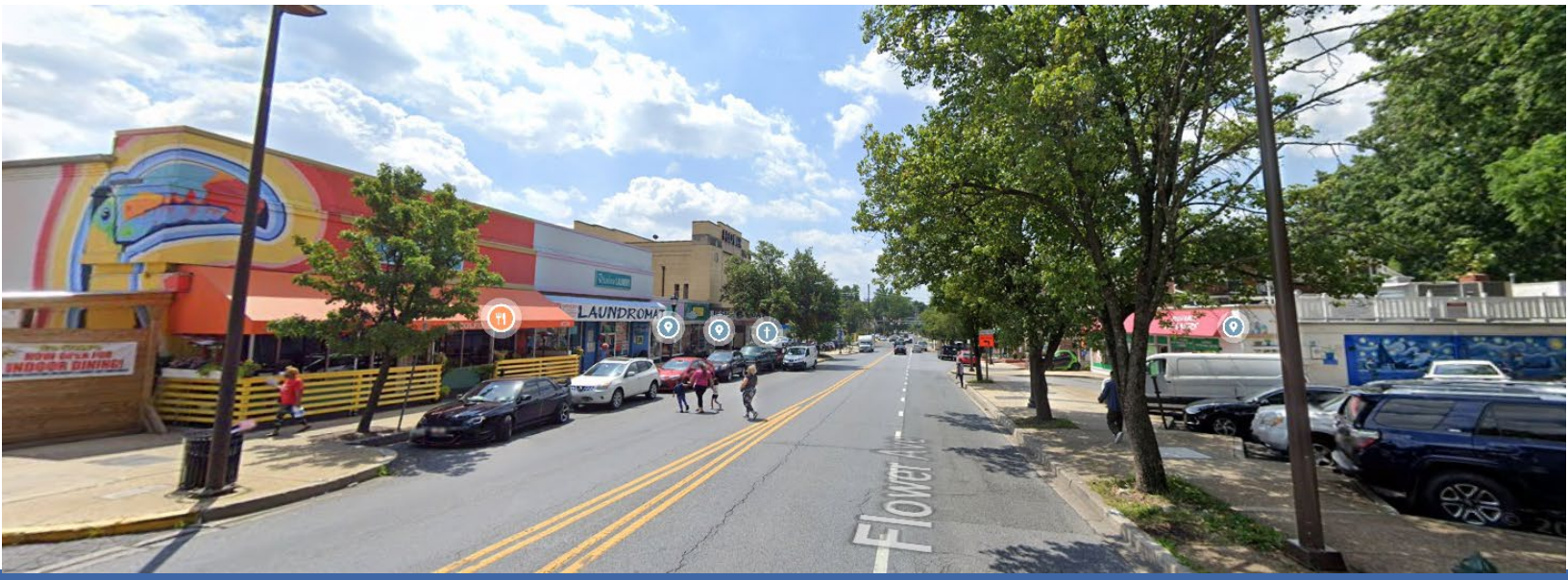
Montgomery Planning

MANDATORY REFERRAL NO. 2024013 – FLOWER AVENUE SEPARATED BIKE LANES



Description

This is a Mandatory Referral review for the Montgomery County Department of Transportation proposal for separated bike lanes along approximately 0.2 miles of Flower Avenue between Piney Branch Road and Arliss Street, with other pedestrian and bicycle safety improvements.

	No. MR2024013	MCPB Item 10 06/20/2024	2425 Reedie Drive Floor 14 Wheaton, MD 20902

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LOCATION

Flower Avenue between Arliss Street and Piney Branch Road

MASTER PLANS

2018 *Bicycle Master Plan,* 2018 *Master Plan of Highways and Transitways,* 2013 *Long Branch Sector Plan*

APPLICANT

Montgomery County Department of Transportation

ACCEPTANCE DATE

April 16, 2024

REVIEW BASIS

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

Summary

- Montgomery County Department of Transportation project to construct separated bike lanes along Flower Avenue from Piney Branch Road to Arliss Street.
- The proposed project is funded as part of the Purple Line Bicycle-Pedestrian Priority Area Improvements (FY 24 CIP P502004) and is within a quarter mile of the Long Branch Purple Line station.
- Montgomery Planning Staff recommends approval of the Mandatory Referral with comments and transmittal of comments to Montgomery County Department of Transportation.
- The Planning Board review of a Mandatory Referral is pursuant to the Land Use Article of the Maryland Annotated Code, Section 20-301, et seq.

CONTENTS

SECTION 1 – RECOMMENDATIONS

Planning Staff recommends the transmittal of the following comments to the Montgomery County Department of Transportation:

Transportation Recommendations

1. Provide raised crossings at all driveways—also called sidewalk-level driveways—in line with the 2024 *Complete Streets Design Guide*.
2. Provide green conflict zone striping where the Bike Lane merges with the roadway at the driveway on the west side of Flower Avenue (southbound), south of Piney Branch Road at Station 100+00.
3. Tighten the curb radii at all intersections in line with the 2024 *Complete Streets Design Guide* default radii (15 feet), but especially at the southwest corner of the Piney Branch Road intersection.
4. Provide curb extensions into the Parking Lanes on both sides of Flower Avenue just north of Piney Branch Road, as outlined in the Planning Department's 2021 *Vision Zero Community Toolkit*.
5. Provide a crossing on the north side of the Arliss Street-Flower Avenue intersection, in line with the 2023 *Pedestrian Master Plan*, add stop controls at all legs of the intersection, and improve the transition for the southbound Bike Lane.
6. Prioritize increasing Active Zone facility widths to meet the Town Center Street guidelines in the 2024 *Complete Streets Design Guide* in the following order:
    1. Street Buffer: widen the Street Buffer to six feet.
    2. Sidewalk: widen the Sidewalk to the default 10 feet (8 feet minimum) width.
    3. Bikeway: widen each one-way Separated Bike Lane to the default six- and one-half feet.
    4. Ped / Bike Buffer: widen the Ped/Bike Buffer six feet default (2 feet minimum).
7. At the following locations, remove the median to provide sufficient width for the Street Buffer and Sidewalk, as outlined in the 2024 *Complete Streets Design Guide*.
    a. Between Stations 105+00 and 106+50
    b. Between Stations 111+25 and 112+50
8. Create ADA accessible space for pedestrians to queue at the southeast corner of the Piney Branch-Flower Avenue intersection by narrowing the parking lot driveway and converting it to right-in only.
9. On the west side of Flower Avenue, between Stations 103+00 and 104+00, widen the Sidewalk to the 10-foot default width or eight-foot minimum width identified in the 2024 *Complete Streets Design Guide* and reposition streetlight 207.

10. Avoid abrupt changes in the Separated Bike Lanes by ensuring a maximum 3:1 horizontal taper, in line with the Planning Department's *Bicycle Facility Design Toolkit* in the 2018 *Bicycle Master Plan*.
11. Provide at least one accessible on-street parking space per the Public Right-of-Way Accessibility Guidelines (PROWAG).
12. Narrow the entrance driveway on the east side of Flower Avenue at Station 102+75 to, at most, the 15-foot width of the exit driveway at Station 103+75 to reinforce the one-way vehicular traffic flow that is proposed.
13. Convert the driveway on the west side of Flower Avenue (Stations 102+75/103+00) from full-access to restricted left-out.
14. Shift the northbound Separated Bike Lane (Station 106+00) further east as it crosses the driveway to allow space for a car to queue between the bikeway and the roadway.
15. Develop a wayfinding plan using the 2023 *Bikeway Branding Project* "Wayfinding & Sign System Standards Manual."

Environmental Recommendations

16. When replacing street trees, use native tree species specified in the *Montgomery County Tree Manual.*

Parks Recommendations

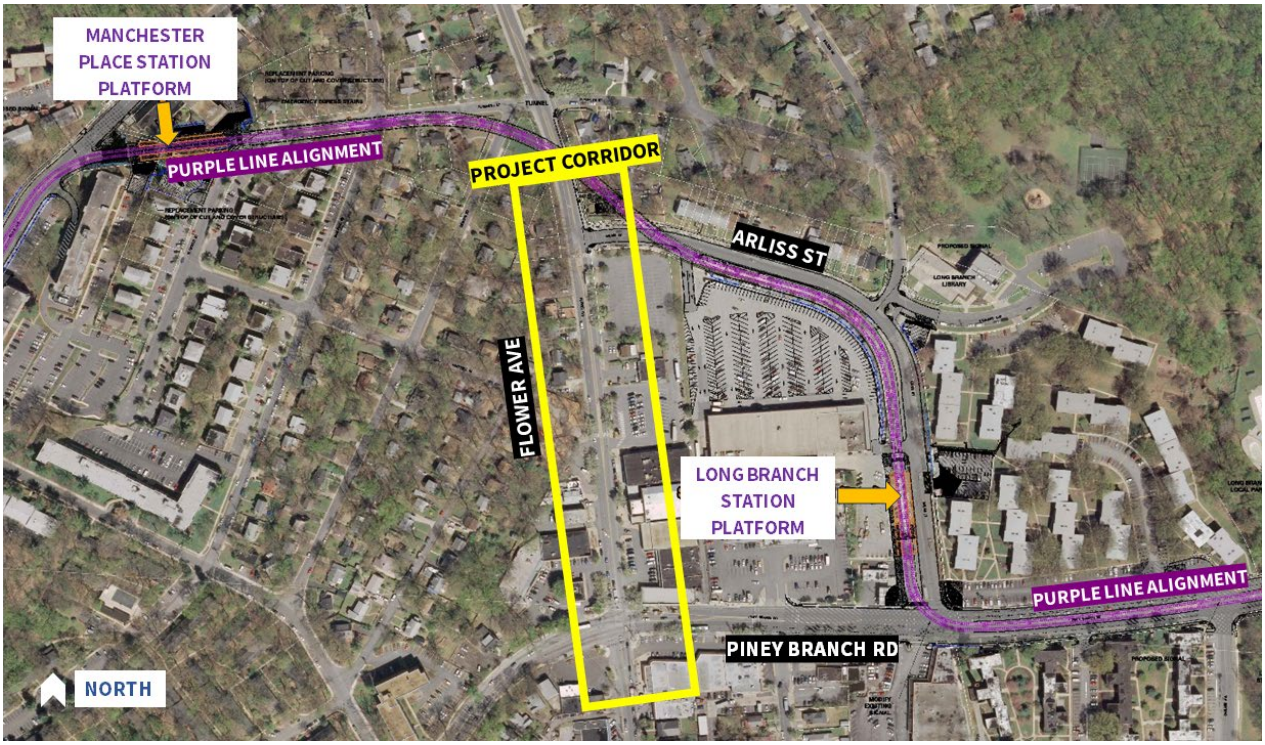
17. Provide a continuous sidewalk connection from the bus stop curb ramps at Station 106+50 directly into Flower Avenue Urban Park.
18. Bollards at the entrance to Flower Ave Urban Park shall be replaced in-kind within the same footprint of the new sidewalk.

