

# EXPANDING THE BETHESDA TROLLEY TRAIL

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## PROJECT OVERVIEW

The Bethesda Trolley Trail (BTT) is an urban greenway that spans over six miles providing a direct link between Bethesda and Rockville for people who walk, bike, and roll.

The study area extends between North Bethesda (White Flint) and Twinbrook Metro Stations along and around Rockville Pike (MD 355).

This feasibility study will explore alignment alternatives and facility type options to extend the BTT to create low-stress bicycle and high-comfort pedestrian facilities between the North Bethesda (White Flint) Metro station and Twinbrook Metro station.



Source: <https://www.traillink.com/trail-gallery/bethesda-trolley-trail/>. Phot by: jpreeg51



Source: MCDOT

## GOALS

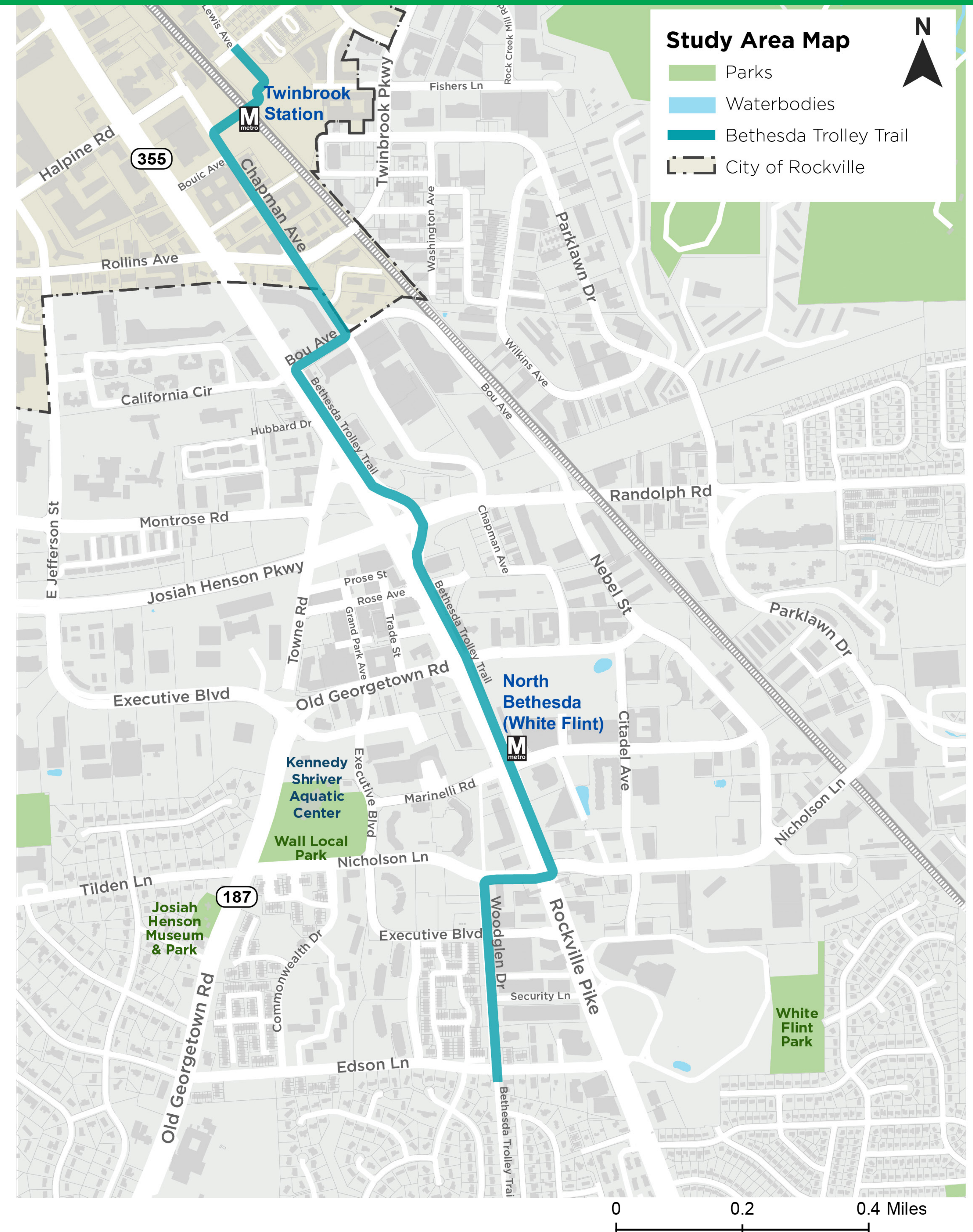
EVALUATE  
ALTERNATE  
ALIGNMENTS

IDENTIFY  
GAPS

GATHER  
FEEDBACK

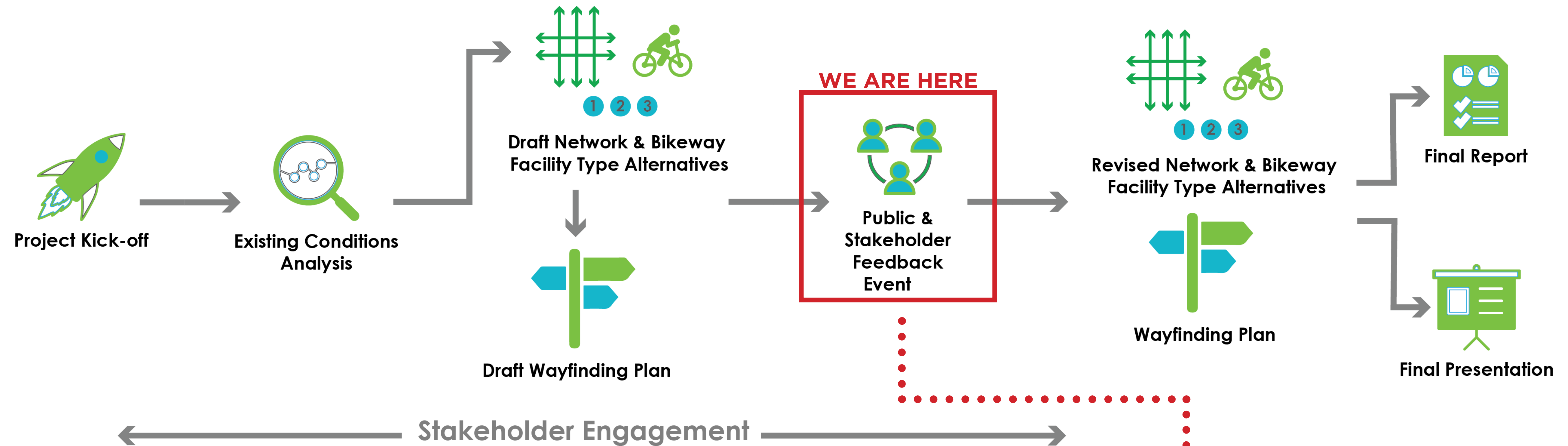
PRESENT  
POTENTIAL  
ROUTES

- Explore alignment alternatives to expand the Bethesda Trolley Trail (BTT) and develop a wayfinding plan to connect to regional trails and neighborhoods.
- Evaluate existing and proposed off-road and on-road bicycle facilities between Edson Lane and Woodglenn Drive to Twinbrook Metro station.
- Identify gaps in the overall bicycle network in North Bethesda.
- Engage major stakeholders and community members to gather feedback.



## PLANNING PROCESS AND SCHEDULE

PLANNING PROCESS



SCHEDULE

Tasks	2022										2023	
	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb
1. Project Kick-Off Meeting & Project Initiation												
2. Existing Conditions Analysis												
3. Public Outreach & Stakeholder Engagement												
4. Alternatives Development												
5. Final Report & Concept-Level Design												
6. Submit the Draft Final Report to MDOT for Review												
7. Revise & Submit the MDOT Final Report												



# EXPANDING THE BETHESDA TROLLEY TRAIL

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## THE BETHESDA TROLLEY TRAIL TIMELINE

The Georgetown and Tenallytown Railway Company operated trolleys along Wisconsin Avenue in Georgetown to the DC boundary. The trolley to trails story dates back to 1890 when The Tenallytown and Rockville Railroad operated trolleys in Bethesda.

