FIE BICYCLE MASTER PLAN - Biennial Monitoring Report 2019-2020

Montgomery Planning

Abstract

This document meets the 2018 Bicycle Master Plan requirement for a biennial monitoring report and provides recommendations to the Planning Board and County Council for implementing the vision of the plan. It evaluates progress made in advancing the goals and objectives of the plan as well as recommendations for bikeways and bicycle parking, and bicycle-supportive programs and policies.

Sources of Copies

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Online at https://montgomeryplanning.org/bikeplan



The Bicycle Master Plan sets forth a transformative vision for transportation in Montgomery County, encouraging people of all ages and bicycling abilities to meet their daily needs by bicycle. The plan envisions a community where bicycling to work, stores, schools, and transit or going for a leisurely ride on the weekend is so embedded in our way of life that bicycling becomes an integral mode of transportation in the daily lives of the county's residents. The Bicycle Master Plan creates a framework for this transformation with recommendations to build an extensive network of lowstress bikeways connecting the county's downtowns and town centers, transit stations and public facilities and a plethora of secure and convenient bicycle parking and bicycle-supportive programs and policies.

To ensure transparency and accountability of implementation, the plan requires the Planning Department to produce a biennial monitoring report to track how well the vision of the plan is being fulfilled. The report is reviewed by the Planning Board and County Council.

This document meets the 2018 Bicycle Master Plan requirement for a biennial monitoring report and provides recommendations to the Planning Board and County Council for implementing the vision of the plan. It evaluates progress made in advancing the goals and objectives of the plan as well as recommendations for bikeways and bicycle parking, and bicycle-supportive programs and policies.



Highlights of the past two years.

EQUITY

The Racial Equity and Social Justice Act came into effect in March 2020 and requires the Planning Board to consider racial equity and social justice impacts when preparing master plans. While completion of the Bicycle Master Plan predated this law, one of the plan's goals is to provide equal access to low-stress bicycling for all members of the community. The Planning Department is committed to incorporating equity into all of its work efforts and therefore this monitoring report makes several improvements to the equity analysis approved as part of the Bicycle Master Plan. First, the new geographic area of analysis is Montgomery Planning's Equity Focus Areas (EFA) instead of the low-income areas originally proposed in the Bicycle Master Plan. Second, the report adds new equity metrics, including low-stress bicycle accessibility to schools and an evaluation of where transportation-related fatalities and serious injuries occur.

MASTER-PLANNED BIKEWAYS

On January 1, 2019, there were 877.2 miles of masterplanned but unbuilt bikeways. During the two-year period ending on December 31, 2020:

- 6.4 miles of bikeways were built, including 4.4 miles of sidepaths and 2.0 miles of separated bike lanes.
- 10.9 miles of new bikeways were under construction on December 31, 2020, including 5.1 miles of offstreet trails (largely the Capital Crescent Trail), 4.5 miles of sidepaths, 0.7 miles of separated bike lanes and 0.7 miles of bikeable shoulders.
- 8.4 miles of bikeways were programmed in the county's capital budget but not yet constructed, including 5.4 miles of sidepaths and 1.5 miles of separated bike lanes and 0.5 miles of off-street trails.
- 4.2 miles of bikeways were conditioned in development projects approved by the Montgomery County Planning Board but not yet constructed, including 2.5 miles of separated bike lanes and 1.2 miles of sidepaths.

BICYCLE PARKING

- Three bicycle parking stations are advancing, including the 460-space station at the Bethesda Purple Line station, which was constructed by the 7272 Wisconsin development project, the 74-space Dixon Lane bicycle parking station in Downtown Silver Spring, which was in design at the end of 2020, and the 100+ bicycle parking station at Grosvenor station, which was a condition of approval for a development project.
- 125 bike racks (or 250 spaces) were installed by the Montgomery County Department of Transportation (MCDOT).

PROGRAMS

- In Spring 2019, the Department of Recreation initiated the Excel Beyond the Bell Program pilot to train elementary school students how to ride a bike. The pilot program trained 50 third graders at Oak View Elementary School.
- Montgomery County had seven permanent bicycle counters at the end of 2020, of which six are maintained by the Parks Department and one is maintained by MCDOT. The county had plans to implement 16 additional permanent counters, 11 by MCDOT and five by the Parks Department.

POLICIES

- House Bill 562 was approved on May 30, 2021 and authorizes Montgomery County and its municipalities to decrease the maximum speed limit to not less than 15 miles per hour on highways only after performing an engineering and traffic investigation.
- Bicycle parking requirements in the zoning code were adopted by the Council on July 21, 2020.

Recommendations

The monitoring report provides the opportunity to offer recommendations to address some of the challenges that have arisen since the plan was approved and to provide recommendations on how to proceed over the next few years. While fiscal capacity may limit the county's ability to implement all of the recommendations in the next two years, the following recommendations should be considered as implementation of the Bicycle Master Plan proceeds:

- 1. Prioritize construction of the bikeway projects in Table 1 to improve connectivity to downtowns, upgrade the county's temporary neighborhood greenways to permanent neighborhood greenways, and improve access to low-stress bicycling in Equity Focus Areas.
- 2. Upgrade deficient bike racks at all public libraries and recreation centers over the next two years and expand and upgrade bicycle parking availability at all public schools over a ten-year period.
- 3. Develop the organizational capacity to operate bicycle parking stations at the Bethesda Purple Line station and Silver Spring Transit Center and construct a bicycle parking station at the Glenmont Metrorail station.
- 4. All new public buildings, as well as major renovations, should be required to design and construct bikeways and walkways recommended in master plans and the Complete Streets Design Guide that are along their frontage, and dedicate right-ofway to do so where required. The cost required to design and construct required facilities should be integrated into the budget for new public buildings and major renovations.

- 5. Develop comprehensive design standards for bicycle facilities.
- 6. Develop a Neighborhood Greenway Toolkit.
- 7. Continue to expand the equity metrics evaluated as part of the Bicycle Master Plan Biennial Monitoring Report.
- 8. Fund and conduct a biennial travel monitoring survey in support of the Bicycle Master Plan and forthcoming Pedestrian Master Plan to measure travel behavior and attitudes about walking and bicycling.
- Establish targets of 10% of students bicycling to school and 10% of commuters bicycling to jobs in the North Bethesda, Greater Shady Grove and White Oak Transportation Management Districts (TMDs), 12% to the Friendship Heights TMD and 15% to the Bethesda and Silver Spring TMDs upon completion of Tier 4 of the plan.

Table 1: High Priority Projects

| STREET | FROM | то | BIKEWAY | TIER | RATIONALE |
|---|----------------------|-------------------------------|--------------------------|------|---|
| 13th St / Burlington Ave | District of Columbia | Fenton St | Separated Bike Lanes | 1 | Tier 1 |
| Arlington Rd | Old Georgetown Rd | Bradley Blvd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Broadbirch Dr | Tech Rd | Cherry Hill Rd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Cherry Hill Rd | Prosperity Dr | Prince George's County | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| City of Rockville to Friendship Heights | Rockville Pike | Woodglen Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Breezeway (via Bethesda Trolley | Battery Ln | Old Georgetown Rd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Trail, Woodmont Ave and MD 355) | Old Georgetown Rd | Strathmore Ave | Separated Bike Lanes | 1 | Complete from Old Georgetown Rd to Montgomery Ln |
| Education | Exeter Rd | Arlington Rd | Neighborhood Greenway | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Eagemoor Ln | Arlington Rd | Bethesda Metrorail Station | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Flower Ave to University Blvd (via Domer Ave) | Flower Ave | University Blvd | Neighborhood Greenway | 1 | Advance for equity |
| Franklin Ave - Arliss St (via Sudbury Rd) | Franklin Ave | Arliss St | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Friendship Blvd | Willard Ave | District of Columbia | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Glenmont to Silver Spring Breezeway (via Grandview Ave) | Georgia Ave | Arcola Ave | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Glenmont to Silver Spring Breezeway (via Woodland Dr) | Columbia Blvd | Spring St | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| | Arcola Ave | Blueridge Ave | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Grandview Ave | Blueridge Ave | University Blvd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| | University Blvd | Reedie Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| | Piney Branch Rd | Wabash Ave | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Greenwood Ave | Wabash Ave | Division St | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Grubb Rd / | Brookville Rd | Lyttonsville Pl | Separated Bike Lanes | 1 | Advance for equity |
| Lyttonsville Rd | Lyttonsville Pl | East West Hwy | Separated Bike Lanes | 1 | Advance for equity |
| Marinelli Rd | Executive Blvd | Woodglen Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |

| STREET | FROM | то | BIKEWAY | TIER | RATIONALE |
|--|-------------------------|---------------------------|--------------------------|------|---|
| Olney to Glenmont Breezeway (via Holdridge Rd) | Matthew Henson Trail | Georgia Ave | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Selfridge Rd | Aspen Hill Rd | Veirs Mill Rd | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Veirs Mill Road to White Oak Breezeway (via Cherry Hill Rd) | Columbia Pike | Prosperity Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Wayne Ave - Philadelphia Ave (via Grove St / Woodbury Dr) | Wayne Ave | Philadelphia Ave | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Woodmont Ave | Strathmore Ave | Wisconsin Ave | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Veirs Mill Rd (MD 586) | Glorus Pl | Veirs Mill Rd | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Bowie Mill Rd | Muncaster Mill Rd | Olney-Laytonsville Rd | Sidepath | 2 | Tier 2 unfunded project in the CIP |
| Briggs Chaney Rd (North Side) | Old Columbia Pike | ICC Trail | Sidepath | 3 | Advance for equity |
| Castle Blvd | Castle Ridge Cir | Briggs Chaney Rd | Separated Bike Lanes | 3 | Advance for equity |
| Germantown Rd (North Side) | Clopper Rd | Middlebrook Rd | Sidepath | 2 | Advance for equity |
| | Wightman Rd | Stewartown Rd | Sidepath | n/a | Advance for equity |
| Montgomery Village | Stewartown Rd | Stedwick Rd | Sidepath | 4 | Advance for equity |
| Ave (East Side) | Stedwick Rd | Midcounty Hwy | Sidepath | 3 | Advance for equity |
| | Midcounty Hwy | City of Gaithersburg | Sidepath | 3 | Advance for equity |
| Piney Branch Rd (MD | University Blvd | Carroll Ave | Separated Bike Lanes | 2 | Advance for equity |
| 320) | Carroll Ave | Prince George's County | Separated Bike Lanes | 2 | Advance for equity |
| Scenery Dr | Germantown Rd | Frederick Rd (MD 355) | Sidepath | n/a | Advance for equity |

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The COVID-19 pandemic fundamentally changed how people travel and recreate over the past year and a half. Due to unprecedented challenges resulting from efforts to control the spread of the virus, more and more people took to bicycling and walking for physical activity and travel. In response, Montgomery Parks launched the Open Roadways Initiative and the Montgomery County Department of Transportation (MCDOT) created its Shared Streets program to promote bicycling and walking. But the county's efforts didn't stop there. In fact, substantial efforts by MCDOT, the Parks Department and developers continued to advance implementation of the Bicycle Master Plan. This report summarizes those efforts during 2019 and 2020.

The Bicycle Master Plan sets forth a transformative vision for transportation in Montgomery County, encouraging people of all ages and bicycling abilities to meet their daily needs by bicycle. The plan envisions a community where bicycling to work, stores, schools and transit or going for a leisurely ride on the weekend is so embedded in our way of life that bicycling becomes an integral mode of transportation in the daily lives of the county's residents. The Bicycle Master Plan creates a framework for this transformation, with recommendations to build an extensive network of low-stress bikeways connecting the county's downtowns and town centers, transit stations and public facilities and a plethora of secure and convenient bicycle parking, and bicycle-supportive programs and policies.

The Bicycle Master Plan paves the way for safe, comfortable, and accessible bicycling throughout Montgomery County. Appropriate bikeways are recommended in response to the amount of stress people bicycling experience on each street type. On busy streets, bicyclists will have dedicated space separated from traffic. On residential streets, they will be able to comfortably share the road. Between downtowns and town centers, people will be able to travel comfortably and efficiently on a "breezeway network," where faster moving bicyclists are able to travel with fewer delays, and where all users – including slower moving bicyclists and pedestrians – can safely and comfortably coexist. In rural areas of the county, a network of bikeable shoulders is recommended for recreational bicyclists who prefer to ride on the road.

Recognizing that providing a comfortable bicycling network is insufficient if people do not have secure places to store their bicycles at their destinations, the plan also recommends an extensive supply of bicycle parking. This includes short-term bicycle parking provided with "U" racks at public facilities, such as parks, libraries, recreational centers, and short-term bicycle parking serving commercial areas. It also includes long-term bicycle parking provided in bicycle rooms and bicycle cages for residents, students, employees, and others who are storing their bicycles for several hours or longer. Long-term bicycle parking in secure bicycle parking stations within or directly adjacent to transit stations, including all Red Line stations and the higher-demand MARC, Purple Line, and Corridor Cities Transitway stations, is also recommended.

What is Low-Stress Bicycling?

A low-stress bicycling network is one that is comfortable and safe for people of all ages and bicycling abilities. Low-stress bicycling reflects the context of the road. For example, low-stress bikeways include sidepaths with wide buffers from the street along high-volume and highspeed suburban highways, separated bike lanes on downtown streets, and bicycling in the road on very low-volume and low-speed residential streets. The Bicycle Master Plan includes a number of bicycle-supportive program and policy recommendations as well. Programmatic recommendations include dedicated funding programs for specific needs, such as neighborhood greenways and a bicycle parking program, to teach children how to bicycle in public school and a BikeMontgomery outreach program to encourage bicycling. It also includes legal and policy recommendations, such as updating the county's road design standards, updating the bicycle parking provisions in the zoning code, and consolidating driveways along bikeways.

To ensure transparency and accountability of implementation, the plan requires the Planning Department to produce a biennial monitoring report to track how well the vision of the plan is being fulfilled. The report is reviewed by the Planning Board and approved by the County Council. This report includes six main sections:

- 1. Introduction
- 2. Goals and Objectives
- 3. Bikeways
- 4. Bicycle Parking
- 5. Bicycle-Supportive Programs
- 6. Bicycle-Supportive Legal and Policy Framework
- 7. Recommendations

The appendix of this document provides a detailed evaluation of metrics and the status of bikeway projects.





GOALS AND OBJECTIVES

The Bicycle Master Plan envisions a future where Montgomery County is a world-class bicycling community in which everyone will be able to travel by bicycle on a comfortable, safe, and connected bicycling network. This vision is defined by four goals. The first goal measures the results – whether more people are bicycling. The other goals measure the process and represent things that can be done to improve the chance that the first goal is advanced. The four goals are:

- Goal 1: Increase Bicycling Rates in Montgomery County
- Goal 2: Create a Highly Connected, Convenient and Low-Stress Bicycling Network
- Goal 3: Provide Equal Access to Low-Stress Bicycling for all Members of the Community
- Goal 4: Improve the Safety of Bicycling

Defining a vision for the Bicycle Master Plan does not simply mean stating the goals on paper. It also lays the foundation for a comprehensive monitoring program, which supports the implementation of the plan by providing an ongoing assessment of how effective Montgomery County is in meeting the plan's goals and objectives over time. This section of the report discusses the extent to which each of the four goals in the Bicycle Master Plan have advanced over the past two years. Table 2 compares the results of each metric every two years with targets that were established in the plan. A detailed discussion of each of the metrics is included in the Bicycle Master Plan.

2.1 Goal 1: Increase Bicycling Rates in Montgomery County

One of the most important measures of success for the Bicycle Master Plan is the extent to which the amount of bicycling increases in Montgomery County. Goal 1 evaluates how bicycling increases over time among different groups of people, destinations, and trip types. Success in advancing this goal is largely driven by success in advancing the other three goals of the plan, as well as the program and policy recommendations in the plan.

Bicycling rates are likely to have been heavily impacted by the COVID-19 pandemic and may not provide a reliable measure of the bicycling rates in the county. On the one hand, the temporary surge in teleworking and virtual schooling reduced daily trips, especially commute trips and trips to school, which are the most likely trips to be made by bicycling. On the other hand, Montgomery Park's Open Roadways Initiative and the MCDOT's Shared Streets program increased recreational bicycling.

The Percentage of Residents who Commute by Bicycle (Objective 1.1) dropped slightly between 2018 and 2019, from 0.6% to 0.5%.

Bicycling Rates to the Transportation Management Districts (Objective 1.2) were

collected during Fall 2020 and show a slight increase in bicycle travel to Bethesda (0.7% to 0.8%) and Silver Spring (1.4% to 1.8%), but a reduction in bicycle travel to Friendship Heights (1.4% to 0.4%), Greater Shady Grove (1.5% to 0.0%), and North Bethesda (1.0% to 0.3%).

Bicycle Rates to Transit (Objective 1.3) were

collected for the Red Line in 2016 and found that 1.6% of passengers accessed the Red Line by bicycle. No recent surveys were conducted by WMATA or MARC for the Red Line or the Brunswick Line. **Bicycle Rates to Schools (Objective 1.4)** were collected in fall 2019 and show that bicycling rates were about 2.5% for elementary schools, 1.7% for middle schools and 1.7% for high schools. Plans to collect these data in fall 2020 were put on hold by the pandemic but should resume in 2021. Schools with the highest rates of bicycling in Fall 2019 include:

- High School: Bethesda-Chevy Chase (11%)
- Middle Schools: Thomas Pyle (8%), Hallie Wells (5%)
- Elementary Schools: Piney Branch (14%), Weller Road (11%), Bradley Hills (9%), Gibbs (9%)

Bicycling rates for each public school can be found in Appendix A.2, Appendix A.3 and Appendix A.4.

Goal 2: Create a Highly Connected, 2.2 Convenient, and Low-Stress Bicycling Network

Goal 2 captures how well destinations are connected on a low-stress bicycling network. It also evaluates the availability of bicycle parking.