SECTION 2 – PROJECT DESCRIPTION

Project Description

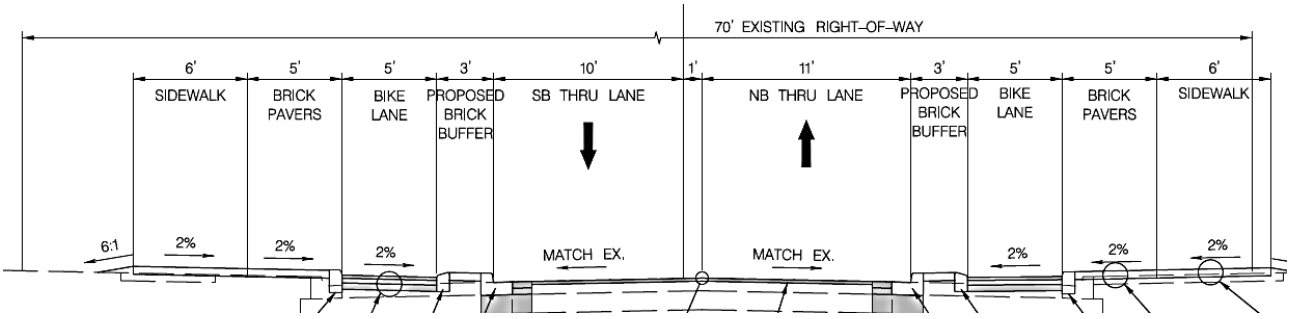
The Montgomery County Department of Transportation (MCDOT) proposes to construct one-way separated bike lanes on either side of Flower Avenue—which runs north-south—from Piney Branch Road (MD 320) to Arliss Street, the area identified in Figure 1.

Figure 1: Project Area Map with Purple Line Alignment



The proposed bike lanes are five feet (5 ft) wide, and MCDOT will be narrowing the vehicle through-lanes and making improvements to sidewalks and designated on-street parking as part of the project. The typical roadway section in Figure 2 shows generally the proposed configuration of the project, though the street buffer widths vary along the project extent. Engineering drawings for the project are found in Attachment A.

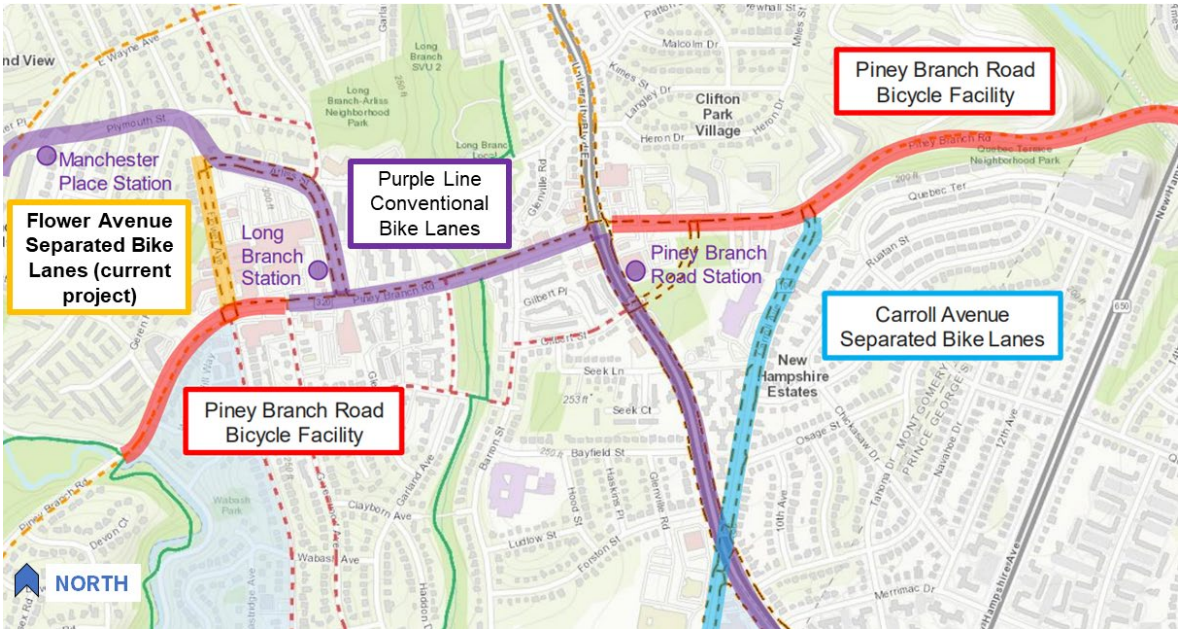
Figure 2: Proposed Typical Roadway Section



Background

The proposed project is recommended as a Tier 2 bikeway[1] in the 2018 *Bicycle Master Plan*. While constructing the proposed separated bike lanes will enable bicyclists to avoid conflicts with motor vehicles in the busy town center, bicyclists continuing north or south of the town center will transition to riding in the street However, MCDOT is coordinating with MDOT SHA to connect the Flower Ave bikeway to the conventional bike lanes that will be constructed as part of the Purple Line project. In the future, the Flower Avenue bike lanes will be part of a larger bicycle network, with bikeways along Piney Branch Road, Arliss Street, University Boulevard, and Carroll Avenue. Figure 3, from MCDOT, outlines the nearby bikeways that are currently in the design or construction phase.

Figure 3: Nearby Planned Bikeway Network



The project will make it easier and safer for people to walk or bike to the Purple Line stations, existing local businesses, and nearby community facilities such as the Long Branch Library and Long Branch Recreation Center. It will also provide safer pedestrian and bike crossings across Piney Branch Road, which is a state road (MD 320).

The Flower Avenue Separated Bike Lanes are within a quarter mile of the future Long Branch Purple Line station, and the bikeway is funded for design and construction through the Purple Line Bicycle and Pedestrian Priority Area program in the current FY 24 Capital Improvement Program.

[1] Tier 1 represents the highest priority bikeways and Tier 4 represents the lowest priority bikeways, as defined in the 2018 *Bicycle Master Plan*.

Surrounding Neighborhood

The surrounding neighborhood is mainly commercial with small, local businesses. Architecture varies from walk-up retail to strip malls with parking. There are also several grocery stores and single-family homes immediately outside the project area. Within the project area, pedestrians can access Flower Avenue Urban Park via the park entrance on Flower Avenue. The nearby Flower Avenue Theater and Shopping Center is a designated historic site, and the theater façade was restored in 2023. Piney Branch Road is a state road (MD 320), and south of Piney Branch Road, Flower Avenue enters the City of Takoma Park.

South of Piney Branch Road, the City of Takoma Park recently constructed the Flower Avenue Green Street project, which installed sidewalks, curb extensions and other traffic calming treatments, along with enhanced stormwater facilities.

Flower Avenue is a two-lane, two-way roadway with variable parking lane widths and additional dedicated turn lanes (Figure 4). There is also a narrow, raised median in the northern portion of the project area. The County Council designated Flower Avenue as a Town Center Street as part of the county's transition to a Complete Streets roadway classification system, and the Working Draft of the 2024 *Master Plan of Highways and Transitways Technical Update* proposes to retain this designation.

The posted speed limit is 25 miles per hour. In 2022, the calculated MDOT SHA Annual Average Daily Traffic volumes along Flower Avenue between Piney Branch Road and Franklin Avenue to the north was 9,825 vehicles (10,425 per weekday only). In a seven-day period in September 2022, the typical two-way weekday average daily volume on Flower Avenue north of Piney Branch Road was approximately 11,850 vehicles (see Attachment B).

According to an MCDOT analysis (Attachment B), there were 22 documented crashes in the study area between 2019 and 2022, and 21 of those crashes occurred at the intersection of Flower Avenue and Piney Branch Road. Twenty-one crashes involved only motor vehicles, one included a bicyclist, and none included pedestrians. Five crashes involved injuries, and the highest frequency of crashes occurred between 4PM and 5PM. No crashes were fatal.

Figure 4: Flower Avenue in front of Flower Theater, looking toward Piney Branch Road

Sidewalks along Flower Avenue currently vary in width and the presence of buffers. The typical walking conditions range from "Somewhat Comfortable" to "Uncomfortable" (Pedestrian Level of Comfort 2 or 3)[2], mainly due to insufficient street buffer width as defined in the 2023 *Pedestrian Master Plan*. Bicycling conditions are "Moderately High Stress" (Bicycle Level of Traffic Stress 3)[3], due to the shared roadway conditions and wide traffic through-lanes, as defined in the 2018 *Bicycle Master Plan*. There is only one protected crossing within the 0.2-mile project area: a signalized crossing at Piney Branch Road. There are also 10 to 12 commercial driveways accessing small parking lots or alleys on either side of the roadway that create additional conflict points with pedestrians and bicyclists.

