MAPLE AVENUE CONNECTIVITY PROJECT
MANDATORY REFERRAL MR2025001

Description

The City of Takoma Park submitted a Mandatory Referral for separated bike lanes to be constructed on both sides of Maple Avenue between the DC line and Hilltop Road/Sligo Creek Parkway in Takoma Park, Maryland.

COMPLETED: 06/19/2025
PLANNING BOARD HEARING DATE: 06/26/2025
MCPB ITEM NO. 9

Montgomery County Planning Board
2425 Reedie Drive, Floor 14 Wheaton MD 20902
Montgomeryplanning.org

	Sofia Aldrich, Planner IV, Countywide Planning & Policy Division sofia.aldrich@montgomeryplanning.org, 301-495-4528
	Richard Brockmyer, Transportation Planning Supervisor, Countywide Planning & Policy Division richard.brockmyer@montgomeryplanning.org, 301-495-4526
	David Anspacher, Chief, Countywide Planning & Policy Division david.anspacher@montgomeryplanning.org, 30 1-4 95-2191

LOCATION

Maple Avenue between Carroll Avenue and Hilltop Road/Sligo Creek Parkway

MASTER PLANS

2024 Takoma Park Minor Master Plan Amendment

2024 Pedestrian Master Plan

2018 Bicycle Master Plan

2018 Master Plan of Highways and Transitways

2001 Takoma Park Master Plan

APPLICANT

City of Takoma Park

ACCEPTANCE DATE

March 10, 2025

REVIEW BASIS

Md. Land Use Article, Section 20-301, et seq.

Chapter 22A

Summary

- Staff recommends approval of the Mandatory Referral and transmittal of comments to the City of Takoma Park.
- Applicant received Forest Conservation Exemption.
- The Applicant agreed to a 40-day extension of the Application review period.

CONTENTS

SECTION 1 – COMMENTS

Planning Staff recommends approval of the Mandatory Referral with the transmittal of the following comments to the City of Takoma Park:

1. The design should incorporate curb stops in addition to flex posts to discourage encroachment into the separated bike lanes.
2. Every curb ramp along Maple Avenue will need to be made ADA compliant. This includes both the use of directional ramps and appropriate design requirements.
3. Accessible parking should be designed along the corridor at logical and regular locations.
4. Widen the bus boarding islands to 10 feet to meet Montgomery County Accessible Design Guide requirements.
5. Design the chicanes to comply with bus turning radii requirements from the bus operator (Ride On Transit).
6. Reconstruct the intersection of Maple Avenue with Tulip Avenue as a full raised intersection consistent with national best practices to include raised intersection flush with sidewalks, intersection raised to curb level, and consiterdation should be given to providing bollards.
7. Coordinate with the bus operator Ride On and MCDOT on the design of bus boarding islands/stations to ensure that the bus stop and protected bike lane elements are designed to meet evolving national standards and current County best practices. This should include more details on whether flexposts will be included with the bike lane design consistently or only at specific locations.
8. Restrict parking within a minimum distance of five feet (typically defined by County Code and per sight distance requirements in the American Association of State and Highway Transportation Officials (AASHTO) Green Book) of driveways and intersections to maintain visibility for driveway users, motorized vehicles, and bicycles.
9. Conduct an auto turn analysis at the intersection of Maple Avenue with Philadelphia Avenue to determine if the turn radius can be tightened.
10. Conduct auto-turn analysis to assess potential pinch point conflicts of proposed chicanes for trucks, buses, and passenger vehicles.. Coordinate closely with MCDOT and assess the appropriate spacing of curb extensions relative to potential conflict zones.
11. Construction plans must be submitted to the Maryland National Capital Park and Planning Commission (M-NCPPC) Department of Parks for review as part of the Park Construction Permit process to ensure that all work is performed in accordance with M-NCPPC standard details, specifications, and policies. No work on Parkland may occur until an approved Park Construction Permit is issued for the project.
12. Montgomery Parks tree mitigation will be fulfilled through either (1) replacement planting on parkland at a rate of one-inch to one-inch diameter or (2) a monetary per inch caliper basis at the rate of $200/diameter inch, to be paid to Montgomery Parks before completion of construction. The construction plans must locate all trees (with size and species) that are 6” DBH and greater within 25 feet of the proposed Limit of Disturbance on park property.

SECTION 2 – INTRODUCTION

The City of Takoma Park submitted a Mandatory Referral for separated bike lanes to be constructed on both sides of Maple Avenue between the DC line and Hilltop Road/Sligo Creek Parkway in Takoma Park, Maryland.

SECTION 3 – PROJECT DESCRIPTION

Project Location

The Maple Avenue corridor roughly parallels Carroll Avenue (MD 195) and Piney Branch Road (MD 320) between the DC Line and Sligo Creek, providing a strong north-south street connection between the Takoma area in the District of Columbia and the Takoma Metro Station to the south and the Washington Adventist Hospital to the north of Sligo Creek. This is shown in Figure 1.

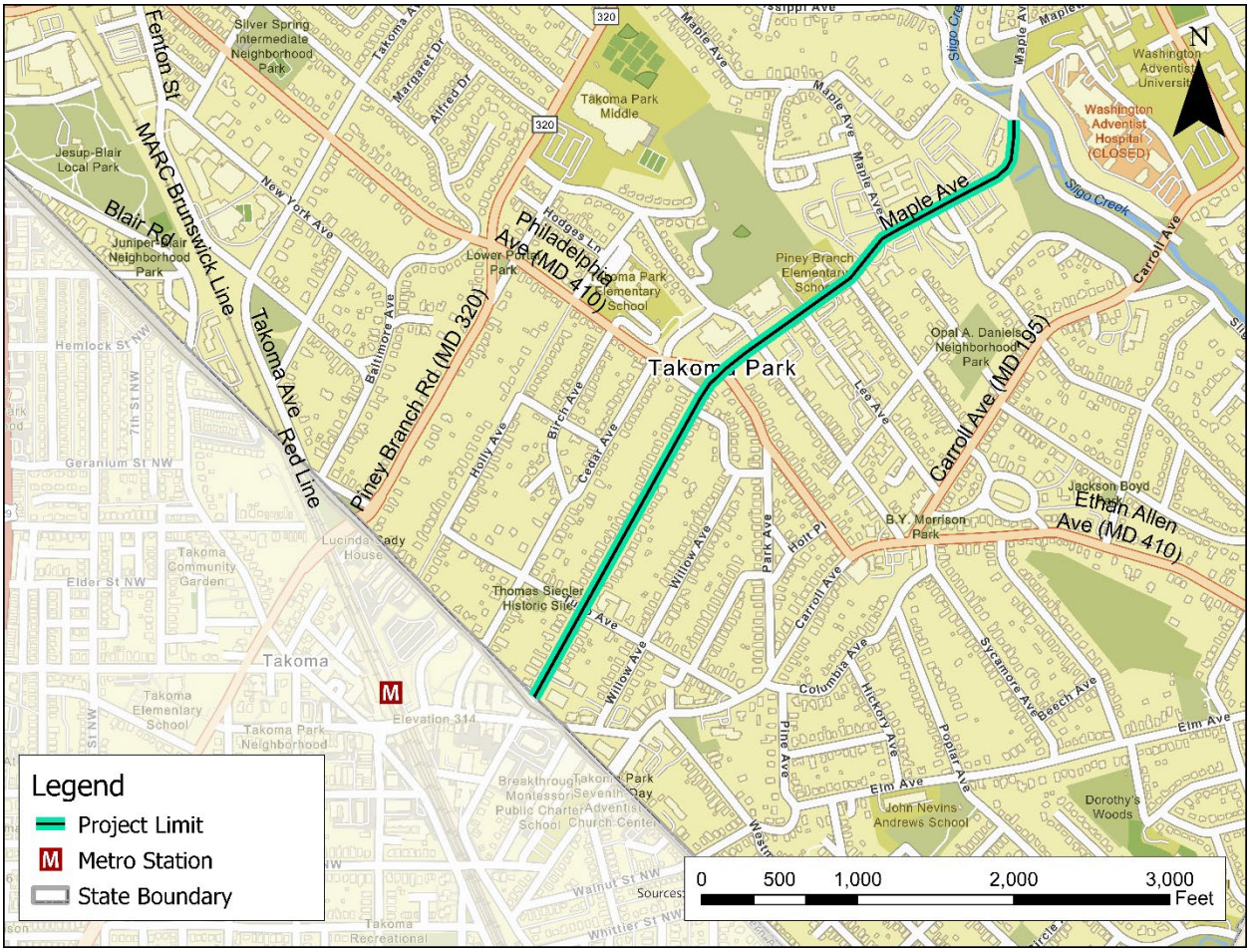

Figure 1: Project Location

The Project's surrounding land use is predominantly residential as shown below in Figure 2. Single unit houses are located south of Philadelphia Avenue, whereas multifamily buildings are found north of Philadelphia Avenue (Commercial Residential Town (CRT) zoning). Institutional uses consisting of the City's offices, Community Center and Library and the Piney Branch Elementary School are also present between Philadelphia Avenue and Lee Avenue. There are smaller areas designated for neighborhood retail on the south end of the project limits and north of Sherman Avenue.

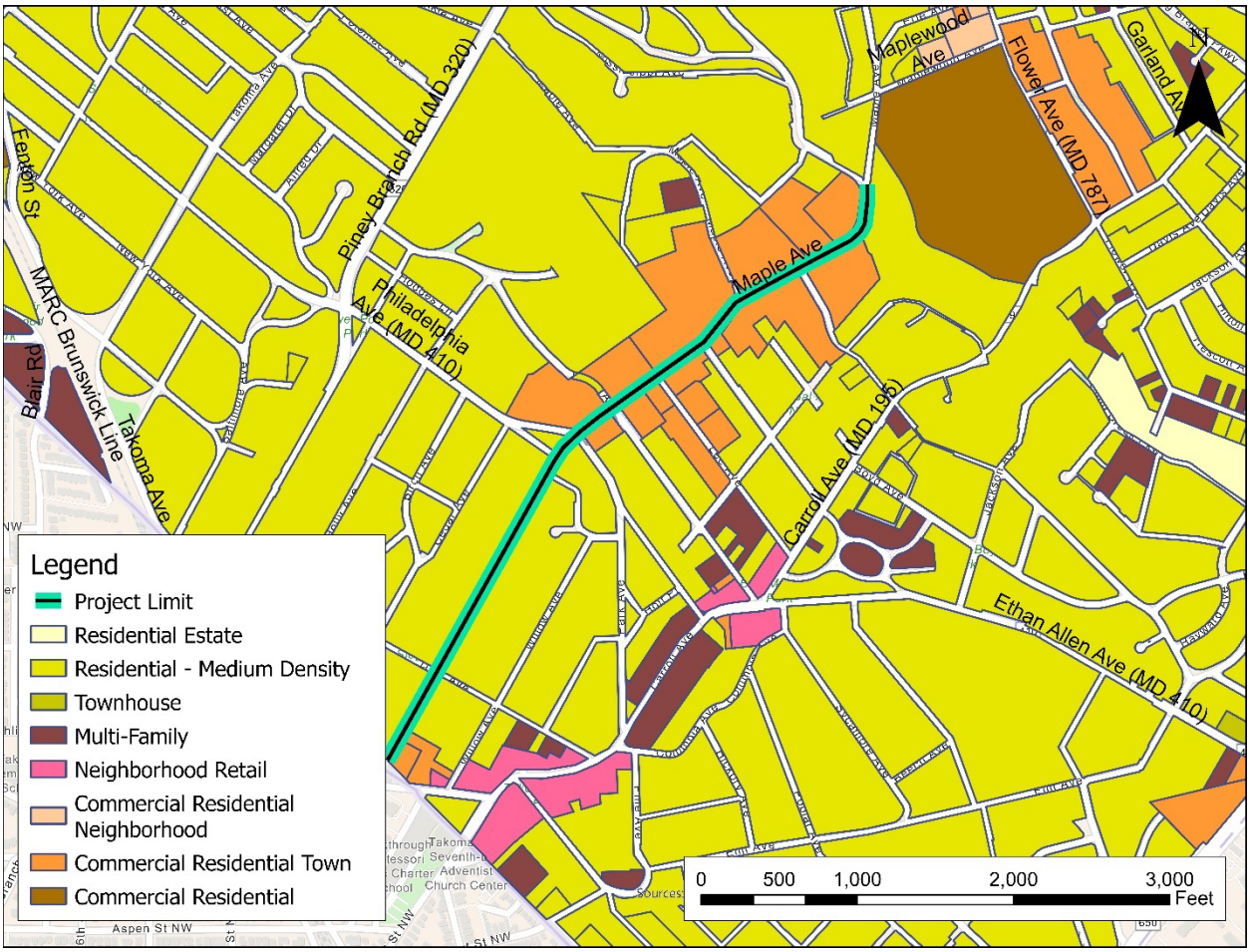

Figure 2: Surrounding Zoning/Land Use

The existing topography of the area is highlighted below in Figure 3. The southern end of Maple Avenue at the DC Line is where the elevation is highest, the section of Maple Avenue between the DC line and Philadelphia Avenue is a downgrade travelling northbound, and the remainder of Maple Avenue is relatively flat between Philadelphia Avenue and Sligo Creek. The topography is relevant for non-motorized travel (i.e., bikes and pedestrians) and can be a factor in evaluating transportation improvements being proposed.