LOW-STRESS BICYCLING METRICS

Bicycling is more likely to become a mainstream mode of transportation in Montgomery County if a low-stress network is developed that enables people to travel by bicycle to the places they want and need to go safely and comfortably. While about 75% of the roads in the county are already low stress, they are often surrounded by high speed and high-volume roads or difficult intersections, effectively creating islands of connectivity. Where feasible, reductions in traffic lanes and speeds can link these islands; where infeasible, bicycle infrastructure, such as sidepaths, separated bike lanes and conventional bike lanes, are needed to connect the network. Four metrics evaluate the availability of low-stress bicycling:

- Countywide Connectivity (Objective 2.1)
- Connectivity to Transit Stations (Objective 2.2)

- Connectivity to Public Schools (Objective 2.3)
- Connectivity to Public Facilities (Objective 2.4)

Countywide Connectivity (Objective 2.1), is

the overall measure of low-stress connectivity, and measures the percent of potential bicycling trips that will be able to be made on a low-stress bicycling network. This metric grew slightly between December 2018 and December 2020 from 15% to 16%. Upon completion of projects that were under construction in December 2020, this will grow to 17% and with the completion of projects in the capital improvements program or development projects approved in 2019 and 2020, countywide connectivity will grow to 19%. The experience of individual policy areas shows greater improvements in some areas of the county. Between December 2018 and December 2020. connectivity to the Woodside policy area grew 7%, Clarksburg Town Center grew 5% and the Silver Spring Central Business District (CBD) grew 4%. These policy areas will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

- Clarksburg Town Center will increase 31%, from 19% to 50%
- Chevy Chase Lake will increase 28%, from 0% to 28%
- Silver Spring CBD will increase 27%, from 3% to 30%
- Lyttonsville will increase 17%, from 39% to 56%
- Woodside will increase 14%, from 9% to 23%

Bicycle connectivity rates for each policy area can be found in Appendix A.5. The methodology for evaluating Objective 2.1 is documented in the Bicycle Master Plan <u>Appendix E</u>.

Connectivity to Transit Stations (Objective 2.2)

evaluates the percentage of dwelling units within two "network distance" miles of each transit station that are connected to the public facility on a lowstress bicycling network. This metric also grew slightly between December 2018 and December 2020: from 9% to 10% for Red Line stations, and remained the same for MARC stations (14%) and future Purple Line stations (3%), and Corridor Cities Transitway stations(17%).

Red Line Stations: Overall, connectivity grew from 9% in December 2018 to 10% in December 2020. It will further grow to 17% with projects under construction as of December 2020 and to 31% with projects that are programmed or conditions of development projects. Between December 2018 and December 2020, connectivity to the Silver Spring and Medical Center stations grew 5%. However, this masks some substantial gains at individual stations. These Red Line stations will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

- Silver Spring station will increase 42%, from 1% to 43%, due to completion of the Wayne Ave / 2nd Ave separated bike lanes, completion of the ongoing Capital Crescent Trail project, Silver Spring Green Trail project and Ripley II development project, and with the future construction of the Metropolitan Branch Trail and Fenton Street cycle track.
- Takoma station will increase 16%, from 25% to 42% due to the completion of the Metropolitan Branch Trail.
- Bethesda station will increase 15%, from 0% to 15% due to the completion of the Capital Crescent Surface Trail (Phase 1) and the future construction of the Capital Crescent Surface Trail (Phase 2), the Capital Crescent Trail Tunnel and the Montgomery Ave / Montgomery Lane separated bike lanes.

• Medical Center station will increase 12%, from 11% to 24% due to improvements to the Jones Bridge Road shared use path, the completion of the MD 355 Crossing project and future construction of the Battery District development project.

Brunswick Line Stations: Overall, connectivity remained at 17% between December 2018 and December 2020. It will grow to 24% with projects under construction as of December 2020 and to 28% with projects that are programmed or conditions of development projects. The only station to have a significant change in connectivity is the Silver Spring station. Connectivity will grow 39%, from 0% to 39% due to completion of the Wayne Ave / 2nd Ave separated bike lanes, completion of the ongoing Capital Crescent Trail project, Silver Spring Green Trail project and Ripley II development project, and with the future construction of the Metropolitan Branch Trail.

Purple Line Stations: Overall, connectivity to future Purple Line stations remained at 3% between December 2018 and December 2020. It will grow to 9% with projects under construction as of December 2020 and to 18% with projects that are programmed or conditions of development projects. These Purple Line stations will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

- Silver Spring Library station will increase to 44%, from 0% to 44% due to completion of the Wayne Ave / 2nd Ave separated bike lanes, completion of the ongoing Capital Crescent Trail project, Silver Spring Green Trail project and Ripley II development project, and with the future construction of the Metropolitan Branch Trail and Fenton Street cycle track.
- Silver Spring Transit Center station will increase to 40%, from 0% to 40% for the same reasons at the Silver Spring Library station.

- Lyttonsville station will increase 27%, from 0% to 27% upon completion of the Capital Crescent Trail.
- Connecticut Avenue station will increase 25%, from 0% to 25%, upon completion of the Capital Crescent Trail, the Chevy Chase Lake development project, and the Crescent at Chevy Chase Lake development project.
- Bethesda station will increase 14%, from 0% to 14% due to the completion of the Capital Crescent Surface Trail (Phase 1) and the future construction of the Capital Crescent Surface Trail (Phase 2), the Capital Crescent Trail Tunnel, and the Montgomery Ave / Montgomery Lane separated bike lanes.

Corridor Cities Transitway: Overall, connectivity to future Corridor Cities Transitway stations remained unchanget at 0%.

Bicycle connectivity rates for each transit station can be found in Appendix A.6 (Red Line), Appendix A.7 (Brunswick Line), Appendix A.8 (Purple Line), and Appendix A.9 (Corridor Cities Transitway).

Connectivity to Public Schools (Objective 2.3)

evaluates the percentage of dwelling units within one mile of elementary schools, 1.5 miles of middle schools and 2 miles of high that are connected to each school on a very low-stress bicycling network¹. This metric grew slightly between December 2018 and December 2020 from 12% to 13% for high schools and remained the same for elementary schools (38%) and middle schools (22%).

Elementary Schools: Overall, connectivity to elementary schools remained at 38% between December 2018 and December 2020. It will grow to 39% with projects that are programmed or conditions of development projects. These elementary schools will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

• Little Bennett Elementary School will increase 30%, from 43% to 72% with completion of Overlook

Park Drive and the future construction of the MD 355 / Clarksburg Shared Use Path, Clarksburg Road / MD 355 project and the Clarksburg Road / Snowden Farm Parkway project.

- Sligo Creek Elementary School will increase 8%, from 16% to 24% when ongoing construction of the Silver Spring Green Trail is complete.
- Woodlin Elementary School will increase 19%, from 7% to 26% when ongoing construction of the Capital Crescent Trail is complete.

Middle Schools: Overall, connectivity to middle schools remained at 22% between December 2018 and December 2020. Connectivity to the Silver Spring International Middle School will increase 3%, from 22% to 25% when ongoing construction of the Silver Spring Green Trail is complete.

High Schools: Overall, connectivity to high schools grew from 12% to 13% between December 2018 and December 2020. It will grow to 14% with projects under construction as of December 2020. These high schools will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

- Bethesda Chevy Chase High School will increase 10%, from 5% to 15% when ongoing construction of the Capital Crescent Trail is complete.
- Seneca Valley High School increased 15%, from 0% to 15% with completion of the Middlebrook Road separated bike lanes project.

One exception is the Clarksburg High school, as connectivity will decrease 11%, from 29% to 18%. This is not because existing connectivity is reduced, but rather because two locations are only assumed to be connected when the low-stress route is no more than 30% longer than the most direct route, as many people are dissuaded from bicycling when

^{1.} This is based on an "as the crow flies" distance from each public school, as that is how Montgomery County Public Schools determines its busing zones.

they have to travel too far out of their way. With the construction of a new high-stress road in Clarksburg that makes the most direct route to the high school shorter, this caused the low-stress routes to be more than 30% longer than the high-stress route, thereby decreasing connectivity.

Bicycle connectivity rates for each public school can be found in Appendix A.10 (elementary schools), Appendix A.11 (middle schools) and Appendix A.12 (high schools).

Connectivity to Public Facilities (Objective 2.4)

evaluates the percentage of dwelling units within two "network distance" miles of public libraries, recreation centers and regional / recreational parks that are connected to these public facilities on a low-stress bicycling network. This metric grew slightly between December 2018 and December 2020: from 9% to 11% for public libraries and remained the same for recreation centers (16%) and regional and recreational parks (29%).

Public Libraries: Overall, connectivity to public libraries remanined at 9% between December 2018 and December 2020. It will grow to 11% with projects that were under construction as of December 2020. It will grow to 16% with projects that are programmed or conditions of development projects. These public libraries will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

- Silver Spring Library will grow 43%, from 0% to 43% due to completion of the Wayne Ave / 2nd Ave separated bike lanes, completion of the ongoing Capital Crescent Trail project, Silver Spring Green Trail project and Ripley II development project, and with the future construction of the Metropolitan Branch Trail and the Fenton Street cycle track.
- Germantown Library grew 20%, from 0% to 20% due to completion of Middlebrook Road separated bike lanes project.

Recreation Centers: Overall, connectivity to recreation centers remained at 16% between December 2018 and December 2020. It will grow to 19% with the completion of projects that were under construction in December 2020. These recreation centers will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

- Gwendolyn E. Coffield Recreation Center will grow 15%, from 16% to 31% upon completion of the Capital Crescent Trail.
- Leland Community Recreation Center will grow 11%, from 7% to 18% upon completion of the Capital Crescent Trail.

Recreational and Regional Parks: Overall, connectivity to recreational and regional parks remained at 29% between December 2018 and December 2020. These parks will experience the largest growth in connectivity once all projects under construction at the end of 2020 and projects in the capital improvement program and development approvals are completed:

- Rock Creek Regional Park will grow 8%, from 34% to 42% due to completion of the Capital Crescent Trail.
- Ovid Hazen Wells Recreational Park will grow 5%, from 59% to 63% with completion of Overlook Park Drive and the Frederick Road bike path, as well as the future construction of the MD 355 / Clarksburg Shared Use Path, Clarksburg Road / MD 355 project and the Clarksburg Road / Snowden Farm Parkway project.

Bicycle connectivity rates for each public facility can be found in Appendix A.13 (public libraries), Appendix A.14 (recreation center) and Appendix A.15 (regional and recreational parks).

BICYCLE PARKING METRICS

Simply providing a comfortable bicycling network is insufficient if people do not have a secure place to store their bicycles when they get to their destinations. This goal also considers bicycle parking at major destinations, such as transit stations, commercial areas and public facilities, including schools, libraries and recreation centers. Four metrics evaluate the availability of low-stress bicycling:

- Rail Stations with Bicycle Parking Stations (Objective 2.5)
- Sufficient Bicycle Parking at Public Schools (Objective 2.6)
- Sufficient Bicycle Parking in Bicycle-Pedestrian Priority Areas (Objective 2.7)
- Sufficient Bicycle Parking at Public Facilities (Objective 2.8)

In this report, only the changes to Objective 2.5 are measured, as the Planning Department did not have sufficient resources during the COVID-19 pandemic to visit over 170 public schools and 18 libraries, 20 recreation centers and 34 Bicycle-Pedestrian Priority Areas.

Rail Stations with Bicycle Parking Stations

(Objective 2.5): Currently, three bicycle parking stations are advancing, including a 460-space station at the Bethesda South² station and a 74-space station in Downtown Silver Spring. Additionally, the Strathmore Square development project will be constructing a 100-space bicycle parking station at the Grosvenor Metrorail station.

2.3 Goal 3: Provide Equal Access to Low-Stress Bicycling for all Members of the Community

The Racial Equity and Social Justice Act went into effect March 2020 and requires the Planning Board to consider racial equity and social justice impacts when preparing master plans. While completion of the Bicycle Master Plan predated this law, one of the plan's goals is to provide equal access to low-stress bicycling for all members of the community. The Planning Department is committed to incorporating equity into all of its work efforts and therefore this monitoring report makes several improvements to the equity analysis approved as part of the Bicycle Master Plan. First, the new geographic area of analysis is Montgomery Planning's Equity Focus Areas (EFA) instead of the low-income areas originally proposed in the Bicycle Master Plan. Second, the report adds new equity metrics, including low-stress bicycle accessibility to schools and an evaluation of where transportation-related fatalities and serious injuries occur. Two metrics evaluate equitable low-stress bicycling:

- Connectivity to Equity Focus Areas (Objective 3.1)
- Connectivity to Title I / Focus FARMS Public Schools (Objective 3.2)

Connectivity to Equity Focus Areas (Objective

3.1) compares the percent of potential bicycling trips that will be able to be made on a low-stress bicycling network between non-EFAs and EFAs. A result of 100% would indicate that there is parity in the low-stress connectivity between EFAs and non-EFAs overall. A result of 50% would indicate that EFAs have access to only half the low-stress connectivity of non-EFAs. The results show that EFAs had only about 89% of the low-stress connectivity that non-EFAs experience in December 2020. While connectivity to both EFAs and non-EFAs will continue to increase with projects under construction, connectivity to non-EFAs will grow faster, reducing this metric to 87%. When projects that are in the capital improvement program and development approvals are completed, the metric will improve to 88%.

^{2.} The Bethesda South station is the location of the new southern entrance to the Bethesda Metrorail station and the Bethesda Purple Line station at 7272 Wisconsin Avenue.

On the other hand, for **Connectivity to Title I /** Focus FARMS Public Schools (Objective 3.2),

schools that serve equity populations are better connected, on average, by low-stress bicycling than non-Title I and non-Focus schools. For instance, in December 2020, the low-stress connectivity to elementary schools that serve equity populations was 42%, compared to 33% for elementary schools that do not serve equity populations. Similarly, the low-stress connectivity to middle schools that serve equity population was 24%, compared to 19% for middle schools that do not serve equity populations. For high schools the low-stress connectivity to schools that serve equity populations was 14%, compared to 10% for high schools that do not serve equity populations. This finding does not mean that connectivity to schools is sufficient, it just means that on average, schools that serve equity populations are better connected by low-stress bicycling than non-Title Lschools and schools with smaller shares. of FARMS students.

2.4 Goal 4: Improve the Safety of Bicycling

The intent of this goal is to make bicycling safe by eliminating serious injuries and fatalities. While safety can be improved by taking active measures to reduce travel speeds and providing separation from traffic, this goal will be evaluated by reactive metrics based on crash reports. Two metrics evaluate the safety of bicycling:

- Bicycling Fatalities and Serious Injuries per Year (Objective 4.1)
- Bicycling Fatalities and Serious Injuries per Year in Equity Focus Area (Objective 4.2)

Bicycling Fatalities and Serious Injuries per Year (Objective 4.1): There were 12 serious injuries and one fatality among bicyclists in 2018, 13 serious injuries and one fatality among bicyclists in 2019, and ten serious injuries and one fatality among bicyclists in 2020.

Bicycling Fatalities and Serious Injuries per Year in Equity Focus Area (Objective 4.2): While the

goal is to eliminate all serious injuries and fatalities, it is known that serious and fatal transportation crashes are overrepresented among Blacks and Hispanics. Since race and ethnicity is not available in the crash data, this analysis reviews the location of crashes to see if a disproportionate number of crashes as a percentage of the population occur in EFAs compared to non-EFAs. In 2018, 3 of 13 serious and fatal bicyclist crashes occurred in EFAs. In 2020, 0 of 11 serious and fatal bicyclist crashes occurred in EFAs. Controlling for population size, this means that EFAs were less likely to experience serious injuries and fatalities among bicyclists than non-EFAs. In 2018, there were 0.83 fatalities and serious injuries among bicyclists in EFAs for every serious injury and fatality among bicyclists in non-EFAs, controlling for population size. In 2020 this dropped to zero.

Table 2: Evaluation of Goals and Objectives

| Objective | Metric | | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 2019 / 2020 | Target (Tier 4) |
|---|---|------------------------------------|----------------|---------------------|----------------------------------|---|--------------------|
| Goal 1: Inci | rease Bicycling rates in | Montgomery County | | | | | |
| 1.1 | Percentage of Residents who Commute by Bicycle. | | | 0.5% (2019) | | | 8% |
| 1.2 | | Downtown Bethesda | 0.7% | 0.8% | | | 15% |
| | | Downtown Silver Spring | 1.4% | 1.8% | | | 12% |
| | Bicycling Rates | Friendship Heights | 1.4% | 0.4% | | | 10% |
| | Management Districts | Greater Shady Grove | 1.5% | 0.0% | | | 10% |
| | | North Bethesda | 1.0% | 0.3% | | | 10% |
| | | White Oak | N/A | N/A | | | 10% |
| | | Red Line | 1.6% (2016) | N/A | | | 10% |
| 1.2 | Bicycle Rates to Transit | Brunswick Line | N/A | N/A | | | N/A |
| 1.3 | | Purple Line | N/A | N/A | | | N/A |
| | | Corridor Cities Transitway | N/A | N/A | | | N/A |
| | | Elementary Schools | N/A | 2.5% (fall 2019) | | | 10% |
| 1.4 | Bicycle Rates to Schools | Middle Schools | N/A | 1.7% (fall 2019) | | | 10% |
| | | High Schools | N/A | 1.7 (fall 2019) | | | 10% |
| Goal 2: Create a Highly-Connected, Conv | | , Convenient and Low-Stress | Bicycling N | etwork | | | |
| 2.1 | Countywide Connectivity | | 15% | 16% | 17% | 19% | 50% |
| | | Red Line | 9% | 10% | 17% | 31% | 65% |
| 2.2 | Connectivity to Transit Stations | Brunswick Line | 17% | 17% | 24% | 28% | 65% |
| 2.2 | | Purple Line | 3% | 3% | 9% | 18% | 70% |
| | | Corridor Cities Transitway | 0% | 0% | 0% | 0% | 40% |
| | | Elementary Schools | 38% | 38% | 38% | 39% | 60% |
| 2.3 | Connectivity to Public Schools | Middle Schools | 22% | 22% | 22% | 22% | 55% |
| | | High Schools | 12% | 13% | 14% | 14% | 35% |
| | | Public Libraries | 9% | 9% | 11% | 16% | 55% |
| 2.4 | Connectivity to Public Facilities | Recreation Centers | 16% | 16% | 19% | 19% | 40% |
| | racintico . | Recreational and Regional Parks | 29% | 29% | 29% | 30% | 50% |

| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | Objective | Metric | | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 2019 / 2020 | Target (Tier 4) |
|--|---|--|--|--------------|-----------|----------------------------------|---|--------------------|
| A.5. Bicycle Parking Stations with Bicycle Parking StationsMARC Brunswick Line00000Purple Line00020020Corridor Cities Transitway00000000A.6.Sufficient Bicycle Parking at Public SchoolsElementary Schools0%N/AN/AN/AN/A02.7Sufficient Bicycle Parking at Public SchoolsMiddle Schools0%N/AN/AN/AN/A002.7.7Sufficient Bicycle Parking in Bicycle-Pedestrian Priority Areas15%N/AN/AN/AN/A000002.8.Sufficient Bicycle Parking at Public FacilitiesPublic Libraries11%N/AN/AN/AN/A0000003.1Connectivity to Equity-Tocus Areas89%89%87%88%0000003.2Connectivity to Titlel / Focus FARMS Public SchoolsElementary Schools $\frac{42\%}{19\%}$ 24% / 19%24% / 19%24% / 19%100 | | | Red Line | 0 | 0 | 0 | 3 | 11 |
| 2.5Bicycle Parking StationsPurple Line0002 | 25 | Rails Stations with | MARC Brunswick Line | 0 | 0 | 0 | 0 | 5 |
| Image: constraint of the series of the ser | 2.5 | Stations | Purple Line | 0 | 0 | 0 | 2 | 7 |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | Corridor Cities Transitway | 0 | 0 | 0 | 0 | 3 |
| 2.6Sufficient Bicycle Parking at Public SchoolsMiddle Schools0%N/AN/AN/A2.7Sufficient Bicycle Parking in Bicycle-Pedestrian Priority Areas15%N/AN/AN/AN/A2.8Sufficient Bicycle Parking at Public FacilitiesPublic Libraries11%N/AN/AN/AN/A2.8Sufficient Bicycle Parking at Public FacilitiesPublic Libraries11%N/AN/AN/AN/A3.1Connectivity to Equity Focus Areas89%89%87%88%13.2Connectivity to Titlet Focus FARMS Public SchoolsElementary Schools $\frac{42\%}{33\%}$ $42\%/33\%$ $42\%/19\%$ $42\%/19\%$ n | | Cufficient Disusla | Elementary Schools | 0% | N/A | N/A | N/A | 100% |
| $\frac{1}{1001} = \frac{1}{1001} + 1$ | 2.6 | Parking at Public | Middle Schools | 0% | N/A | N/A | N/A | 100% |
| 2.7Sufficient Bicycle Parking in Bicycle-Pedestrian Priority Areas15%N/AN/AN/AN/A2.8Sufficient Bicycle Parking at Public FacilitiesPublic Libraries11%N/A <td></td> <td>SCHOOIS</td> <td>High Schools</td> <td>0%</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>100%</td> | | SCHOOIS | High Schools | 0% | N/A | N/A | N/A | 100% |
| $\begin{array}{c} \label{eq:alpha} & \begin{array}{c} \mbox{Sufficient Bicycle} \\ \mbox{Parking at Public} \\ \mbox{Facilities} & \mbox{Public} \\ \mbox{Facilities} & \mbox{Public} \\ \mbox{Facilities} & \mbox{Intervent Public} \\ \mbox{Facilities} & \mbox{Intervent Public} \\ \mbox{Facilities} & \mbox{Intervent Public} \\ \mbox{Sufficient Bicycle} \\ \mbox{Facilities} & \mbox{Intervent Public} \\ \mbox{Sufficient Bicycle} \\ \mbox{Sufficient Bicycle} \\ \mbox{Facilities} & \mbox{Intervent Public} \\ Interven$ | 2.7 | Sufficient Bicycle Parking in Bicycle-Pedestrian Priority Areas | | 15% | N/A | N/A | N/A | 40% |
| 2.8Parking at Public FacilitiesRecreation Centers15%N/AN/AN/AGoal 3: Provide equal access to low-stress bicycling for all members of the community3.1Connectivity to Equity -cus Areas89%89%87%88%88%3.2Connectivity to Title I / Focus FARMS Public SchoolsElementary Schools42% / | 2.0 | Sufficient Bicycle | Public Libraries | 11% | N/A | N/A | N/A | 100% |
| Goal 3: Provide equal access to low-stress bicycling for all members of the community 3.1 Connectivity to Equity - Scus Areas 89% 89% 87% 88% 88% 3.2 Connectivity to Title I / Focus FARMS Public Schools Elementary Schools 42% / 33% 42% / 33% 42% / 34% 42% / 34% 42% / 34% 42% / 34% 42% / 34% 10 | Facilities | | Recreation Centers | 15% | N/A | N/A | N/A | 100% |
| 3.1Connectivity to Equity Cus Areas89%89%89%87%88%88%3.2Connectivity to Title I / Focus FARMS Public SchoolsElementary Schools42% / 33%42% / 33%42% / 34%42% / | Goal 3: Pro | Goal 3: Provide equal access to low-stress bicycling for all mem | | bers of the | community | | | |
| 3.2 Connectivity to Title I / Focus FARMS Public Schools Elementary Schools 42% / 33% 42% / 33% 42% / 34% 42% / 34% 42% / 34% 42% / 34% 42% / 34% 1 | 3.1 | Connectivity to Equity Focus Areas | | 89% | 89% | 87% | 88% | 100% |
| 3.2 / Focus FARMS Public Schools Middle Schools 24% / 19% 24% / 19% 24% / 19% 24% / 19% 24% / 19% 10%< | | Connectivity to Title I | Elementary Schools | 42% / 33% | 42% / 33% | 42% / 34% | 42% / 34% | EFA > non-EFA |
| | 3.2 | / Focus FARMS Public Schools | Middle Schools | 24% / 19% | 24% / 19% | 24% / 19% | 24% / 19% | EFA > non-EFA |
| (EFA / non-EFA) High Schools 14% / 10% 16% / 10% 16% / 12% 16% / 12% | (EFA / non-EFA) | | High Schools | 14% / 10% | 16% / 10% | 16% / 12% | 16% / 12% | EFA > non-EFA |
| Goal 4: Improve the safety of bicycling | Goal 4: Improve the safety of bicycling | | | | | | | |
| 4.1Number of Bicycling Fatalities and Serious Injuries.1311 | 4.1 | Number of Bicycling Fa | talities and Serious Injuries. | 13 | 11 | | | 0 |
| 4.2Ratio of EFA to non-EFA Fatalities and Serious Injuries among Bicyclists, Controlling for Population0.830.00 | 4.2 | Ratio of EFA to non-EFA among Bicyclists, Contr | Fatalities and Serious Injuries rolling for Population | 0.83 | 0.00 | | | <=1.00 |

| | = Proposed new metric or target |
|-----|----------------------------------|
| | = Metric cannot be calculated |
| N/A | = Data was not available in 2020 |



Although many trips are short enough to be made by bicycle, most are made by private motor vehicles. One barrier to bicycling is what is known as "traffic stress." The concept of traffic stress is that people have a certain tolerance for bicycling near traffic, and if that tolerance is exceeded even for a short distance, they may be deterred from bicycling. To attract the broadest segment of the population to bicycle, the Bicycle Master Plan recommends bikeways that create a low-stress network of bikeways.

3.1 Bikeway Implementation

As shown in Table 3, the Bicycle Master Plan recommends 1,150 miles of bikeways, of which 279.2 miles, or about one-quarter, existed as of December 31, 2020. The largest category of recommended bikeways comprises sidepaths (603 miles), followed by off-street trails (174 miles), bikeable shoulders (129 miles), separated bike lanes (98 miles) and neighborhood greenways (51 miles).

| Facility Type | Bikeway Type | Existing | Unbuilt | Total |
|--------------------|-------------------------------|----------|---------|---------|
| | Off-Street Trails | 98.3 | 75.5 | 173.8 |
| Trails | Stream Valley Park Trails | 27.9 | 0.8 | 28.8 |
| | Neighborhood Connectors | 12.8 | 2.2 | 15.1 |
| Constant Dikoway | Separated Bike Lanes | 3.2 | 94.5 | 97.7 |
| Separated Bikeway | Sidepaths | 114.1 | 488.5 | 602.5 |
| Striped Bikeways | Buffered Bike Lanes | 0.0 | 6.5 | 6.5 |
| | Conventional Bike Lanes | 12.9 | 21.4 | 34.3 |
| | Contra-Flow Bike Lane | 0.0 | 4.9 | 4.9 |
| Bikeable Shoulders | Bikeable Shoulders | 9.9 | 119.2 | 129.0 |
| | Shared Streets | 0.0 | 0.8 | 0.8 |
| Shared Roads | Neighborhood Greenways | 0.0 | 51.2 | 51.2 |
| | Priority Shared Lane Markings | 0.0 | 5.3 | 5.3 |
| Total | Total | 279.2 | 870.8 | 1,150.0 |

Table 3: Status of Bikeway Recommendations as of December 31, 2020 (miles)

Note: Miles of bikeways includes amendments to the Bicycle Master Plan that have occurred since its approval. The existing miles of bikeways includes bikeways that have been completed since the plan's approval.

During the first two years of plan implementation, 6.4 miles of new bikeways were completed (Table 4). This includes 3.1 miles by the public sector (largely MCDOT) and 3.4 miles by developers. Sidepaths (4.4 miles) and separated bike lanes (2.0 miles) represent nearly all of the bikeway mileage constructed during this time period. While development projects constructed the majority of sidepath miles (60%), capital projects constructed the most separated bike lane miles (65%). See Appendix B.1 and Appendix B.2 for a list of specific bikeways constructed by capital projects and development projects in 2019 and 2020.

| Facility Type | Bikeway Type | Capital Projects | Development Projects | Total |
|---------------------|-------------------------------|------------------|-------------------------|-------|
| | Off-Street Trails | 0.0 | 0.1 | 0.1 |
| Trails | Stream Valley Park Trails | 0.0 | 0.0 | 0.0 |
| | Neighborhood Connectors | 0.0 | 0.0 | 0.0 |
| Concreted Dilleurov | Separated Bike Lanes | 1.3 | 0.7 | 2.0 |
| Separated Bikeway | Sidepaths | 1.8 | 2.6 | 4.4 |
| | Buffered Bike Lanes | 0.0 | 0.0 | 0.0 |
| Striped Bikeways | Conventional Bike Lanes | 0.0 | 0.0 | 0.0 |
| | Contra-Flow Bike Lane | 0.0 | 0.0 | 0.0 |
| Bikeable Shoulders | Bikeable Shoulders | 0.0 | 0.0 | 0.0 |
| | Shared Streets | 0.0 | 0.0 | 0.0 |
| Shared Roads | Neighborhood Greenways | 0.0 | 0.0 | 0.0 |
| | Priority Shared Lane Markings | 0.0 | 0.0 | 0.0 |
| Total | Total | 3.1 | 3.3 | 6.4 |

Table 4: Bikeways Completed in 2019 & 2020 (miles)

The following pages provide information on some of the bikeway projects completed in the two years since adoption of the Plan.

PROJECT:

Executive Boulevard Separated Bike Lanes

LENGTH: 0.3 miles

LEAD Montgomery County Department of Transportation

BIKEWAY TYPE Separated Bike Lanes (One-Way)

POLICY AREA White Flint

COMPLETION January 2020



















Table 5 shows that an additional 10.9 miles of new bikeways were under construction as of December 31, 2020. This includes 10.2 miles by the public sector and 0.7 miles by developers. There were 4.9 miles of off-street trails (largely the Capital Crescent Trail) and 4.5 miles of sidepaths under construction at this time. See Appendix B.3 and Appendix B.4 for a list of specific bikeways under construction by capital projects and development projects on 12/31/2020.

Table 5: Bikeways Under Construction as of 12/31/2020 (miles)

| Facility Type | Bikeway Type | Capital Projects | Development Projects | Total |
|---------------------|-------------------------------|------------------|-------------------------|-------|
| | Off-Street Trails | 4.9 | 0.2 | 5.0 |
| Trails | Stream Valley Park Trails | 0.0 | 0.0 | 0.0 |
| | Neighborhood Connectors | 0.0 | 0.0 | 0.0 |
| Concentral Dilucuru | Separated Bike Lanes | 0.5 | 0.2 | 0.7 |
| Separated Bikeway | Sidepaths | 4.2 | 0.3 | 4.5 |
| Striped Bikeways | Buffered Bike Lanes | 0.0 | 0.0 | 0.0 |
| | Conventional Bike Lanes | 0.0 | 0.0 | 0.0 |
| | Contra-Flow Bike Lane | 0.0 | 0.0 | 0.0 |
| Bikeable Shoulders | Bikeable Shoulders | 0.7 | 0.0 | 0.7 |
| Shared Roads | Shared Streets | 0.0 | 0.0 | 0.0 |
| | Neighborhood Greenways | 0.0 | 0.0 | 0.0 |
| | Priority Shared Lane Markings | 0.0 | 0.0 | 0.0 |
| Total | Total | 10.2 | 0.7 | 10.9 |

The following pages provide information on some of the bikeway projects that were under construction at the end of 2020.

PROJECT:

Frederick Road Bike Path

LENGTH:

1.6 miles

PROJECT LEAD Montgomery County Department of Transportation BIKEWAY TYPE Sidepath

POLICY AREA Clarksburg, Germantown East

COMPLETION

on Under Construction as of 12/31/2020 (now complete)



PROJECT:

Chevy Chase Lake Separated Bike Lanes, Connecticut Ave

LENGTH: 0.1 miles

LEAD

Chevy Chase Land Company

BIKEWAY TYPE Separated Bike Lanes (Two-Way)

POLICY AREA Chevy Chase Lake

COMPLETION Under Construction as of 12/31/2020



PROJECT:

Capital Crescent Trail

LENGTH: 4.9 miles

PROJECT LEAD Maryland Transit Administration

BIKEWAY TYPE Off-Street Trail

POLICY AREA

Bethesda CBD, Bethesda/Chevy Chase, Chevy Chase Lake, Lyttonsville, Silver Spring CBD, Woodside

COMPLETION Under Construction as of 12/31/2020






PROJECT: Snouffer School Road

LENGTH: 1.5 miles

PROJECT LEAD Montgomery County Department of Transportation **BIKEWAY TYPE** Sidepath

POLICY AREA Montgomery Village / Airpark

COMPLETION Under Construction as of 12/31/2020 (now complete)



As shown in Table 6, a number of new bikeways are on the horizon. This includes 8.4 miles of bikeways that are programmed in the county's capital budget and 4.2 miles of bikeways that are conditions of development projects approved by the Montgomery County Planning Board in 2019 and 2020. This includes nearly four miles of separated bike lanes and seven miles of sidepaths. See Appendix B.5 and Appendix B.6 for a list of programmed bikeways and bikeways that will be delivered as part of development projects.

| Facility Type | Bikeway Type | Capital Projects | Development Projects | Total |
|--------------------|-------------------------------|------------------|-------------------------|-------|
| | Off-Street Trails | 0.5 | 0.1 | 0.6 |
| Trails | Stream Valley Park Trails | 0.0 | 0.0 | 0.0 |
| | Neighborhood Connectors | 0.0 | 0.1 | 0.1 |
| Separated Bikeway | Separated Bike Lanes | 1.5 | 2.5 | 3.9 |
| Separated Bikeway | Sidepaths | 5.4 | 1.2 | 6.6 |
| | Buffered Bike Lanes | 0.0 | 0.0 | 0.0 |
| Striped Bikeways | Conventional Bike Lanes | 0.6 | 0.0 | 0.6 |
| | Contra-Flow Bike Lane | 0.0 | 0.0 | 0.0 |
| Bikeable Shoulders | Bikeable Shoulders | 0.0 | 0.3 | 0.3 |
| | Shared Streets | 0.0 | 0.0 | 0.0 |
| Shared Roads | Neighborhood Greenways | 0.4 | 0.0 | 0.4 |
| | Priority Shared Lane Markings | 0.0 | 0.0 | 0.0 |
| Total | Total | 8.4 | 4.2 | 12.6 |

Table 6: Bikeways Funded in the Capital Improvements Program or to be Constructed by Developers as of 12/31/2020 (miles)

3.2 Fee-in-Lieu

While for the most part it is preferable to require a developer to construct a master-planned bikeway along their frontage, in some instances, the Planning Board determines that it is more appropriate to take a financial contribution from a developer in lieu of having the developer construct the project. The fee-in-lieu contributions in 2019 and 2020 were made by five projects and were valued at over \$185,000, or roughly \$37,000 per project.

3.3 Bikeway Prioritization

Recognizing that the network of bikeways recommended in the Bicycle Master Plan is extensive and that funding is limited, the plan establishes priorities for implementation by the county. The approach to prioritizing construction of the bikeway network is based on reaching the targets established for each metric in the Goals, Objectives, Metrics and Targets section of this plan. The priorities focus on increasing bicycling in the county as quickly as possible by focusing initial efforts on constructing networks of bikeways in places that the Montgomery County Council has designated as Bicycle and Pedestrian Priority Areas (BiPPAs), completing connections between downtowns and ensuring that low-stress bicycling is equitably distributed. Also prioritized are missing gaps in the existing low-stress bicycling network and low-cost bikeways, such as neighborhood greenways, which will funnel bicyclists to the BiPPAs.

The Bicycle Master Plan groups bikeways into four groups.

- Tier 1 projects are recommended to be substantially completed in the near-term following approval of the Bicycle Master Plan. These projects include:
 - Bikeways located in seven BiPPAs (Bethesda, Friendship Heights, Life Sciences Center, Silver Spring, Wheaton, White Flint, White Oak).
 - Neighborhood greenways feeding into these BiPPA areas.
 - Bikeways with high demand that were included in the Capital Improvements Program at the time of approval.
 - Other county priorities.

- Tier 2 projects include bikeways located in the remaining BiPPAs.
- Tier 3 projects include:
 - Remaining neighborhood greenways.
 - Highest demand bikeways located outside of the BiPPAs.
 - High demand recreational bicycling routes.
- Tier 4 projects include:
 - All remaining bikeways that are recommended for completion within the life of the plan.
 - Several heavily used recreational bicycling routes.

All other projects are not prioritized for implementation within the life of the plan but may be implemented as opportunities arise.

The Bicycle Master Plan identifies several Tier 1 projects as having the highest priority. Table 7 shows the status of implementing these high priority projects.