PARKLAND AND NATURAL RESOURCES DESCRIPTION

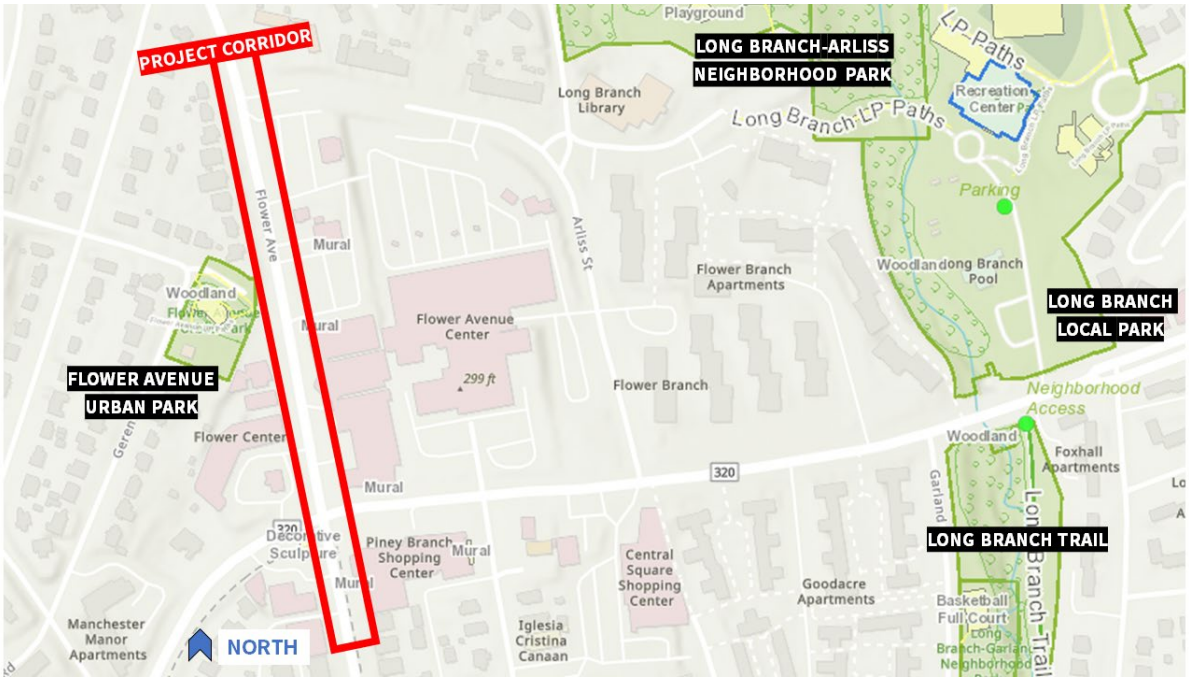
Flower Avenue Urban Park fronts the project area, and its main function is as a community gathering space and children's playground. The park provides a walking connection from Flower Avenue to Hartwell Road and the adjacent neighborhoods to the west. Trees within this park help with shading and cooling the neighborhood and provide some stormwater value. The proposed project will not impact these benefits. Flower Avenue Urban Park drains to Sligo Creek, and most of the stormwater in the watershed is untreated.

In addition, the proposed bicycle lanes will enhance connections from Long Branch Trail, Long Branch Local Park, and Long Branch-Arliss Neighborhood Park to the Flower Avenue Urban Park, the adjacent neighborhood to the west, and the commercial establishments along the Flower Avenue corridor (Figure 5).

[2] Pedestrian Level of Comfort Scores include the following:
- 1 = very comfortable
- 2 = somewhat comfortable
- 3 = uncomfortable
- 4 = undesirable

[3] Bicycle Level of Traffic Stress Scores include the following:
- 1 = very low stress
- 2 = low stress
- 3 = moderate high stress
- 4 = high stress
- 5 = very high stress

Figure 5: Surrounding Parklands in Relation to the Project Corridor



SECTION 3 – 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 20-302, the Montgomery County Planning Board has jurisdiction over mandatory referral projects presented by the federal government, State of Maryland, Montgomery County government, Montgomery County Board of Education, and public utilities, among others, for:

(1) acquiring or selling land;

(2) locating, constructing or authorizing a road, park, public way or ground, public building or structure, or public utility; or

(3) changing the use of or widening, narrowing, extending, relocating, vacating or abandoning any of the previously mentioned facilities.

The Planning Board must review such projects and transmit comments on the proposed location, character, grade and extent of the activity to the project applicant.

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 4 – MANDATORY REFERRAL ANALYSIS AND FINDINGS

Master Plan Consistency

As described in the Uniform Standards outlined in Section 3 of this staff report, 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.

The proposed bikeway is consistent with the 2018 *Bicycle Master Plan*. The 2018 *Bicycle Master Plan* recommends one-way separated bike lanes on both sides of Flower Avenue. This project is classified

as a Tier 2[4] master-planned bikeway in the 2018 *Bicycle Master Plan*. The 2018 *Bicycle Master Plan* also notes that interim separated bike lanes will be a minimum of five feet wide, and permanent separated bike lanes will be a minimum of six- and one-half-feet-wide, but eight feet is preferred. The proposed facility design befits an interim, but not permanent separated bike lane condition due to constraints imposed by adjacent developments. Additional improvements to the facility could be possible with future redevelopment of adjacent properties or right-of-way acquisition.

The proposed design is consistent with the master-planned 70-foot right-of-way with two traffic-lanes, as described in the 2013 *Long Branch Sector Plan*. The proposed design also reinforces the 25 mile-per-hour target speed that was prescribed in this plan.

The County Council designated Flower Avenue as a Town Center Street as part of the county's transition to a Complete Streets roadway classification system. The Working Draft of the 2024 *Master Plan of Highways and Transitways Technical Update* proposes to retain this designation.

Other Mandatory Referral Uniform Standard Findings

Regarding the other aspects outlined in the Uniform Standards in Section 3 of this staff report, not all of them apply to Mandatory Referrals for public transportation projects. The project is consistent with the aspects of the Uniform Standards listed below, and reasoning is provided. All other aspects 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 in this small commercial center. 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, layout, and parking 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.

[4] Tier 1 represents the highest priority bikeways and Tier 4 represents the lowest priority bikeways, as defined in the 2018 *Bicycle Master Plan*. Tier 2 includes all bikeways in existing Bicycle and Pedestrian Priority Areas (BiPPAs) that are not prioritized through other policies that apply in Tier 1.

- *Approval of NRI/FSD, preliminary SWM Concept Plan, and Forest Conservation law compliance*
    - The project meets these requirements. A forest conservation exemption request was granted under Section 22A-59(e) as a "county and municipal highway project." The stormwater management concept for the project was approved by the Department of Permitting Services (DPS).

Transportation Best Practices

The County Council designated Flower Avenue as a Town Center Street as part of the county's transition to a Complete Streets roadway classification system. The Town Center Street classification corresponds with design guidance from the 2024 *Complete Streets Design Guide* (*CSDG*). The following section outlines how the proposed design achieves stated design goals and best practices.

COMPLETE STREETS DESIGN GUIDE

The 2024 *Complete Streets Design Guide* introduces two distinct zones of a roadway: the Active Zone and the Street Zone. The Active Zone includes the sidewalk and bike lanes, as well as a pedestrian-bike buffer between these two facilities, and a street buffer that separates these active modes of transportation from motor vehicles. The Street Zone includes the parking lane, any travel lanes for motor vehicles, turn lanes, and medians (Figure 6).

Figure 6: Diagram from Complete Streets Design Guide showing the Active Zone and Street Zone

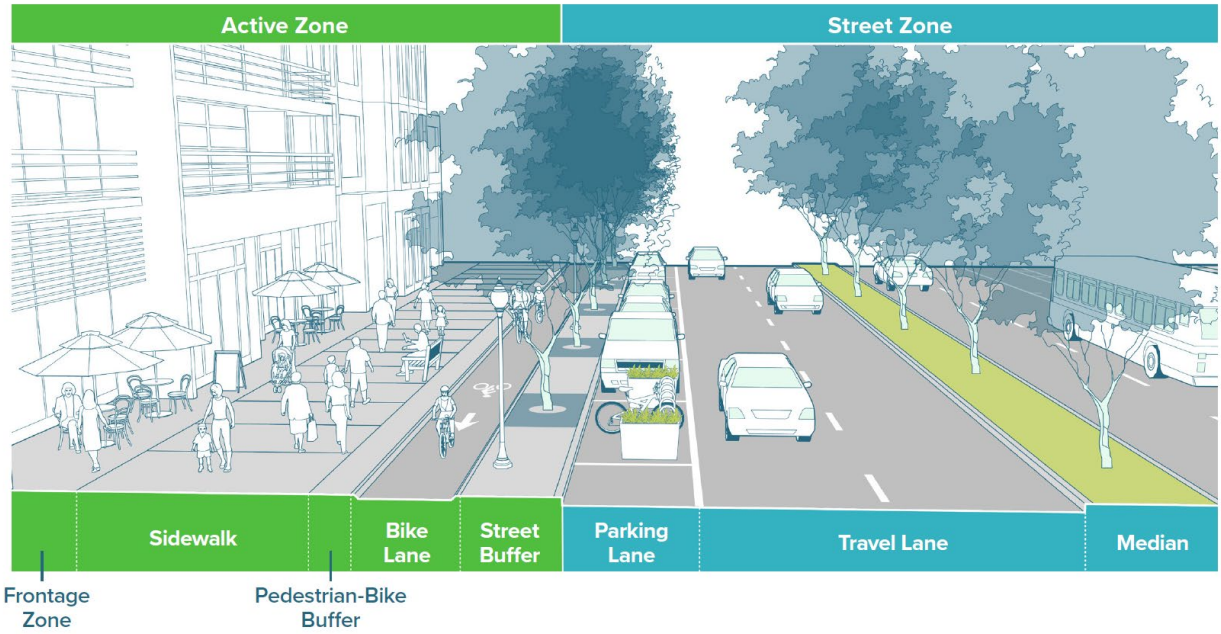


Table 1 summarizes how existing conditions and the proposed design compare with guidance on **Active Zone facility widths** from the 2024 *Complete Streets Design Guide*. For a detailed analysis by distinct sections of the project area, please see Attachment C.

Table 1: Summary of Complete Streets Design Guide Compliance Analysis

Active Zone Facility	Existing (ft)	Proposed (ft)	CSDG (ft)
Sidewalk (west)	5 to 8	6	8 to 10
Ped/Bike Buffer (west)	N/A	0 to 5	2 to 6
Separated Bike Lane (west)	N/A	5	5 to 6.5
Street Buffer (west)	0 to 6	3 to 9	6
Street Buffer (east)	0 to 5	1 to 9	6
Separated Bike Lane (east)	N/A	5	5 to 6.5
Ped/Bike Buffer (east)	N/A	0 to 5	2 to 6
Sidewalk (east)	6 to 10	6 to 10	8 to 10

While the proposed Active Zone facilities either meet or fall below the minimum width standards in the 2024 *Complete Streets Design Guide*, they do represent an improvement from existing conditions.