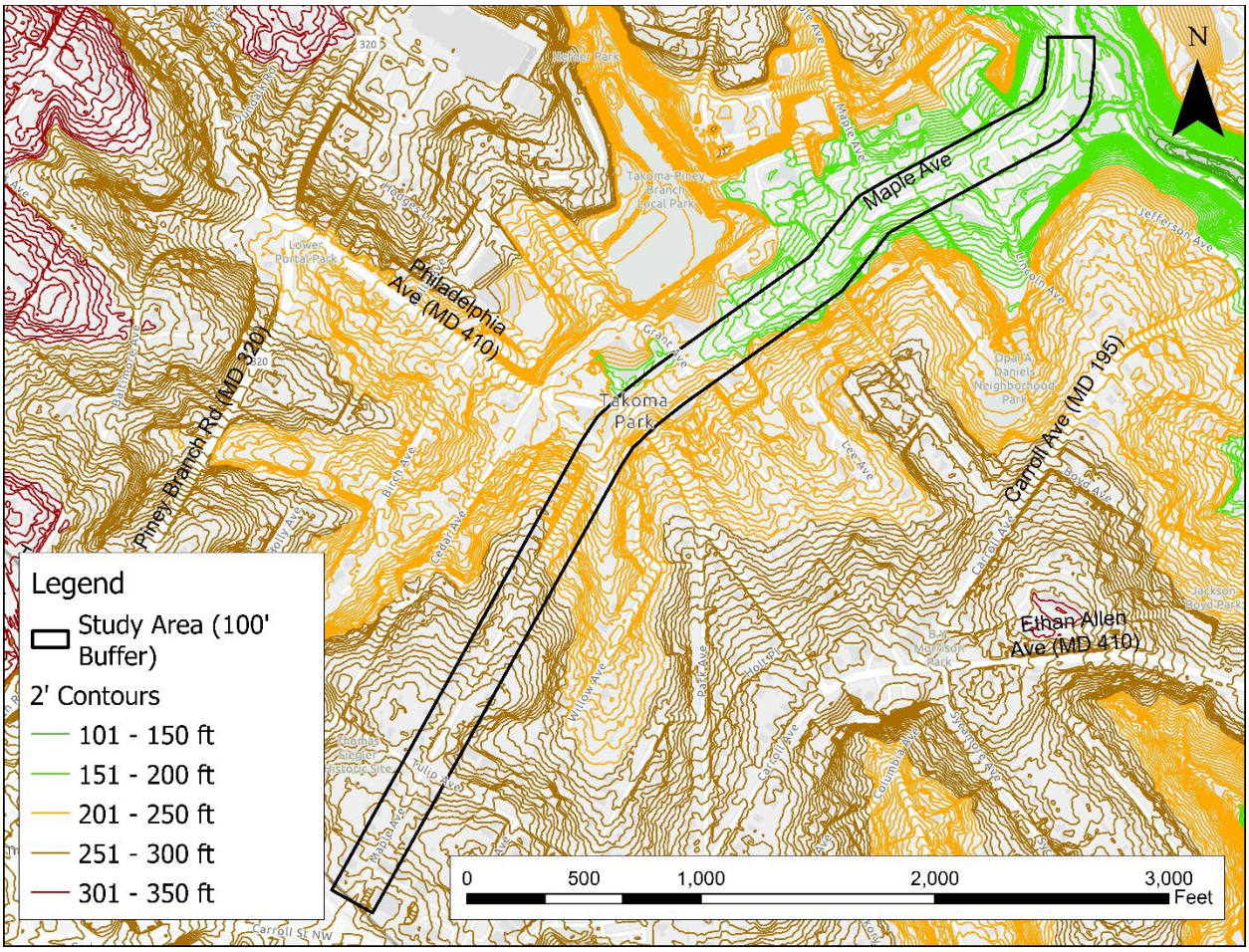

Figure 3: Topography along Maple Avenue Corridor

Representative photographs have been included to display the street and neighborhood character for Maple Avenue. Figure 4 shows a photo taken midway between the DC Line and Philadelphia Avenue.

Figure 4: Maple Avenue Between Carroll Avenue and Philadelphia Avenue Looking North

Between the DC line and Philadelphia Avenue, there are seven speed humps where advisory speed warning signs (5 mph) are posted. The downslope grade of Maple Avenue through this section can be seen in Figure 5.

Figure 5: Maple Avenue Speed Hump Looking North

Figure 6 shows the signalized intersection of Maple Avenue with Philadelphia Avenue.

Figure 6: Maple Avenue at Philadelphia Avenue Looking North

Maple Avenue to the north of Grant Avenue currently has on-street parking on both sides of the street, as shown below in Figure 7.

Figure 7: Maple Avenue at Grant Avenue Looking North

Figure 8, similarly, shows on-street parking along both sides of Maple Avenue.

Figure 8: Maple Avenue at Lincoln Avenue Looking North

Figure 9 shows the Maple Avenue approach to its intersection with Hilltop Road (to the left) and Sligo Creek Parkway (to the right).

Figure 9: Maple Avenue at Hilltop Road/Sligo Creek Parkway Looking North

Project Description

The City of Takoma Park has completed the 30% design phase of the Maple Avenue Connectivity Project (Project). The Project improves pedestrian and bicycling safety along Maple Avenue between the DC Line and Hilltop Road/Sligo Creek Parkway, while providing a low-stress bikeway and traffic calming to the corridor. The proposed improvements total 4,965 feet in length and include:

- Curb extensions and chicanes for traffic calming at thirteen (13) locations on the Maple Avenue segment between the DC Line and Philadelphia Avenue (2,400 linear feet)
- Removal of speed humps at seven (7) locations on the Maple Avenue segment between the DC Line and Philadelphia Avenue
- Five-foot-wide (5 ft), one-way bike lanes, (2,565 linear feet) primarily on both sides of Maple Avenue between Philadelphia Avenue and Hilltop Road/Sligo Creek Parkway, with differing levels of separation from traffic
- Additional pedestrian crossings at four locations (17 total) for Project, two of which are proposed as raised crosswalks
- Reconstruction of a raised intersection on Maple Avenue at Tulip Avenue
- Six (6) bus boarding islands to eliminate conflicts between bicyclists and transit riders

Project plans are included with this Staff Report as Attachment A.

The project has two main areas of focus, first the mainly residential portion of Maple Avenue between the DC Line and Philadelphia Avenue, and second, one of the largest concentrations of high-rise multi-family dwelling units between Philadelphia Avenue and Hilltop Road/Sligo Creek Parkway as shown below in Figure 10.

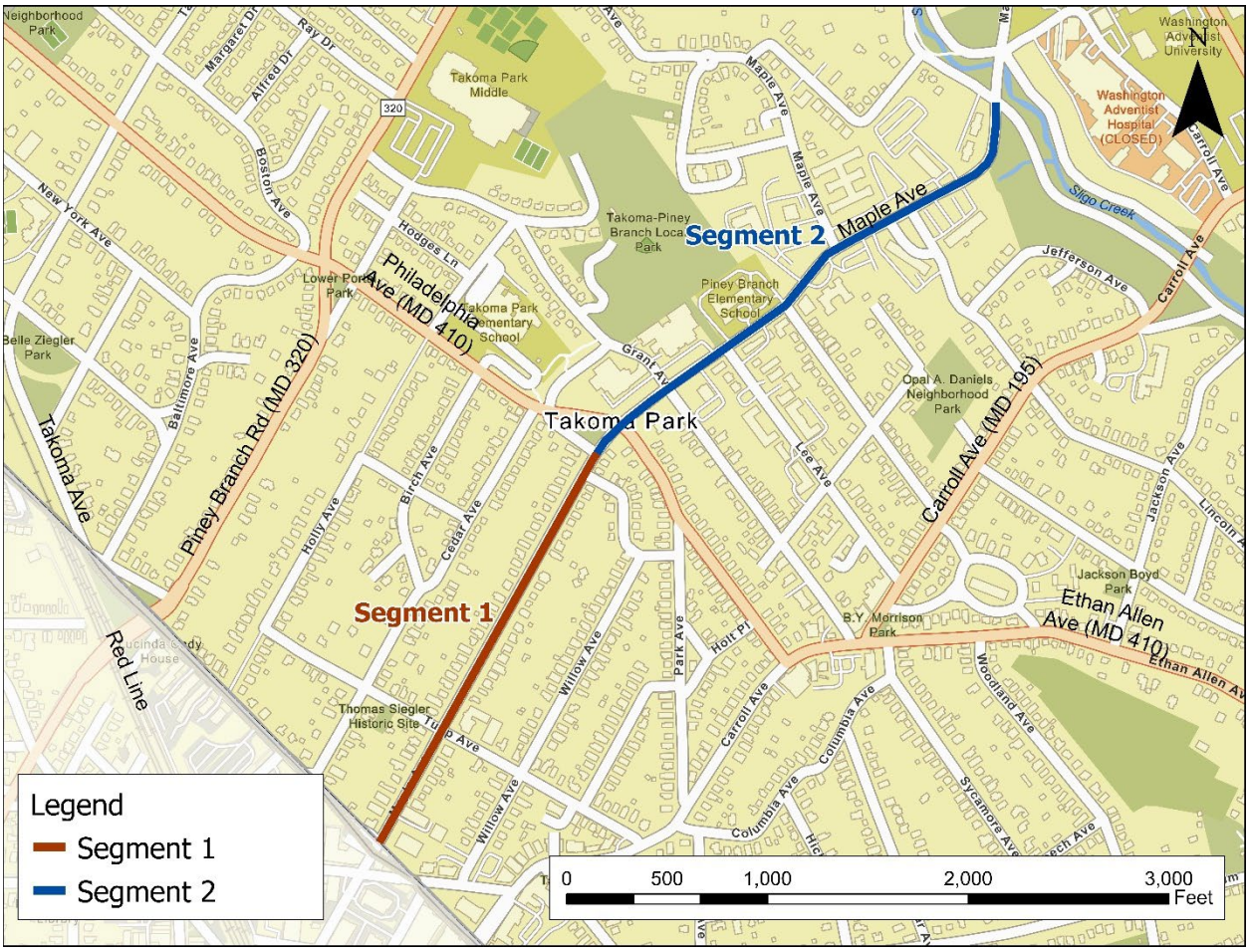

Figure 10: Project Segmentation

Maple Avenue is an important multimodal corridor, carrying vehicular traffic, Ride On bus routes 17 and 25, with sidewalks on both sides of the street, however it currently does not have exclusive bicycle facilities. Existing bus routes are shown below in Figure 11 and the street is an important multimodal connection to the Takoma Metro Station area. In addition to bus transit, this Project will serve as the missing link in the larger local bicycle network. The intent of the Project is to significantly enhance pedestrian and bicycle safety in the neighborhood by reducing traffic speeds and improving conditions for the community's most vulnerable users of the roadway. The proposed improvements along Maple Avenue will upgrade existing infrastructure, provide a safe north/south connection for bicyclists and pedestrians, and improve accessibility to transit and other destinations in the Project vicinity.

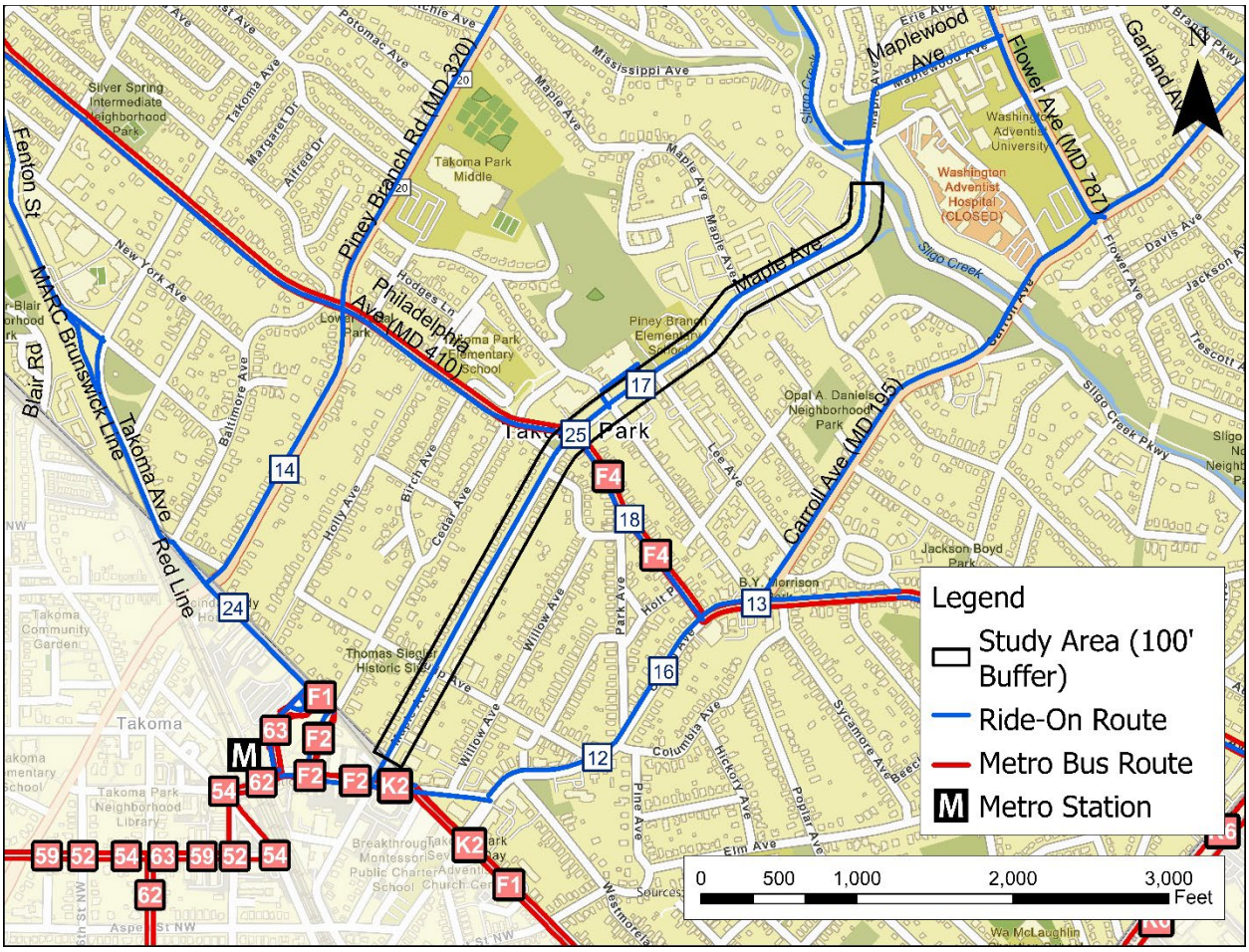

Figure 11: Existing Bus Transit Routes

SEGMENT 1 - BETWEEN DC LINE AND PHILADELPHIA AVENUE

The southern segment between the DC Line and Philadelphia Avenue is a 22 to 28-feet-wide (curb to curb) Neighborhood Yield Street. The road profile has a consistent downgrade from south to north along Maple Avenue, however, it is steepest between Tulip Avenue and Valley View Avenue.

Between the DC Line and Tulip Avenue, the street width is only 22 feet wide and the existing roadway cross section consists of one 14-feet-wide bidirectional travel lane with on-street parking (8 feet wide) in the northbound direction only (see Figure 12). There is a continuous sidewalk on both sides of the roadway but only the northbound side includes a street buffer. Currently, due to the narrow travel lanes and on-street parking, this shared travel lane space operates as a shared bi-directional travel lane with sharrow pavement markings.