Table 7: Status of Highest Priority Tier 1 Bikeway Projects

| Project | From | То | Bikeway | Length (mi) | Status |
|---|-------------------|-------------------------------|--------------------------|----------------|---|
| 2nd Ave / Wayne Ave | Spring St | Georgia Ave | Separated Bike Lanes | 0.5 | Complete |
| Arlington Rd | Old Georgetown Rd | Bradley Blvd | Separated Bike Lanes | 0.7 | Not yet started |
| Bethesda Trolley Trail | Battery Ln | Rugby Ave | Off-Street Trail | 0.1 | Complete |
| Broadbirch Dr | Tech Rd | Cherry Hill Rd | Separated Bike Lanes | 0.7 | Not yet started |
| Capital Crescent Trail Breezeway | Woodmont Ave | Elm Street Park | Off-Street Trail | 0.2 | Partially Complete & Programmed |
| Cherry Hill Rd | Prosperity Dr | Prince George's Co | Separated Bike Lanes | 1.3 | Not yet started |
| | Rockville Pike | Woodglen Dr | Separated Bike Lanes | 0.1 | Not yet started |
| City of Rockville to Friendship Heights | NIH Property Line | Battery Ln | Off-Street Trail | 0.1 | Development Condition |
| Breezeway (via Bethesda Trolley | Battery Ln | Old Georgetown Rd | Separated Bike Lanes | 0.5 | Not yet started |
| Trail, Woodmont Ave and MD 355) | Old Georgetown Rd | Strathmore St | Separated Bike Lanes | 0.5 | Partially Programmed & Under Construction |
| Dixon Ave | Wayne Ave | Georgia Ave | Separated Bike Lanes | 0.3 | Programmed |
| Edgemoor Ln | Exeter Rd | Arlington Rd | Neighborhood Greenway | 0.2 | Not yet started |
| Edgemoor Ln | Arlington Rd | Bethesda Metrorail Station | Separated Bike Lanes | 0.2 | Not yet started |
| Fenton St | Ellsworth Dr | Wayne Ave | Separated Bike Lanes | 0.1 | Programmed |
| Fenton St | Wayne Ave | King St | Separated Bike Lanes | 0.6 | Programmed |
| Friendship Blvd | Willard Ave | District of Columbia | Separated Bike Lanes | 0.2 | Not yet started |
| | Blueridge Ave | University Blvd | Separated Bike Lanes | 0.2 | In Design |
| Glenmont to Silver Spring Breezeway (via Amherst Ave) | University Blvd | Windham Ln | Separated Bike Lanes | 0.7 | In Design |
| | Planning Dept | Cameron St | Separated Bike Lanes | 0.3 | Under Construction |
| Glenmont to Silver Spring Breezeway (via Fenton St) | Cameron St | Ellsworth Dr | Separated Bike Lanes | 0.5 | Programmed |
| Crandulau Aug | Blueridge Ave | University Blvd | Separated Bike Lanes | 0.1 | In Design |
| Grandview Ave | University Blvd | Reedie Dr | Separated Bike Lanes | 0.2 | In Design |
| Life Sciences Center | Key West Ave | Great Seneca Hwy | Separated Bike Lanes | 1.1 | Development Condition |
| Loop | Great Seneca Hwy | Key West Ave | Separated Bike Lanes | 0.5 | Programmed |

| Project | From | То | Bikeway | Length (mi) | Status |
|---|------------------|---------------|----------------------|----------------|--|
| Marinalli Dd | Executive Blvd | Woodglen Dr | Separated Bike Lanes | 0.2 | Not yet started |
| | Rockville Pike | Nebel St | Separated Bike Lanes | 0.4 | Programmed |
| Medical Center Dr (Outer Side) | Great Seneca Hwy | Key West Ave | Separated Bike Lanes | 0.5 | Not yet started |
| Montgomery Ave | Wisconsin Ave | East West Hwy | Separated Bike Lanes | 0.4 | Partially Programmed & Under Construction |
| Montgomery Ln | Woodmont Ave | Wisconsin Ave | Separated Bike Lanes | 0.1 | Programmed |
| Veirs Mill Road to White Oak Breezeway (via Cherry Hill Rd) | Columbia Pike | Prosperity Dr | Separated Bike Lanes | 0.1 | Not yet started |
| Woodmont Ave | Strathmore St | Wisconsin Ave | Separated Bike Lanes | 0.1 | Not yet started |





The availability of secure and convenient bicycle parking is an important factor when considering a trip by bicycle. No matter how well connected the bikeway network is, many people will forgo bicycling if their destinations lack safe places to secure their bicycles. An adequate supply of bicycle parking encourages bicycling while reducing theft and improper use of trees and street furniture for bicycle parking.

Whether traveling to work, school, shopping or home, people must feel confident that their bicycles will not be stolen or vandalized when stored. The length of time that a bicycle will be parked largely determines the level of security that is needed. The longer the time period, the more secure the bicycle parking needs to be.

The following sections review bicycle parking at public facilities, such as schools, libraries, recreation centers, and transit stations.

41 Bicycle Parking at Public Facilities

As shown in Table 8, a study conducted in 2016 for the Bicycle Master Plan compared the availability of bicycle parking spaces at each school, public library and recreation center that existed in the county at the time to the estimated need for bicycle parking. It found out of 3,700 bike spaces at these public facilities, only about 400 adhere to industry standards, such as "U" racks. The study also found approximately 3,300 spaces that need to be upgraded because they do not provide adequate security. Additionally, approximately 5,400 bike racks will need to be installed over time to meet industry standards. While this study is now five years old and some out-of-date racks have been upgraded and new racks have been added, there is still a large deficiency in bicycle parking at these public facilities. The 2016 study will be updated for the next biennial monitoring report.

| | Industry | | Existing Spaces⁴ | | Shortage | | | |
|--------------------|----------------------------------|----------|----------------------|-------|----------|----------------------|-------|--|
| Facility Type | Estimate of Need ³ | Adequate | Needs Replacement | Total | New | Needs Replacement | Total | |
| Elementary Schools | 3,832 | 162 | 1,504 | 1,665 | 2,327 | 1,504 | 3,831 | |
| Middle Schools | 1,964 | 93 | 713 | 806 | 1,179 | 713 | 1,892 | |
| High Schools | 2,528 | 40 | 701 | 741 | 1,845 | 701 | 2,546 | |
| Public Libraries | 76 | 56 | 156 | 212 | 2 | 156 | 158 | |
| Recreation Centers | 84 | 56 | 218 | 274 | 10 | 218 | 228 | |
| Total | 8,484 | 407 | 3,292 | 3,698 | 5,363 | 3,292 | 8,655 | |

Table 8: Bicycle Parking Assessment in 2016

Notes:

3 The "Industry Estimate of Need" is based off of 1 space per 20 student capacity and 1 space per 8,000 square feet of gross floor area for libraries and recreation centers.

4 Data is from a 2016 inventory of bicycle parking at public facilities.

4.2 Bicycle Parking Stations

The Bicycle Master Plan recommends bicycle parking stations all WMATA Metrorail Red Line stations and at the higher demand MARC, future Purple Line, and future Corridor Cities Transitway (CCT) stations to increase the numbers of bicyclists traveling to these transit hubs. Table 9 summarizes the status of the Tier 1 bicycle parking stations. Currently, two of the Tier 1 bicycle parking stations are advancing, including a 460-space station at the Bethesda South station and a 74-space station in Downtown Silver Spring. Additionally, the Strathmore Square development project will be constructing a 100-space bicycle parking station at the Grosvenor Metrorail station, a Tier 2 recommendation.

| Station | Long-Term Spaces | Short-Term Spaces | Status |
|------------------------|------------------|-------------------|------------------------|
| Bethesda South Station | 330 | 130 | Programmed, 460 spaces |
| Forest Glen Station | 300 | 100 | |
| Glenmont Station | 400 | 150 | |
| Shady Grove Station | 330 | 110 | |
| Silver Spring Station | 600 | 170 | In Design, 74 spaces |
| Wheaton Station | 400 | 100 | |
| White Flint Station | 250 | 50 | |

Table 9: Status of Tier 1 Bicycle Parking Stations

4.3 Short-Term and Long-Term Bicycle Parking

As shown in Table 10, progress was also made toward implementing short-term and long-term bicycle parking in the county. In particular, between 2019 and 2020 over 300 short-term bicycle parking spaces were conditioned with development approvals and 250 spaces were installed by MCDOT. Additionally, over 1,500 long-term bicycle parking spaces were conditioned with development approvals.

Table 10: Bicycle Support Facilities in 2019 and 2020

| Bicycle Support Facility | Conditioned with Development Approvals | Installed by MCDOT |
|--------------------------------|--|--------------------|
| Short-Term Bike Parking Spaces | 339 | 126 |
| Long-Term Bike Parking Spaces | 1,574 | 0 |

Bethesda Purple Line Station

The 7272 Wisconsin Ave project constructed a shell for a bicycle parking station directly adjacent to the Capital Crescent Trail and Bethesda Purple Line station. The Capital Crescent Trail Under MD 355 project will outfit the bicycle storage area within the 7272 Wisconsin Avenue building with bike racks, lighting and other finishings. The bicycle storage area will provide parking for approximately 460 bicycles. The bottom level of the bicycle storage area will be a secured, long-term, bicycle parking area with space for 330 bicycles. The upper level of the bicycle storage area will be an unsecured, short-term, bicycle parking area with space for 330 bicycles.



BICYCLE-SUPPORTIVE PROGRAMS

The Bicycle Master Plan recommends 12 bicycle-supportive programs. Progress has been made in all but four of them (see Table 11).

Table 11: Status of Program Recommendations

| Progr | am Recommendation | Lead Agency | Progress | Status | Recommended Timeframe |
|-------|--|----------------|---|-----------------------|--------------------------|
| 2.1 | Bikeways Program – Minor Projects: Fund Neighborhood Connectors | MCDOT | The Bikeways Program - Minor Projects (507596) project includes funds that can be used to implement Neighborhood Connector projects. | Ongoing | Short Term |
| 2.2 | Roadway and Bikeway Related Maintenance | MCDOT | | Not yet started | Medium Term |
| 2.3 | Snow Removal / Wind / Rain Storms | MCDOT | | Not yet started | Medium Term |
| 2.4 | Resurfacing: Primary/ Arterial AND Sidewalk & Curb Replacement | MCDOT | | Not yet started | Medium Term |
| 3.1 | BikeMontgomery Outreach Program | MCDOT | A bicycle-focused outreach program has not yet been initiated. | Not yet started | Medium Term |
| 3.2 | Bicycle Master Plan Monitoring Report | Planning | The first biennial monitoring report has been published. | Ongoing | Ongoing |
| 3.3 | Neighborhood Greenway Program | MCDOT | The Bikeways Program - Minor Projects (507596) project includes funds that can be used to implement Neighborhood Connector projects. The Aspen Hill Neighborhood Greenway project is in design and the Grove St Neighborhood Greenway project is under construction. | Ongoing | Short Term |
| 3.4 | Bicycle Parking Program | MCDOT | MCDOT installed 22 bike racks in 2019 and 41 bike racks in 2020, for a total of 63 bike racks (or 126 spaces). Secure bike parking is in design for the Bethesda Purple Line Station, Downtown Silver Spring and the Grosvenor Metrorail Station. | Ongoing | Short Term |
| 3.5 | Public School Bicycle Education | MCPS | In Spring 2019, the Department of Recreation initiated the "Excel Beyond the Bell Program" pilot to train elementary school students on how to ride a bike. The pilot program trained 50 third graders at Oak View ES. In spring 2021, the program trained 80 students at South Lake ES and JoAnn Leleck ES. Additional schools will be added in the 2021-2022 school year. Over time, it is hoped that MCPS will add a more comprehensive bicycle training program to their PE curriculum. | Ongoing | Medium Term |
| 3.6 | Bicycle Facility Education | MCDOT | MCDOT initiated the "Lookout" campaign to educate residents on new bicycle facilities. | Ongoing | Short Term |
| 3.7 | Bicycle Count Program | MCDOT | Montgomery County currently has seven permanent bicycle counters, of which six are maintained by the Parks Department and one is maintained by MCDOT. The county has plans to implement 16 additional permanent counters, 11 by MCDOT and five by the Parks Department. See: bikearlington.com/counter- data/ | Ongoing | Short Term |
| 3.8 | Countywide Wayfinding Plan | MCDOT | The Planning Department initiated the Bikeway Branding Project in August 2021. This project will develop a branding and wayfinding approach for Neighborhood Greenways and Breezeways. | Partially Complete | Medium Term |



Program 3.5: Public School Bicycle Education

The Public School Bicycle Education program recommends incorporating bicycle training and safety curricula into the Montgomery County public school system, including elementary, middle, and high schools.

In Spring 2019, the Department of Recreation initiated the Excel Beyond the Bell Program pilot to train elementary school students on how to ride a bike. The pilot program trained 50 third graders at Oak View Elementary School.

Source: Washington Area Bicyclists Association



Program 3.7: Bicycle Count Program

The Bicycle Count Program recommends conducting pre- and post-implementation studies of new bicycle infrastructure projects to track the frequency at which they are being used. Under this program, permanent bicycle counters are installed at key locations to track the growth of bicycling over time. Annual counts of bicyclists are collected at multiple locations and counts at locations of high crash rates are monitored. Data collected from this initiative will be posted online.

Montgomery County currently has seven permanent bicycle counters, of which six are maintained by the Parks Department and one is maintained by MCDOT. The county has plans to implement 16 additional permanent counters, 11 by MCDOT and five by the Parks Department.







BICYCLE-SUPPORTIVE LEGAL & POLICY FRAMEWORK

The Bicycle Master Plan recommends 22 bicycle-supportive legal and policy recommendations. Substantial progress has been made in all but five of them (see Table 12).

Table 12: Status of Policy Recommendations

| Policy | Recommendation | Lead Agency | Progress | Status | Recommended Timeframe |
|--------|---|---------------------|---|-----------------------|--------------------------|
| 2.1 | Authorize Lower Posted Speed Limits | MCG | Approved as part of House Bill 562 on May 30, 2021. Authorizes Montgomery County and municipalities of Montgomery County to decrease the maximum speed limit to not less than 15 miles per hour on highways only after performing an engineering and traffic investigation. Posted speed limits of 10 mph not yet authorized on shared streets. | Partially Complete | Ongoing |
| 2.2 | Repeal the Mandatory Use Law (requires bicyclists to ride in marked bike lanes) | MCG | | Not yet started | Ongoing |
| 2.3 | Conduct a "Rules of the Road" Assessment | Multiple | | Not yet started | Short Term |
| 2.4 | Replace the State's Marked Bike Lane Policy | MCG | While the state's marked bike lane policy remains in effect, MDOT/SHA's Context Driven 1.0 guide permits protected bicycle lanes to be evaluated in areas defined as urban contexts (Bethesda, Rockville, Silver Spring and Wheaton). | Partially Complete | Ongoing |
| 2.5 | Develop a County Policy on E-Bikes | MCG | The Parks Department issued a Park Directive on March 25, 2021 permitting the use of electric bicycles and electric scooters on hard surface trails located on parkland owned or controlled by M-NCPPC in Montgomery County, except where expressly prohibited and posted. | Partially Complete | Short Term |
| 2.6 | Establish Level of Traffic Stress Targets | Planning / MCDOT | Established in Growth and Infrastructure Policy for development projects on November 16, 2020. Not yet established for capital projects. | Partially Complete | Short Term |
| 2.7 | Update Context Sensitive Road Design Standards | MCDOT | The draft Complete Streets Design Guide was submitted to County Council for review on July 29, 2021. | Partially Complete | 11/2019 |
| 2.8 | Compare all Designed Projects Against Best Practices | MCDOT | MCDOT is refreshing the Falls Road Bikeway and Pedestrian Facility project (500905), the Seven Locks Bikeway and Safety Improvements project (501303) and the Bradley Boulevard Improvements project (501733) to reflect best practices. | Partially Complete | Short Term |
| 2.9 | Make Separated Bikeways the Preferred Bikeway Facility Type | MCDOT | The Complete Streets Design Guide was submitted to County Council for review on July 29, 2021. It includes recommendation to make separated bike lanes and sidepaths the default bikeway type on all street types except neighborhood streets (Neighborhood Connectors, Neighborhood Streets and Neighborhood Yield Streets). | Partially Complete | Short Term |
| 2.10 | Extending Separated Bike Lanes Through Intersections | MCDOT | The Complete Streets Design Guide was submitted to County Council for review on July 29, 2021. Protected intersections are required at all intersections with existing or planned separated bike lanes, sidepaths, buffered bike lanes, or conventional bike lanes. The first protected intersection was completed in September 2020 at the intersection of Spring St and 2nd Ave in Downtown Silver Spring. | Partially Complete | Short Term |

| Policy | Recommendation | Lead Agency | Progress | Status | Recommended Timeframe |
|--------|--|---------------------------|---|-----------------------|--------------------------|
| 2.11 | Consolidate Driveways along Master-Planned Bikeways | MCG | The Planning Department's access management study began in July 2021 and will propose changes to access management policies. Upon completion of the study, changes to the county code and executive regulations may be needed. | Partially Complete | Short Term |
| 2.12 | Develop a Shared Lane Marking Policy | MCDOT / SHA | The Complete Streets Design Guide will need to explicitly state that shared lane markings are only appropriate where the Bicycle Master Plan recommends a Neighborhood Greenways or Priority Shared Lane Markings. They may be appropriate on Neighborhood Streets and Neighborhood Yield Streets. | Not yet started | Short Term |
| 2.13 | Develop Bicycle Parking Standards for County Facilities | MCDGS | The Montgomery County, Maryland Building Design Standards: Planning, Design & Construction of Public Facilities, Version 2020-7, requires the use of "U" racks on county properties. | Complete | Short Term |
| 2.14 | Reassess Road Code Urban Area Boundaries | Planning | Approved as part of the amendment to the Master Plan of Highways and Transitways in December 2018. | Complete | Short Term |
| 2.15 | Establish Standards for Trail Crossings at Major Roads | MCDOT / Parks / SHA | Since 2018, the Parks Department has upgraded between eight and 12 park trail crossings each year as part of its Vision Zero efforts. Upgrades have targeted the highest priority crossings, based on speed limit, number of lanes of traffic, lack of existing traffic control devices, trail usage and complaints. | Ongoing | Short Term |
| 2.16 | Develop Protocols for Bicycle Facility Closures and Detours | MCDOT | Bill 38-19 signed into law on March 27, 2020 requires the Executive to adopt regulations regarding permits to close shared use paths in the public rights-of-way, among other things. | Complete | Short Term |
| 2.17 | School Site Selection | MCPS | | Not yet started | Short Term |
| 2.18 | Enable Traffic Calming and Access Restrictions on Neighborhood Greenways | MCDOT | MCDOT staff has determined that this policy change is not needed. Design efforts are underway as part of Aspen Hill and Grove Street neighborhood greenway projects that will pilot traffic calming and access restrictions for assessment. | Complete | Short Term |
| 2.19 | Update the Zoning Code (Bicycle Parking Requirements) | Planning | ZTA 19-08 was adopted by the Council on July 21, 2020. | Complete | Short Term |
| 2.20 | Revise the Bicycle to School Policy | MCPS | MCPS principals retain the authority to determine when students can bicycle to school. | Not yet started | Short Term |
| 2.21 | Abandonments | MCDOT | No action is necessary. | Complete | Short Term |
| 2.22 | Loading Zones | Planning | Urban Loading and Delivery Management Study completed in September 2021. The Vision Zero Action Plan recommends implementing the recommendations of the study in Fiscal Year 2023. | Partially Complete | Short Term |

Other Legislation that Impacts Bicycling:

• Senate Bill 726, passed in 2021, permits personal delivery devices to use footpaths and bicycle trails.