The 2024 *Complete Streets Design Guide* also provides guidance on how frequently **protected pedestrian crossings** should be provided. For Town Center Streets, this recommended spacing is 400 feet. The proposed design retains the protected crossing at Piney Branch Road, but this is the only protected crossing in the project area. The proposed design does include safety improvements to an existing mid-block crossing at Flower Avenue Urban Park and a crossing at the Arliss Street intersection, but these do not qualify as protected crossings. Accounting for all marked crosswalks, there are marked pedestrian crossings every 450 feet.

There are additional benefits to the proposed design related to **traffic calming**. The proposed design shifts space away from the existing Street Zone, where some single travel lanes currently range from 12 feet to 22 feet wide. Restricting travel lanes to the recommended 11 feet can reduce traffic speeds on Flower Avenue and bring them closer to the 25 miles per hour target speed recommended in the 2013 *Long Branch Sector Plan*.

The proposed design also introduces a raised crosswalk (a walkable speed hump with a high-visibility crosswalk) at the mid-block crossing at Flower Avenue Urban Park, where there will also be an enhanced bus stop. The design also implements curb extensions to formally delineate on-street parking lanes and prevent that space from being used as a travel lane when no vehicles are parked there.

PEDESTRIAN LEVEL OF COMFORT AND BICYCLE LEVEL OF TRAFFIC STRESS

With the proposed design and traffic calming treatments, the Pedestrian Level of Comfort (PLOC) scores and Bicycle Level of Traffic Stress (BLTS) scores improve from existing levels. As discussed in Section 2, PLOC scores range from one (1), meaning “very comfortable” and four (4), meaning “undesirable.” BLTS scores range from one (1), “very low stress,” to five (5), “very high stress.” Scores exceeding PLOC 2 or BLTS 2 are unacceptable. The tables below (Table 2 and Table 3) summarize the

level of improvement. Overall, the project results in scores for most sections of the corridor that are increased by at least one level and that are PLOC 2 and BLTS 2 or better.

Table 2: Summary of the Change in PLOC from Existing to Proposed Conditions

Street Location	Existing PLOC (west)	Proposed PLOC (west)	Existing PLOC (east)	Proposed PLOC (east)
100' south of Piney Branch Road to Piney Branch Road	2	1	2	2
Piney Branch Road to 300' north of Piney Branch Road	2	1	2	1
300' north of Piney Branch Road to Flower Avenue Urban Park	2	2	1	1
Flower Avenue Urban Park to 50' north of Flower Avenue Urban Park	2	1	2	1
50' north of Flower Avenue Urban Park to 100' south of Arliss Street	3	2	2	2
100' south of Arliss Street to 50' north of Arliss Street	3	2	3	1

Table 3: Summary of the Change in BLTS from Existing to Proposed Conditions

Street Location	Existing BLTS (west)	Proposed BLTS (west)	Existing BLTS (east)	Proposed BLTS (east)
100' south of Piney Branch Road to Piney Branch Road	3	2	2.5	2
Piney Branch Road to 300' north of Piney Branch Road	2.5	1	3	1
300' north of Piney Branch Road to Flower Avenue Urban Park	3	2	2.5	1
Flower Avenue Urban Park to 50' north of Flower Avenue Urban Park	3	1	3	2
50' north of Flower Avenue Urban Park to 100' south of Arliss Street	3	2	3	2
100' south of Arliss Street to 50' north of Arliss Street	3	2	3	2

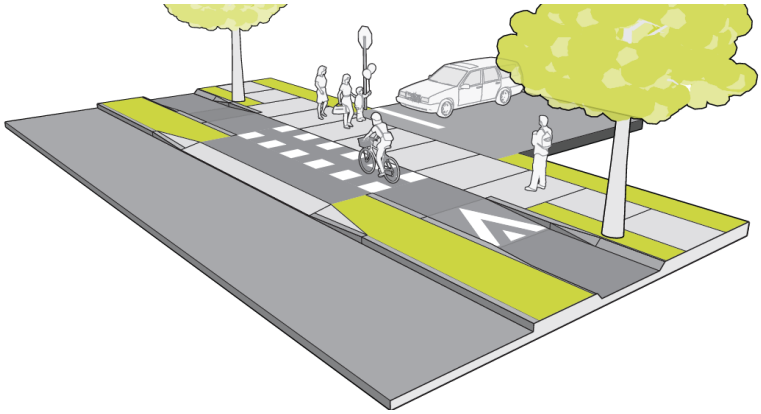
TRANSPORTATION COMMENTS

Flower Avenue runs north-south. However, all engineering drawings for this project are oriented so that Flower Avenue is horizontal on each page, meaning that north is on the right of each page. This flipped-orientation is referenced throughout this comment section.

Traffic Calming and Visibility

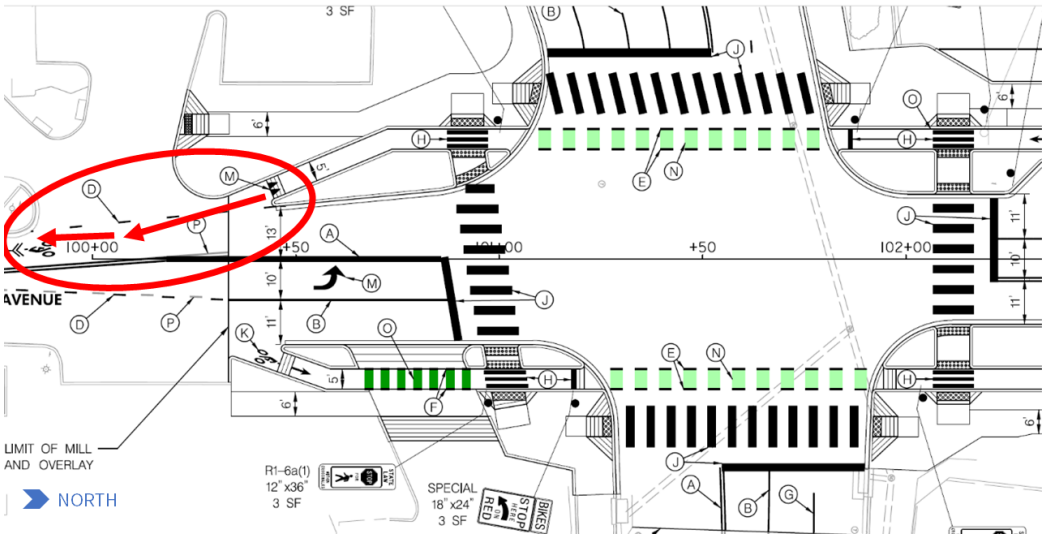
1. **Provide raised crossings at all driveways—also called sidewalk-level driveways.** Sidewalk-level driveways are a recommended design element for Town Center Streets in the 2024 *Complete Streets Design Guide*. The *Bicycle Facility Design Toolkit* (Figure 7) included with the 2018 *Bicycle Master Plan* states that, “All separated bike lane driveway crossings should be raised. If the separated bike lane is street-level at driveways, it should be raised to sidewalk-level. In these situations, the transition ramp for bicyclists from street- to sidewalk-level should have a maximum 10 percent slope” (p. 31).

Figure 7: Diagram from the *Bicycle Facility Design Toolkit* Showing Sidewalk-Level Driveways



2. **Provide green conflict zone striping where the Bike Lane merges with the roadway at the driveway on the west side of Flower Avenue (southbound), south of Piney Branch Road at Station 100+00 (**Figure 8**)**. Since the Bike Lane ends abruptly and there are no movement restrictions into or out of the driveway, striping would identify this as a conflict zone to drivers and bicyclists before the roadway gets much narrower south of this location.

Figure 8: High-Conflict Driveway Southwest of Piney Branch Road



3. **Tighten the curb radii at all intersections in line with the 2024 *Complete Streets Design Guide* default radii (15 feet), but especially at the southwest corner of the Piney Branch Road intersection** (Figure 9). The Guide states that "designers should assume a maximum 10 miles per hour turning speed for passenger cars and a 5 miles per hour for all other vehicles." Where wider turning radii may be helpful for larger vehicles or emergency operations, consider the use of mountable curbs or relocating the receiving leg stop bar to allow for encroachment (Figure 10).

   Providing tight turning radii is essential to reducing the turning speed of motor vehicles,

improving visibility among motorists, pedestrians, and bicyclists, and reducing the likelihood and severity of collisions between roadway users. Figure 11 illustrates how tighter turning radii improve visibility by allowing motorists to cross bikeways, sidewalks, and sidepaths at a perpendicular angle so potential conflicts can be seen through the front windshield, not over a shoulder. Additionally, smaller curb radii shorten pedestrian street crossings, reducing their exposure to conflict, and make it easier to provide directional curb ramps to better guide pedestrians in the crosswalk through an intersection.