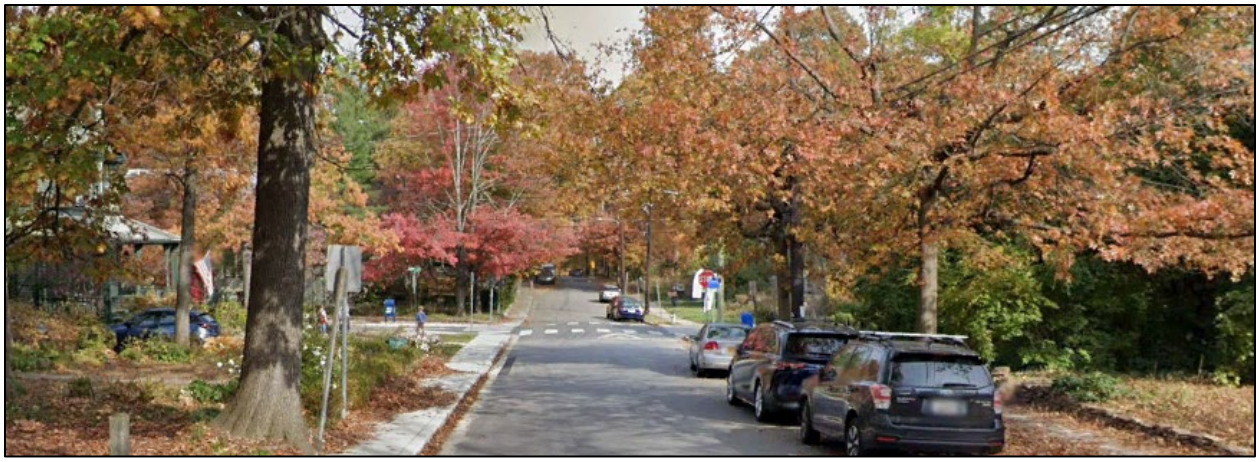

Figure 12: Maple Avenue approaching Tulip Avenue, Looking North

North of Tulip Avenue until Philadelphia Avenue, parking is allowed on both sides of the street, there is no yellow street centerline, and the width of the street curb to curb increases to 28 feet. There is continuous sidewalk on both sides of the roadway but only the northbound side includes a street buffer. Currently, due to the narrow travel lanes and on-street parking, this 12-foot-wide travel lane space operates as a shared bi-directional travel lane with sharrow pavement markings. When two vehicles approach from the opposite direction, one has to yield to the other.

To improve conditions for walking and bicycling as part of a Neighborhood Greenway implementation, the proposed improvements convert some on-street parking spaces to chicanes to help reduce the speed of traffic. Chicanes are alternating curb extensions or islands that create a snaking, curved path on a road, forcing drivers to slow down. An example of a chicane on a residential street is shown below in Figure 13.

Figure 14 shows the typical cross section of proposed chicanes within this segment with alternating six-feet-wide chicanes/curb extensions with a 22-feet-wide space for two travel lanes that is used for northbound and southbound travel. Figure 15 shows a plan view of these same chicanes.

Figure 13: Typical Residential Chicane

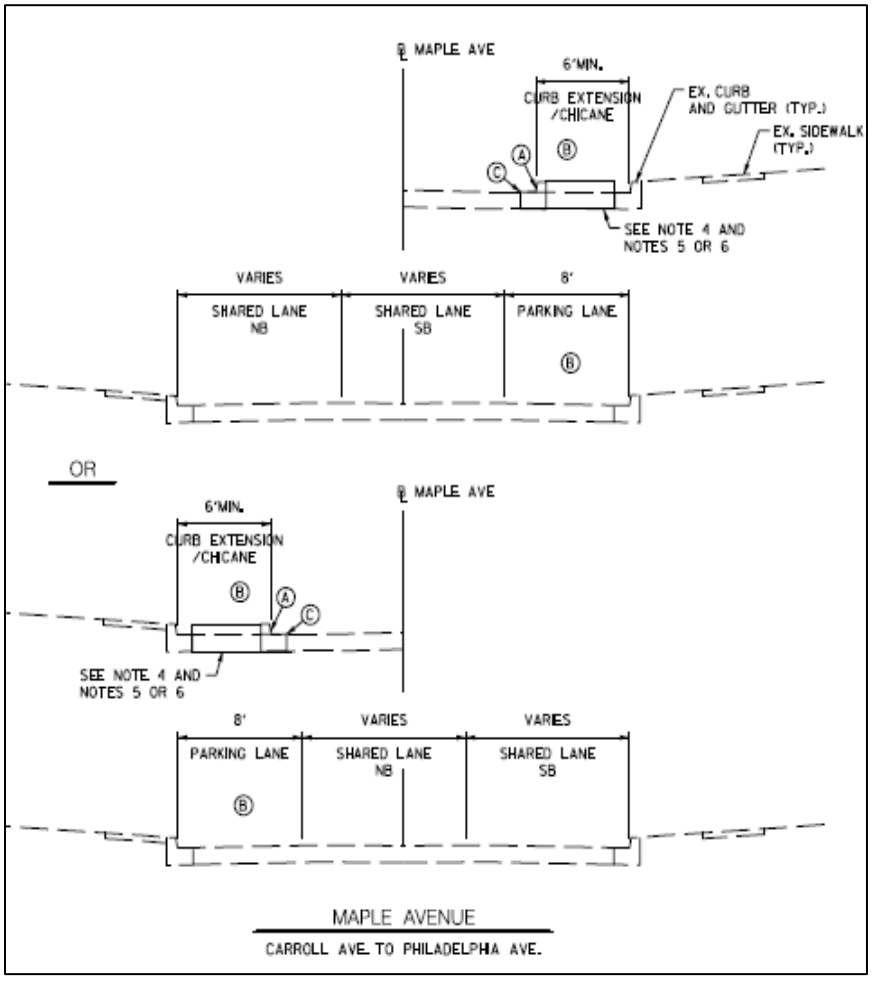

Figure 14: Typical Section - Carroll Avenue to Philadelphia Avenue

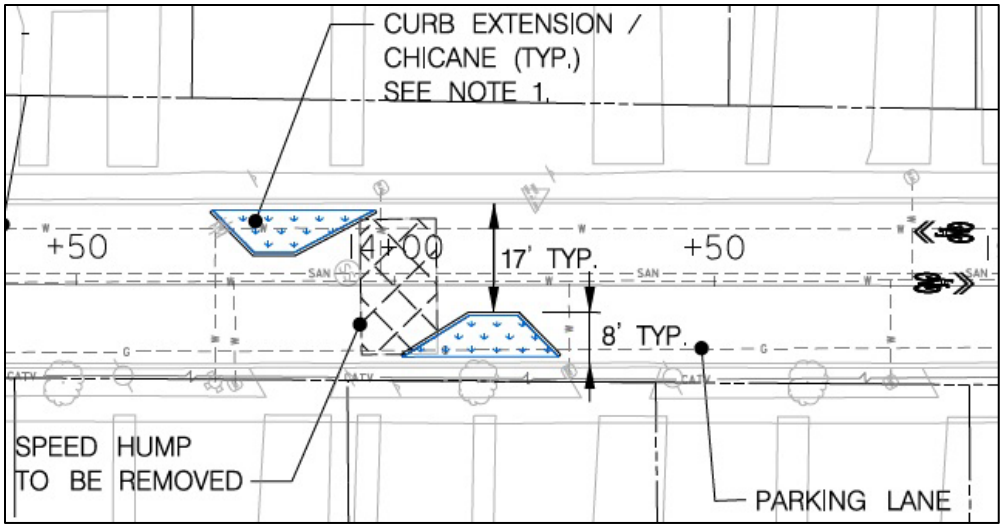

Figure 15: Typical Chicane Plan View

SEGMENT 2 - BETWEEN PHILADELPHIA AVENUE AND HILLTOP ROAD/SLIGO CREEK PARKWAY

The existing roadway north of Philadelphia Avenue consists of a wider street section that includes one travel lane in each direction and on-street parking generally on both sides of the road. There is a continuous sidewalk on both sides of the street with a street buffer. The current street width (curb to curb) in this segment of the corridor is typically 43 feet wide.

To improve conditions for bicycling in this segment, the proposed improvements mainly consist of the installation of bike lanes on each side of the road as depicted in Figure 16.

In the northbound, the project proposes varying levels of separation between bicyclists and traffic, including sections of bicycling in the street, conventional bike lanes and separated bike lanes:

- Philadelphia Avenue to Grant Avenue: there will be no bike lane at all for 300 feet, so bicyclists will share the lane with motor vehicles.
- Grant Avenue to Sherman Avenue: a conventional bike lane will be provided for 715 feet.
- Sherman Avenue and Hilltop Road/Sligo Creek Parkway: a separated bike lane will be provided for 1,550 feet, which includes a two-foot-wide (2 feet) striped buffer.

In contrast, there will be a separated bike lane in the southbound bike lane for the entire length between Philadelphia Avenue and Hilltop Road. To accommodate these facilities, the southbound parking lane will be removed along Maple Avenue between Grant Avenue and Hilltop Road/Sligo Creek Parkway. One block of Maple Avenue between Philadelphia Avenue and Grant Avenue will maintain on-street parking on both sides of the roadway.

The type of separation between the bikeway and traffic has not yet been identified, but at a minimum will be flex posts.

Figure 16: Schematic of Proposed Bike Lane Facility Types

Table 1 and Table 2 show cross section details about on-street parking, travel lane width, and bicycle facility provided for the Northbound and Southbound directions, respectively. The typical cross sections for the project for Segment 2 are shown in Figure 17 through Figure 19.

Other improvements include painted curb extensions to shorten pedestrian crossing lengths, bus boarding islands to eliminate conflict between buses and cyclists, and the installation of additional crosswalks at key locations.

The Project will only make changes within the existing curbed roadway section and will not change existing sidewalks and existing buffers. Some actions within the existing curb-to-curb may result in an increased overall street buffer where chicanes are installed, on-street parking is provided, and curb extensions are constructed.

Table 1: Proposed Bicycle and Parking Accommodations in Northbound Direction

From	To	Northbound Parking Provided?	Northbound Travel Lane	Northbound Bikeway
DC Line	Philadelphia Avenue	Yes, curb	12'*	Neighborhood Greenway
Philadelphia Avenue	Grant Avenue	No	12'	None
Grant Avenue	Sherman Avenue	Yes, 8' curb	10.5'	5' conventional bike lane
Sherman Avenue	Hilltop Road/Sligo Creek Parkway	Yes, 8' between bike lane and travel lane	10.5'	5' separated bike lane with 2' buffer

* Maple Avenue is only 22 to 26 feet wide through this section, so the travel lane is shared bidirectionally.

Table 2: Proposed Bicycle and Parking Accommodations in Southbound Direction

From	To	Southbound Parking Provided?	Southbound Travel Lane	Southbound Bikeway
DC Line	Philadelphia Avenue	Yes, curb	12'*	Neighborhood Greenway
Philadelphia Avenue	Grant Avenue	Yes, 8' between bike lane and travel lane	10.5' left/thru plus 10.5' right-turn lane	5' separated bike lane with 2' buffer
Grant Avenue	Sherman Avenue	No	10.5'	5' separated bike lane with 2' buffer
Sherman Avenue	Hilltop Road/Sligo Creek Parkway	No	10.5'	5' separated bike lane with 2' buffer

*Maple Avenue is only 22 to 26 feet wide through this section, so the travel lane is shared bidirectionally.

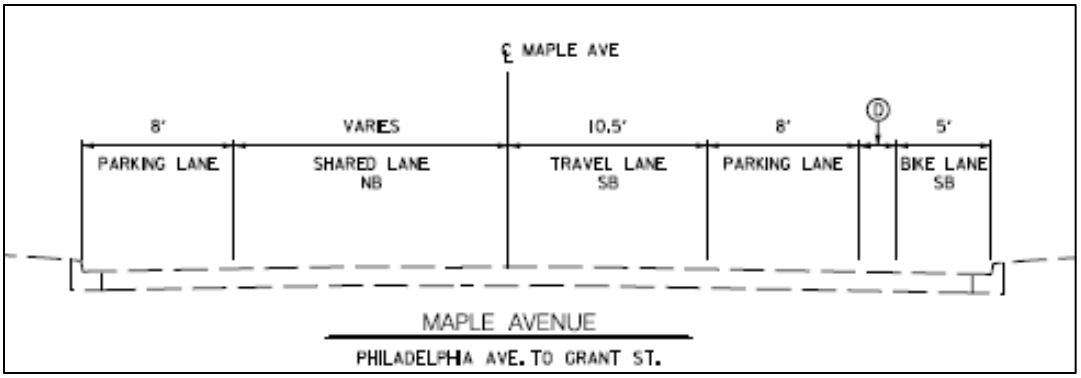

Figure 17: Typical Section - Philadelphia Avenue to Grant Avenue

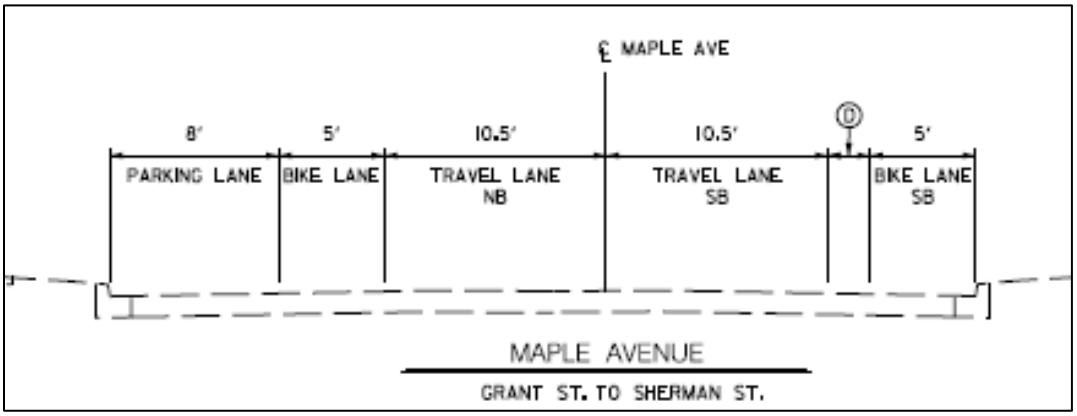

Figure 18: Typical Section - Grant Avenue to Sherman Avenue

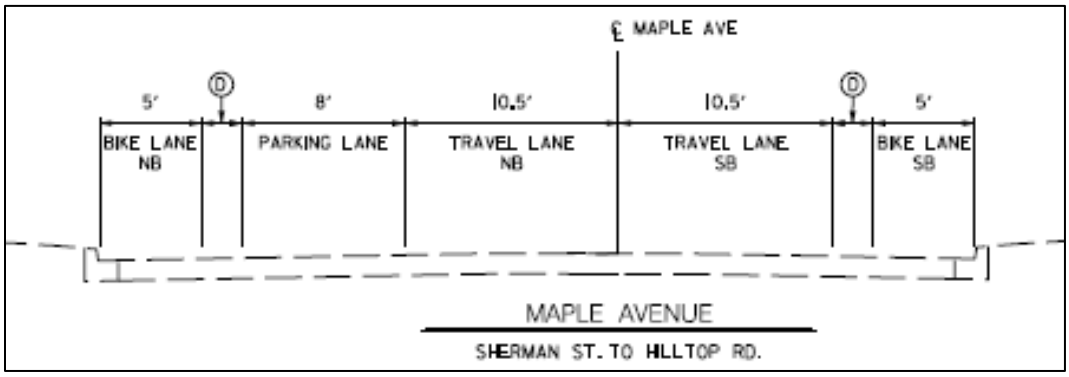

Figure 19: Typical Section - Sherman Avenue to Hilltop Road/ Sligo Creek Parkway

Related Projects

The project team completed field investigations to identify and delineate existing streams, wetlands, forests, and specimen trees within the project study area. A Natural Resource Inventory (NRI) / Forest Conservation Exemption Plan (42025100E) was submitted to M-NCPPC and confirmed on February 12, 2025.