Policy 2.1: Authorize lower posted speed limits.

This policy recommends that the county petition the Maryland General Assembly to lower the default speed limit to 25 mph on all highways in a business district and undivided highways in a residential district in Montgomery County. It also recommends reducing the lowest possible speed limit to 10 mph on shared streets and 20 mph on neighborhood greenways in Montgomery County.

House Bill 562 was approved on May 30, 2021 and authorizes Montgomery County and municipalities of Montgomery County to decrease the maximum speed limit to not less than 15 miles per hour on highways, only after performing an engineering and traffic investigation.

The Montgomery County Department of Transportation (MCDOT) launched the Vision Zero pilot program "20 is Plenty" on June 17, 2021. The program will lower speed limits to 20 miles per hour on targeted streets to promote safer roadways for pedestrians and bicyclists.

Source: Montgomery County Department of Transportation

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STREETS

Policy 2.7: Update Context-Sensitive Road Design **Standards**

This policy recommends updating Montgomery County's context-sensitive road design standards to include all bicycle facility types outlined in the Bicycle Facility Toolkit. These types include separated bike lanes, buffered bike lanes, advisory bike lanes, neighborhood greenways, shared streets, and protected intersections. Obsolete bikeways, such as wide outside lanes, should be removed from the standards. Out-of-date bikeway applications, including conventional bike lanes on major highways, arterials and minor arterials, should likewise be removed from the standards.

The Complete Streets Design Guide was submitted to County Council for review on July 29, 2021 and includes all bikeway types in the Bicycle Master Plan. Future efforts are needed to update design standards for each of these bikeway types.

RECOMMENDATIONS

AUI

Implementation of the Bicycle Master Plan continues to ramp up as more and more bikeways are funded for design and construction, bicycle parking is installed, and programmatic and policy changes are implemented to support bicycling. Looking to the coming years, the monitoring report provides the opportunity to offer recommendations to address some of the challenges that have arisen since the plan was approved and to provide recommendations on how to proceed over the coming years. This section presents nine recommendations that are related to bicycle facilities, bicycle standards and toolkits, and monitoring. While fiscal capacity may limit the county's ability to implement all of the recommendation in the next two years, the following recommendations should be considered as implementation of the Bicycle Master Plan proceeds.

7.1 Bicycle Facilities

Recommendations to implement bicycle facilities should continue to focus on constructing highpriority bikeways and bicycle parking stations, to install bike racks at public schools, libraries and recreation centers and to require county agencies to install bicycle and pedestrian infrastructure as part of new construction and renovation projects.

High Priority Bikeways

Substantial progress has been made on funding and constructing bikeway projects since the Bicycle Master Plan was approved in December 2018, many of which were identified by the Bicycle Master Plan (page 154) as high priorities. Every few years the Bicycle Master Plan supports reevaluating these priorities, stating that "the bikeway and bicycle parking station prioritization in this plan are guidelines based on the best available information at the time the plan was approved by the Montgomery County Council. This prioritization should be reassessed every few years based on available resources, lessons learned and to ensure consistency with the goals of the plan and to ensure continuity of the bicycling network." The bikeways shown in Table 13 should be considered as part of the next round of bikeway projects, upon completion of the projects currently included in the Capital Improvements Program⁵. These include projects that are:

- in the Capital Improvements Program but that do not have construction funding;
- on the Bicycle Master Plan's (page 15) high-priority list that have not yet been funded;
- temporary neighborhood greenways initiated as part of the Shared Streets program that should be upgraded to permanent neighborhood greenways; and,
- projects located in Equity Focus Areas, which, as Table 2 (Objective 3.1) showed, have only about 89% of the low-stress connectivity that non-EFA's experience.

Recommendation: Prioritize construction of the bikeway projects in Table 13 to improve connectivity to downtowns, upgrade the county's temporary neighborhood greenways to permanent neighborhood greenways, and improve access to low-stress bicycling in Equity Focus Areas.

5. At the time or writing, the following were standalone projects in the Capital Improvements Program: Bradley Boulevard (MD 191) Improvements, Dale Drive Shared Use Path and Safety Improvements, Dixon Lane Separated Bike Lanes, Fenton Street Cycletrack, Good Hope Road Shared Use Path, Goldsboro Road Sidewalk and Bikeway, MacArthur Blvd Bikeway Improvements, MD 355 – Clarksburg Shared Use Path, Metropolitan Branch Trail.

Table 13: High Priority Projects for Next Few Years

| STREET | FROM | то | BIKEWAY | Tier | Rationale |
|---|-------------------------|-------------------------------|--------------------------|------|---|
| 13th St / Burlington Ave | District of Columbia | Fenton St | Separated Bike Lanes | 1 | Tier 1 |
| Arlington Rd | Old Georgetown Rd | Bradley Blvd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Broadbirch Dr | Tech Rd | Cherry Hill Rd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Cherry Hill Rd | Prosperity Dr | Prince George's County | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| City of Rockville to Friendship Heights | Rockville Pike | Woodglen Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Breezeway | Battery Ln | Old Georgetown Rd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| (via Bethesda Trolley Trail, Woodmont Ave and MD 355) | Old Georgetown Rd | Strathmore Ave | Separated Bike Lanes | 1 | Complete from Old Georgetown Rd to Montgomery Ln |
| Edanmanyla | Exeter Rd | Arlington Rd | Neighborhood Greenway | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Edgemoor Ln | Arlington Rd | Bethesda Metrorail Station | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Flower Ave to University Blvd (via Domer Ave) | Flower Ave | University Blvd | Neighborhood Greenway | 1 | Advance for equity |
| Franklin Ave - Arliss St (via Sudbury Rd) | Franklin Ave | Arliss St | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Friendship Blvd | Willard Ave | District of Columbia | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Glenmont to Silver Spring Breezeway (via Grandview Ave) | Georgia Ave | Arcola Ave | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Glenmont to Silver Spring Breezeway | Columbia Blvd | Spring St | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| (via woodland Dr) | Arcola Ave | Blueridge Ave | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Grandview Ave | Blueridge Ave | University Blvd | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| | University Blvd | Reedie Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Creanwood Are | Piney Branch Rd | Wabash Ave | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Greenwood Ave | Wabash Ave | Division St | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |

| STREET | FROM | то | BIKEWAY | Tier | Rationale |
|--|-------------------------|---------------------------|--------------------------|------|---|
| Crubb Dd / Luttensville Dd | Brookville Rd | Lyttonsville Pl | Separated Bike Lanes | 1 | Advance for equity |
| Grubb ka / Lyttonsville ka | Lyttonsville Rd | | Separated Bike Lanes | 1 | Advance for equity |
| Marinelli Rd | Executive Blvd | Woodglen Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Olney to Glenmont Breezeway (via Holdridge Rd) | Matthew Henson Trail | Georgia Ave | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Selfridge Rd | Aspen Hill Rd | Veirs Mill Rd | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Veirs Mill Road to White Oak Breezeway (via Cherry Hill Rd) | Columbia Pike | Prosperity Dr | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Wayne Ave - Philadelphia Ave (via Grove St / Woodbury Dr) | Wayne Ave | Philadelphia Ave | Neighborhood Greenway | 1 | Tier 1 MCDOT Temporary Neighborhood Greenway |
| Woodmont Ave | Strathmore Ave | Wisconsin Ave | Separated Bike Lanes | 1 | Tier 1 carryover from Bicycle Master Plan High Priority list |
| Veirs Mill Rd (MD 586) | Glorus Pl | Veirs Mill Rd | Neighborhood Greenway | 1 | Tier 1 Neighborhood Greenway |
| Bowie Mill Rd | Muncaster Mill Rd | Olney- Laytonsville Rd | Sidepath | 2 | Tier 2 unfunded project in the CIP |
| Briggs Chaney Rd (North Side) | Old Columbia Pike | ICC Trail | Sidepath | 3 | Advance for equity |
| Castle Blvd | Castle Ridge Cir | Briggs Chaney Rd | Separated Bike Lanes | 3 | Advance for equity |
| Germantown Rd (North Side) | Clopper Rd | Middlebrook Rd | Sidepath | 2 | Advance for equity |
| | Wightman Rd | Stewartown Rd | Sidepath | n/a | Advance for equity |
| Montgomery Village Ave | Stewartown Rd | Stedwick Rd | Sidepath | 4 | Advance for equity |
| (East Side) | Stedwick Rd | Midcounty Hwy | Sidepath | 3 | Advance for equity |
| | Midcounty Hwy | City of Gaithersburg | Sidepath | 3 | Advance for equity |
| Dinov Pranch Dd (MD 220) | University Blvd | Carroll Ave | Separated Bike Lanes | 2 | Advance for equity |
| Filley dialicii Ku (MD 320) | Carroll Ave | Prince George's County | Separated Bike Lanes | 2 | Advance for equity |
| Scenery Dr | Germantown Rd | Frederick Rd (MD 355) | Sidepath | n/a | Advance for equity |

Bicycle Parking at Public Facilities

Based on a 2016 survey, over 8,600 bicycle parking spaces are needed at public schools, public libraries and recreation centers; the vast majority are needed at schools. As shown in Table 14, the estimated cost to upgrade and expand bicycle parking at these public facilities is over \$3.6 million. While the cost of installing bike racks is high, another challenge will be identifying appropriate places to install them.

Recommendation: Upgrade deficient bike racks at all public libraries and recreation centers over the next two years and expand and upgrade bicycle parking availability at all public schools over a ten-year period.

| Facility Type | Bicycle Racks Needed | Estimated Cost |
|--------------------|----------------------|----------------|
| Elementary Schools | 3,831 | \$1,566,000 |
| Middle Schools | 1,892 | \$788,000 |
| High Schools | 2,546 | 1,188,000 |
| Public Libraries | 158 | \$18,000 |
| Recreation Centers | 228 | \$30,000 |
| Total | 8,655 | \$3,590,000 |

Table 14: Estimated Cost to Address Bicycle Parking Needs at Public Facilities

High Priority Bicycle Parking Stations

The Bicycle Master Plan recommends bicycle parking stations at all WMATA Metrorail Red Line stations and at the higher demand MARC, future Purple Line and Corridor Cities Transitway (CCT) stations to increase the numbers of bicyclists traveling to these transit hubs. Currently, bicycle parking stations are funded at the Bethesda Purple Line station and Silver Spring Transit Center. A developer will also provide a station at the Grosvenor Metrorail station. An additional bicycle parking station should be pursued at the Glenmont Metrorail station, as this station is in an Equity Focus Area, has a large catchment area as an end-of-theline station and is already connected to much of the surrounding community by low-stress bicycling.

Recommendation: Develop the organizational capacity to operate bicycle parking stations at the Bethesda Purple Line station and Silver Spring Transit Center and construct a bicycle parking station at the Glenmont Metrorail station.

Bikeways Constructed as Part of New Construction and Renovation of Public Facilities

In some instances, public facilities – especially public schools – are constructed or undergo major renovation without upgrading the walking and bicycling infrastructure on their frontage.

Recommendation: All new public buildings, as well as major renovations, should be required to design and construct bikeways and walkways recommended in master plans and the Complete Streets Design Guide that are along their frontage, and dedicate right-of-way to do so where required. The cost required to design and construct required facilities should be integrated into the budget for new public buildings and major renovations.

7.2 Bicycle Standards and Toolkits

A focus on implementing bikeways is insufficient if the standards do not represent best practices. Therefore, the county should focus on developing bicycle design standards and toolkits.

Develop Design Standards for Bicycle Facilities

A challenge for successfully implementing the Bicycle Master Plan's vision is a lack of design standards for bicycle facilities. While the Bicycle Master Plan include a bikeways toolkit and the Complete Streets Design Guide also provides guidance, specific design standards are still needed for certain components of the bicycling network. Therefore, MCDOT, in partnership with the Planning Department, should develop comprehensive design standards for bicycle facilities included in Montgomery Planning's Bicycle Facility Design Toolkit and the Complete Streets Design Guide. Among other things, this includes:

- Protected intersections
- Pavement standards for breezeways and sidepaths
- Standards for creating a world-class network of separated bike lanes
- Dimensions for sidepaths on bridges
- Treatments for separated bike lanes crossing driveways

Recommendation: Develop comprehensive design standards for bicycle facilities.

Neighborhood Greenway Toolkit

The Bicycle Master Plan designates over 80 streets as neighborhood greenways, which are streets with low motorized traffic volumes and speeds, designed and designated to give priority to those walking and bicycling through a combination of signage, pavement markings, and traffic calming to create safe and convenient roadways. As a result of the COVID-19 pandemic, MCDOT launched the Shared Streets program which included adding signage and barriers to several of the neighborhood Greenways as temporary neighborhood greenways. Given the popularity of the temporary neighborhood greenways and a desire to make these routes more permanent, more quickly, a Neighborhood Greenway Design Toolkit is needed to guide and accelerate design and implementation across different neighborhoods and roadway conditions. This action is also recommended in the Vision Zero 2030 Action Plan.

Recommendation: Develop a Neighborhood Greenway Toolkit.

7.3 Monitoring

New metrics that focus on equity and new data sources are required to conduct an effective monitoring program for the Bicycle Master Plan.

Equity Metrics

The Bicycle Master Plan was the first master plan to include equity as a measurable goal. The plan assesses equity by reviewing the availability of lowstress bicycle accessibility in EFAs compared to the rest of the county. As part of this monitoring report, two equity metrics were added: the availability of lowstress bicycle accessibility to public schools serving equity populations and the percentage of trafficrelated serious injuries and fatalities among bicyclists by EFA. Moving forward, the monitoring report will endeavor to evaluate and compare low-stress bicycle accessibility to other public facilities, such transit stations, libraries, and recreation centers inside and outside EFAs.

Recommendation: Continue to expand the equity metrics evaluated as part of the Bicycle Master Plan Biennial Monitoring Report.

Changes to Evaluation Metrics

Data sources that were available during the development of the Bicycle Master Plan generally focused on bicycling as part of the commute to work. However, travel to work represents only about 20% of all trips, so a more nuanced understanding of travel by bicycle is needed to track changes in travel behavior and attitudes. To capture this information, a biennial travel survey is proposed to monitor implementation of both the Bicycle Master Plan and the forthcoming Pedestrian Master Plan. This survey will require biennial funding from the council.

Recommendation: Fund and conduct a biennial travel monitoring survey to measure travel behavior and attitudes toward walking and bicycling.

Target Bicycling Rates

While most metrics in the Bicycle Master Plan include target rates, a few metrics did not because they lacked baseline data, including Objective 1.2 (Bicycling Rates to Transportation Management Districts) and Objective 1.4 (Bicycling Rates to School). As bicycling-to-school data is now available from a survey of student travel patterns to Montgomery County Public Schools, it is now possible to establish targets for this objective. For Transportation Management Districts (TMDs), a rate that is slightly higher than the target 8% bicycle commute rate (Objective 1.1), but proportional to the Non-Auto Driver Mode Share (NADMS) is appropriate, as bicycling is more likely to occur in these areas.

Recommendation: Establish targets of 10% of students bicycling to school and 10% of commuters bicycling to jobs in the North Bethesda, Greater Shady Grove and White Oak TMDs, 12% to the Friendship Heights TBD and 15% to the Bethesda and Silver Spring TMDs upon completion of Tier 4 of the plan.







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A.1 Bicycling Rates to Transportation Management Districts

Table 15: Objective 1.2: Percentage of people who commute by bicycle to a Transportation Management District

| Transportation Management District | 2018 | 2020 |
|------------------------------------|------|------|
| Downtown Bethesda | 0.7% | 0.8% |
| Downtown Silver Spring | 1.4% | 1.8% |
| Friendship Heights | 1.4% | 0.4% |
| Greater Shady Grove | 1.5% | 0.0% |
| North Bethesda | 1.0% | 0.3% |
| White Oak | N/A | N/A |