### 1897 - 1900

Trolley extension completed to Rockville.

### 1902

The Washington Railway and Electric Company acquired the merged railroads in 1902, and later became part of Capital Transit.

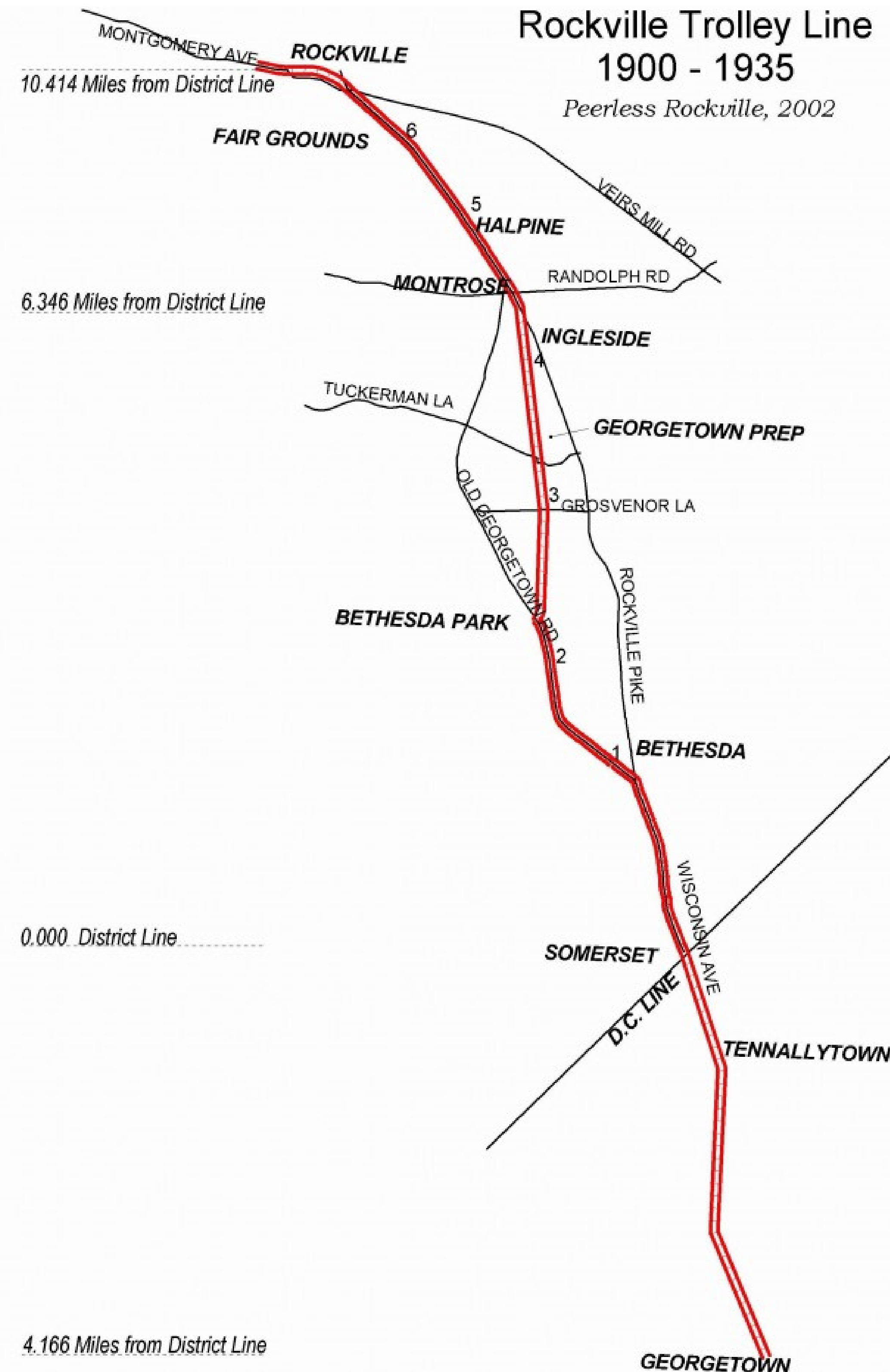


Trolley Rail ROW intersecting Rockville Pike (MD 355) in North Bethesda.

Source: Photo by Lewis Reed, 1910. Courtesy of Reed Bros. Dodge History Blog, <https://reedbrothersdodgehistory.wordpress.com/>.

### 1935

In 1935, the Rockville trolley line ceased operation.



Source: peerlessrockville.org

### 1978

County-wide Bikeways Master Plan recommends designing a trail along rail ROW.

### Early 2000s

Construction of The Bethesda Trolley Trail begins.

### 2005

Trail construction from Cedar Lane intersection to the intersection of Randolph Road begins.

### 2008

The southern edge of the trail is built, connecting Battery Lane Urban Park and Rugby Avenue.

### 2009

Shared use path along Rockville Pike (MD 355) is constructed.



Source: Google Earth



Source: <https://www.trailink.com/trail-gallery/bethesda-trolley-trail/>. Photo by: pault12

### 2014



Two-way Separated Bike Lanes extending the BTT along Woodglan Drive to Nicholson Lane.