In October 2022, the MDOT Kim Lamphier Bikeways Program[1] awarded the City of Takoma Park grant funds to complete the design work for the Maple Avenue Connectivity Project. The grant scope includes design work that revisits the existing preliminary design (30% design) and then progresses the designs to shovel readiness (100% design).

[1] The Kim Lamphier Bikeways Network Program is administered by MDOT SHA and provides grant support for projects that maximize bicycle access and enhance last-mile connections to work, school, shopping and transit. In 2020 the program was renamed for Kim Lamphier, a bicycle advocate who contribute towards increasing bicycle infrastructure funding and updating the "Three-Foot-Law".

SECTION 4 – MANDATORY REFERRAL AUTHORITY AND PROCESS

Mandatory Referral review is guided by the Montgomery Planning Mandatory Referral Review Uniform Standards (December 2022), and the authority granted through the Maryland Land Use Article, Section 20-301, et seq. As set forth in Sections 20-301 and -302, the Montgomery County Planning Board has jurisdiction over mandatory referral projects presented by Montgomery County government, municipal corporation or special taxing district, and Montgomery County Board of Education/Montgomery County Public Schools, for (i) acquiring or selling land; (ii) locating, constructing or authorizing a road, park, public way or ground, public building or structure, or publicly owned or privately owned public utility; or (iii) changing the use of or widening, narrowing, extending, relocating, vacating or abandoning any of the previously mentioned facilities. The Planning Board, or its Staff pursuant to the adopted Uniform Guidelines, must review such projects and transmit comments on the proposed location, character, grade, and extent of the activity.

As described in the Uniform Standards, the Planning Board considers all relevant land use and planning aspects of the proposal including, but not limited to, the following:

(1) whether the proposal is consistent with the County's General Plan, functional plans, the approved and adopted area master plan or sector plan and any associated design guidelines, and any other public plans, guidance documents, or programs for the area;
(2) whether the proposal is consistent with the intent and the requirements of the zone in which it is located;
(3) whether the nature of the proposed site and development, including but not limited to its size, shape, scale, height, arrangement, design of structure(s), massing, setback(s), site layout, and location(s) of parking is compatible with the surrounding neighborhood and properties;
(4) whether the locations of buildings and structures, open spaces, landscaping, recreation facilities, and pedestrian and vehicular circulation systems are adequate, safe, and efficient;
(5) whether the proposal has an approved NRI/FSD and a preliminary SWM Concept Plan, and meets the requirements of the Forest Conservation law (Chapters 19 and 22A of the Montgomery County Code);
(6) whether a Preliminary or a Final Water Quality Plan has been reviewed by the Planning Board if the project is located in a Special Protection Area. In addition, for a Water Quality Plan on public property, the Board must determine if the plan meets any additional applicable standards for Special Protection Areas;
(7) whether or not the site would be needed for park use if the proposal is for disposition of a surplus public school or other publicly-owned property; and
(8) whether alternatives or mitigation measures have been considered for the project if the proposal is inconsistent with the General Plan or other plans and policies for the area, or has discernible negative impacts on the surrounding neighborhood, the transportation network, the environment, historic resources (including burial sites), or other resources.

SECTION 5 – MANDATORY REFERRAL ANALYSIS AND CONSIDERATIONS

Master Plan Consistency

The Planning Board considers whether the proposal is consistent with the County's General Plan, functional plans, area master plans, and any associated design guidelines.

2001 Takoma Park Master Plan

The 2001 *Takoma Park Master Plan* recommended to: "Improve Maple Avenue between MD 410/Philadelphia Avenue and Sligo Creek Parkway. This street serves the Takoma Park Municipal Center, numerous apartment residents, Sligo Creek Parkway, and the Washington Adventist Hospital. Provide attractive features such as flower beds, benches, decorative lights, seasonal banners, seating areas, and enhanced crosswalks. Traffic calming features should also be considered." The Project is consistent with this overarching vision for Maple Avenue in the Street Zone area recommendations (crosswalks and traffic calming).

2018 Bicycle Master Plan

The 2018 *Bicycle Master Plan*, as shown below in Figure 20 recommends a neighborhood greenway on Maple Avenue between the DC Line and Philadelphia Avenue and one-way separated bike lanes on both sides of Maple Avenue between Philadelphia Avenue and Hilltop Road/Sligo Creek Parkway.

Per the 2018 *Bicycle Master Plan*, Neighborhood greenways are 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.

The Project is partially consistent with the *Bicycle Master Plan*. While separated bike lanes will be provided along most of the corridor, the northbound direction (south side) of Maple Avenue between Grant Avenue and Sherman Avenue will be a conventional bike lane and there will be no northbound bike lane between Philadelphi Avenue and Grant Avenue.

The project is consistent with implementing a neighborhood greenway between the DC Line and Philadelphia Avenue as the Project includes traffic calming through the use of chicanes, median islands and shared lane markings, as well as intersection improvements such as curb extensions and raised intersections to slow traffic. The daily traffic volume of a little over 2,640 vehicles is within the range recommended for neighborhood greenways, which is 3,000 vehicles per day maximum. The traffic calming measures will slow traffic speeds and may lead vehicles to use alternative routes, potentially reducing volumes.

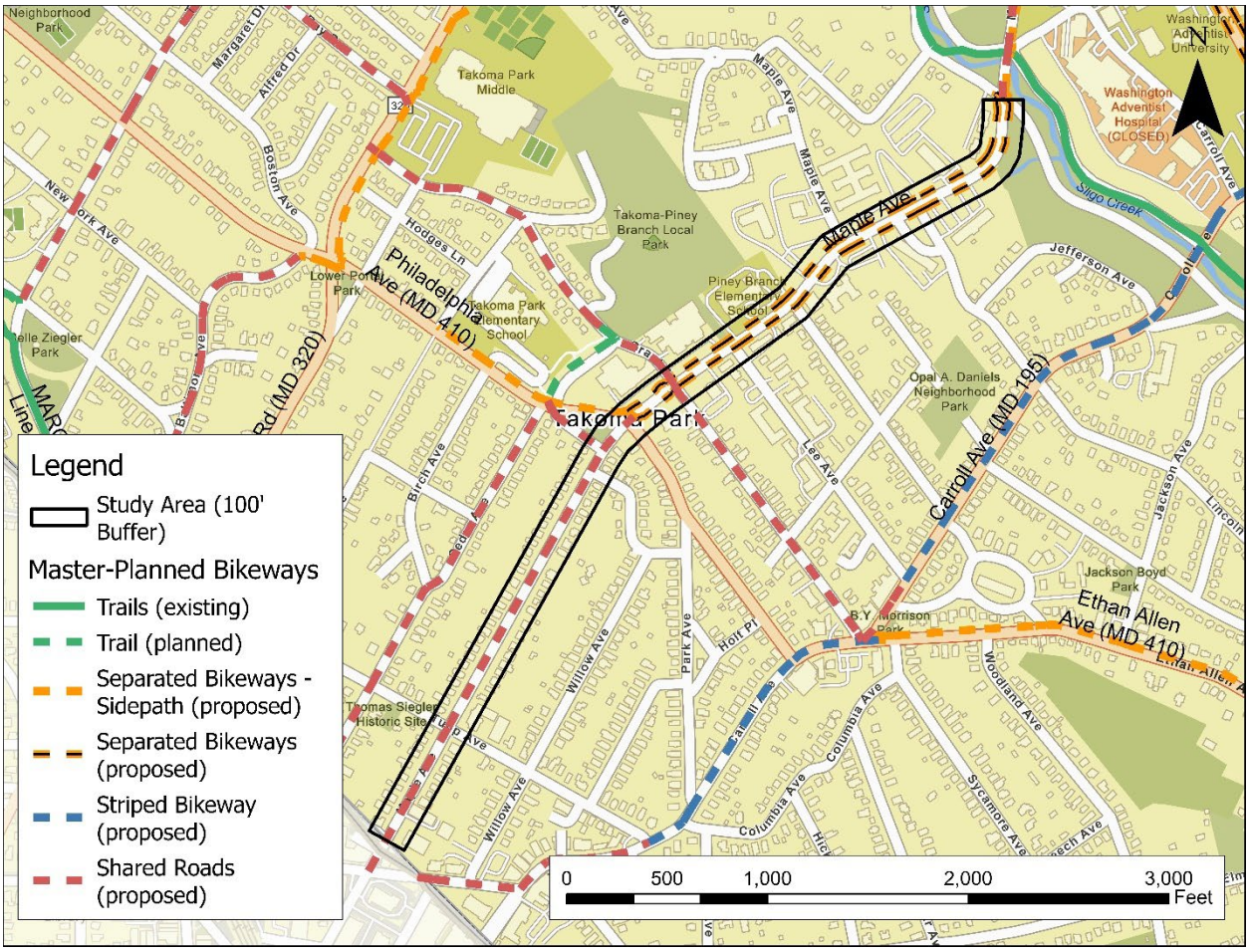

Figure 20: Bicycle Master Plan - Existing and Planned Bikeways

2024 Takoma Park Minor Master Plan Amendment

The 2024 *Takoma Park Minor Master Plan Amendment* also confirmed these same bikeway recommendations as shown below in Figure 21. The Project is partially consistent with the bicycle recommendations from the 2024 *Takoma Park Minor Master Plan Amendment* but not fully consistent as discussed above in determining the consistency with the 2018 *Bicycle Master Plan*

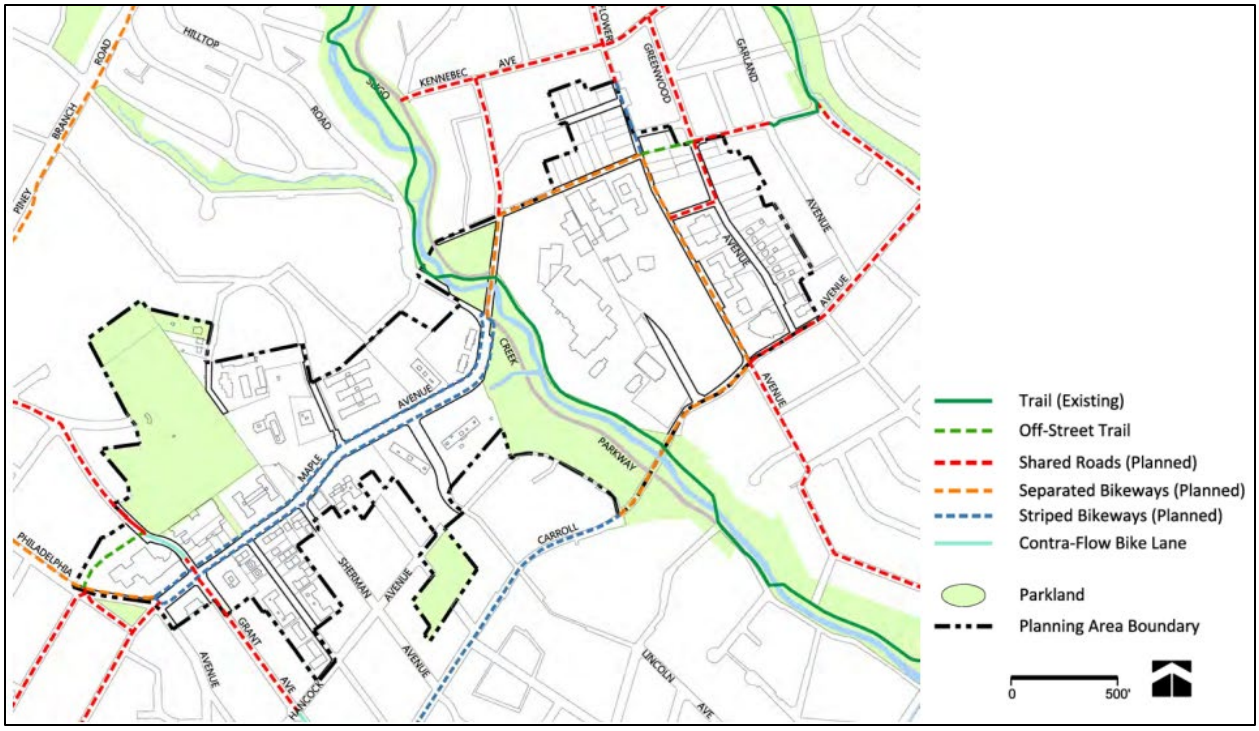

Figure 21: 2024 Takoma Park Minor Master Plan Amendment Bikeway Recommendations

2024 Pedestrian Master Plan

The Project supports the vision and goals of the 2024 *Pedestrian Master Plan* in several ways:

1) by providing additional pedestrian crossing opportunities through the project area,
2) by installing horizontal traffic calming like chicanes and other design features that slow vehicles.

At the same time, there are opportunities for further improvement, particularly for pedestrian accessibility along the corridor.

2018 Master Plan of Highways and Transitways

The 2018 *Master Plan of Highways and Transitways* (MPOHT) currently classifies Maple Avenue between the Philadelphia Avenue and Hilltop Road/Sligo Creek Parkway as a Neighborhood Connector (see Figure 21). The Planning Board Draft of the 2025 MPOHT technical update is now under review by the County Council, however, no changes are recommended for Maple Avenue within the project area.

Maple Avenue between the DC Line and Philadelphia Avenue is a non-master planned street, but the County Code would consider it a Neighborhood Street.