Figure 9: Wide Curb Radius at Southwest Corner of Flower Avenue-Piney Branch Road Intersection

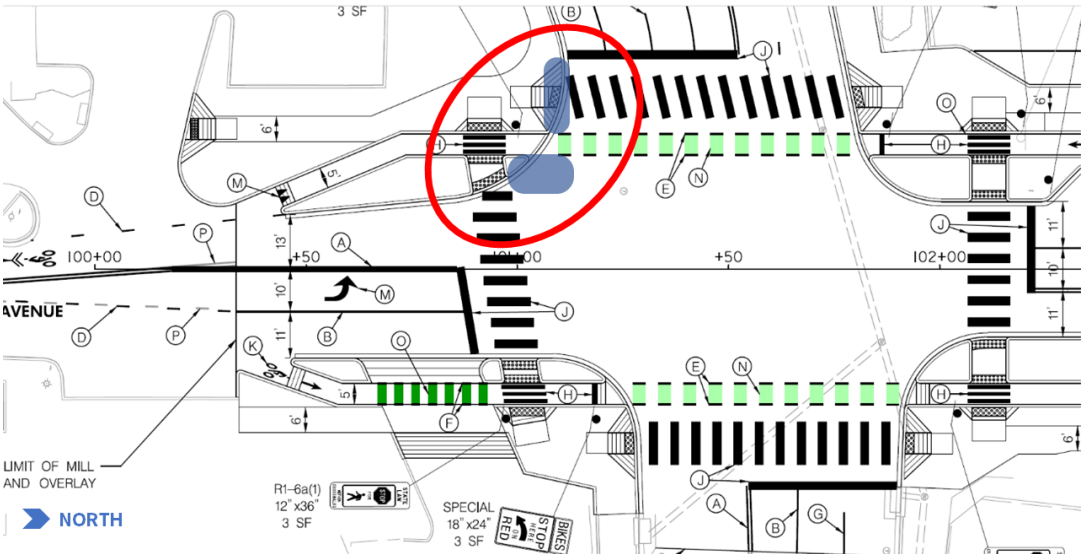


Figure 10: Mountable Truck Apron Curb Radius (Photo: ODOT)

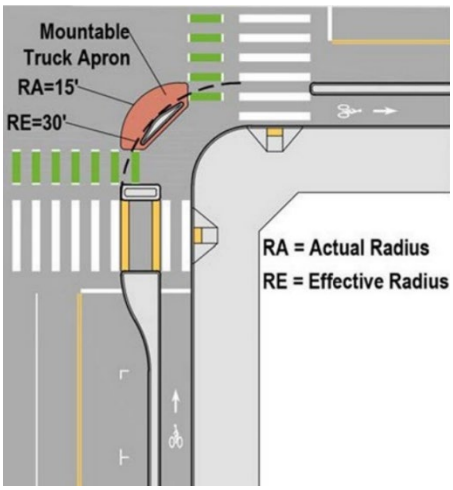
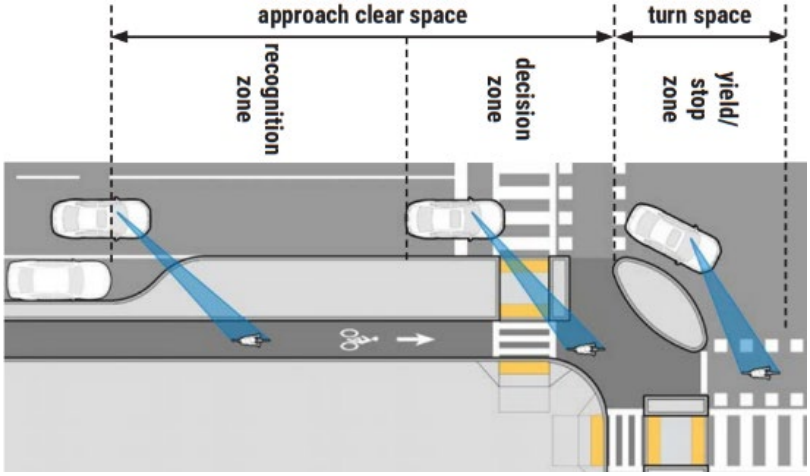


Figure 11: Tighter Curb Radii Visibility Illustration



4. **Provide curb extensions into the Parking Lanes on both sides of Flower Avenue just north of Piney Branch Road** (Figure 12). As outlined in the Planning Department's 2021 *Vision Zero Community Toolkit*, curb extensions can be built in all-day Parking Lanes (Figure 13), and they increase visibility among drivers, bicyclists, and pedestrians and reduce vehicle through and turning speeds. This will enhance safety and prevent vehicles from double parking.

Figure 12: Possible Locations for Curb Extensions in the Parking Lanes North of Piney Branch Road

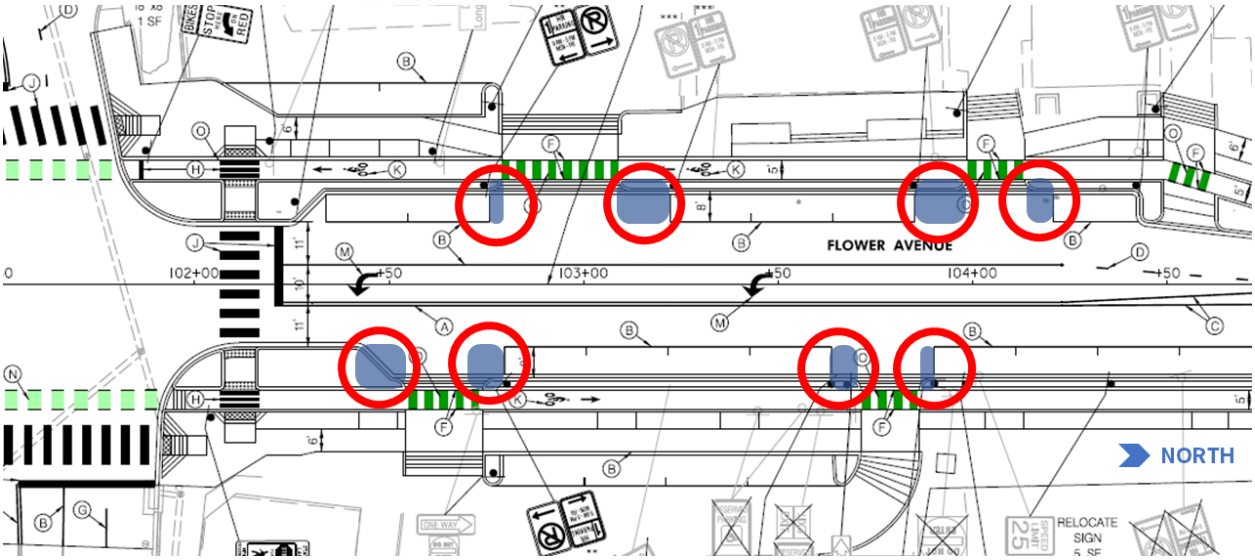
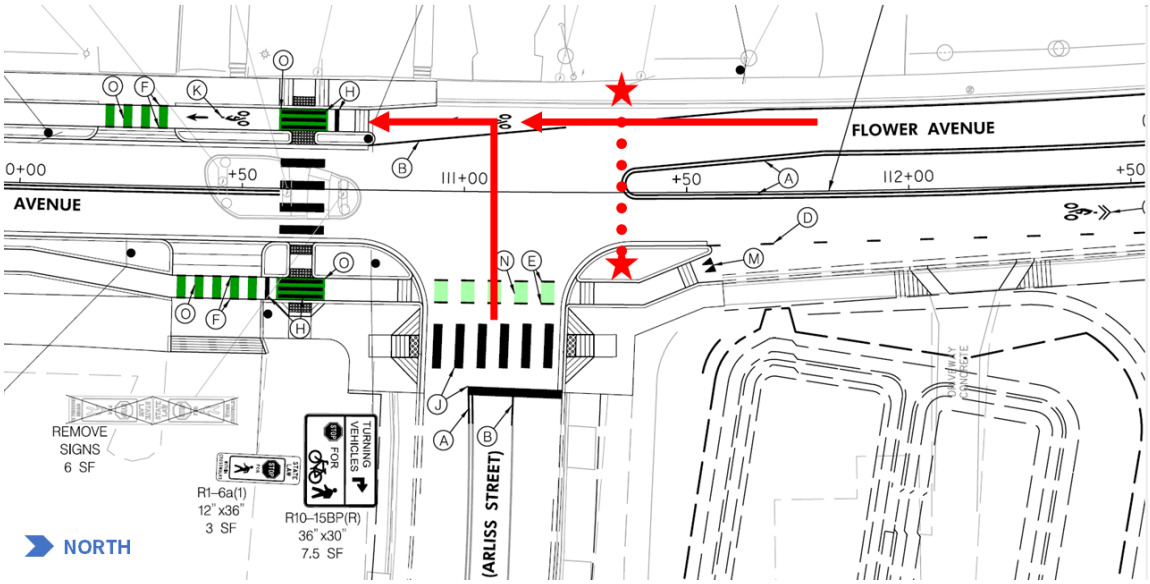


Figure 13: Example of Mid-Block Curb Extensions in a Parking Lane

5. **Provide a crossing on the north side of the Arliss Street-Flower Avenue intersection, add stop controls at all legs of the intersection, and improve the transition for the southbound Bike Lane** (Figure 14). Aligned with 2023 *Pedestrian Master Plan* key action B-3d, provide marked crosswalks at all legs of an intersection where there are connecting sidewalks. There is an existing stop sign for vehicles exiting Arliss Street, but there are no stop controls for vehicles traveling along Flower Avenue. Adding stop controls and formalizing the pedestian crossings at this intersection (with the recommended additional crossing shown as a dashed line and stars in Figure 14) will enhance safety for pedestrians and facilitate traffic calming for all road users. The design should also ensure that southbound cyclists on Flower Avenue and left-turning cyclists from Arliss Street can safely enter the southbound Separated Bike Lane on Flower Avenue.