Source: Montgomery County Planning Department



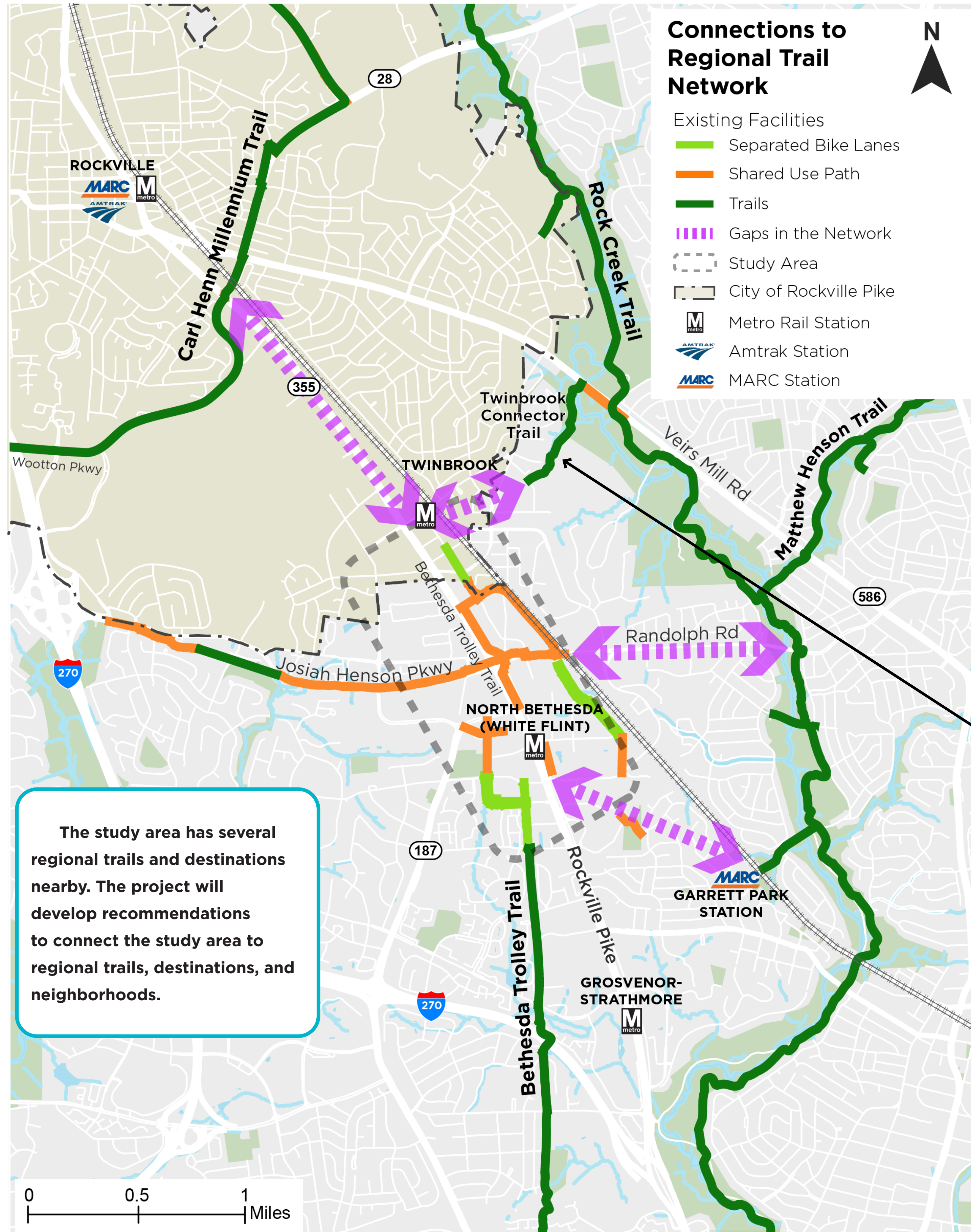
Bethesda Trolley Trail Map

Source: MCDOT

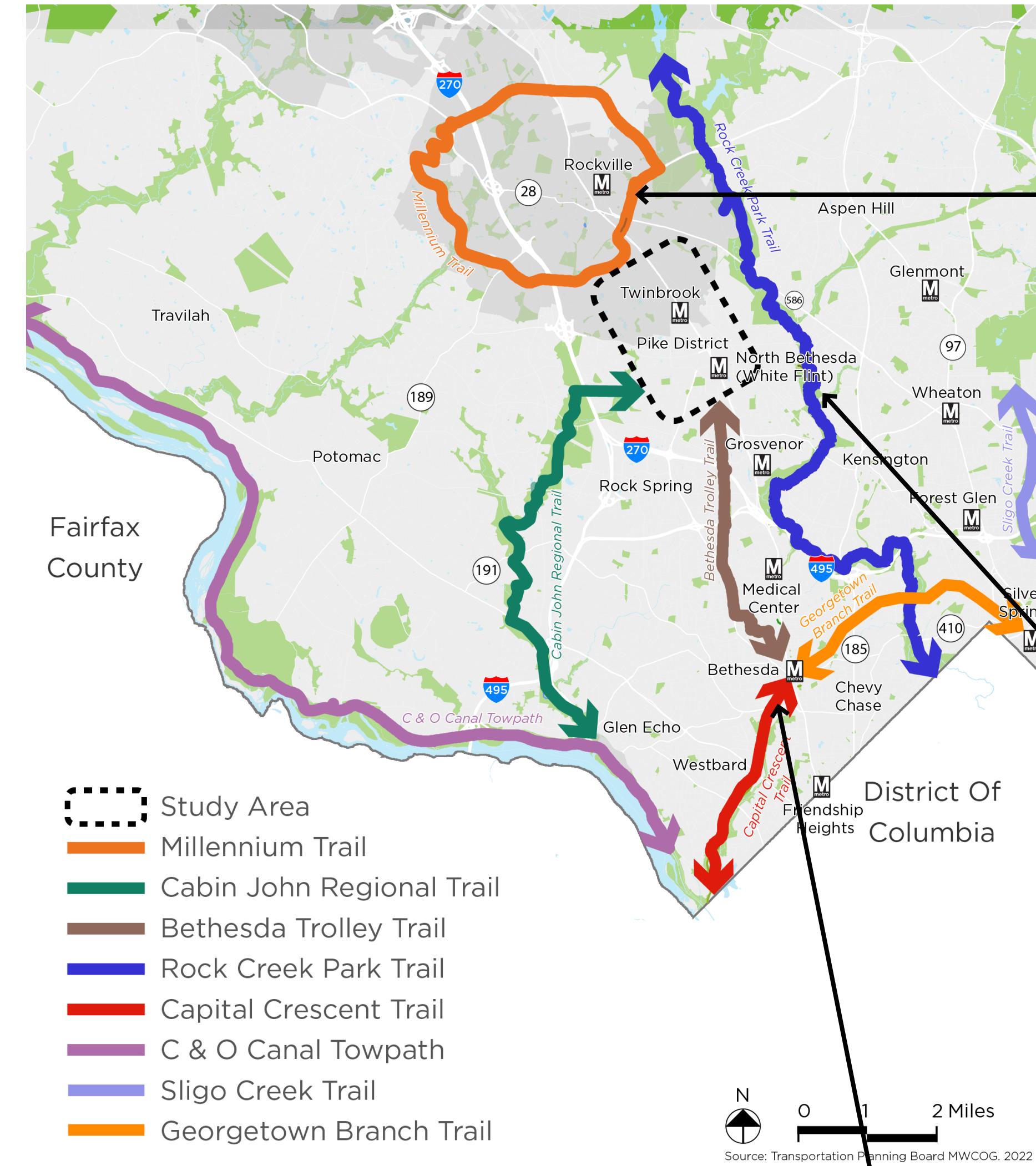
# EXPANDING THE BETHESDA TROLLEY TRAIL

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## CONNECTING TO REGIONAL AND LOCAL TRAILS



### KEY LINK IN THE REGIONAL TRAIL NETWORK



**Carl Henn Millennium Trail**  
Source: [https://www.trailink.com/trail-photo/carl-henn-millennium-trail\\_181727/](https://www.trailink.com/trail-photo/carl-henn-millennium-trail_181727/). Photo: dtread



**Rock Creek Trail bridge over Veirs Mill Road**  
Source: [https://www.trailink.com/trail-photo/rock-creek-trail-\(md\)\\_166748/](https://www.trailink.com/trail-photo/rock-creek-trail-(md)_166748/). Photo: dtread



**Twinbrook Connector Trail (formerly known as the Parklawn North Trail)**  
Source: Kittelson & Associates



**Capital Crescent Trail in Downtown Bethesda**  
Source: Kittelson & Associates

# EXPANDING THE BETHESDA TROLLEY TRAIL

## EXPERIENCE ALONG THE BETHESDA TROLLEY TRAIL TODAY

- The Bethesda Trolley Trail between Edson Lane and Twinbrook Metro Station is signed along Woodglen Drive, Nicholson Lane, Rockville Pike, Bou Avenue, Chapman Avenue, and through the Twinbrook Metro Station till the intersection of Halpine Road and Lewis Avenue.
- This segment of Bethesda Trolley Trail is a mix of multiple facility types, including separated bike lanes, sidepaths, bicycle lanes, and sidewalks.
- Many sections along this segment lack comfortable pedestrian and bicycle facilities and are limited to narrow sidewalks along arterial roads such as Rockville Pike.