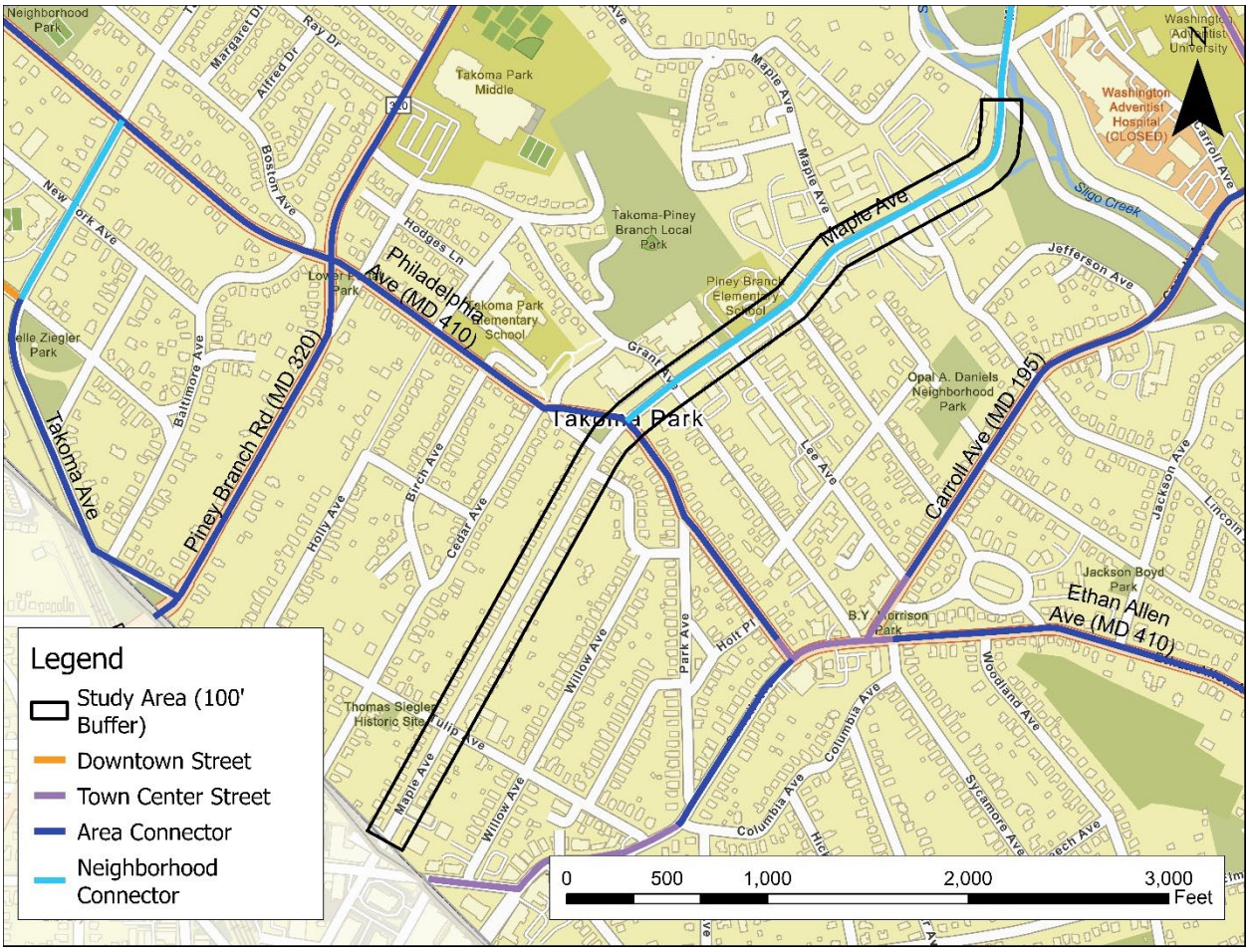

Figure 22: Master Plan of Highways and Transitways - Street Classification

Other Mandatory Referral Uniform Standard Considerations

The Project is consistent with the aspects of the Uniform Standards listed below, and reasoning is provided. All other aspects of the Uniform Standards are not applicable to this project.

- *Consistency with the intent and the requirements of the existing zoning*
  - The proposed Project is consistent with the existing commercial and residential zones. It will improve safety and access to the existing land uses and support future development consistent with the zoning.
- *Compatibility with the surrounding neighborhood and properties*
  - The design and layout of the proposed Project is compatible with the surrounding neighborhood and will improve travel conditions to the standard outlined in master plans for the area.
- *Adequacy, safety, and efficiency of landscaping and pedestrian and vehicular circulation*

- The entire Project aims to improve safety and efficiency of the transportation network in the project area.

- *Approval of NRI/FSD, preliminary SWM Concept Plan, and Forest Conservation law compliance*
  - The Project has an approved forest conservation exemption. The project received stormwater concept approval from the City of Takoma Park Department of Public Works in its letter dated May 23, 2024.

Transportation Best Practices

COMPLETE STREETS DESIGN GUIDE

The proposed Project is generally consistent with the *Complete Streets Design Guide.*

Illustrations of a Neighborhood Street and a Neighborhood Connector are provided in Figure 23 and Figure 24, respectively.

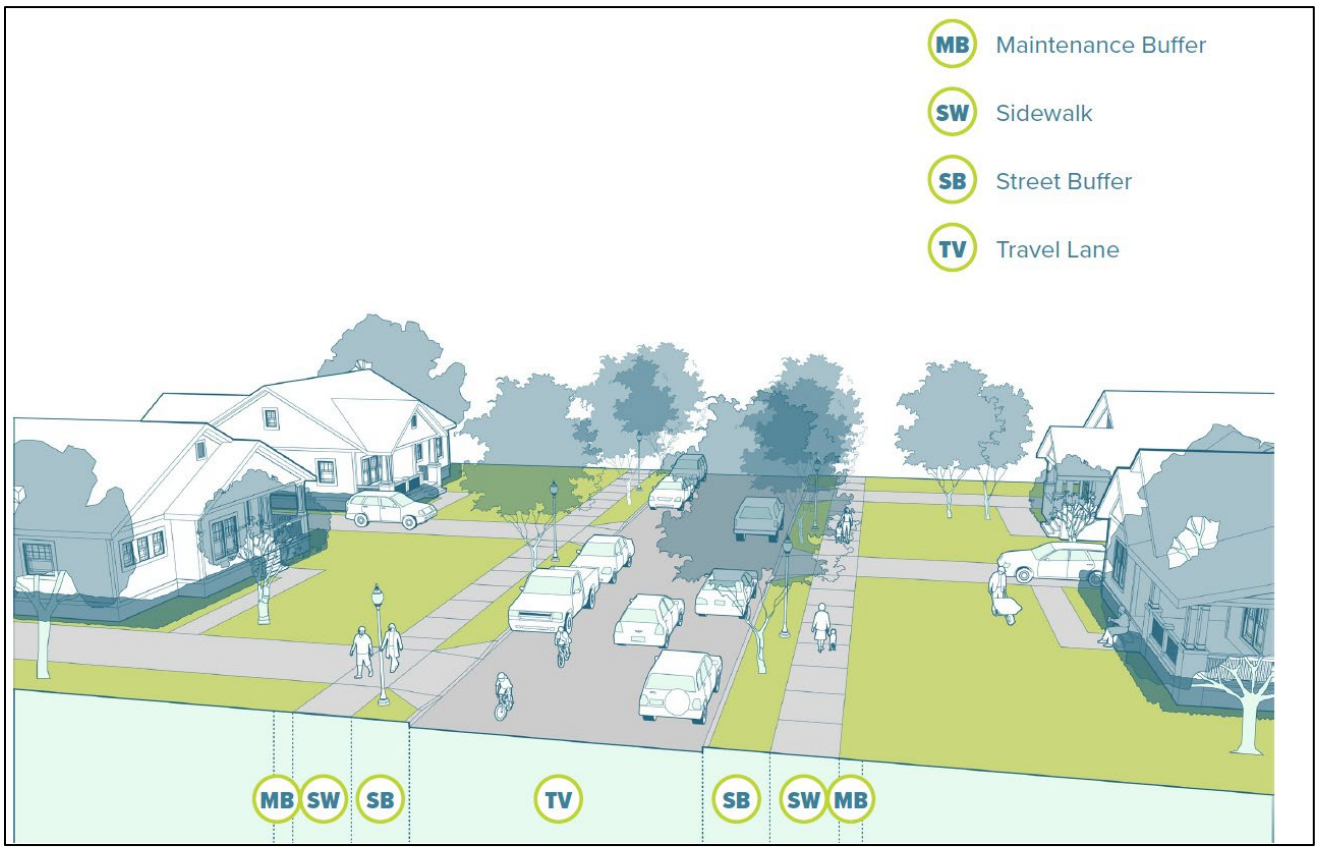

Figure 23: Illustration of a Neighborhood Yield Street

Maple Avenue between the DC Line and Philadelphia Avenue (MD 410) generally fits the definition of a Neighborhood Yield Street, although it is currently defined by County Code in Chapter 49.31 as a Neighborhood Street. A Neighborhood Yield Street typically has no marked centerline, allows parking

on both sides of the street, and is typically 26 to 28 feet wide curb to curb. Bicycle travel is accommodated within the travel lane space shared with vehicular traffic. Sidewalks with grass street buffers are provided on both sides of the street. Also, it appears that there is no maintenance buffer along this stretch of Maple Avenue with the sidewalk built right up to the adjacent property lines.

Figure 24: Illustration of a Neighborhood Connector

For the Neighborhood Connector portion of the corridor (between Philadelphia Avenue and Hilltop Road/Sligo Creek Parkway),

Table 3 provides a summary of how the proposed street design matches with the CSDG requirements for a Neighborhood Connector Street.

Table 3: CSDG Compliance for Maple Avenue between Philadelphia Avenue & Hilltop Road/ Sligo Creek Parkway

CSDG Street Element	Proposed Project	Meets CSDG Requirements
Bicycle Lane	5 ft bike lane	Yes (Meets the Minimum of 5 ft)
Street Buffer	2 ft striped pavement with plastic flexposts Inconsistent buffer widths	No (project does not meet the Minimum of 3 ft) Additionally, standard 6-inch vertical curbs are recommended adjacent to motor vehicle travel lanes and on-street parking to discourage encroachment into the separated bike lane
Travel Lane	10.5 ft wide travel lane	Yes
Ped/Bike Buffer	Inconsistent buffer widths	Project does not include right-of-way outside existing curb-to-curb)
Sidewalk	5 ft wide sidewalk	Project does not include right-of-way outside existing curb-to-curb)
On-street Parking	8 ft wide parking lanes	Yes

While the Project is limited mostly to the area between the curbs, Active Zone elements are critical to the quality of travel in the Active Zone. Figure 25 shows the sidewalk widths on both sides of Maple Avenue within the Project area. Most of the corridor has sidewalks ranging in the 3.5 ft to less than 5 ft range (this is most typically 4 ft in width).

Figure 25: Sidewalk Widths along Maple Avenue (Source: Montgomery Planning)

Figure 26 shows street buffer widths on both sides of Maple Avenue within the Project area. In Segment 1 of the corridor (between the DC Line and Philadelphia Avenue, there is no street buffer on the west side (southbound direction) and a generally narrow street buffer (3.5 to 5 feet) on the east side (northbound direction). In Segment 2 (Philadelphia Avenue to Hilltop Road/Sligo Creek Parkway), street buffers are provided on all block faces except in the southbound direction between Lee Avenue and Grant Avenue where the sidewalk is adjacent to the curb and a parking lane. The street buffers in the other blocks are generally in the 4 to 6 feet range. The blocks between Grant Avenue and Sherman Avenue in the northbound direction have more limited buffers (between one to three feet).

Figure 26: Existing Street Buffers along Maple Avenue (Source: Montgomery Planning)

The street buffer and sidewalk along Maple Avenue will not be modified as part of the proposed Project, since the project is limited to modifications between the curbs and does not include.

Overall, the current and proposed design of Maple Avenue is partially consistent with the design elements of CSDG, but not all the minimum or default dimensions.

Comment: The design should incorporate curb stops in addition to flex posts to discourage encroachment into the separated bike lanes. Per the Complete Streets Design Guide, standard 6-inch vertical curbs are recommended adjacent to motor vehicle travel lanes to discourage encroachment into separated bike lanes.

MONTGOMERY COUNTY ACCESSIBLE DESIGN GUIDE

The Project needs to ensure that its design elements are compliant with the Montgomery County Accessible Design Guide and the Americans with Disabilities Act (ADA). Following are some comments about elements that are not compliant:

Accessible Curb Ramps

The Project is focused on improvements between the curbs, however, improvements or compatibility with ADA will be required for all curb ramps.

Comment: Every curb ramp along Maple Avenue will need to be made ADA compliant. This includes both the use of directional ramps and appropriate design requirements. Many of the existing curb ramps along Maple Avenue today do not meet ADA requirements, and the proposed design does not propose changes to most ramps.

Accessible Parking

When in full effect, PROWAG will mandate the provision and design of accessible parking spaces. A standard on-street accessible parking space design is illustrated below in Figure 27 and requires a wider parking bay (13 feet minimum).

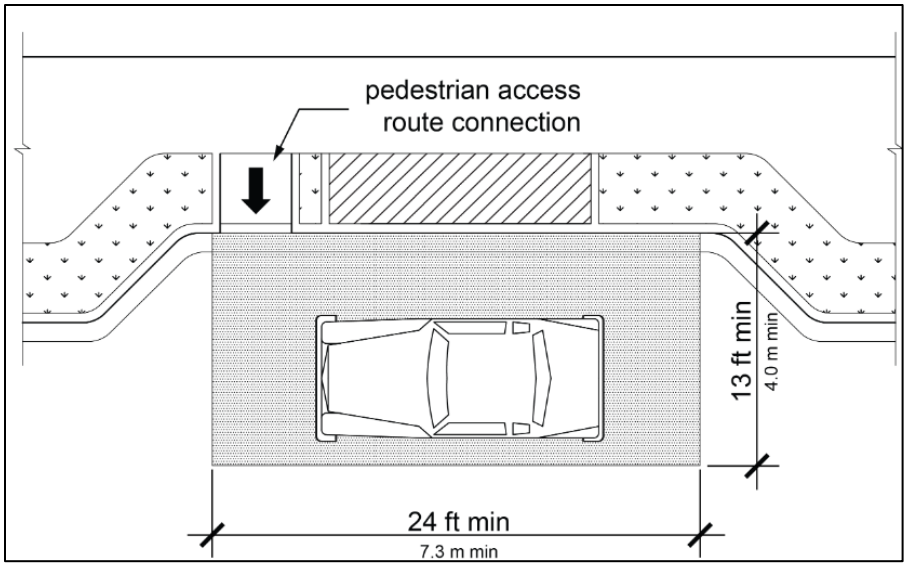

Figure 27: Accessible On-Street Parking PROWAG Requirements

Montgomery County Accessible Design Guide minimum requirements[2] are shown below in Table 4.