Figure 14: Possible Location of Additional ADA Ramps and Marked Crossing with Bike Connections



Facility Widths

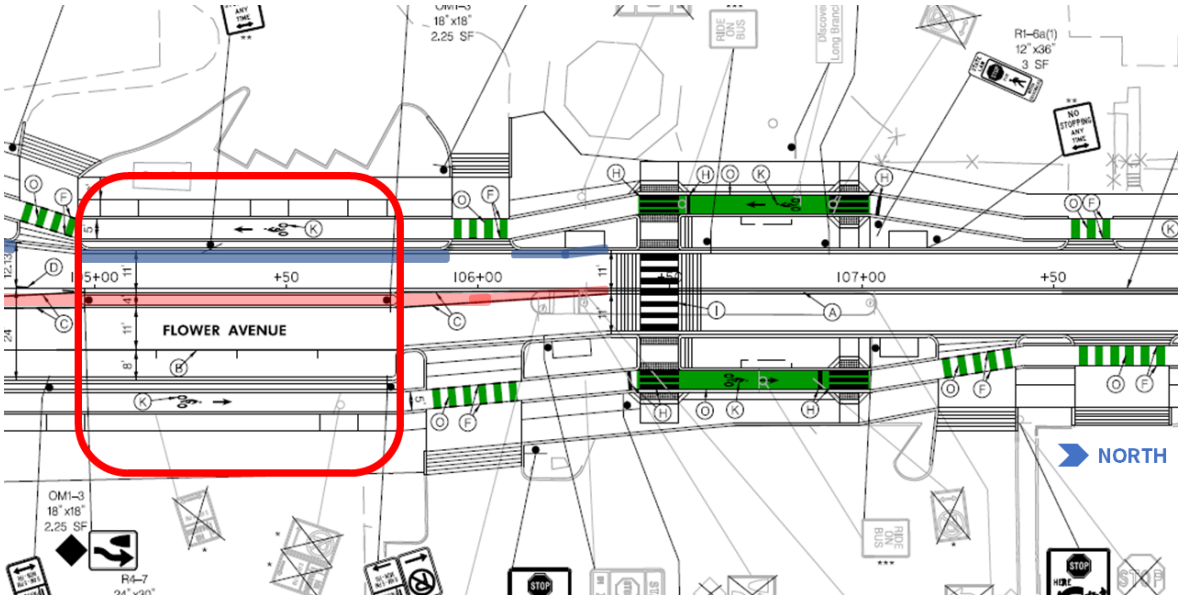
6. **Prioritize increasing Active Zone facility widths to meet the Town Center Street guidelines in the 2024 *Complete Streets Design Guide* in the following order:**
    1. **Street Buffer:** widen the Street Buffer to six feet. Per the 2024 *Complete Streets Design Guide*, in constrained environments, Street Buffer width is a higher priority than Bikeway width.
    2. **Sidewalk:** widen the Sidewalk to the default 10 feet (8 feet minimum) width. Per the 2024 *Complete Streets Design Guide*, in constrained environments, Sidewalk width is a higher priority than Bikeway width.
    3. **Bikeway:** widen each one-way Separated Bike Lane to the default six- and one-half feet.
    4. **Ped / Bike Buffer**: widen the Ped/Bike Buffer six feet default (2 feet minimum). Since this is the lowest priority facility of the Active Zone, all other elements should be addressed first.

    In addition, on-street parking is a lower priority than providing adequate Active Zone facilities, and some parking spaces could be removed to improve the design. Planning Staff acknowledge that adjacent business owners provided comments asking to retain on-street parking for their businesses. The design could be improved by removing on-street parking spaces at a few strategic locations while still retaining other on-street parking.

7. **At the following locations, remove the median to provide sufficient widths for the Street Buffer and Sidewalk, as outlined in the 2024 *Complete Streets Design Guide*.** For example, Figure 15 shows a section of the design where the proposed median (shown as a pink rectangle) is narrower than the six feet recommended for Town Center Streets in the 2024 *Complete Streets Design Guide* and there is almost no proposed Street Buffer (shown as blue rectangles). Shifting the center median width to the Street Buffer will not only maintain the traffic calming effects of narrow travel lanes, but also enhance the pedestrian and bicyclist experience through wider buffers and shorter crossing distances (example of a shortened pedestrian crossing distance is shown as a red dotted line with stars in Figure 16).

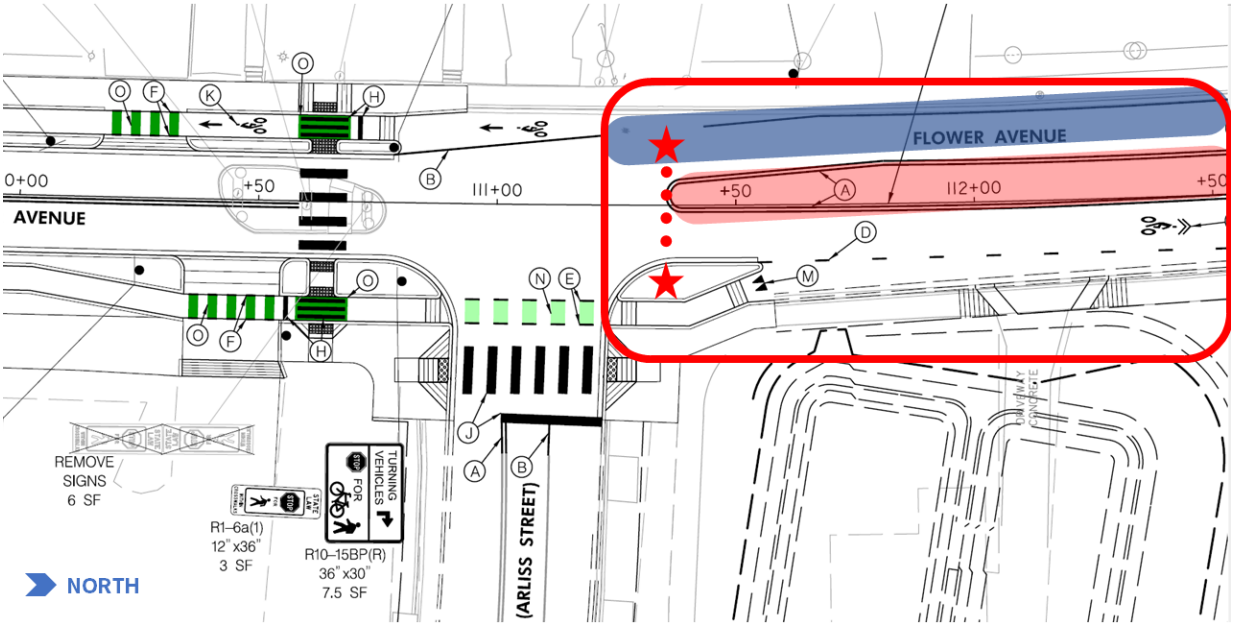
a. **Between Stations 105+00 and 106+50** (Figure 15).

Figure 15: Flower Avenue Segment with Four-Foot Median that Could Shift to Street Buffer Instead



b. **Between Stations 111+25 and 112+50** (Figure 16).

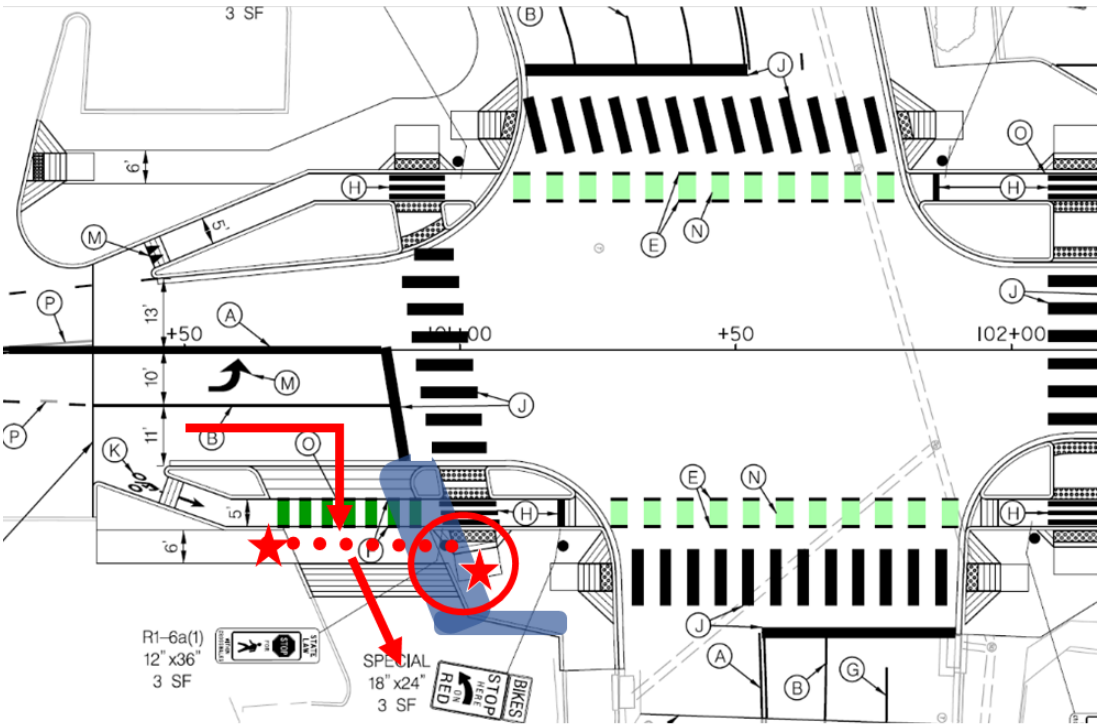
Figure 16: North End of the Project Area Where Median Could Shift to Street Buffer Instead



8. **Create ADA accessible space for pedestrians to queue at the southeast corner of the Piney Branch-Flower Avenue intersection by narrowing the parking lot driveway and converting it to right-in only**. There is insufficient landing space to cross the driveway at the southeast corner of the intersection in a wheelchair. Figure 17 shows the proposed pedestrian path as a red dotted

line and the proposed pedestrian landings as red stars; the pathway does not provide a direct connection between the landings. In addition, this driveway is very close to the Piney Branch Road intersection, and it would reduce conflicts among vehicles, bicyclists, and pedestrians if drivers were not trying to enter the roadway from the parking lot driveway. There is a second driveway for this parking lot on Piney Branch Road that drivers can use to safely exit the property.

Figure 17: Narrow Pedestrian Clear Zone at Southeast Corner of Piney Branch-Flower Avenue Intersection



9. **On the west side of Flower Avenue, between Stations 103+00 and 104+00 (**Figure 18**), widen the Sidewalk to the 10-foot default width or eight-foot minimum width identified in the 2024 *Complete Streets Design Guide* and reposition streetlight 207.** At minimum, the Sidewalk should meet the PROWAG-recommended sidewalk width of five feet. The proposed Sidewalk treatment is between 3.5 feet and 4.7-feet-wide because the existing stairs down to the retail storefront will remain (Figure 19). To provide additional space to widen the Sidewalk, either shift the Bike Lane into the on-street parking area or reconfigure the storefront access. For Town Center Streets, on-street parking is a lower priority than bicycle and pedestrian facilities, as outlined in the 2024 *Complete Streets Design Guide*. In addition, the 2013 *Long Branch Sector Plan* (p. 44) calls for only one lane of on-street parking on this segment of Flower Avenue. The Applicant should consider removing the west side Parking Lane.