Conventional Bike Lanes along Chapman Avenue



Tunnel at Twinbrook Metro Station



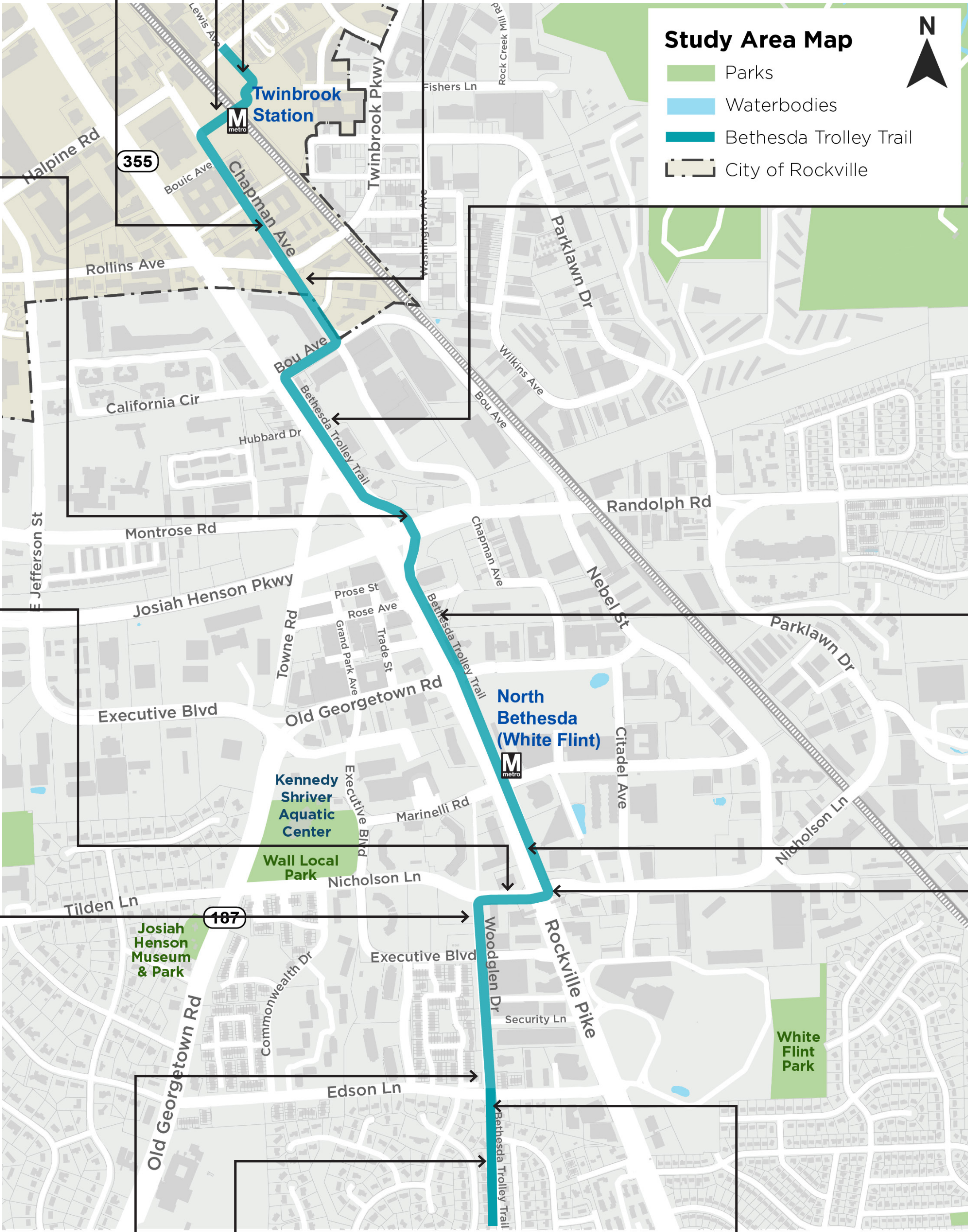
Pathway from Twinbrook Metro Station to Halpine Road



Sidewalk along Chapman Avenue, south of Twinbrook Parkway



Shared Use Path along Rockville Pike at Josiah Henson Parkway



Shared Use Path along Rockville Pike, south of Bou Avenue



Sidewalk along Nicholson Lane, west of Rockville Pike



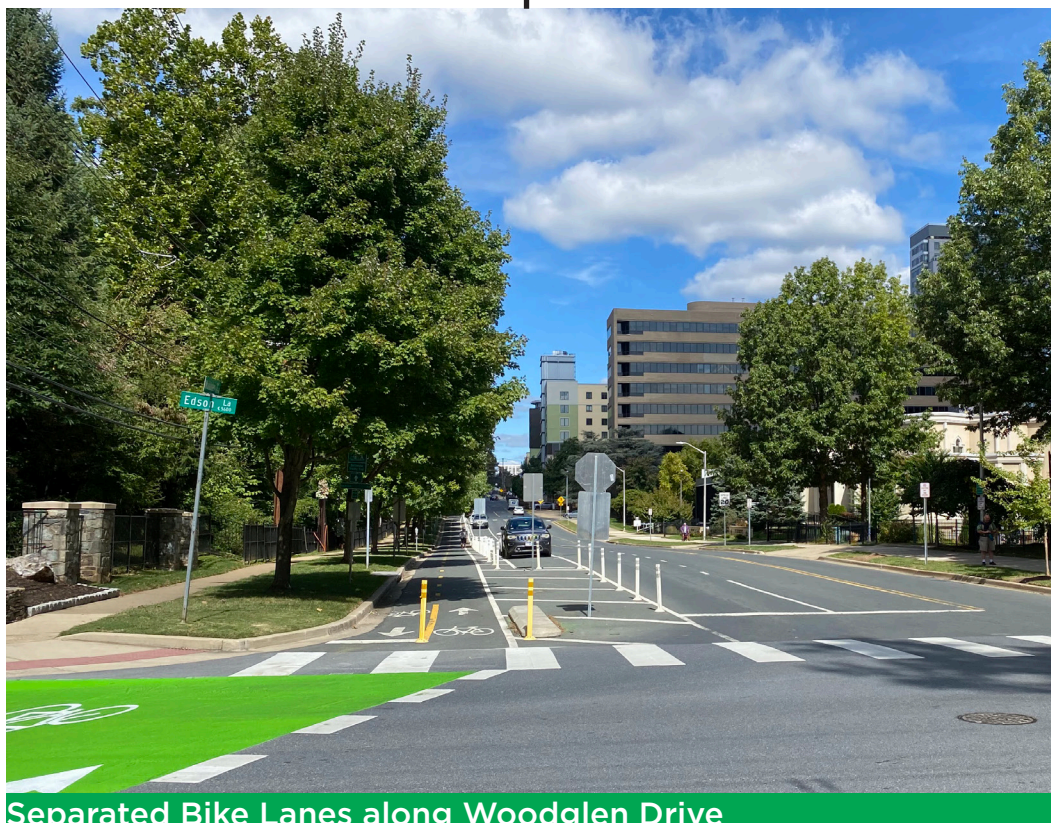
Shared Use Path along Rockville Pike, at Old Georgetown Road



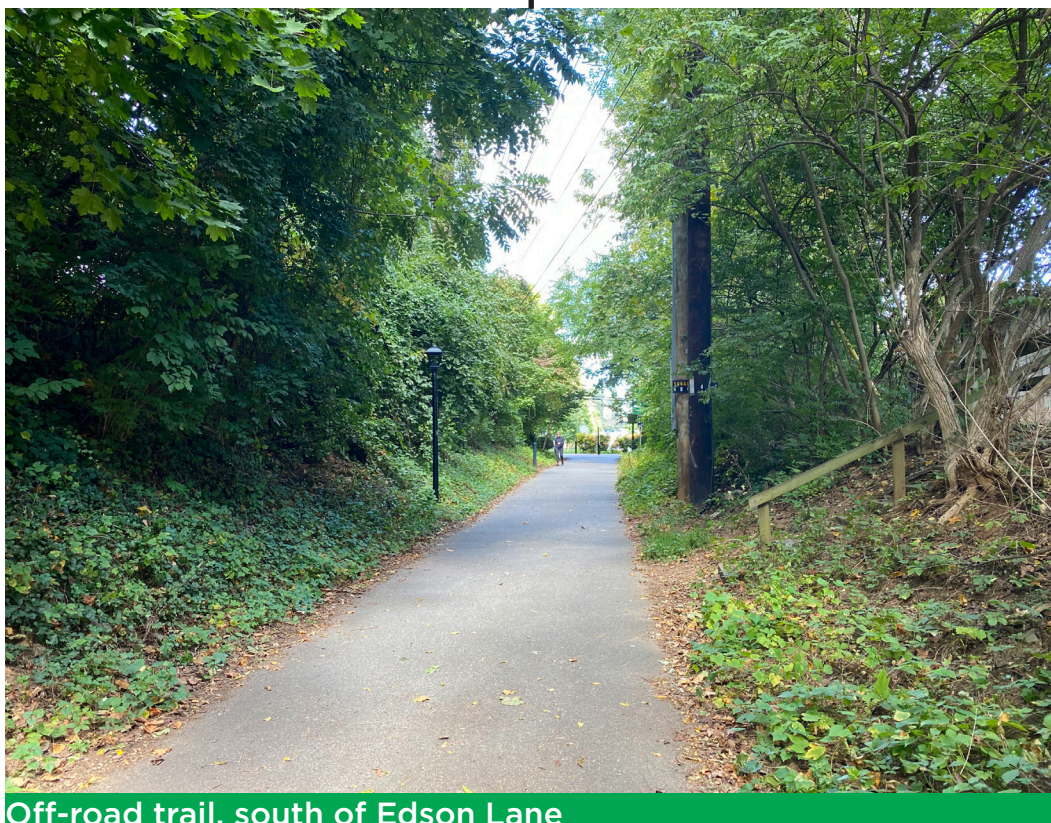
Separated Bike Lanes along Woodglen Drive