Table 4: Accessible Parking Requirements per Block

Total Number of Metered or Designated Parking Spaces	Minimum Required Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 and over	4% of total

Comment: Accessible parking should be designed along the corridor at logical and regular locations. For the proposed project, a total of three accessible parking spaces are needed to comply with the Montgomery County accessible parking requirements.

[2] MCDOT, *Montgomery County Accessible Design Guide,* Table 24, page 105, November 2024.

Staff conducted an estimate of the number of planned on-street parking spaces on Maple Avenue between Philadelphia Avenue and Hilltop Road/Sligo Creek Parkway at 65 parking spaces (plans do not currently show individual parking spaces marked). Based on PROWAG requirements, this would require a total of three accessible spaces to be located at regular intervals along this section of the corridor.

Bus Boarding Islands

A photo of a typical bus boarding island from San Francisco is shown below in Figure 28. The Project shows proposed bus boarding islands at Tulip Avenue, midway between Tulip Avenue and Valley View Avenue, Grant Avenue, Sherman Avenue, and the Sligo Creek Parkway. The midblock example is shown below in Figure 29, an example with a bus boarding island located on the intersection approach is shown below in Figure 30, and an example with a bus boarding island on the intersection departure is shown below in Figure 31. The Montgomery County Accessible Design Guide requires that bus boarding islands be 10-feet wide minimum. However, the width of the bus boarding islands proposed by this project is 8 feet.

Comment: Widen the bus boarding islands to 10 feet to meet Montgomery County Accessible Design Guide requirements.

Figure 28: Typical Bus Boarding Island

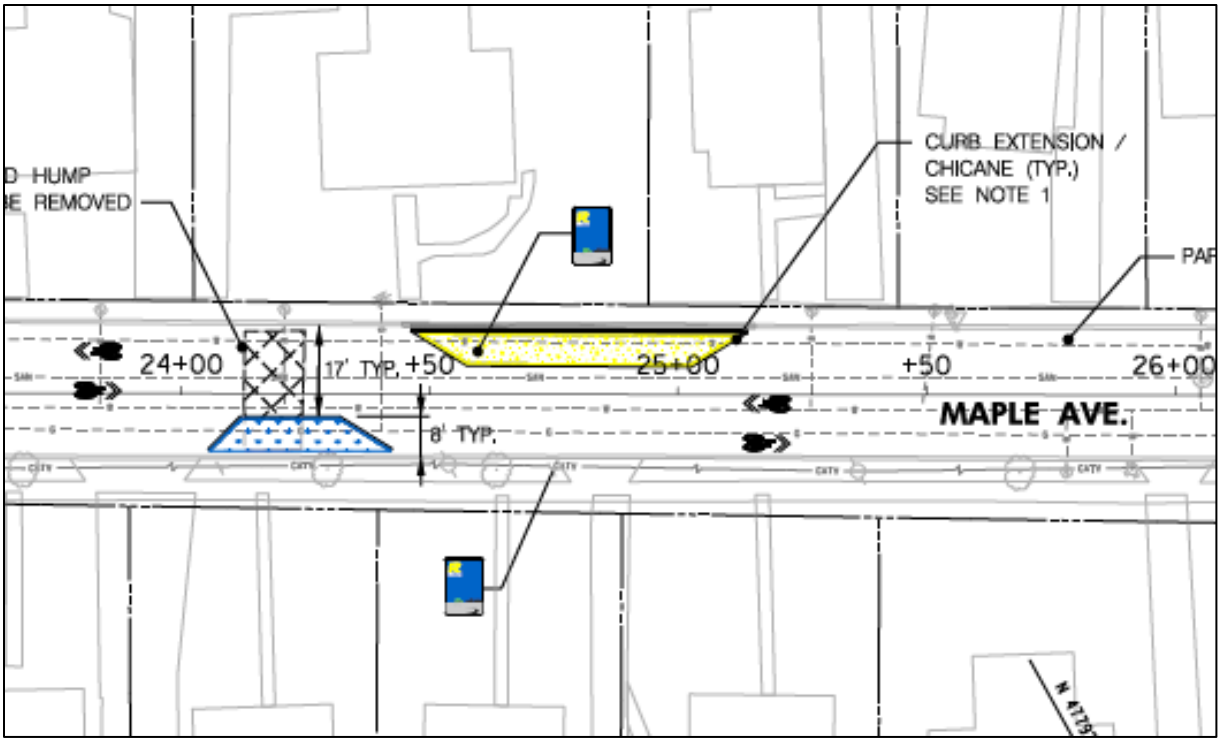

Figure 29: Bus Boarding Island – Midblock

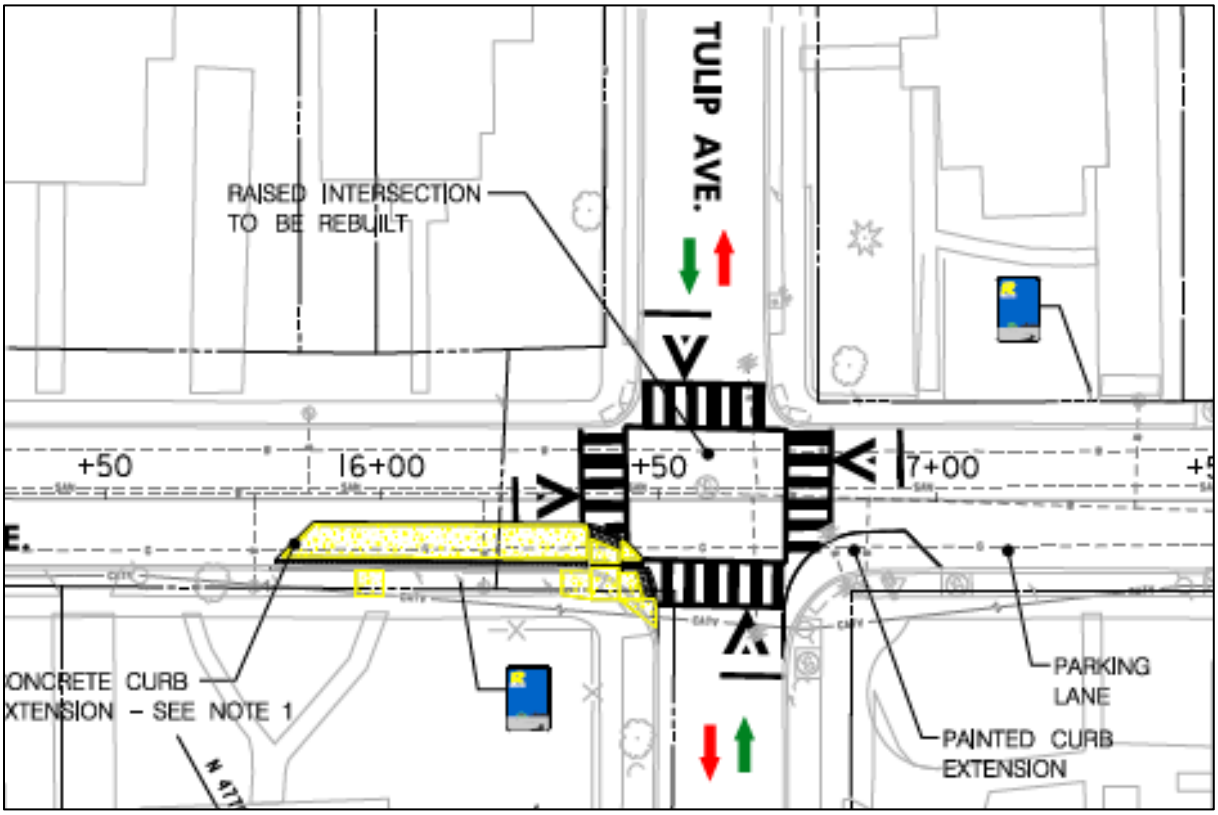

Figure 30: Bus Boarding Islands - Typical Approaching Intersection

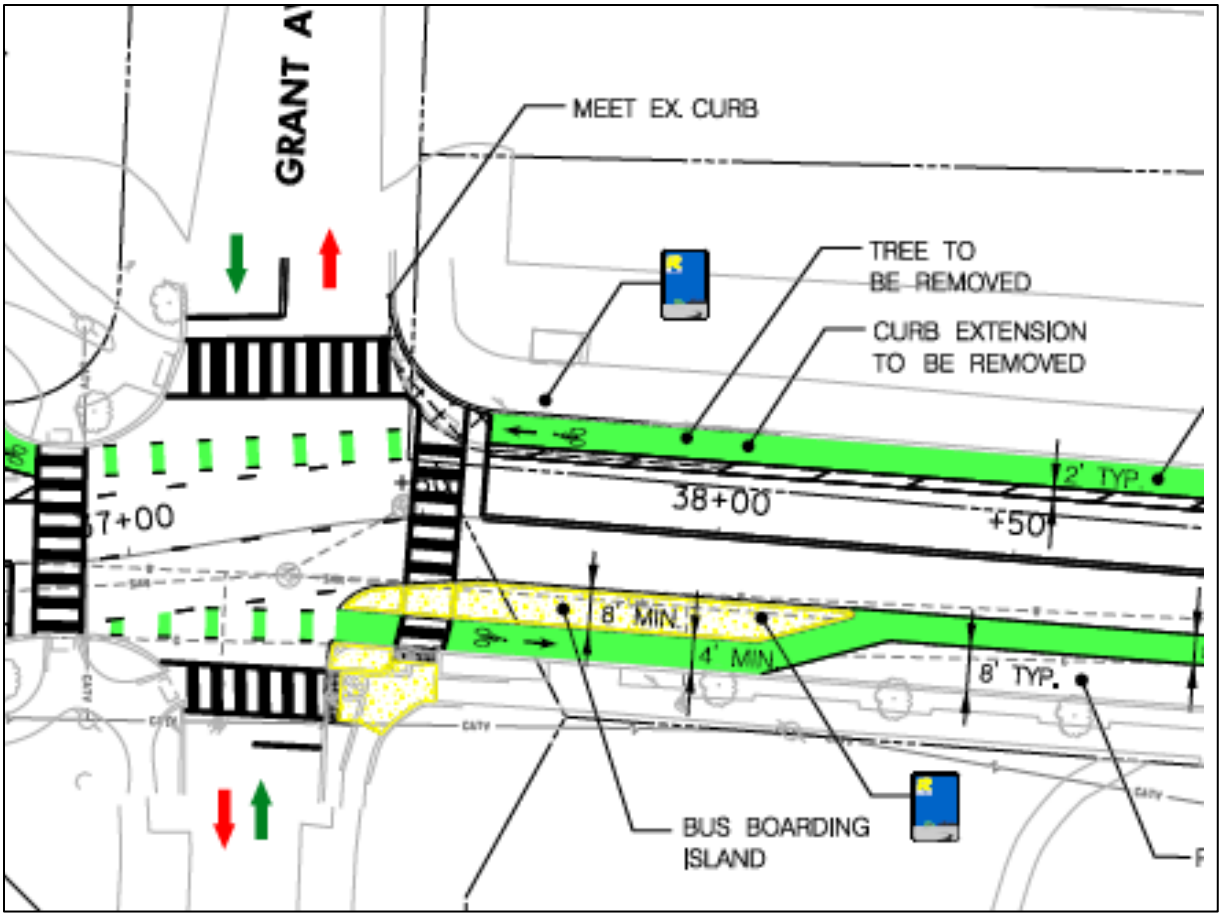

Figure 31: Bus Boarding Island - Typical Departing Intersection

NATIONAL ASSOCIATION OF CITY TRANSPORTATION OFFICIALS' (NACTO) GUIDELINES

Chicane Design

Given the generally steep downgrade of Maple Avenue between the DC Line and Philadelphia Avenue, the grade should be considered in both siting the chicane locations and designing the chicane spacing. Chicanes are likely to reduce the number of on-street parking available by about two to three spaces at each location. Chicanes that intersect with Ride On bus stops should provide proper clearance for bus stops.

Comment: Design the chicanes to comply with bus turning radii requirements from the bus operator (Ride On Transit).

Raised Intersections

The intersection of Maple Avenue with Tulip Avenue has a raised intersection treatment that will be impacted during construction of the Project but will be re-established by the Project. A photo of the existing intersection is shown in Figure 32. It should be noted the while the center of the intersection is raised slightly, it is difficult to visually recognize this as a raised intersection as it lacks some best practices design elements, and the proposed design does not fully address these issues. Figure 33 displays a NACTO visualization of how raised intersections should be designed, typically with a differentiated surface where the pavement is raised, elevation warning markers (painted chevrons), and flush curb ramps and bollards.

Figure 32: Raised Intersection - Maple Avenue at Tulip Avenue

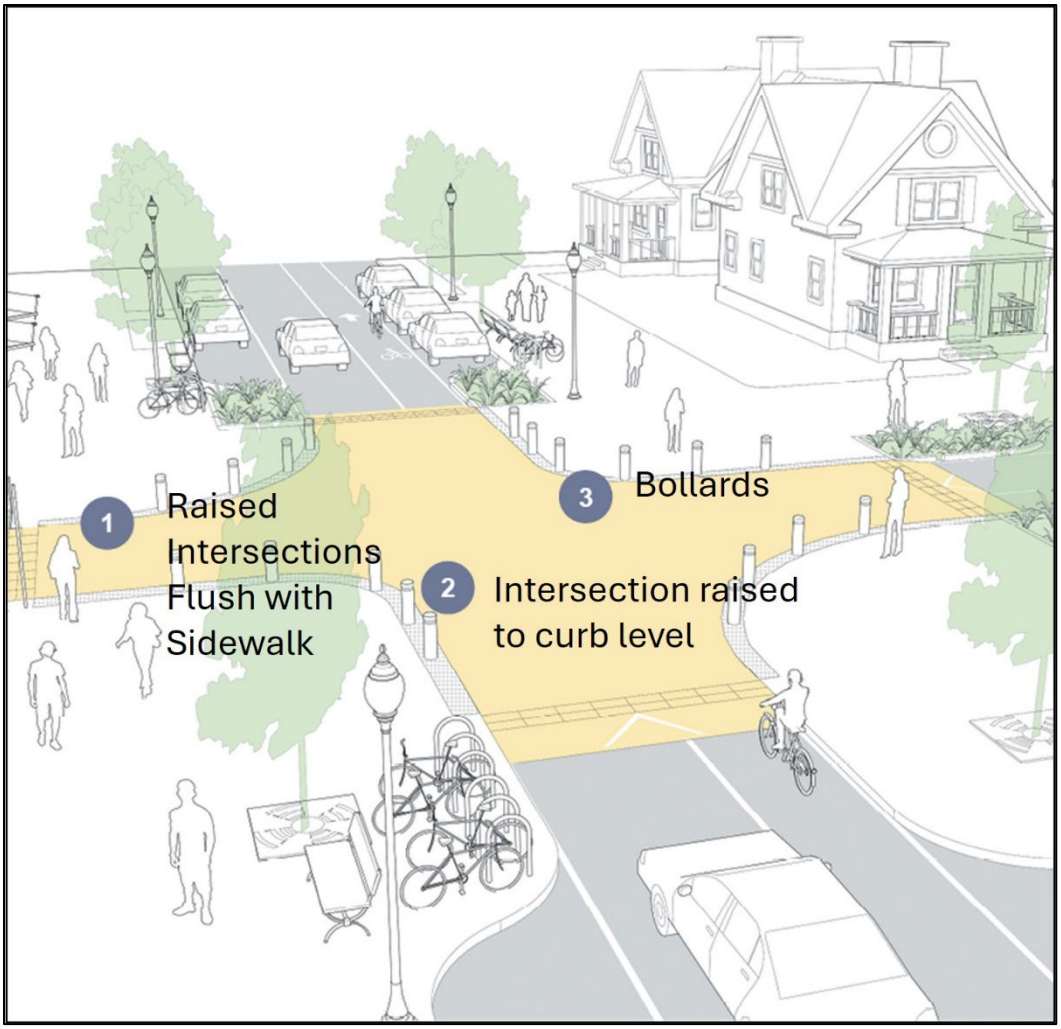

Figure 33: Raised Intersection - NACTO

Illustrative photos are also shown in Figure 34 and Figure 35 to demonstrate how seamless a raised intersection can be implemented.