A.2 Bicycling Rates to Elementary Schools

Table 16: Objective 1.4: Percentage of elementary school students who bicycle to school

| School | # of Bike Riders | # of Responses | Bike-to-School Rate |
|-----------------------|------------------|----------------|---------------------|
| Arcola | n/a | n/a | |
| Ashburton | 2 | 663 | 0% |
| Bannockburn | 13 | 361 | 4% |
| Bayard Rustin | 7 | 289 | 2% |
| Bel Pre | 3 | 415 | 1% |
| Bells Mill | 30 | 555 | 5% |
| Belmont | 27 | 323 | 8% |
| Bethesda | 11 | 159 | 7% |
| Beverly Farms | 2 | 268 | 1% |
| Bradley Hills | 30 | 330 | 9% |
| Brooke Grove | n/a | n/a | |
| Brookhaven | 5 | 244 | 2% |
| Burning Tree | 8 | 261 | 3% |
| Burnt Mills | n/a | n/a | |
| Burtonsville | 11 | 229 | 5% |
| Candlewood | 5 | 318 | 2% |
| Cannon Road | 5 | 199 | 3% |
| Captain James E. Daly | 7 | 495 | 1% |
| Carderock Springs | 12 | 144 | 8% |
| Cashell | 4 | 146 | 3% |
| Cedar Grove | 1 | 311 | 0% |
| Chevy Chase | 22 | 444 | 5% |

| School | # of Bike Riders | # of Responses | Bike-to-School Rate |
|-----------------------------|------------------|----------------|---------------------|
| Clarksburg | 2 | 560 | 0% |
| Clearspring | n/a | n/a | |
| Clopper Mill | 7 | 262 | 3% |
| Cloverly | n/a | n/a | |
| Cold Spring | n/a | n/a | |
| Cresthaven | n/a | n/a | |
| Damascus | 1 | 237 | 0% |
| Darnestown | n/a | n/a | |
| Dr. Charles R. Drew | n/a | n/a | |
| Dr. Sally K. Ride | 10 | 120 | 8% |
| DuFief | 10 | 142 | 7% |
| East Silver Spring | n/a | n/a | |
| Fairland | 10 | 276 | 4% |
| Farmland | 8 | 368 | 2% |
| Fields Road | 3 | 321 | 1% |
| Flora M. Singer | n/a | n/a | |
| Flower Hill | 7 | 384 | 2% |
| Flower Valley | n/a | n/a | |
| Forest Knolls | 9 | 576 | 2% |
| Fox Chapel | 5 | 497 | 1% |
| Galway | 2 | 122 | 2% |
| Garrett Park | 21 | 658 | 3% |
| Georgian Forest | 3 | 331 | 1% |
| Germantown | 3 | 63 | 5% |
| Glen Haven | 11 | 402 | 3% |
| Glenallan | 13 | 226 | 6% |
| Goshen | 5 | 200 | 3% |
| Great Seneca Creek | n/a | n/a | |
| Greencastle | 7 | 312 | 2% |
| Greenwood | 3 | 90 | 3% |
| Harmony Hills | 4 | 409 | 1% |
| Highland | 9 | 359 | 3% |
| Highland View | n/a | n/a | |
| Jackson Road | 8 | 567 | 1% |
| JoAnn Leleck at Broad Acres | n/a | n/a | |
| Jones Lane | n/a | n/a | |
| Judith A. Resnik | 7 | 268 | 3% |
| Kemp Mill | 1 | 257 | 0% |
| Kensington Parkwood | n/a | n/a | |
| Lake Seneca | 11 | 327 | 3% |
| Laytonsville | 5 | 303 | 2% |
| Little Bennett | 8 | 457 | 2% |
| Lois P. Rockwell | 2 | 286 | 1% |
| Lucy V. Barnsley | 6 | 689 | 1% |
| Luxmanor | 8 | 197 | 4% |

| School | # of Bike Riders | # of Responses | Bike-to-School Rate |
|-----------------------|------------------|----------------|---------------------|
| Mill Creek Towne | 5 | 357 | 1% |
| Monocacy | 1 | 139 | 1% |
| Montgomery Knolls | 4 | 323 | 1% |
| New Hampshire Estates | 7 | 217 | 3% |
| North Chevy Chase | 8 | 229 | 3% |
| Oak View | 5 | 344 | 1% |
| Oakland Terrace | n/a | n/a | |
| Olney | 12 | 382 | 3% |
| Pine Crest | 3 | 257 | 1% |
| Piney Branch | 36 | 262 | 14% |
| Poolesville | 10 | 216 | 5% |
| Potomac | 3 | 315 | 1% |
| Rock Creek Forest | 8 | 517 | 2% |
| Rock Creek Valley | 6 | 154 | 4% |
| Rock View | 10 | 563 | 2% |
| Rolling Terrace | n/a | n/a | |
| Ronald McNair | 28 | 454 | 6% |
| Roscoe R. Nix | 6 | 214 | 3% |
| Rosemary Hills | 3 | 404 | 1% |
| S. Christa McAuliffe | 7 | 472 | 1% |
| Sargent Shriver | 7 | 623 | 1% |
| Sequoyah | 5 | 335 | 1% |
| Seven Locks | 1 | 126 | 1% |
| Sherwood | 1 | 216 | 0% |
| Sligo Creek | 18 | 463 | 4% |
| Snowden Farm | 11 | 355 | 3% |
| Somerset | 29 | 489 | 6% |
| South Lake | n/a | n/a | |
| Spark M. Matsunaga | n/a | n/a | |
| Stedwick | n/a | n/a | |
| Stone Mill | n/a | n/a | |
| Stonegate | 4 | 350 | 1% |
| Strathmore | 4 | 396 | 1% |
| Strawberry Knoll | 2 | 166 | 1% |
| Takoma Park | 5 | 482 | 1% |
| Thurgood Marshall | 4 | 502 | 1% |
| Travilah | 1 | 93 | 1% |
| Viers Mill | n/a | n/a | |
| Washington Grove | 3 | 168 | 2% |
| Waters Landing | n/a | n/a | |
| Watkins Mill | n/a | n/a | |
| Wayside | 3 | 435 | 1% |
| Weller Road | 17 | 155 | 11% |
| Westbrook | n/a | n/a | |
| Westover | 10 | 219 | 5% |

| School | # of Bike Riders | # of Responses | Bike-to-School Rate |
|----------------------|------------------|----------------|---------------------|
| Wheaton Woods | 6 | 221 | 3% |
| Whetstone | n/a | n/a | |
| William B. Gibbs Jr. | 9 | 103 | 9% |
| William Tyler Page | 8 | 422 | 2% |
| Wilson Wims | 15 | 663 | 2% |
| Wood Acres | 9 | 476 | 2% |
| Woodfield | n/a | n/a | |
| Woodlin | n/a | n/a | |
| Wyngate | n/a | n/a | |
| Total | 748 | 29,697 | 3% |

A.3 Bicycling Rates to Middle Schools

Table 17: Objective 1.4: Percentage of middle school students who bicycle to school

| School | # of Bike Riders | # of Responses | Bike-to-School Rate |
|-----------------------------|------------------|----------------|---------------------|
| A. Mario Loiederman | 5 | 782 | 1% |
| Argyle | 2 | 671 | 0% |
| Benjamin Banneker | 6 | 635 | 1% |
| Briggs Chaney | 5 | 531 | 1% |
| Cabin John | 6 | 898 | 1% |
| Col. E. Brooke Lee | 6 | 394 | 2% |
| Dr. Martin Luther King Jr. | 2 | 614 | 0% |
| Earle B. Wood | 1 | 779 | 0% |
| Eastern | n/a | n/a | |
| Francis Scott Key | 0 | 632 | 0% |
| Hallie Wells | 40 | 789 | 5% |
| Herbert Hoover | 9 | 856 | 1% |
| John Poole | 12 | 358 | 3% |
| John T. Baker | n/a | n/a | |
| Kingsview | 17 | 808 | 2% |
| Montgomery Village | 11 | 575 | 2% |
| Neelsville | 0 | 142 | 0% |
| Newport Mill | n/a | n/a | |
| North Bethesda | 41 | 1,083 | 4% |
| Parkland | 3 | 1,054 | 0% |
| Redland | 1 | 495 | 0% |
| Ridgeview | 4 | 574 | 1% |
| Roberto W Clemente | n/a | n/a | |
| Rocky Hill | 1 | 747 | 0% |
| Rosa Parks | 20 | 756 | 3% |
| Shady Grove | 1 | 492 | 0% |
| Silver Creek | 15 | 739 | 2% |
| Silver Spring International | 36 | 814 | 4% |
| Sligo | n/a | n/a | |
| Takoma Park | 18 | 467 | 4% |
| Thomas W. Pyle | 43 | 516 | 8% |
| Tilden | n/a | n/a | |
| Westland | 12 | 599 | 2% |
| White Oak | n/a | n/a | |
| William H. Farquhar | 2 | 576 | 0% |
| Total | 319 | 18,376 | 2% |

A.4 Bicycling Rates to High Schools

Table 18: Objective 1.4: Percentage of high school students who bicycle to school

| School | # of Bike Riders | # of Responses | Bike-to-School Rate |
|----------------------|------------------|----------------|---------------------|
| Albert Einstein | 4 | 995 | 0% |
| Bethesda-Chevy Chase | 103 | 911 | 11% |
| Blake | 0 | 571 | 0% |
| Clarksburg | 7 | 1,460 | 0% |
| Damascus | 1 | 1,041 | 0% |
| Kennedy | 2 | 1,090 | 0% |
| Magruder | 6 | 984 | 1% |
| Montgomery Blair | n/a | n/a | |
| Northwest | n/a | n/a | |
| Northwood | 13 | 946 | 1% |
| Paint Branch | 2 | 984 | 0% |
| Poolesville | 15 | 612 | 2% |
| Quince Orchard | 30 | 934 | 3% |
| Seneca Valley | n/a | n/a | |
| Sherwood | 5 | 1,495 | 0% |
| Springbrook | 10 | 547 | 2% |
| Walter Johnson | 32 | 1,582 | 2% |
| Watkins Mill | n/a | n/a | |
| Wheaton | 8 | 749 | 1% |
| Whitman | 48 | 1,587 | 3% |
| Winston Churchill | n/a | n/a | |
| Total | 286 | 16,488 | 2% |

A.5 Countywide Connectivity

Table 19: Objective 2.1: Percentage of potential bicycle trips that will be able to be made on a low-stress bicycling network by policy area

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|----------------------------|---------|---------|----------------------------------|----------------------------------|---------|
| Aspen Hill | 19% | 20% | 20% | 20% | 75% |
| Bethesda CBD | 3% | 4% | 6% | 12% | 74% |
| Bethesda/Chevy Chase | 21% | 22% | 25% | 28% | 84% |
| Burtonsville Town Center | 3% | 3% | 3% | 3% | 95% |
| Chevy Chase Lake | 0% | 1% | 27% | 28% | 78% |
| Clarksburg | 15% | 16% | 24% | 28% | 70% |
| Clarksburg Town Center | 19% | 24% | 26% | 50% | 59% |
| Cloverly | 10% | 10% | 10% | 11% | 87% |
| Damascus | 20% | 20% | 20% | 20% | 74% |
| Derwood | 4% | 4% | 4% | 4% | 59% |
| East Purple Line | 27% | 27% | 32% | 35% | 90% |
| Fairland/Colesville | 15% | 15% | 15% | 15% | 90% |
| Forest Glen | 23% | 23% | 23% | 24% | 91% |
| Friendship Heights | 1% | 1% | 1% | 1% | 79% |
| Germantown East | 19% | 19% | 20% | 20% | 77% |
| Germantown Town Center | 12% | 15% | 16% | 16% | 87% |
| Germantown West | 19% | 21% | 21% | 21% | 83% |
| Glenmont | 17% | 17% | 17% | 17% | 94% |
| Grosvenor | 4% | 4% | 4% | 4% | 76% |
| Kensington/Wheaton | 23% | 24% | 24% | 25% | 92% |
| Lyttonsville | 39% | 40% | 53% | 56% | 88% |
| Medical Center | 53% | 53% | 55% | 55% | 81% |
| Montgomery Village/Airpark | 4% | 4% | 4% | 4% | 66% |
| North Bethesda | 6% | 7% | 7% | 8% | 85% |
| North Potomac | 21% | 22% | 22% | 22% | 73% |
| Olney | 25% | 25% | 25% | 28% | 88% |
| Potomac | 12% | 12% | 12% | 13% | 87% |
| R&D Village | 12% | 13% | 13% | 14% | 65% |
| Rural East | 5% | 8% | 8% | 10% | 57% |
| Rural West | 21% | 21% | 21% | 21% | 50% |
| Shady Grove Metro Station | 7% | 8% | 8% | 8% | 62% |
| Silver Spring CBD | 3% | 7% | 15% | 30% | 66% |
| Silver Spring/Takoma Park | 29% | 31% | 34% | 38% | 88% |
| Takoma | 35% | 35% | 36% | 41% | 90% |
| Twinbrook | 1% | 1% | 1% | 1% | 50% |
| Wheaton CBD | 9% | 9% | 9% | 9% | 93% |
| White Flint | 2% | 3% | 3% | 3% | 92% |
| White Oak | 10% | 10% | 10% | 10% | 90% |
| Woodside | 9% | 16% | 21% | 23% | 80% |
| Total | 15% | 16% | 17% | 19% | 80% |

A.6 Connectivity to Red Line Stations

Table 20: Objective 2.2: Percentage of dwelling units within two miles of each Red Line station that are connected to the transit station on a low-stress bicycling network

| Red Line Station | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|----------------------|---------|---------|----------------------------------|----------------------------------|-------------|
| Bethesda | 0% | 0% | 2% | 15% | 58% |
| Forest Glen | 12% | 12% | 12% | 12% | 74% |
| Friendship Heights | 0% | 0% | 0% | 0% | 59% |
| Glenmont | 33% | 33% | 33% | 33% | 94% |
| Grosvenor-Strathmore | 19% | 19% | 19% | 19% | 70% |
| Medical Center | 11% | 16% | 21% | 24% | 53% |
| Shady Grove | 9% | 9% | 9% | 9% | 63% |
| Silver Spring | 1% | 5% | 31% | 43% | 72% |
| Takoma | 25% | 25% | 25% | 42% | 64% |
| Wheaton | 0% | 0% | 0% | 0% | 92% |
| White Flint | 0% | 0% | 0% | 0% | 63% |
| Total | 9% | 10% | 17% | 31% | 69 % |

A.7 Connectivity to Brunswick Line Stations

Table 21: Objective 2.2: Percentage of dwelling units within two miles of each Brunswick Line station that are connected to the transit station on a low-stress bicycling network

| Brunswick Line Station | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|------------------------|---------|---------|----------------------------------|----------------------------------|---------|
| Barnesville | 0% | 0% | 0% | 0% | 0% |
| Boyds | 2% | 2% | 2% | 2% | 16% |
| Dickerson | 4% | 4% | 4% | 4% | 4% |
| Garrett Park | 38% | 38% | 38% | 38% | 84% |
| Germantown | 23% | 23% | 23% | 23% | 85% |
| Kensington | 28% | 28% | 28% | 28% | 81% |
| Silver Spring | 0% | 0% | 26% | 39% | 69% |
| Washington Grove | 6% | 6% | 6% | 6% | 29% |
| Total | 17% | 17% | 24% | 28% | 70% |

A.8 Connectivity to Purple Line Stations

Table 22: Objective 2.2: Percentage of dwelling units within two miles of each Purple Line station that are connected to the transit station on a low-stress bicycling network

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|-------------------------------|---------|---------|----------------------------------|-------------------------------------|---------|
| Bethesda | 0% | 0% | 2% | 14% | 45% |
| Connecticut Avenue | 0% | 0% | 22% | 25% | 65% |
| Dale Drive | 0% | 0% | 0% | 0% | 75% |
| Long Branch | 0% | 0% | 0% | 0% | 76% |
| Lyttonsville | 0% | 0% | 27% | 27% | 68% |
| Manchester Place | 23% | 23% | 26% | 28% | 74% |
| Piney Branch Road | 0% | 0% | 0% | 0% | 79% |
| Silver Spring Library | 0% | 0% | 0% | 44% | 72% |
| Silver Spring Transit Center | 0% | 0% | 26% | 40% | 69% |
| Takoma-Langley Transit Center | 0% | 0% | 0% | 0% | 82% |
| Woodside | 0% | 0% | 0% | 0% | 66% |
| Total | 3% | 3% | 9% | 18% | 70% |

A.9 Connectivity to Corridor Cities Transitway Stations

Table 23: Objective 2.2: Percentage of dwelling units within two miles of each Corridor Cities Transitway station that are connected to the transit station on a low-stress bicycling network

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|-------------|---------|---------|----------------------------------|-------------------------------------|---------|
| DANAC | 0% | 0% | 0% | 0% | 75% |
| LSC Belward | 0% | 0% | 0% | 0% | 68% |
| LSC Central | 0% | 0% | 0% | 0% | 71% |
| LSC West | 0% | 0% | 0% | 0% | 67% |
| Shady Grove | 0% | 0% | 0% | 0% | 59% |
| Total | 0% | 0% | 0% | 0% | 69% |
A.10 Connectivity to Elementary Schools

Table 24: Objective 2.3: Percentage of dwelling units within one mile of elementary schools that are connected to the schools on a very low-stress bicycling network.

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|--------------------|---------|---------|----------------------------------|----------------------------------|---------|
| Arcola | 46% | 46% | 46% | 46% | 80% |
| Ashburton | 36% | 36% | 36% | 36% | 66% |
| Bannockburn | 16% | 16% | 16% | 16% | 16% |
| Barnsley | 74% | 74% | 74% | 74% | 78% |
| Bayard Rustin | 24% | 24% | 24% | 24% | 25% |
| Bel Pre | 61% | 61% | 61% | 61% | 63% |
| Bells Mill | 57% | 57% | 57% | 57% | 71% |
| Belmont | 100% | 100% | 100% | 100% | 92% |
| Bethesda | 4% | 4% | 4% | 4% | 4% |
| Beverly Farms | 57% | 57% | 57% | 57% | 91% |
| Bradley Hills | 67% | 67% | 67% | 67% | 76% |
| Brooke Grove | 17% | 17% | 17% | 17% | 72% |
| Brookhaven | 0% | 0% | 0% | 0% | 96% |
| Burning Tree | 39% | 39% | 39% | 39% | 40% |
| Burnt Mills | 12% | 12% | 12% | 12% | 11% |
| Burtonsville | 0% | 0% | 0% | 0% | 9% |
| Candlewood | 17% | 17% | 17% | 17% | 17% |
| Cannon Road | 79% | 79% | 79% | 79% | 75% |
| Carderock Springs | 56% | 56% | 56% | 56% | 71% |
| Cashell | 26% | 26% | 26% | 26% | 59% |
| Cedar Grove | 0% | 0% | 0% | 0% | 0% |
| Chevy Chase | 60% | 60% | 60% | 60% | 60% |
| Clarksburg | 32% | 29% | 29% | 29% | 61% |
| Clearspring | 34% | 34% | 34% | 34% | 34% |
| Clopper Mill | 0% | 0% | 0% | 0% | 54% |
| Cloverly | 35% | 35% | 35% | 35% | 57% |
| Cold Spring | 86% | 86% | 86% | 86% | 88% |
| Cresthaven | 32% | 32% | 32% | 32% | 45% |
| Daly | 1% | 1% | 1% | 1% | 2% |
| Damascus | 0% | 0% | 0% | 0% | 0% |
| Darnestown | 2% | 2% | 2% | 2% | 2% |
| Drew | 72% | 72% | 72% | 73% | 72% |
| DuFief | 75% | 75% | 75% | 75% | 75% |
| East Silver Spring | 34% | 34% | 34% | 34% | 41% |
| Fairland | 13% | 13% | 13% | 13% | 54% |
| Farmland | 60% | 60% | 60% | 60% | 60% |
| Fields Road | 0% | 0% | 0% | 0% | 0% |
| Flora M. Singer | 37% | 37% | 37% | 37% | 47% |
| Flower Hill | 80% | 80% | 80% | 80% | 86% |
| Flower Valley | 56% | 56% | 56% | 56% | 56% |
| Forest Knolls | 88% | 88% | 88% | 88% | 96% |