Shared Use Path along Rockville Pike along U.S. NRC



Separated Bike Lanes along Woodglen Drive



Off-road trail, south of Edson Lane



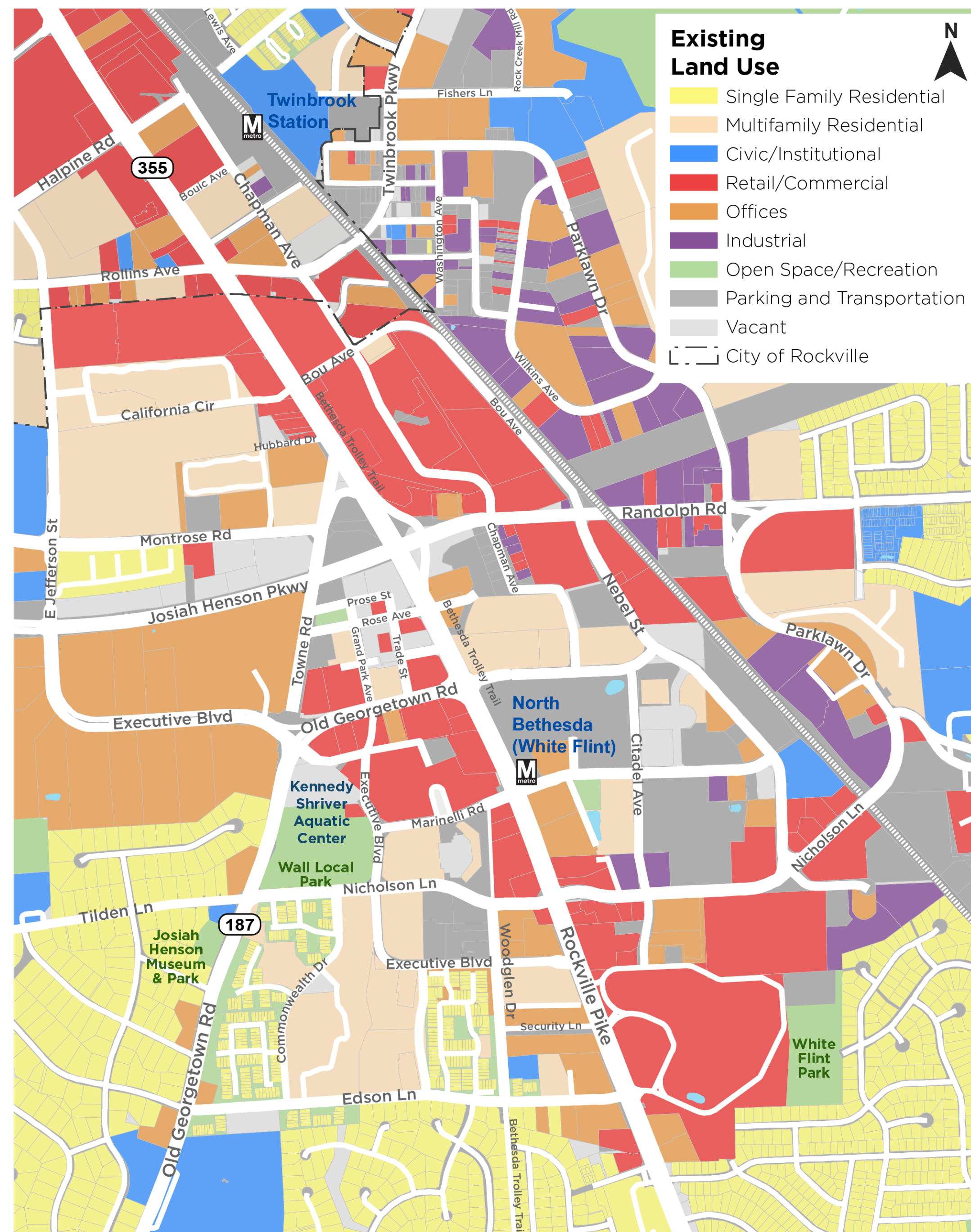
Trail Gateway at Edson Lane



Sidewalk along Rockville Pike, north of Nicholson Lane

## LAND USE & DESTINATIONS

- A mix of commercial, office, and residential land uses in the study area.
- Light Industrial land uses along the rail corridor, especially on the east side.
- Single-family residential areas are concentrated to the south and the east of the study area.



- A concentration of everyday destinations like metro stations, restaurants, parks, convenience stores, banks, and shopping centers are located along major roads in the study area.
- The study area also contains many large vacant parcels that are likely to develop in the near future.
- There are a number of existing and planned multifamily residential developments.



Retail and commercial land uses along Rockville Pike (MD 355)  
Source: Google Earth