Figure 18: Sidewalk Segment with Non-Compliant ADA Clear Zone

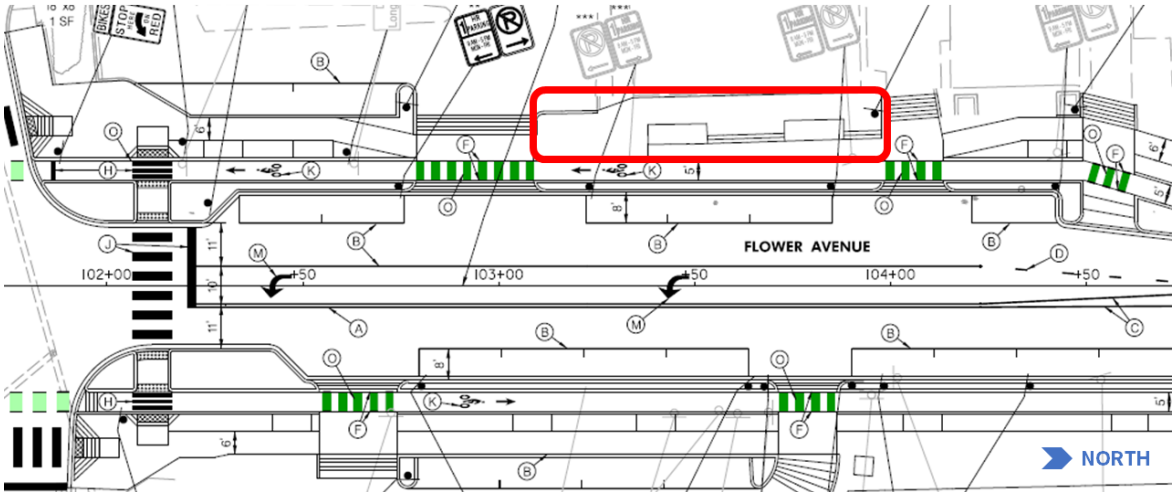
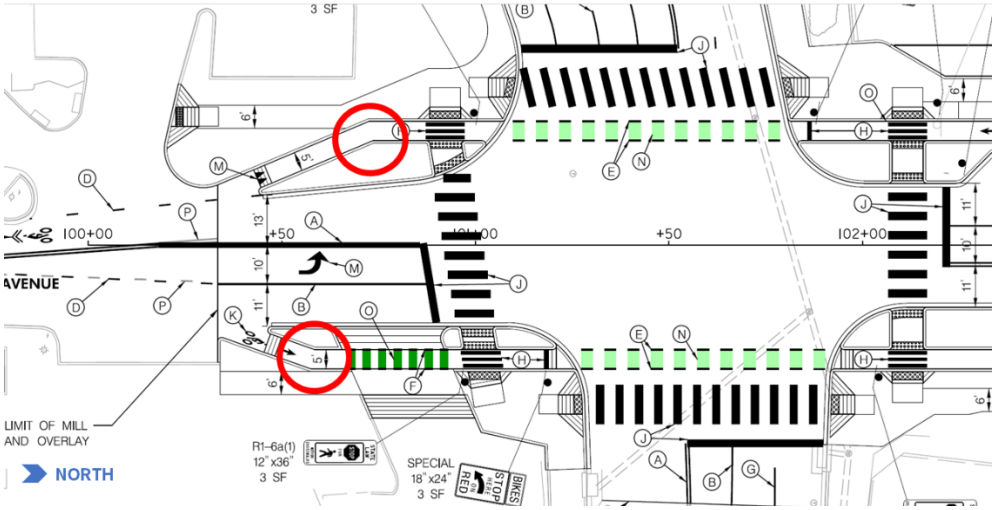


Figure 19: Existing Sidewalk and Stairs Down to Retail Storefront

10. **Avoid abrupt changes in the Separated Bike Lanes by ensuring a maximum 3:1 horizontal taper** (Figure 20)**.** The *Bicycle Facility Design Toolkit* in the 2018 *Bicycle Master Plan* indicates that the maximum "lateral taper" or horizontal shift should be at a 3:1 ratio or one foot horizontal for every three feet along the bikeway. In addition, the Bike Lanes should be chamfered appropriately to provide enough space for bicyclists to shift direction safely.

Figure 20: Example Segments Where the Bike Lane Shifts Position

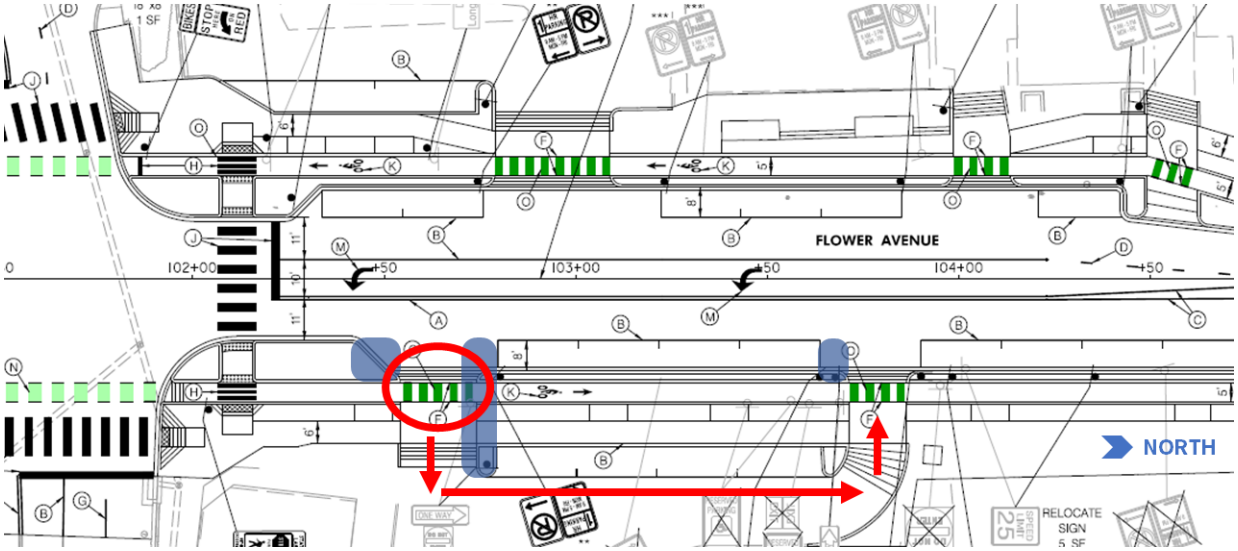


11. **Provide at least one accessible on-street parking space per the Public Right-of-Way Accessibility Guidelines (PROWAG).** Because there are fewer than 25 on-street parking spaces proposed in the project, only one accessible parking space is required. Any project (including this one) where on-street parking is altered is required to meet these standards.

Parking Lot Traffic Flow

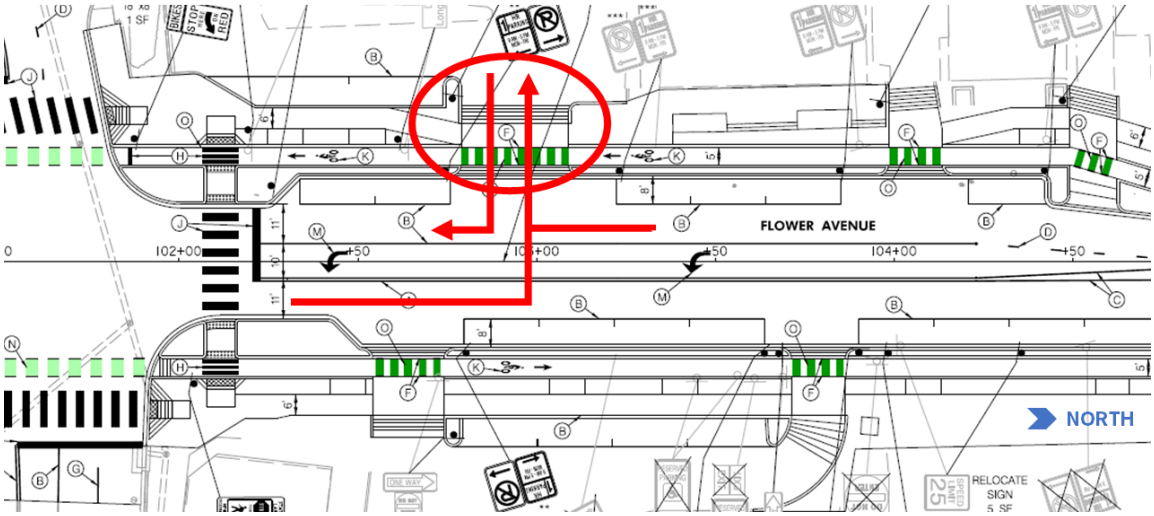
12. **Narrow the entrance driveway on the east side of Flower Avenue at Station 102+75 to, at most, the 15-foot width of the exit driveway at Station 103+75 to reinforce the one-way traffic flow that is proposed (**Figure 21**).** If the driveway is too wide, drivers may attempt to travel the wrong direction. Also, consider making the southern driveway right-out only to reduce conflicts with the center left turn lane on Flower Avenue.