Comment: Reconstruct intersection of Maple Avenue with Tulip Avenue as a full raised intersection consistent with national best practices to include: raised intersection flush with sidewalk, intersection raised to curb level, and consideration should be given to providing bollards.

Figure 34: Photo of Raised Intersection (Boulder, CO)

Figure 35: Raised Intersection (Cambridge, MA) - Credit: Cara Seiderman

Bus Boarding Islands

Comment: Coordinate with the bus operator Ride On and MCDOT on the design of bus boarding islands/stations to ensure that the bus stop and protected bike lane elements are designed to meet evolving national standards and current County best practices. This should include more details on whether flexposts will be included with the design consistently or only at specific locations.

On-Street Parking Layout

The on-street parking design appears to allow parking right up to driveway entrances. This creates sight distance challenges for drivers exiting and entering the driveways. For exiting drivers, they would have to pull out across the bikeway in order to see oncoming traffic. For entering drivers, the parked cars block visibility of parallel bicycle travel.

Comment: Restrict parking within 5 feet of distance (typically defined by County Code and per sight distance requirements in the American Association of State and Highway Transportation Officials (AASHTO) Green Book) of driveways and intersections to maintain visibility for driveway users, motorized vehicles, and bicycles.

Intersection Design/Design Vehicle

The curb radius of the northwest corner of the Maple Avenue intersection with Philadelphia Avenue is excessively wide (see Figure 36). This turn should be able to accommodate a bus design vehicle at the very least, however, it is more generous than needed and should be re-evaluated.

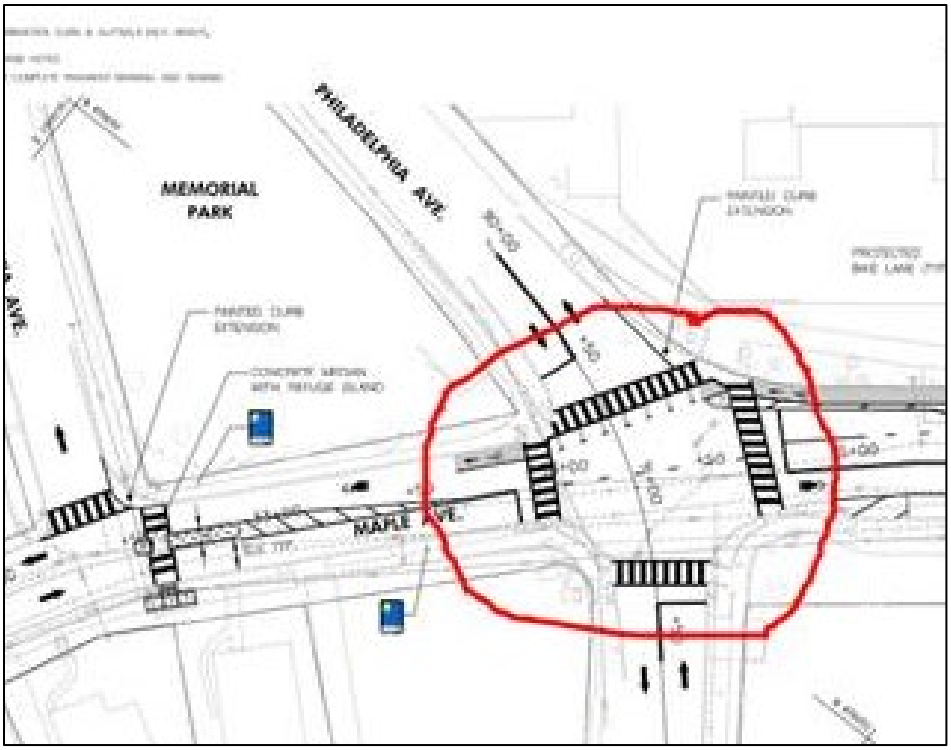

Figure 36: Intersection of Maple Avenue with Philadelphia Avenue (MD 410) Design Compliance

Comment: Conduct an auto turn analysis at the intersection of Maple Avenue with Philadelphia Avenue to determine if the turn radius can be tightened.

While the chicane bulb outs are effective at traffic calming, maneuvering buses and larger trucks (SU-40) could create a visibility conflict for bicyclists and shared traffic.

Comment: Conduct auto-turn analysis to assess potential pinch point conflicts of proposed chicanes for trucks, buses, and passenger vehicles. Coordinate closely with MCDOT and assess the appropriate spacing of curb extensions relative to potential conflict zones.

PEDESTRIAN LEVEL OF COMFORT AND BICYCLE LEVEL OF TRAFFIC STRESS

The Pedestrian Level of Comfort (PLOC) methodology captures how comfortable it is to walk and roll in different conditions in Montgomery County. A variety of pathway and crossing factors are considered to determine a comfort score for each crossing and pathway segment. The four main scores are: undesirable (score = 4), uncomfortable (score = 3), somewhat comfortable (score = 2), and very comfortable (score = 1).

The current Pedestrian Level of Comfort (PLOC) score along Maple Avenue, as shown in Figure 37, is identified as “Somewhat Comfortable” and this score is based on the existing substandard narrow sidewalks and a limited street buffer. Between the DC Line and Philadelphia Avenue, most of Maple

Avenue on the west side (southbound direction) has no street buffer with the sidewalk located immediately adjacent to the curb. North of Philadelphia Avenue, street buffers are provided, but not consistently on both sides of the street. The Project will not significantly improve the PLOC score along existing sidewalks, since it does not include improvements to existing sidewalks and will only marginally change the street buffers in spots where chicanes and curb extensions are constructed.

Figure 37: Maple Avenue & Vicinity Existing Pedestrian Level of Comfort

Crosswalk improvements are planned to add four crosswalks at the following locations:

1. Maple Avenue at Old Philadelphia Avenue (north side),
2. Maple Avenue at Sherman Avenue (south side),
3. Maple Avenue at Ritchie Avenue (south side), and
4. Maple Avenue at Lincoln Avenue (north side).

The project is planning to modify two existing crosswalks to be raised crosswalks at the following locations:

1. Maple Avenue at Sherman Avenue (north side), and

2. Maple Avenue at Ritchie Avenue (north side).

Similarly, the Bicycle Level of Traffic Stress (BLTS) methodology captures how comfortable it is to bicycle in different conditions in Montgomery County. The LTS methodology assigns a numeric stress level to streets and trails based on attributes such as traffic speed, traffic volume, number of lanes, frequency of parking turnover, ease of intersection crossings and others. The main scores are: Very Low Stress (appropriate for most children), Low Stress (appropriate for most adults) and High & Moderate Stress (inappropriate for children and most adults).

Currently, the Bicycle Level of Traffic Stress (BLTS) score along Maple Avenue, as shown in Figure 38 is classified as Very Low Stress between the DC Line and Philadelphia Avenue, and Low Stress between Philadelphia Avenue and Hilltop Road/Sligo Creek Parkway. Providing the protected bike lanes will improve the BLTS to Very Low Stress along the entire length of the Project. The Project will eliminate seven existing speed humps, which is favorable to on-street bicycle travel (while still slowing traffic speeds), however it will maintain the raised intersection on Maple Avenue at Tulip Avenue.

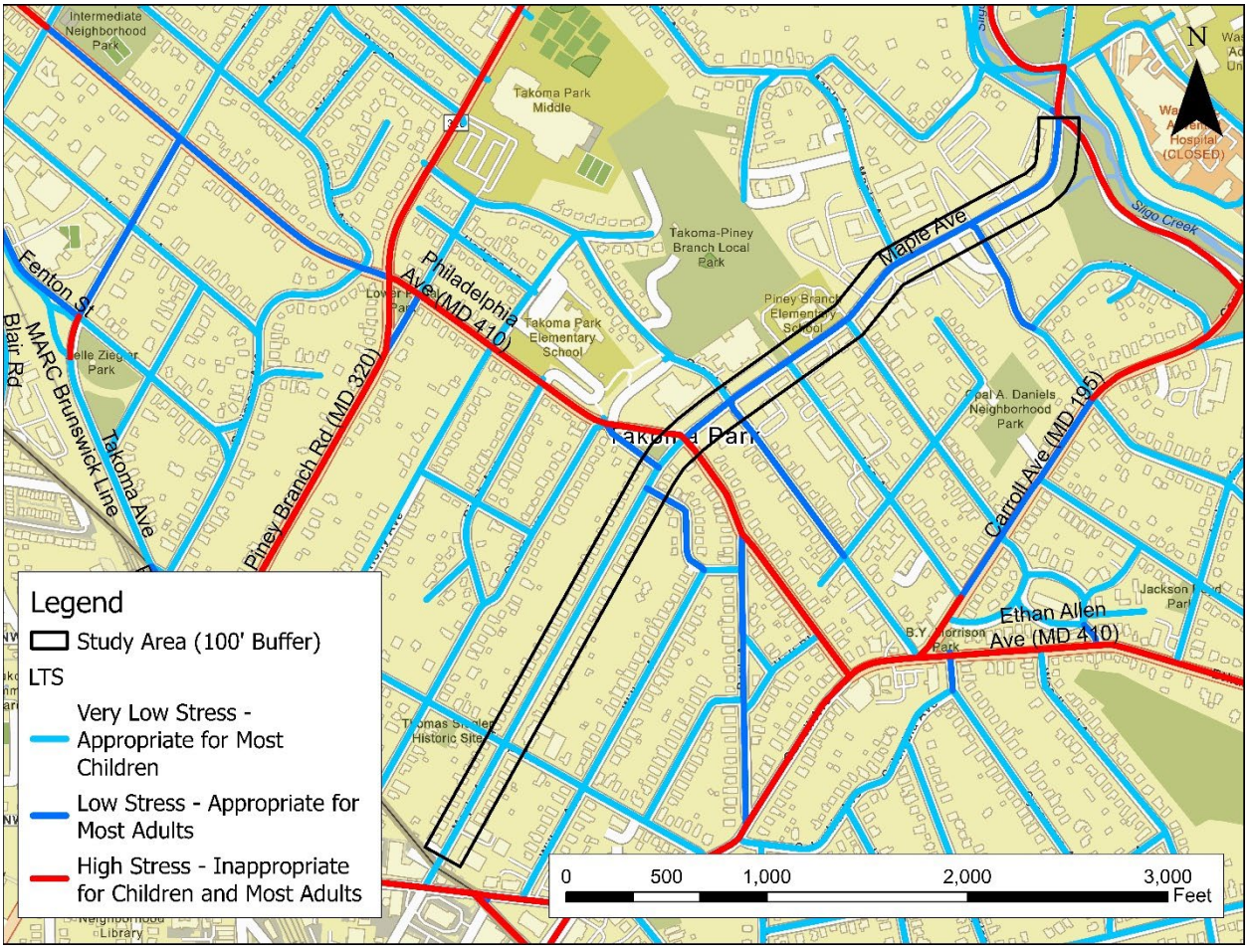

Figure 38: Maple Avenue & Vicinity Existing Bicycle Traffic Stress

Environment

ENVIRONMENTAL GUIDELINES

The Project conforms to the Planning Board-approved Environmental Guidelines for Environmental Management of Development in Montgomery County.

The Property is located within the Sligo Creek Watershed, which is a Use I watershed. There are no stream buffers, wetlands, or 100-year floodplains on-site. The soils on the Property are classified as urban land and are not considered highly erodible or sensitive. There are no known rare, threatened, or endangered species on the Property.

Any environmental impacts have been minimized to the greatest extent possible but are necessary and unavoidable to achieve the design standards of the proposed Project. The following sections evaluate project compliance with forest conservation and stormwater management regulations.

FOREST CONSERVATION

The Project is subject to Chapter 22A, Montgomery County Forest Conservation Law, but exempt from Article II and from the submission of a forest conservation plan under Section 22A-5(e) as a "county and municipal highway project." Therefore, a Forest Conservation Exemption Request Plan No. 42025100E was granted under Section 22A-5(e) on February 12, 2025. This document is provided with the Staff Report as Attachment B. While the project is exempt from Article II of the Forest Conservation Law, the Applicant is still required under section 22A-9 of Chapter 22A of the County Code to prepare a plan that demonstrates:

a) General.
    a. This Section applies to construction of a highway by the County or a municipality as part of an approved Capital Improvements Program project.
    b. The construction should minimize forest removal, land disturbance, and loss of significant, specimen, or champion trees to the extent possible while balancing other design, construction, and environmental standards. The constructing agency must make a reasonable effort to minimize land disturbance to avoid the cutting or clearing of trees and other woody plants.
b) If the forest to be cut or cleared for a county highway project equals or exceeds 20,000 square feet, the constructing agency must reforest a suitable area at the rate of one acre of protected reforestation for each acre of forest cleared.
c) Reforestation for County highway projects must meet the standards in subsections 22A-12(e), (g) and (h).
d) Any mitigation requirement for loss of significant, specimen, or champion trees must be based on the size and character of the tree.