Pike & Rose development with mixed land uses  
Source: Kittelson & Associates



Twinbrook Metro Station  
Source: Kittelson & Associates



North Bethesda (White Flint) Metro Station  
Source: Google Earth

# EXPANDING THE BETHESDA TROLLEY TRAIL

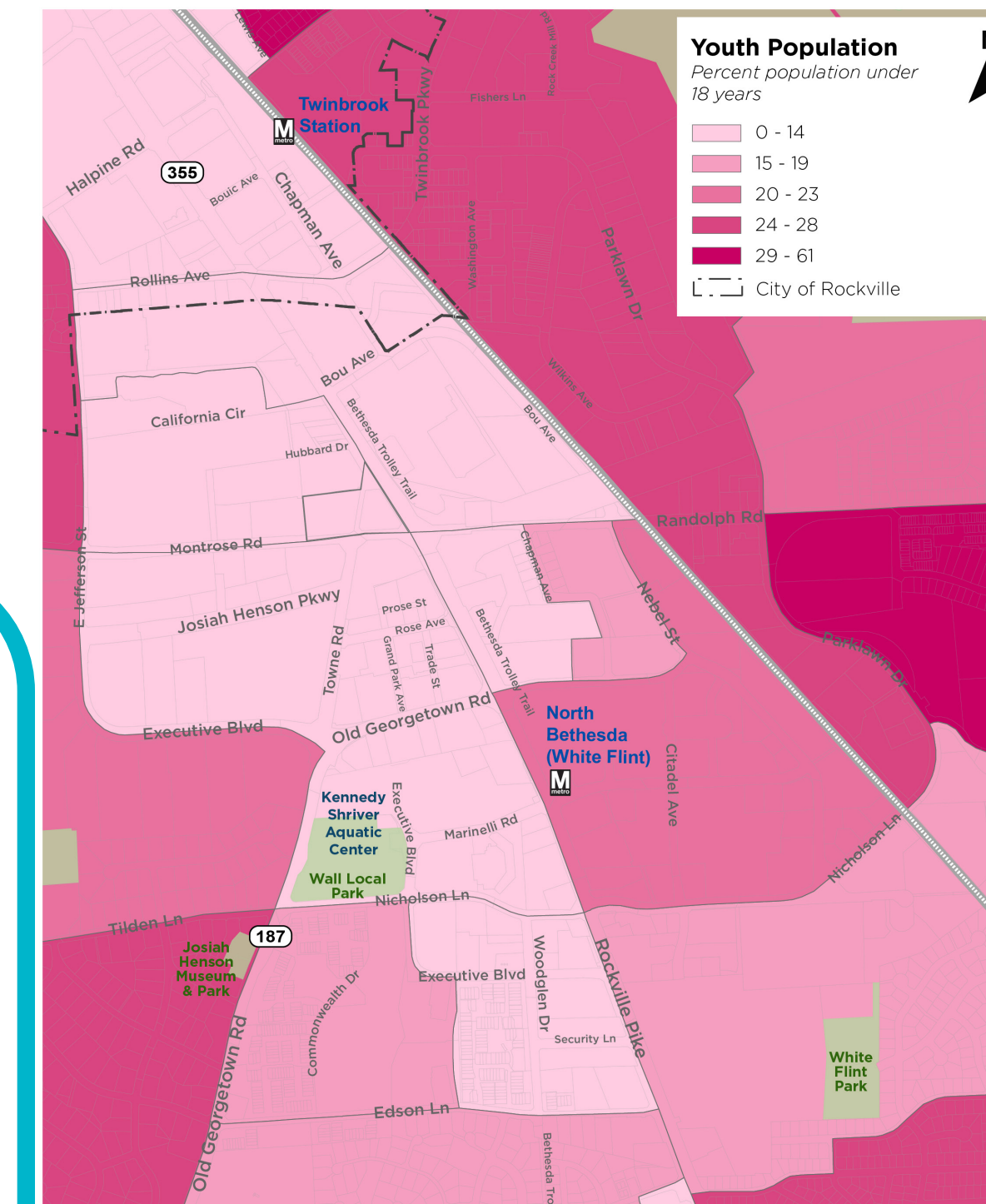
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## DEMOGRAPHIC ANALYSIS

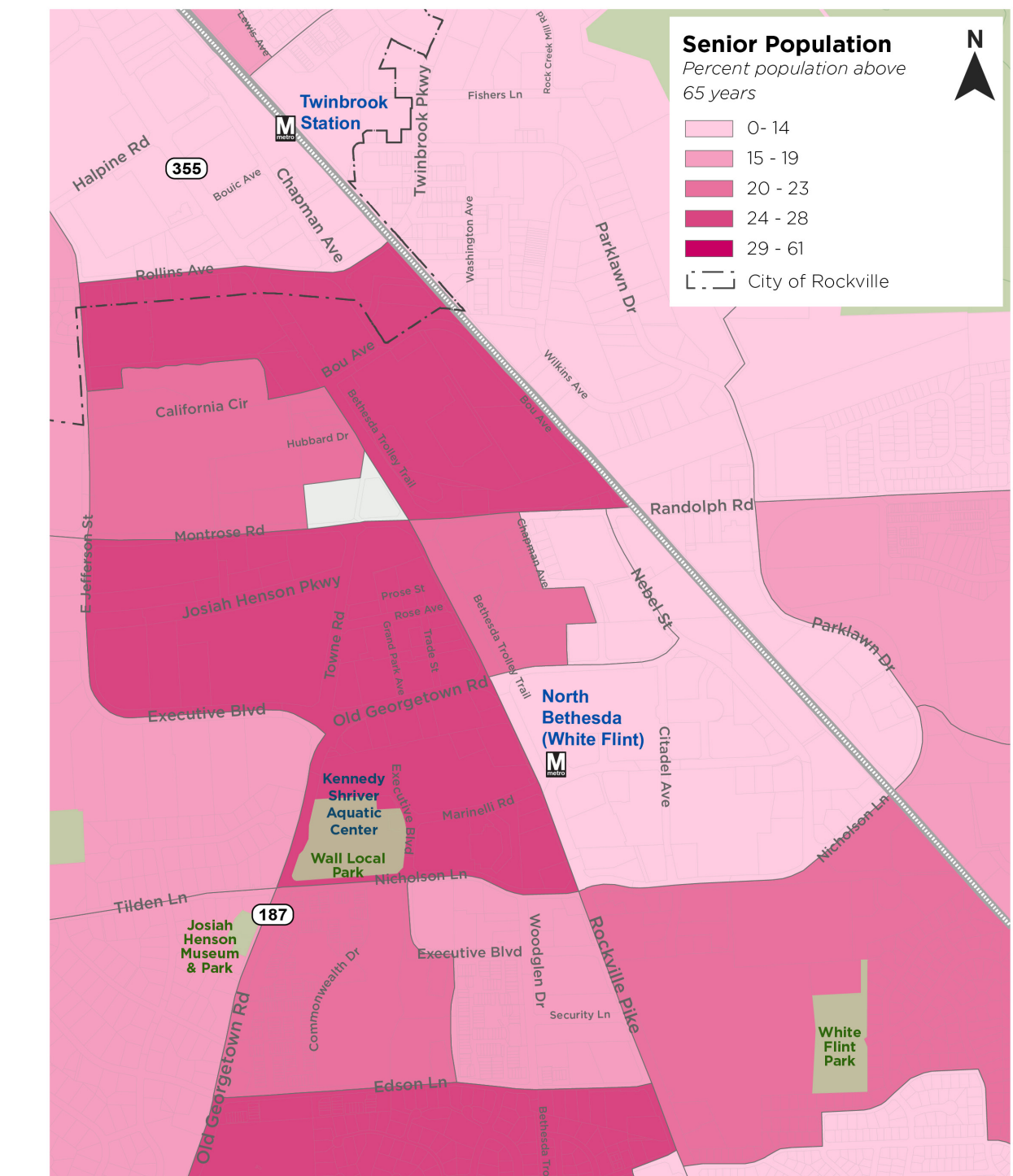


*The Equity Emphasis Areas identified by MWCOG are located on the northern and eastern sides of the study area.*