Figure 21: Driveway to One-Way Parking Lot Where Entrance Could Be Narrowed



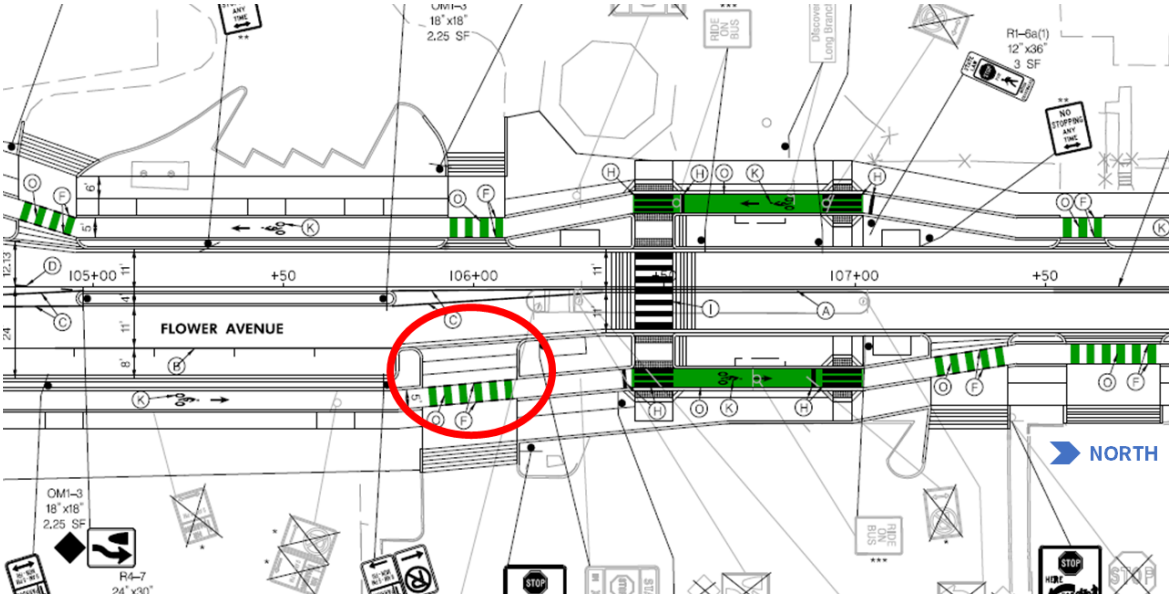
13. **Convert the driveway on the west side of Flower Avenue (Stations 102+75/103+00) from full-access to restricted left-out** (Figure 22**).** Currently, vehicles can exit left or right from the parking lot onto Flower Avenue. There is also another driveway entrance/exit from this parking lot on Piney Branch Road, which has right-only egress. With the addition of the Bike Lane and the proximity to the Piney Branch Road intersection, there is the potential for increased conflict between vehicles, bicyclists, and pedestrians. Restricting traffic movement can limit high-risk conflicts while retaining parking for local retail.

Figure 22: Driveway North of Piney Branch Road That is a Candidate for Right-Out Only Egress



14. **Shift the northbound Separated Bike Lane (Station 106+00) further east as it crosses the driveway to allow space for a car to queue between the bikeway and the roadway (**Figure 23**).** This will limit bikeway encroachment as drivers try to see around the cars parked on-street.

Figure 23: Location Where Bike Lane Could Shift to Provide Vehicle Queuing Space



Connection with Future Master-Planned Bike Facilities

15. **Develop a wayfinding plan using the 2023 *Bikeway Branding Project* "Wayfinding & Sign System Standards Manual."** Montgomery Planning, in collaboration with MCDOT, has completed a branding plan for the county's bikeway network. This brand includes a wayfinding component to help bicyclists navigate the bikeway network to reach local and regional destinations (Figure 24). A pilot effort with MCDOT in North Bethesda is nearing final design. MCDOT should develop and install wayfinding using the same standards as part of the Flower Avenue Separated Bike Lanes project.

Figure 24: Example of Breezeway Directional Signage

Environment

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

The Flower Avenue right-of-way is located within the Sligo Creek Watershed, which is a Use I[5] watershed. There are no stream buffers, wetlands, or 100-year floodplains in the project area. The

[5] *Use I: WATER CONTACT RECREATION, AND PROTECTION OF NONTIDAL WARMWATER AQUATIC LIFE*

Waters that are suitable for: water contact sports: play and leisure time activities where the human body may come in direct contact with the surface water; fishing; the growth and propagation of fish (other than trout); other aquatic life, and wildlife; agricultural water supply, and industrial water supply.

soils in the project area are classified as urban land and are not considered highly erodible or sensitive. There are no known rare, threatened, or endangered species in the project area.

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

FOREST CONSERVATION

The project is subject to Chapter 22A but exempt from Article II of Chapter 22A of the Montgomery County Code ("Forest Conservation Law") and from the submission of a forest conservation plan. Forest Conservation Exemption Plan No. 42023176E was confirmed under Section 22A-5(e), as a "county and municipal highway project," on September 15, 2023. 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 Applicant has minimized the limits of disturbance and the impacts on significant and specimen trees. However, the project still affects specimen and significant trees, including the removal of two (2) significant trees from the right-of-way. The Applicant has provided a plan that highlights mitigation, tree preservation, and significant tree mitigation.

MITIGATION

Under section 22A-9 of Chapter 22A of the County Code, mitigation is required for the removal of significant trees. The two (2) significant trees being removed from the right-of-way equal 51 inches of

diameter at breast height (DBH). Mitigation should be at a rate that approximates the form and function of the trees removed—in this case, as new street trees. Therefore, Planning Staff is recommending that replacement occur at a ratio of approximately one-inch caliper for every four inches DBH removed and that each tree replanted is at least three-inch caliper in size or larger. The 51 inches of DBH removed will be mitigated by the Applicant with 13 caliper-inches of trees.

STORMWATER MANAGEMENT

The stormwater management concept for the project was approved by the Department of Permitting Services (DPS) on February 20, 2024. The Applicant requested a waiver in-lieu of meeting required stormwater management goals. The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

a) A detailed review of the stormwater management computations will occur at the time of detailed plan review.

b) An engineered sediment control plan must be submitted for this project.

c) Stormwater Management requirements for improvements in the MDOT SHA right-of-way are not reviewed by DPS. However, if any stormwater management is required by SHA, the SHA approved drawings must be included on the final design plans submitted to DPS. Any SHA stormwater management designs must be labeled as being approved, inspected, and maintained by SHA. The sediment control permit will remain open until DPS receives written verification from SHA that they have completed any required as-builts and they have no objection to permit closure.

ENVIRONMENTAL COMMENTS

16. **When replacing street trees, use native tree species specified in the *Montgomery County Tree Manual.***

Historic Preservation

The proposed northbound bike lane passes in front of the Flower Theater (8725 Flower Ave.), a site listed on the Master Plan for Historic Preservation (#37/25). The designated environmental setting for the Master Plan site comprises the theater façade, the theater's side walls to a depth of 40 feet, and the historic projecting marquee.

Planning Staff finds the proposal will not have a direct impact on the Flower Theater, and a Historic Area Work Permit is not required.

Parks Department

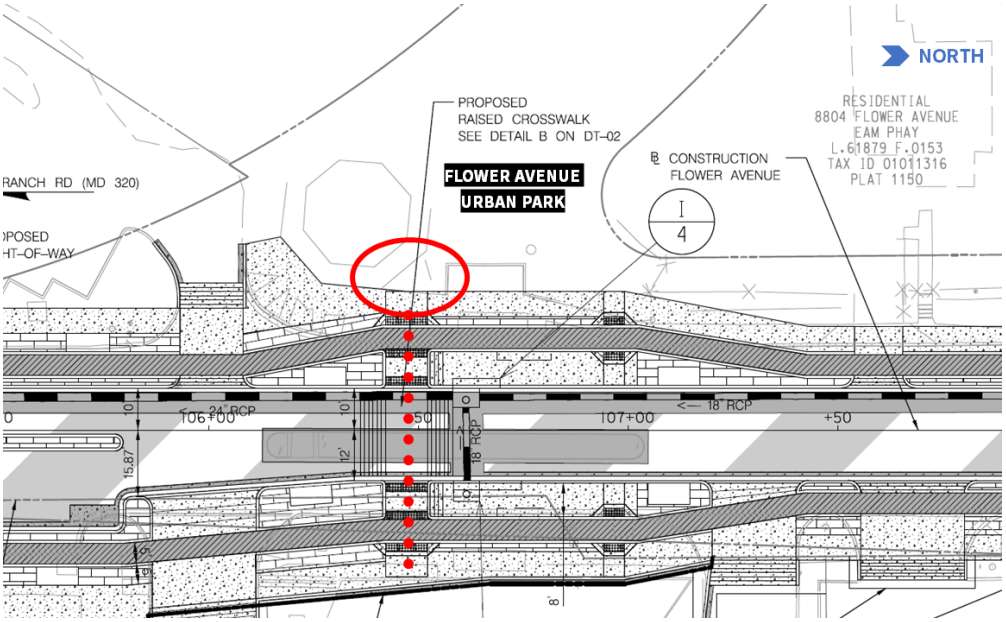
The proposed project will not directly impact park resources within Flower Avenue Urban Park. Therefore, comments focus only on the connection from the proposed sidewalk to the entrance of Flower Avenue Urban Park.

PARK COMMENTS

17. **Provide a continuous sidewalk connection from the bus stop curb ramps at 106+50 directly into Flower Ave Urban Park**. To connect from the park to the proposed bus stop, the proposed design requires pedestrians to zigzag around a small corner of grass where the octagonal entrance to the park meets the sidewalk (Figure 25). Instead, the project should provide a direct connection with a small section of sidewalk to make the proposed sidewalk improvements sympathetic to the park entrance (Figure 26). This area is within the right-of-way and will not require a Park Construction Permit.
18. **Bollards at the entrance to Flower Ave Urban Park shall be replaced in-kind within the same footprint of the new sidewalk**.

Figure 25: Entrance of Flower Avenue Urban Park

Figure 26: Proposed Project Design Showing the Missing Sidewalk Connection to the Park



SECTION 5 – COMMUNITY OUTREACH

After Planning Staff accepted the Mandatory Referral for review, Planning Staff 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.

The Applicant, MCDOT, held two public community meetings on May 19, 2023, and February 7, 2024. The Applicant either addressed or incorporated the following general comments into their design:

- Community members requested an enhanced pedestrian crossing of Flower Avenue at Flower Avenue Urban Park and additional traffic calming treatments.
- Local business owners mentioned that street parking was critical for their businesses and asked that street parking be retained.
- Numerous community members asked questions about how these separated bike lanes would connect with facilities being constructed as part of the Purple Line project and other planned MCDOT facilities. MCDOT stated that they would continue to coordinate details with MDOT SHA, MTA, and Purple Line Transit Partners at a later phase of the design process.
- Community members inquired about the timeline of construction for this project and expressed frustration over the ongoing Purple Line construction. MCDOT staff explained that there is already funding for this project through the Purple Line BIPPA program, and they hope to put these facilities on the ground before the Purple Line is operational.

SECTION 6 – CONCLUSION

Planning Staff recommends transmittal of comments to the Montgomery County Department of Transportation.

SECTION 7 – ATTACHMENTS

Attachment A: Corridor Engineering Drawings

Attachment B: Flower Avenue Separated Bike Lanes Study

Attachment C: Complete Streets Design Guide Compliance Analysis