The exemption includes a required Tree Save Plan. Because the project under review is only at the 35% design stage, the Tree Save Plan is preliminary. The City of Takoma Park-will submit a Final Tree Save Plan to Planning Staff for review and approval during the final (100%) design phase of the project. A final Tree Save Plan must be submitted and approved by Planning Staff prior to clearing, grading, or demolition for each phase of construction.

STORMWATER MANAGEMENT

The City of Takoma Park Department of Public Works approved a Stormwater Concept Management Plan on May 23, 2024. This approval is included as Attachment C.

Historic Preservation

Segment 1 of the project is located in the Takoma Park Historic District (#37/03). Even though the proposed improvements are within the City's right-of-way, Chapter 24A-6 of County Code, Historic Resources Preservation, requires a Historic Area Work Permit (HAWP) for alterations to public or private property within the environmental setting of any historic district. Historic Preservation Staff is supportive of this project and encourages the applicant to apply for the HAWP at their earliest convenience. There are no anticipated impacts to any existing historic easements.

The design for this project is federally funded by a Maryland Bikeways Grant. SHA is coordinating National Environmental Policy Act (NEPA) approval, including coordination with Maryland Historic Trust (MHT).

Parks Department

This Project has minimal impact to M-NCPPC Parkland within Sligo Creek SVU 1. Sligo Creek Parkway extends from University Boulevard to New Hampshire Avenue (MD 650). The 5.6-mile roadway runs parallel to portions of Sligo Creek Trail. Sligo Creek Trail has numerous features and amenities along the 10.2-mile hard surface trail. This section of Sligo Creek Parkway is part of Parks' Open Parkways program and has gates that close the parkway to vehicles on Saturdays and Sundays. The location of the Maple Avenue Connectivity Project in relation to existing M-NCPPC parks is shown in Figure 39. Note the triangular park adjacent to the intersection of Maple Avenue and Philadelphia Avenue is Memorial Park, owned and maintained by the City of Takoma Park.

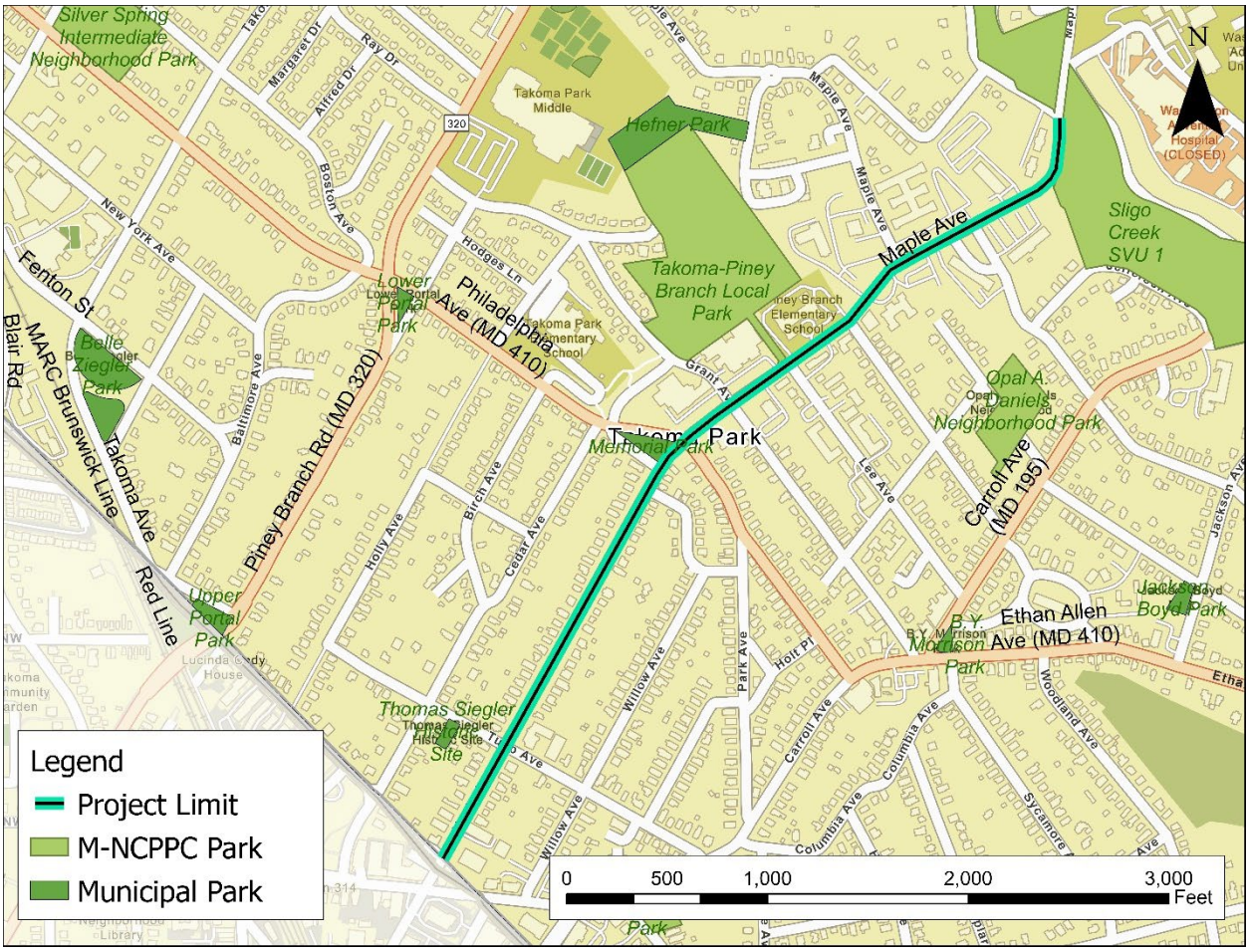

Figure 39: Parkland Near Maple Avenue

PARKLAND AND RESOURCE DESCRIPTION

The Project will result in temporary impacts on the south side of Maple Avenue at the intersection with Sligo Creek Parkway within Sligo Creek Stream Valley Unit 1 (SVU1) and a small section of Takoma Piney Branch Local Park where parkland extends to the street. No permanent impacts are anticipated for this Project. No resource impacts are anticipated for this Project.

PARKLAND IMPACTS

The City of Takoma Park has coordinated with M-NCPPC Montgomery Parks staff on the Maple Ave Connectivity project as it relates to Parkland. The project has minimal impact to Parkland and includes transportation improvements at the intersection with Sligo Creek Parkway south of Maple Avenue in Sligo Creek SVU 1 and Takoma Piney Branch Local Park. The work proposed on Parkland includes the painting of a protected bike lane, a painted curb extension, repainting of a crosswalk over Sligo Creek Parkway, and an improved, accessible pedestrian ramp at Sligo Creek Parkway (Figure 40 and Figure 41) and a curb extension and an improved pedestrian ramp at Takoma Piney Branch Local Park (Figure 42).

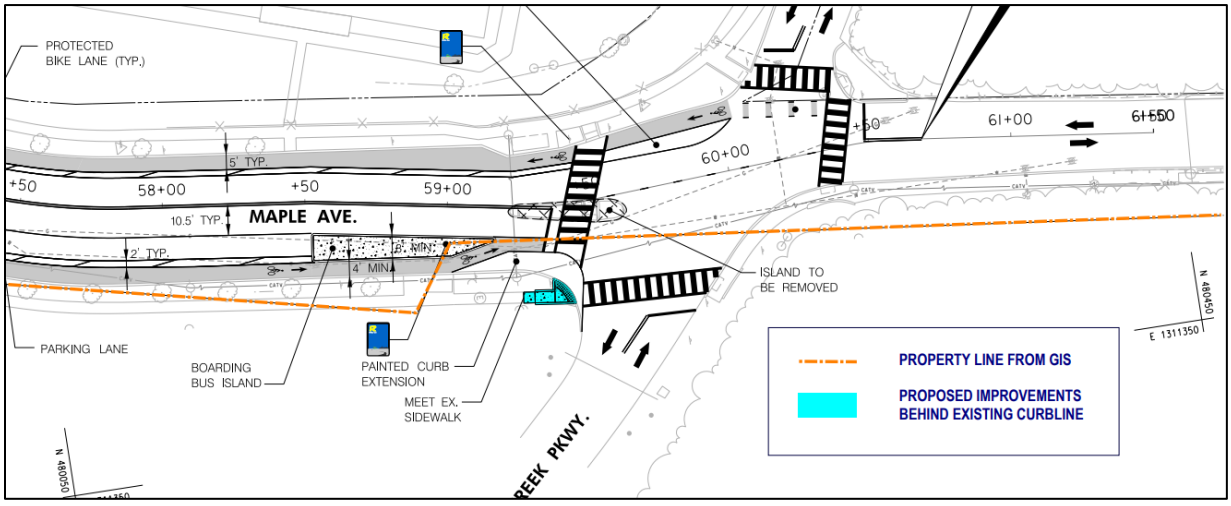

Figure 40: Proposed Improvements on Parkland at Sligo Creek SVU1

Figure 41: Existing Conditions Looking South of Maple Avenue at Sligo Creek Parkway (Sligo Creek SVU1)

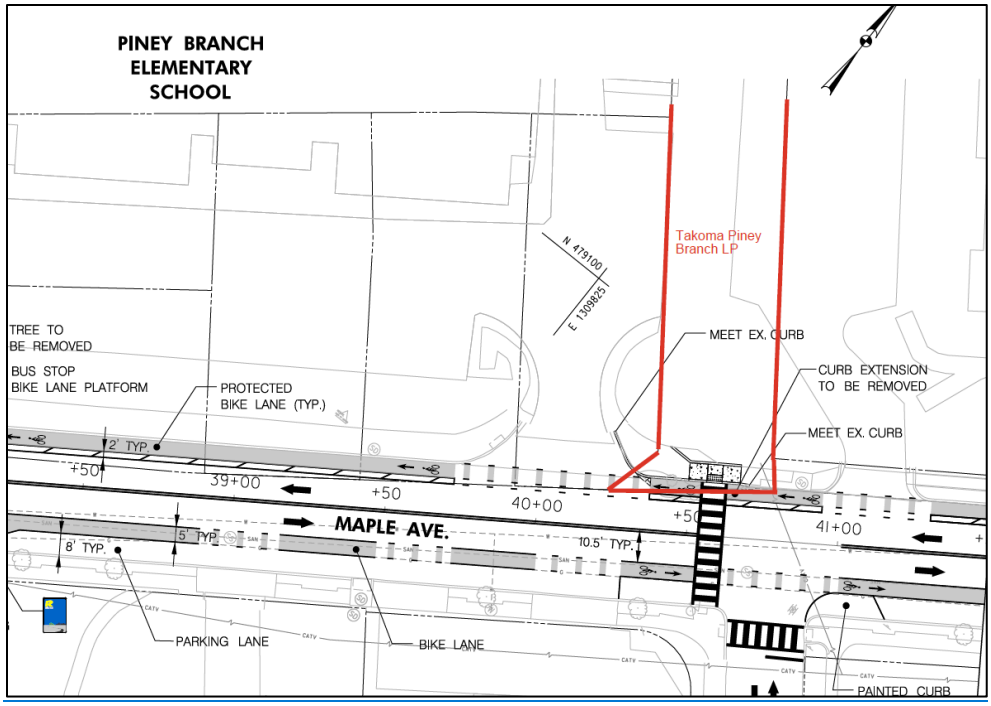

Figure 42: Proposed Impacts at Takoma Piney Branch Local Park

PARK CONSTRUCTION PERMIT

The City of Takoma Park will be required to obtain a Park Construction Permit from Montgomery Parks prior to commencement of any construction activities on Parkland. Plans submitted for Park Construction Permit review must include existing topography, utilities, and identify and locate all trees (with size and species) that are 6" DBH and greater within 25 feet of the proposed Limit of Disturbance on park property. During Park Construction Permit review, Parks staff will work with the City of Takoma Park to minimize impacts to parkland to the greatest extent possible and provide improved pedestrian and cyclist connectivity to the park.

Comment: Construction plans must be submitted to the Maryland National Capital Park and Planning Commission (M-NCPPC) Department of Parks for review as part of the Park Construction Permit process to ensure that all work is performed in accordance with M-NCPPC standard details, specifications, and policies. No work on parkland may occur until an approved Park Construction Permit is issued for the project.

Comment: Montgomery Parks tree mitigation will be fulfilled through either (1) replacement planting on parkland at a rate of one-inch to one-inch diameter or (2) a monetary per inch caliper basis at the rate of $200/diameter inch, to be paid to Montgomery Parks before completion of construction. The construction plans must locate all trees (with size and species) that are 6" DBH and greater within 25 feet of the proposed Limit of Disturbance on park property.

SECTION 6 – COMMUNITY OUTREACH

The City of Takoma Park has a website outlining the project scope, schedule, and available documents. https://takomaparkmd.gov/1519/Maple-Avenue-Connectivity-Project The City conducted a vigorous public outreach program that encompassed a series of surveys at different local events as well as in-person and virtual focus groups, between August 2023 and January 2024. An in-person public meeting was held on January 18, 2024, to present the 30% design to the community. An online story map was set up for residents to review the design materials and leave additional comments.

A second public meeting was conducted in September 2024, after 60% design submittal. The City of Takoma Park will be coordinating the 60% design with property owners, including required removal of on-street parking spaces and right of way acquisitions. City Council presentations are also planned following 60% and 90% design completion. The project outreach has included to-date:

- 10 pop-ups workshops
- 5 community meetings
- 5 on-site events where flyers were distributed
- 4 focus groups
- 2 City Council presentation
- 2 online surveys

After Planning Staff accepted the Mandatory Referral for review, Montgomery Planning notified local civic and homeowners' associations and other interested parties of this proposal. As of the date of this report, Planning staff have received no comments on this project from the public.

SECTION 7 – CONCLUSION

With the comments cited in this Staff Report, the Mandatory Referral application for the Maple Avenue Connectivity Project, designated Mandatory Referral No. MR2025001, is consistent with the general and specific recommendations of the 2024 *Takoma Park Minor Master Plan Amendment*, *the* 2024 *Pedestrian Master Plan,* the 2018 *Bicycle Master Plan,* the 2018 *Master Plan of Highways and Transitways, and the* 2001 *Takoma Park Master Plan*. Staff recommends approval of the Mandatory Referral with the comments cited in Section 1 and transmittal of comments to the City of Takoma Park.

SECTION 8 – ATTACHMENTS

Attachment A: Proposed Project Plans

Attachment B: Forest Conservation Exemption Approval Letter

Attachment C: Stormwater Concept Approval Letter