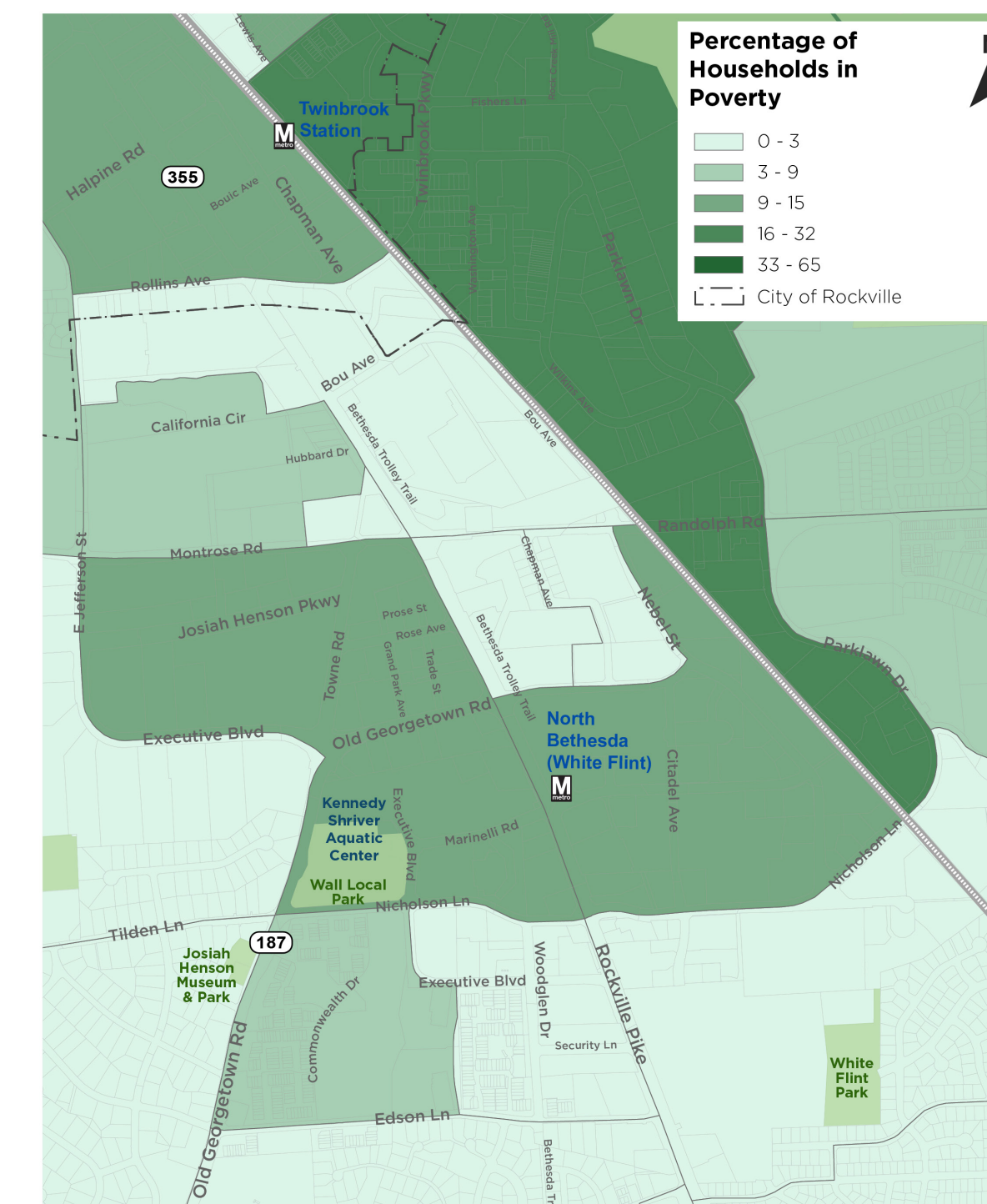
Equity Emphasis Areas identified by MWCOG include Census tracts with higher than average concentration of low-income, minority populations or both. Neighborhoods to the northeast of the rail corridor are within Equity Emphasis Areas.



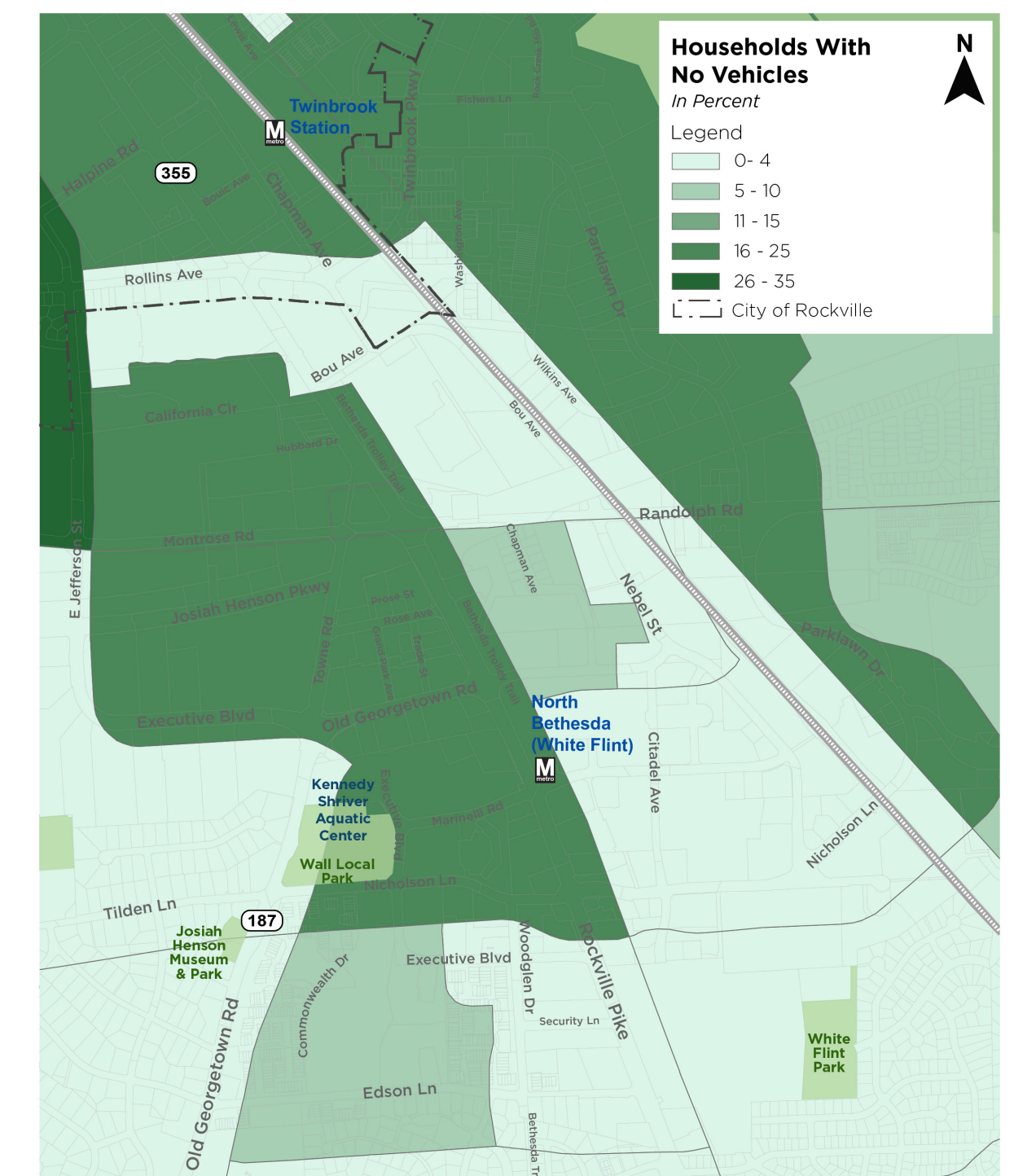
Less youth population in the Pike & Rose area and on the western side of Rockville Pike (MD 355).



Many seniors in the study area live in the neighborhoods east of Rockville Pike (MD 355), between Josiah Henson Parkway and Edson Lane.



A majority of households in poverty are BIPOC communities.



Neighborhoods to the east of the rail corridor and west of Rockville Pike (MD 355) have a higher concentration of households with zero cars.