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|-----------------------|---------|---------|----------------------------------|----------------------------------|---------|
| Fox Chapel | 40% | 40% | 40% | 40% | 41% |
| Galway | 40% | 40% | 40% | 40% | 42% |
| Garrett Park | 14% | 14% | 14% | 14% | 63% |
| Georgian Forest | 39% | 39% | 39% | 39% | 66% |
| Germantown | 53% | 53% | 53% | 53% | 68% |
| Glen Haven | 92% | 92% | 92% | 92% | 94% |
| Glenallan | 9% | 9% | 9% | 9% | 40% |
| Goshen | 6% | 6% | 6% | 6% | 34% |
| Great Seneca Creek | 16% | 16% | 16% | 16% | 31% |
| Greencastle | 52% | 52% | 52% | 52% | 69% |
| Greenwood | 57% | 57% | 57% | 57% | 55% |
| Harmony Hills | 27% | 27% | 27% | 27% | 87% |
| Highland | 96% | 96% | 96% | 96% | 93% |
| Highland View | 91% | 91% | 91% | 90% | 95% |
| Jackson Road | 45% | 45% | 45% | 45% | 65% |
| JoAnn Leleck | 37% | 37% | 37% | 37% | 37% |
| Jones Lane | 4% | 4% | 4% | 4% | 16% |
| Kemp Mill | 85% | 85% | 85% | 85% | 90% |
| Kensington-Parkwood | 84% | 84% | 84% | 84% | 88% |
| Lake Seneca | 80% | 80% | 80% | 80% | 96% |
| Laytonsville | 0% | 0% | 0% | 0% | 0% |
| Little Bennett | 43% | 56% | 56% | 72% | 63% |
| Luxmanor | 12% | 12% | 12% | 12% | 15% |
| Marshall | 73% | 73% | 73% | 73% | 73% |
| McAuliffe | 25% | 25% | 25% | 25% | 23% |
| McNair | 8% | 8% | 8% | 8% | 31% |
| Mill Creek Towne | 44% | 44% | 44% | 44% | 54% |
| Monocacy | 0% | 0% | 0% | 0% | 0% |
| Montgomery Knolls | 48% | 48% | 48% | 48% | 67% |
| New Hampshire Estates | 16% | 16% | 16% | 16% | 58% |
| North Chevy Chase | 0% | 0% | 0% | 0% | 49% |
| Oak View | 51% | 51% | 51% | 51% | 81% |
| Oakland Terrace | 68% | 68% | 68% | 68% | 84% |
| Olney | 63% | 63% | 63% | 63% | 87% |
| Page | 51% | 51% | 51% | 51% | 66% |
| Pine Crest | 39% | 39% | 39% | 39% | 39% |
| Piney Branch | 47% | 47% | 47% | 47% | 69% |
| Poolesville | 33% | 33% | 33% | 33% | 33% |
| Potomac | 9% | 9% | 9% | 9% | 10% |
| Resnik | 52% | 52% | 52% | 52% | 52% |
| Ride | 91% | 91% | 91% | 91% | 90% |
| Rock Creek Forest | 16% | 16% | 16% | 16% | 16% |
| Rock Creek Valley | 87% | 87% | 87% | 87% | 88% |
| Rock View | 85% | 85% | 85% | 85% | 84% |
| Rockwell | 18% | 18% | 18% | 18% | 50% |

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|----------------------|---------|---------|----------------------------------|----------------------------------|---------|
| Rolling Terrace | 72% | 72% | 72% | 72% | 87% |
| Roscoe R. Nix | 24% | 24% | 24% | 24% | 27% |
| Rosemary Hills | 43% | 43% | 44% | 44% | 100% |
| Sargent Shriver | 53% | 53% | 53% | 53% | 60% |
| Sequoyah | 38% | 38% | 38% | 38% | 38% |
| Seven Locks | 5% | 5% | 5% | 5% | 46% |
| Sherwood | 10% | 10% | 10% | 10% | 23% |
| Sligo Creek | 16% | 16% | 24% | 24% | 45% |
| Snowden Farm | 58% | 58% | 58% | 58% | 58% |
| Somerset | 12% | 12% | 12% | 12% | 25% |
| South Lake | 7% | 7% | 7% | 7% | 75% |
| Spark M. Matsunaga | 11% | 11% | 11% | 11% | 58% |
| Stedwick | 27% | 27% | 27% | 27% | 89% |
| Stone Mill | 55% | 55% | 55% | 55% | 66% |
| Stonegate | 85% | 85% | 85% | 85% | 84% |
| Strathmore | 33% | 33% | 33% | 33% | 33% |
| Strawberry Knoll | 29% | 29% | 29% | 29% | 57% |
| Takoma Park | 49% | 49% | 49% | 49% | 65% |
| Travilah | 0% | 0% | 0% | 0% | 44% |
| Viers Mill | 95% | 94% | 94% | 94% | 95% |
| Washington Grove | 16% | 16% | 16% | 16% | 16% |
| Waters Landing | 19% | 20% | 20% | 20% | 58% |
| Watkins Mill | 27% | 27% | 27% | 27% | 36% |
| Wayside | 52% | 52% | 52% | 52% | 55% |
| Weller Road | 64% | 64% | 64% | 64% | 68% |
| Westbrook | 77% | 77% | 77% | 77% | 78% |
| Westover | 69% | 69% | 69% | 69% | 67% |
| Wheaton Woods | 92% | 92% | 92% | 92% | 63% |
| Whetstone | 10% | 10% | 10% | 10% | 59% |
| William B. Gibbs Jr. | 26% | 26% | 26% | 26% | 83% |
| Wilson Wims | 52% | 52% | 52% | 52% | 56% |
| Wood Acres | 19% | 19% | 19% | 19% | 25% |
| Woodfield | 61% | 61% | 61% | 61% | 66% |
| Woodlin | 7% | 7% | 26% | 26% | 39% |
| Wyngate | 75% | 75% | 75% | 75% | 76% |
| Total | 38% | 38% | 38% | 39% | 53% |

A.11 Connectivity to Middle Schools

Table 25: Objective 2.3: Percentage of dwelling units within 1.5 miles of middle schools that are connected to the schools on a very low stress bicycling network

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|-----------------------------|---------|---------|----------------------------------|----------------------------------|---------|
| Argyle | 6% | 6% | 6% | 6% | 38% |
| Baker | 0% | 0% | 0% | 0% | 0% |
| Banneker | 2% | 2% | 2% | 2% | 47% |
| Briggs Chaney | 38% | 38% | 38% | 38% | 63% |
| Cabin John | 40% | 40% | 40% | 40% | 58% |
| Clemente | 7% | 7% | 7% | 7% | 54% |
| Eastern | 7% | 7% | 7% | 7% | 56% |
| Farquhar | 11% | 12% | 12% | 12% | 12% |
| Hallie Wells | 55% | 55% | 55% | 55% | 55% |
| Hoover | 38% | 38% | 38% | 38% | 72% |
| Кеу | 12% | 12% | 12% | 12% | 17% |
| King | 41% | 42% | 42% | 42% | 72% |
| Kingsview | 0% | 0% | 0% | 0% | 11% |
| Loiederman | 48% | 48% | 48% | 48% | 65% |
| Montgomery Village | 6% | 6% | 6% | 6% | 42% |
| Neelsville | 0% | 0% | 0% | 0% | 0% |
| Newport Mill | 64% | 64% | 64% | 64% | 81% |
| North Bethesda | 23% | 23% | 23% | 23% | 39% |
| Parkland | 48% | 48% | 48% | 48% | 73% |
| Poole | 52% | 52% | 52% | 52% | 52% |
| Pyle | 13% | 13% | 13% | 13% | 53% |
| Redland | 0% | 0% | 0% | 0% | 0% |
| Ridgeview | 46% | 46% | 46% | 46% | 71% |
| Rocky Hill | 16% | 16% | 16% | 16% | 60% |
| Rosa Parks | 57% | 57% | 57% | 57% | 80% |
| Shady Grove | 0% | 0% | 0% | 0% | 0% |
| Shannon | 23% | 23% | 23% | 23% | 56% |
| Silver Creek | 21% | 21% | 23% | 23% | 57% |
| Silver Spring International | 22% | 22% | 25% | 25% | 58% |
| Sligo | 27% | 27% | 27% | 27% | 80% |
| Takoma Park | 25% | 25% | 25% | 25% | 57% |
| Tilden | 0% | 0% | 0% | 0% | 0% |
| Westland | 0% | 0% | 0% | 0% | 22% |
| White Oak | 16% | 16% | 16% | 16% | 57% |
| Wood | 62% | 62% | 62% | 62% | 78% |
| Total | 22% | 22% | 22% | 22% | 46% |

8.12 Connectivity to High Schools

Table 26: Objective 2.3: Percentage of dwelling units within two miles of high schools that are connected to the schools on a very low-stress bicycling network

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|----------------------|---------|---------|----------------------------------|----------------------------------|---------|
| Bethesda-Chevy Chase | 5% | 5% | 16% | 15% | 22% |
| Blair | 0% | 0% | 0% | 0% | 45% |
| Blake | 46% | 46% | 46% | 46% | 47% |
| Churchill | 36% | 36% | 36% | 36% | 66% |
| Clarksburg | 29% | 27% | 18% | 18% | 40% |
| Damascus | 0% | 0% | 0% | 0% | 2% |
| Einstein | 58% | 58% | 58% | 58% | 75% |
| Kennedy | 18% | 18% | 18% | 18% | 36% |
| Magruder | 4% | 4% | 4% | 4% | 4% |
| Northwest | 13% | 13% | 13% | 13% | 23% |
| Northwood | 12% | 12% | 12% | 12% | 85% |
| Paint Branch | 0% | 0% | 0% | 0% | 0% |
| Poolesville | 39% | 39% | 39% | 39% | 39% |
| Quince Orchard | 0% | 0% | 0% | 0% | 20% |
| Seneca Valley | 0% | 15% | 15% | 15% | 69% |
| Sherwood | 8% | 8% | 8% | 8% | 12% |
| Springbrook | 1% | 1% | 1% | 1% | 1% |
| Walter Johnson | 0% | 0% | 0% | 0% | 25% |
| Watkins Mill | 1% | 1% | 1% | 1% | 45% |
| Wheaton | 41% | 41% | 41% | 41% | 69% |
| Whitman | 17% | 17% | 17% | 17% | 30% |
| Total | 12% | 13% | 14% | 14% | 38% |

A.13 Connectivity to Public Libraries

Table 27: Objective 2.4: Percentage of dwelling units within two miles of public libraries that are connected to the public library on a low-stress bicycling network

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|---------------------|---------|---------|----------------------------------|-------------------------------------|---------|
| Aspen Hill | 0% | 0% | 0% | 0% | 90% |
| Bethesda | 16% | 16% | 16% | 16% | 56% |
| Chevy Chase | 1% | 1% | 1% | 1% | 59% |
| Damascus | 1% | 1% | 1% | 1% | 49% |
| Davis/Special Needs | 8% | 8% | 8% | 8% | 92% |
| Fairland | 0% | 0% | 0% | 0% | 72% |
| Germantown | 0% | 0% | 20% | 20% | 82% |
| Kensington Park | 0% | 0% | 0% | 0% | 86% |
| Little Falls | 0% | 0% | 0% | 0% | 60% |
| Long Branch | 25% | 25% | 27% | 28% | 77% |
| Noyes Childrens | 19% | 19% | 19% | 19% | 71% |
| Olney | 52% | 52% | 52% | 52% | 93% |
| Poolesville | 11% | 11% | 11% | 11% | 11% |
| Potomac | 19% | 19% | 19% | 19% | 69% |
| Quince Orchard | 0% | 0% | 0% | 0% | 0% |
| Silver Spring | 0% | 0% | 0% | 43% | 72% |
| Wheaton | 16% | 16% | 16% | 16% | 93% |
| White Oak | 12% | 12% | 12% | 12% | 84% |
| Total | 9% | 9% | 11% | 16% | 73% |

A.14 Connectivity to Recreation Centers

Table 28: Objective 2.4: Percentage of dwelling units within two miles of recreation centers that are connected to the recreation centers on a low-stress bicycling network

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|--|---------|---------|----------------------------------|-------------------------------------|---------|
| Apple Ridge Ball Field | 20% | 20% | 20% | 20% | 67% |
| Bauer Drive Recreation Center | 0% | 0% | 0% | 0% | 92% |
| Charles W Gilchrist Ctr for Cultural Diversity | 0% | 0% | 0% | 0% | 0% |
| Clara Barton Recreation Center | 36% | 36% | 41% | 41% | 93% |
| Damascus Community Recreation Center | 0% | 0% | 0% | 0% | 15% |
| East County Community Recreation Center | 36% | 36% | 36% | 36% | 88% |
| Fairland Community Recreation Center | 0% | 0% | 0% | 0% | 79% |
| Friendship Heights Village Center | 0% | 0% | 0% | 0% | 0% |
| Germantown Recreation Center | 0% | 0% | 0% | 0% | 81% |
| Good Hope Neighborhood Rec Center | 0% | 0% | 0% | 0% | 78% |
| Gwendolyn E Coffield Recreation Center | 16% | 16% | 31% | 31% | 66% |
| Heffner Park Community Center | 35% | 35% | 41% | 41% | 71% |
| Kensington Community Center | 14% | 14% | 14% | 14% | 38% |
| Lake Marion Community Center | 0% | 0% | 0% | 0% | 47% |
| Leland Community Recreation Center | 7% | 7% | 18% | 18% | 58% |
| Long Branch Community Recreation Center | 25% | 25% | 28% | 28% | 82% |
| Longwood Community Recreation Center | 48% | 48% | 48% | 48% | 91% |
| Mid County Community Center (2008) | 13% | 13% | 13% | 13% | 82% |
| North Creek Community Center | 14% | 14% | 14% | 14% | 65% |
| North Potomac Recreation Center (2011) | 21% | 21% | 21% | 21% | 45% |
| Plum Gar Neighborhood Recreation Center | 25% | 25% | 25% | 25% | 84% |
| Potomac Community Recreation Center | 6% | 6% | 6% | 6% | 75% |
| Ross Boddy Recreation Center | 0% | 0% | 0% | 0% | 0% |
| Sam Abbott Citizens Center | 41% | 41% | 42% | 42% | 72% |
| Scotland Neighborhood Recreation Center | 2% | 2% | 2% | 2% | 2% |
| Stedwick Community Center | 7% | 7% | 7% | 7% | 71% |
| Takoma Park Recreation Center | 56% | 56% | 56% | 56% | 88% |
| Upper County Neighborhood Rec Center | 0% | 0% | 0% | 0% | 48% |
| Wheaton Neighborhood Recreation Center | 18% | 17% | 17% | 17% | 90% |
| Whetstone Community Center | 3% | 3% | 3% | 3% | 48% |
| Total | 16% | 16% | 19% | 19% | 61% |

A.15 Connectivity to Regional / Recreational Parks

Table 29: Objective 2.4: Percentage of dwelling units within two miles of regional / recreational parks that are connected to the parks on a low-stress bicycling network

| Policy Area | 12/2018 | 12/2020 | Under Construction 12/2020 | Programmed & Approved 12/2020 | Planned |
|------------------------------------|---------|---------|----------------------------------|-------------------------------------|---------|
| Black Hill Regional Park | 29% | 26% | 26% | 26% | 88% |
| Cabin John Regional Park | 0% | 0% | 0% | 0% | 56% |
| Damascus Recreational Park | 64% | 64% | 64% | 66% | 73% |
| Fairland Recreational Park | 30% | 30% | 30% | 30% | 74% |
| Laytonia Recreational Park | 0% | 0% | 0% | 0% | 0% |
| Little Bennett Regional Park | 0% | 0% | 0% | 0% | 0% |
| MLK Jr. Recreational Park | 26% | 26% | 26% | 26% | 83% |
| Northwest Branch Recreational Park | 19% | 19% | 19% | 19% | 83% |
| Olney Manor Recreational Park | 16% | 18% | 18% | 18% | 74% |
| Ovid Hazen Wells Recreational Park | 59% | 59% | 61% | 63% | 64% |
| Ridge Road Recreational Park | 17% | 17% | 17% | 17% | 26% |
| Rock Creek Regional Park | 34% | 39% | 39% | 42% | 60% |
| South Germantown Recreational Park | 46% | 46% | 46% | 46% | 78% |
| Wheaton Regional Park | 42% | 42% | 42% | 42% | 88% |
| Total | 29% | 29% | 29% | 30% | 68% |



B.1 Bikeway Projects Completed by Public Sector in 2019 and 2020

Table 30: Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|-------------------------------|-----------------------------------|-------------|-------------|--|
| Executive Blvd | Separated Bike Lanes (One-Way) | 1,450 | MCDOT | White Flint |
| Gold Mine Rd | Sidepath | 1,250 | MCDOT | Olney, Rural East |
| MD 355 & Jones Bridge Rd | Sidepath | 450 | мсрот | Medical Center |
| MD 355 at Woodmont Ave | Sidepath | 250 | MDOT/SHA | Medical Center |
| Interim MD 586 Shoulder Trail | Sidepath | 1,400 | Parks | Aspen Hill, North Bethesda |
| Middlebrook Road | Separated Bike Lanes (Two-Way) | 2,350 | MCDOT | Germantown West/ Germantown Town Center |
| Needwood Rd | Sidepath | 4,950 | MCDOT | Derwood |
| Overlook Park Dr | Sidepath | 1,050 | мсрот | Clarksburg Town Center |
| Wayne Ave / Second Ave | Separated Bike Lanes (Two-Way) | 2,900 | MDOT | Silver Spring CBD |

Table 31: Non-Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---|-----------------------------------|-------------|-------------|--------------------------------|
| Boiling Brook Pkwy Bike Lanes | Conventional Bike Lanes | 1,550 | MCDOT | North Bethesda |
| Cameron St Bike Lanes - Phase 2 | Conventional Bike Lanes | 750 | MCDOT | Silver Spring CBD |
| Old Georgetown Rd / MD 187 | Buffered Bike Lanes | 2,850 | MDOT/SHA | Bethesda/Chevy Chase |
| US 29 Flash / Stewart Ln | Separated Bike Lanes (One-Way) | 250 | MCDOT | White Oak |
| US 29 Flash / Castle Blvd, Lockwood Dr | Sidepath | 600 | MCDOT | Fairland/Colesville, White Oak |

Table 32: Upgrades to Existing Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---------------------------|-----------------------------|-------------|-------------|--------------------|
| Battery Lane Urban Park | Off-Street Trail | 500 | Parks | Bethesda CBD |
| Dewey Local Park | Stream Valley Park Trail | 100 | Parks | Kensington/Wheaton |
| MD 355 Crossing Project | Sidepath | 700 | MDOT/SHA | Medical Center |
| Platt Ridge Dr Extended | Sidepath | 100 | MCDOT | Chevy Chase Lake |
| Potomac Elementary School | Sidepath | 450 | MCPS | Potomac |

B.2 Bikeway Projects Completed by Developers in 2019 and 2020

Table 33: Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---------------------------------------|-----------------------------------|-------------|-------------|----------------------------|
| 4735 Bethesda Ave | Off-Street Trail | 150 | Developer | Bethesda CBD |
| Bradford's Landing | Sidepath | 750 | Developer | Olney |
| Cabin Branch | Sidepath | 4,600 | Developer | Clarksburg |
| Checkers Restaurant | Sidepath | 300 | Developer | Montgomery Village/Airpark |
| Colesville Senior Living Facility | Sidepath | 350 | Developer | Fairland/Colesville |
| Courts at Clarksburg | Sidepath | 700 | Developer | Clarksburg |
| Gankirk Farms | Sidepath | 1,650 | Developer | Clarksburg |
| Lynwood | Sidepath | 1,800 | Developer | Rural East |
| Randolph Farms | Separated Bike Lanes (Two-Way) | 850 | Developer | North Bethesda |
| Sandy Spring Friends School | Sidepath | 2,450 | Developer | Rural East |
| Silver Spring Retirement Residence | Sidepath | 300 | Developer | Fairland/Colesville |
| Trotters Glen | Off-Street Trail / Sidepath | 300 | Developer | Olney |
| Victory Haven | Sidepath | 400 | Developer | Damascus |
| Washington Adventist Hospital | Separated Bike Lanes (One-Way) | 2,700 | Developer | White Oak |

Table 34: Non-Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|-------------------------------|---------------------|-------------|-------------|---------------------|
| Black Hill | Buffered Bike Lanes | 1,550 | Developer | Germantown West |
| Bradford's Landing | Sidepath | 1,800 | Developer | Olney |
| Cabin Branch | Sidepath | 350 | Developer | Clarksburg |
| Fairland Park | Sidepath | 300 | Developer | Fairland/Colesville |
| Mallory Square Phase 2 | Sidepath | 450 | Developer | R&D Village |
| Randolph Farms | Sidepath | 250 | Developer | North Bethesda |
| Washington Adventist Hospital | Sidepath | 2,200 | Developer | White Oak |

Table 35: Upgrades to Existing Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|----------------|------------------|-------------|-------------|--------------|
| Ourisman Honda | Off-Street trail | 300 | Developer | Bethesda CBD |

B.3 Projects Under Construction by Public Sector on 12/31/2020

Table 36: Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---|-----------------------------------|-------------|-------------|---|
| Brookeville Bypass | Bikeable Shoulders | 3,650 | MDOT/SHA | Olney, Rural East |
| Capital Crescent Trail | Off-Street Trail | 25,650 | МТА | Bethesda CBD, Bethesda/ Chevy Chase, Chevy Chase Lake, Lyttonsville, Silver Spring CBD, Woodside |
| Capital Crescent Surface Trail (Phase 1) | Separated Bike Lanes (Two-Way) | 1,400 | MCDOT | Bethesda CBD |
| Frederick Road Bike Path | Sidepath | 8,200 | MCDOT | Clarksburg, Germantown East |
| MD 355 at West Old Baltimore Road | Sidepath | 2,050 | MCDOT | Clarksburg |
| Silver Spring Green Trail | Sidepath | 3,600 | МТА | Silver Spring CBD, East Purple Line |
| Snouffer School Road North (now complete) | Sidepath | 5,450 | MCDOT | Montgomery Village / Airpark |
| Snouffer School Road South (now complete) | Sidepath | 2,650 | MCDOT | Montgomery Village / Airpark |
| Towne Road / White Flint West Phase 2 | Separated Bike Lanes (Two-Way) | 1,200 | MCDOT | White Flint |

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Table 37: Non-Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---------------------------------------|----------------------------|-------------|-------------|--|
| Silver Spring Green Trail | Sidepath | 400 | МТА | Silver Spring CBD, East Purple Line |
| Towne Road / White Flint West Phase 2 | Conventional Bike Lanes | 1,600 | мсрот | White Flint |

B.4 Projects Under Construction by Developers on 12/31/2020

Table 38: Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---------------------------------------|-----------------------------------|-------------|-------------|--|
| 9800 Medical Center Dr (now complete) | Sidepath | 1,000 | Developer | R&D Village |
| 7272 Wisconsin (now complete) | Off-Street Trail | 400 | Developer | Bethesda CBD |
| Avocet Towers | Separated Bike Lanes (Two-Way) | 300 | Developer | Bethesda CBD |
| Century | Sidepath | 300 | Developer | Germantown Town Center, Germantown West |
| Chevy Chase Lake – Block B | Separated Bike Lanes (Two-Way) | 450 | Developer | Chevy Chase Lake |
| Crescent at Chevy Chase | Sidepath | 450 | Developer | Chevy Chase Lake |
| Ripley II | Separated Bike Lanes (One-Way) | 350 | Developer | Silver Spring CBD |
| Ripley II | Off-Street Trail | 450 | Developer | Silver Spring CBD |

Table 39: Non-Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---------------------------------------|----------|-------------|-------------|-------------|
| 9800 Medical Center Dr (now complete) | Sidepath | 250 | Developer | R&D Village |
| 9950 Medical Center (now complete) | Sidepath | 550 | Developer | R&D Village |

B.5 Projects Funded in the Capital Improvement Program as of 12/31/2020

Table 40: Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---|-----------------------------------|-------------|-------------|---|
| Boyds Transit Center | Sidepath | 450 | МСДОТ | Rural West |
| Cameron St to Planning Place Cycle Track Connection | Separated Bike Lanes (Two-Way) | 550 | МСДОТ | Silver Spring CBD |
| Cameron St to Planning Place Cycle Track Connection | Off-Street Trail | 200 | мсрот | Silver Spring CBD |
| Capital Crescent Surface Trail (Phase 2) | Sidepath | 400 | MCDOT | Bethesda CBD |
| Capital Crescent Surface Trail (Phase 2) | Separated Bike Lanes (Two-Way) | 250 | MCDOT | Bethesda CBD |
| Capital Crescent Trail Tunnel | Off-Street Trail | 600 | МСДОТ | Bethesda CBD |
| Clarksburg Road / Snowden Farm Pkwy | Conventional Bike Lanes | 1,600 | МСДОТ | Clarksburg Town Center |
| Clarksburg Road / Snowden Farm Pkwy | Sidepath | 1,650 | мсрот | Clarksburg Town Center |
| Clarksburg Road at MD 355 | Conventional Bike Lanes | 1,850 | мсрот | Clarksburg Town Center |
| Clarksburg Road at MD 355 | Sidepath | 3,100 | МСДОТ | Clarksburg Town Center |
| Dale Dr Shared Use Path and Safety Improvements | Sidepath | 4,750 | МСДОТ | Forest Glen, Silver Spring/Takoma Park |
| Dennis Ave Bridge | Sidepath | 200 | мсрот | Kensington/Wheaton |
| Emory Ln Shared Use Path | Sidepath | 2,100 | МСДОТ | Aspen Hill, Olney |
| Fenton St at MD 410 | Separated Bike Lanes (Two-Way) | 700 | мсрот | Silver Spring CBD |
| Fenton Street Cycle Track | Separated Bike Lanes (Two-Way) | 3,800 | мсрот | Silver Spring CBD |
| Garrett Park Road Bridge over Rock Creek | Sidepath | 1,050 | мсрот | Kensington/Wheaton, North Bethesda |
| Good Hope Road Shared Use Path | Sidepath | 1,400 | MCDOT | Cloverly |
| Grove Street Neighborhood Greenway, Phase 1 | Neighborhood Greenway | 1,900 | мсрот | East Purple Line |
| Heritage Triangle Trail (Dr Bird / Norwood Rd) | Sidepath | 3,250 | мсрот | Olney, Rural East |
| Life Sciences Center Loop Trail | Sidepath | 7,650 | МСДОТ | R&D Village |
| MD 355 Clarksburg Shared Use Path | Sidepath | 2,450 | МСДОТ | Clarksburg Town Center |
| Marinelli Road Separated Bike Lanes | Separated Bike Lanes (One-Way) | 2,250 | МСДОТ | White Flint |
| Metropolitan Branch Trail from Silver Spring Transit Center to King St | Off-Street Trail | 1,600 | МСДОТ | Silver Spring CBD |
| Montgomery Ln/Ave Cycle Track | Separated Bike Lanes (Two-Way) | 1,300 | мсрот | Bethesda CBD |

Table 41: Non-Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|-------------------------------------|------------------|-------------|-------------|---|
| Dale Dr Shared Use Path | Sidepath | 1,100 | MCDOT | Forest Glen, Silver Spring/Takoma Park |
| Goldsboro Road Sidewalk and Bikeway | Sidepath | 6,150 | мсрот | Bethesda/Chevy Chase |
| Good Hope Road Shared Use Path | Sidepath | 3,150 | MCDOT | Cloverly |
| North Branch Hiker-Biker Trail | Off-Street Trail | 2,100 | Parks | Aspen Hill, Rural East |

Table 42: Upgrades to Existing Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|--|-----------------------------------|-------------|-------------|---|
| Beach Drive over Silver Creek Bridge | Stream Valley Park Trail | 450 | MCDOT | Kensington/Wheaton |
| MacArthur Blvd Shared Use Path Phase 3 | Bikeable Shoulders | 13,350 | мсрот | Bethesda/Chevy Chase |
| MacArthur Blvd Shared Use Path Phase 3 | Sidepath | 12,300 | мсрот | Bethesda/Chevy Chase |
| Spring St Separated Bike Lane Upgrades | Separated Bike Lanes (One-Way) | 1,800 | MCDOT | East Purple Line, Silver Spring CBD, Silver Spring/Takoma Park |

B.6 Projects to be Constructed by Developers as of 12/31/2020

Table 43: Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|---|-----------------------------------|-------------|-------------|-----------------------------|
| Battery District | Separated Bike Lanes (Two-Way) | 2,150 | Developer | Bethesda CBD |
| Cabin John Village | Sidepath | 600 | Developer | Potomac |
| College View Campus | Sidepath | 750 | Developer | Germantown East |
| Kaiser Permanente Aspen Hill | Sidepath | 450 | Developer | Aspen Hill |
| Mar Thoma Church of Greater Washington | Sidepath | 550 | Developer | Cloverly |
| Montgomery County Humane Society Campus | Sidepath | 500 | Developer | Aspen Hill |
| Montgomery Village Whetstone Center | Sidepath | 600 | Developer | Montgomery Village/Airpark |
| New Hampshire Ave Restaurant | Sidepath | 250 | Developer | Cloverly |
| Primrose Layhill | Sidepath | 650 | Developer | Aspen Hill |
| Strathmore Square | Separated Bike Lanes (Two-Way) | 1,700 | Developer | Grosvenor |
| Viva White Oak | Separated Bike Lanes (Two-Way) | 6,900 | Developer | White Oak |
| Westfield Montgomery | Bikeable Shoulders | 1,750 | Developer | North Bethesda |
| Westfield Montgomery | Separated Bike Lanes (Two-Way) | 1,150 | Developer | North Bethesda |
| Westfield Montgomery | Sidepath | 2,100 | Developer | North Bethesda |
| Westwood Shopping Center | Separated Bike Lanes (One-Way) | 1,200 | Developer | Bethesda/Chevy Chase |
| Wildwood Manor Shopping Center | Neighborhood Connector | 400 | Developer | North Bethesda |
| Wilgus | Separated Bike Lanes (Two-Way) | 250 | Developer | North Bethesda, White Flint |

Table 44: Non-Master-Planned Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|-----------------------------------|-----------------------------------|-------------|-------------|--------------------|
| 12500 Ardennes Avenue | Sidepath | 250 | Developer | Twinbrook |
| 4 Bethesda Metro Center | Separated Bike Lanes (Two-Way) | 250 | Developer | Bethesda CBD |
| 8015 Old Georgetown Rd | Off-Street Trail | 350 | Developer | Bethesda CBD |
| Knowles Manor | Sidepath | 150 | Developer | Kensington/Wheaton |
| Poplar Grove | Sidepath | 1,550 | Developer | Germantown West |
| The Residences at Knowles Station | Sidepath | 200 | Developer | Kensington/Wheaton |
| Windridge Winery | Sidepath | 800 | Developer | Rural West |

Table 45: Upgrades to Existing Bikeways

| Project | Bikeway | Length (ft) | Lead Agency | Policy Area |
|------------------|------------------|-------------|-------------|------------------------------|
| Battery District | Off-Street Trail | 600 | Developer | Bethesda CBD, Medical Center |
| Wilgus | Sidepath | 2,400 | Developer | North Bethesda, White Flint |

Appendix C: Glossary

Bicycle and Pedestrian Priority Areas (BiPPA):

Defined in the Maryland state code as a geographical area where the enhancement of bicycle and pedestrian traffic is a priority. Montgomery County has designated 34 BPPAs and has established a funding program for pedestrian and bicycle improvements with these areas. A maps of BiPPAs is shown here.

Bicycle Parking: The availability of secure and convenient bicycle parking is an important factor when considering making a trip by bicycle. No matter how well-connected the bikeway network, many people will forgo bicycling if their destinations lack safe places to secure their bicycles. An adequate supply of bicycle parking encourages bicycling while reducing theft and improper use of trees and street furniture for bicycle parking. Whether traveling to work, school, shopping, or home, people must feel confident that their bicycles will not be stolen or vandalized when stored. The length of time that a bicycle will be parked largely determines the level of security that is needed. The longer the time period, the more secure the bicycle parking needs to be. The Bicycle Master Plan recommends three types of bicycle parking:

- **Bicycle Parking Stations:** Secure bicycle storage areas often located adjacent to transit stations or in downtown areas.
- Long-Term Bicycle Parking: Long-term bicycle parking is intended to provide sheltered and secure bicycle storage for residents, students, employees, and long-term visitors who are leaving their bicycles for several hours or longer. It is typically provided in a fixed, safe, and weather-protected setting, including bike stations, bike rooms, or cages inside buildings and stand-alone bike lockers.

• **Short-Term Bicycle Parking:** Short-term bicycle parking prioritizes convenience and is located at entrances to public buildings, such as schools, libraries, recreation centers, and on commercial blocks. It is typically provided with "U" racks for users to quickly store and retrieve their bicycle.

Bikeways: Bikeways provide physical infrastructure to improve the comfort and safety of bicycling. They are organized into five facilities classifications based on their level of separation from traffic, ranging from trails (the most separation from traffic) to shared roads (no separation from traffic). These five classifications are then subdivided into bikeway types:

Trails: paths that are located outside of the road rightof-way. They provide two-way travel designated for walking, bicycling, jogging and skating.

- **Off-Street Trails:** shared use paths located outside of the road right-of-way that provide two-way travel for people walking, bicycling and using other non-motorized modes.
- **Stream Valley Park Trails:** shared use paths located within a Maryland-National Capital Park and Planning Commission (M-NCPPC) stream valley park that provide two-way travel for people walking, bicycling, and using other non-motorized modes of transportation.
- Neighborhood Connectors: short paths that provide critical connections in the residential walking and bicycling network. They create shortcuts and often bypass or minimize the amount of travel along higher-stress streets.
- **Separated Bikeways:** Separated bikeways provide physical separation from traffic.
 - **Sidepaths:** shared use paths located parallel to and within the road right-of-way. They provide two-way travel routes designated for walking, bicycling, jogging, and skating.

- Separated Bike Lanes: Also known as protected bike lanes or cycle tracks, they provide exclusive bikeways that combine the user experience of a sidepath with the on-street infrastructure of a conventional bike lane. They are physically separated from motor vehicle traffic and distinct from the sidewalk. They operate one-way or twoway.
- **Striped Bikeways:** designated spaces for bicycling that are distinguished from traffic lanes and shoulders by striping and pavement markings.
 - **Buffered Bike Lanes:** conventional bike lanes paired with a designated buffer space separating the bicycle lane from the adjacent vehicle travel lane and/or parking lane to increase the comfort of bicyclists.
 - **Conventional Bike Lanes:** (or simply bike lanes) are portions of the street that have been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists.
 - Contra-Flow Bike Lane: bike lanes designed to allow bicyclists to ride in the opposite direction of motor vehicle traffic.
- Bikeable Shoulders: portions of the roadway that accommodate stopped or parked vehicles, emergency use, bicycles and motor scooters, and pedestrians where sidewalks do not exist.
- **Shared Roads:** bikeways that share space with automobiles.
 - Shared Streets: an urban design approach where pedestrians, bicycles, and motor vehicles can comfortably coexist. They prioritize pedestrian and bicycle movement by slowing vehicular speeds and communicating clearly through design features that motorists must yield to all other users. Motorists are considered "guests" in this environment.

• Neighborhood Greenways: streets with low motorized traffic volumes and speeds, designed and designated to give walking and bicycling priority. They use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient crossings of busy arterial streets.

O Priority Shared Lane Markings:

communicate bicyclist priority within a shared lane and guide bicyclists to ride outside of the door zone. Colored backgrounds and more frequent spacing make priority shared lane markings more conspicuous than standard shared lane markings (also known as sharrows). This treatment does not improve most bicyclists' comfort in shared lanes with traffic.

Breezeways: the arterial bikeway network.

Capital Improvements Program (CIP): A six-

year comprehensive statement of the objectives of capital programs with cost estimates and proposed construction schedules for specific projects. The proposed Montgomery County CIP is submitted by the County Executive to the County Council every two years and a general amendment is typically submitted in the off-years.

Complete Streets Design Guide: A document that provides policy and design guidance on the planning, design, and operation of county roadways to provide safe, accessible, and healthy travel for all users of the roadway system, including pedestrians, bicyclists, transit riders, and motorists.

Equity Focus Area (EFA): Parts of Montgomery County that are characterized by high concentrations of lower-income people of color, who may also speak English "less than very well". See https:// montgomeryplanning.org/planning/equity-agendafor-planning/the-equity-focus-areas-analysis/" **Fee-in-Lieu:** a payment collected by Montgomery County as an alternative to meeting the requirements of county laws and policies.

Level of Traffic Stress (or Traffic Stress):

the concept that people have a certain tolerance for bicycling near traffic, and if that tolerance is exceeded even for a short distance, they may be deterred from bicycling.

Low-Stress Bicycling Network: A bicycling network that is comfortable and safe for people of all ages and bicycling abilities. Low-stress bicycling reflects the context of the road. For example, on high-volume and high-speed suburban highways, a shared-use path with a wide buffer from the road, on downtown streets, a network of separated bike lanes, and on low-volume residential streets, bicycling in the road with traffic may be appropriate.

Transportation Management Districts (TMD):

County organizations that provide concentrated services to encourage the use of transit and other commuting options in Montgomery County's major business districts. Currently, TMDs exist in Friendship Heights, Downtown Bethesda, Downtown Silver Spring, Greater Shady Grove, North Bethesda, and White Oak.

Vision Zero: A proven approach to preventing roadway-related deaths and serious injuries that represents a fundamental change in how we plan and design our roads, shifting from a focus on maximizing motor vehicle efficiency to ensuring that our roads are safe regardless of whether travel is by car, bus, bicycle, or foot. Vision Zero recognizes that people will sometimes make mistakes and that our roads should be designed to ensure those inevitable mistakes do not result in serious injuries or fatalities.



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