## PEDESTRIAN NETWORK



Crosswalk across Rockville Pike at Old Georgetown Road



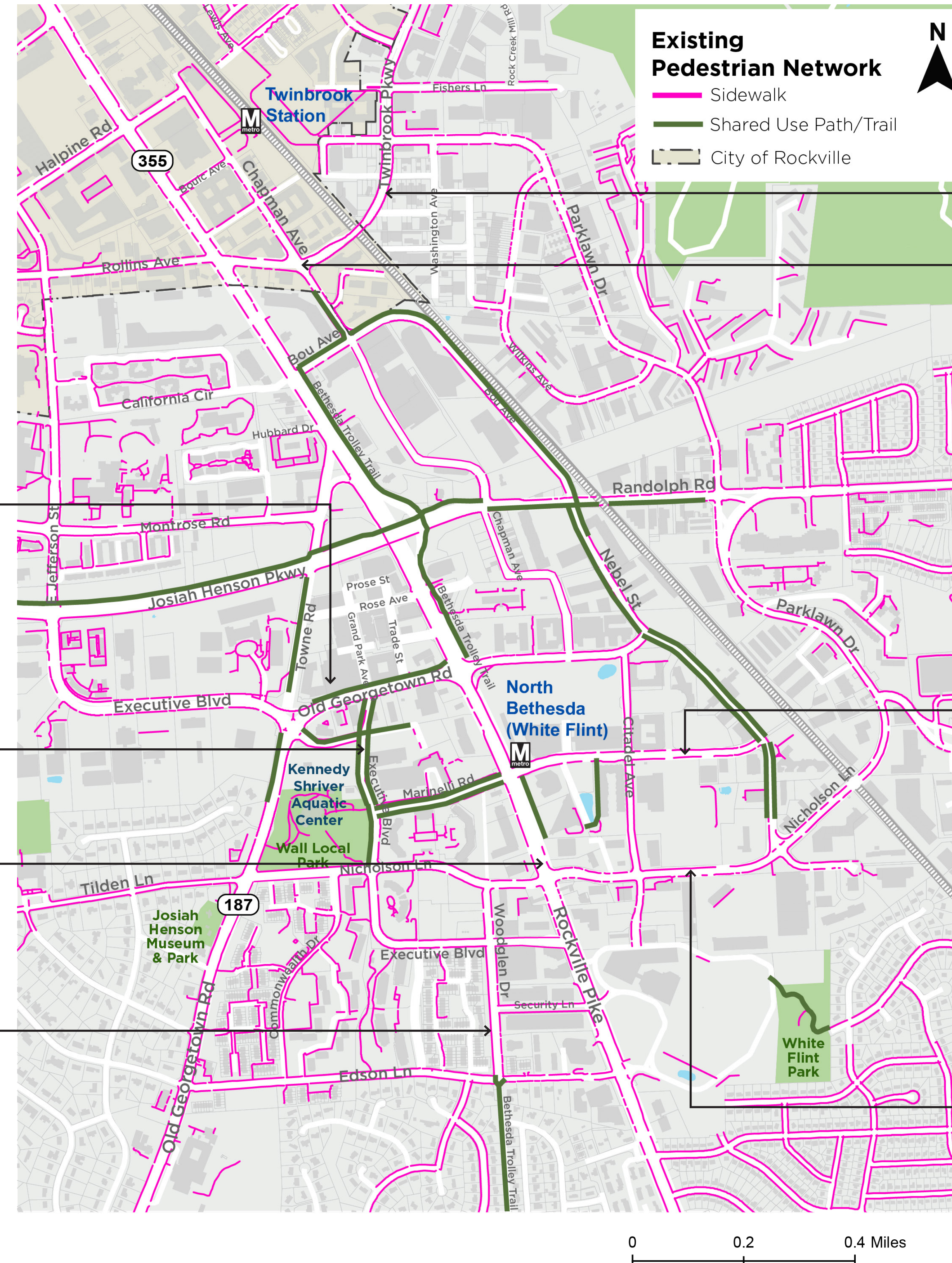
Shared Use Path along Marinelli Road, West of Rockville Pike



Right-Turn Slip Lane and Sidewalk at Nicholson Lane & Rockville Pike



Sidewalk along Nicholson Lane, West of Rockville Pike



Most of the roads in the study area have sidewalks on both sides. However, many sidewalks are not buffered by a curb or are not wide enough for pedestrians to feel safe and comfortable walking along high-speed, high-traffic volume roads.

Some sidewalk gaps exist along Bou Avenue and Citadel Avenue.

Crossings are not frequent and are mostly limited to signalized intersections.



Sidewalk along Twinbrook Parkway, East of Chapman Avenue



Intersection of Twinbrook Parkway and Chapman Avenue



Sidewalk along Marinelli Road, East of Rockville Pike



Sidewalk along Nicholson Lane, East of Rockville Pike

# EXPANDING THE BETHESDA TROLLEY TRAIL

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## BIKEWAY NETWORK



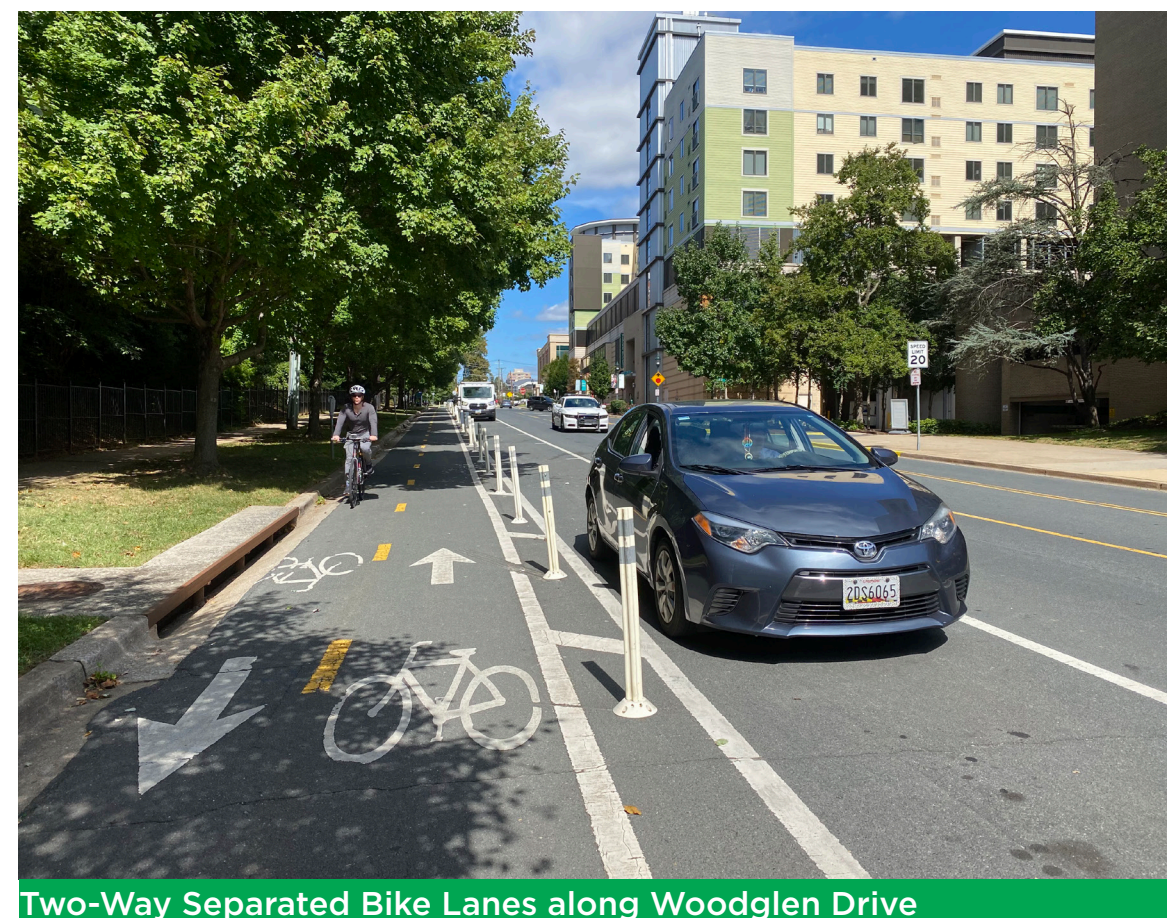
Shared Use Path along Old Georgetown Road, West of Rockville Pike



Shared Use Path along Executive Boulevard/Grand Park Avenue



One-Way Separated Bike Lanes along Executive Boulevard



Two-Way Separated Bike Lanes along Woodglenn Drive



Several new pedestrian, bicycle, and roadway facilities are being constructed by MCDOT and as part of redevelopment projects in the study area.

The 2018 county-wide Bicycle Master Plan has recommended a network of separated bike lanes and shared use paths in the study area.



Shared Use Path along Towne Road/Hoya Street



Shared Use Path along Nebel Street

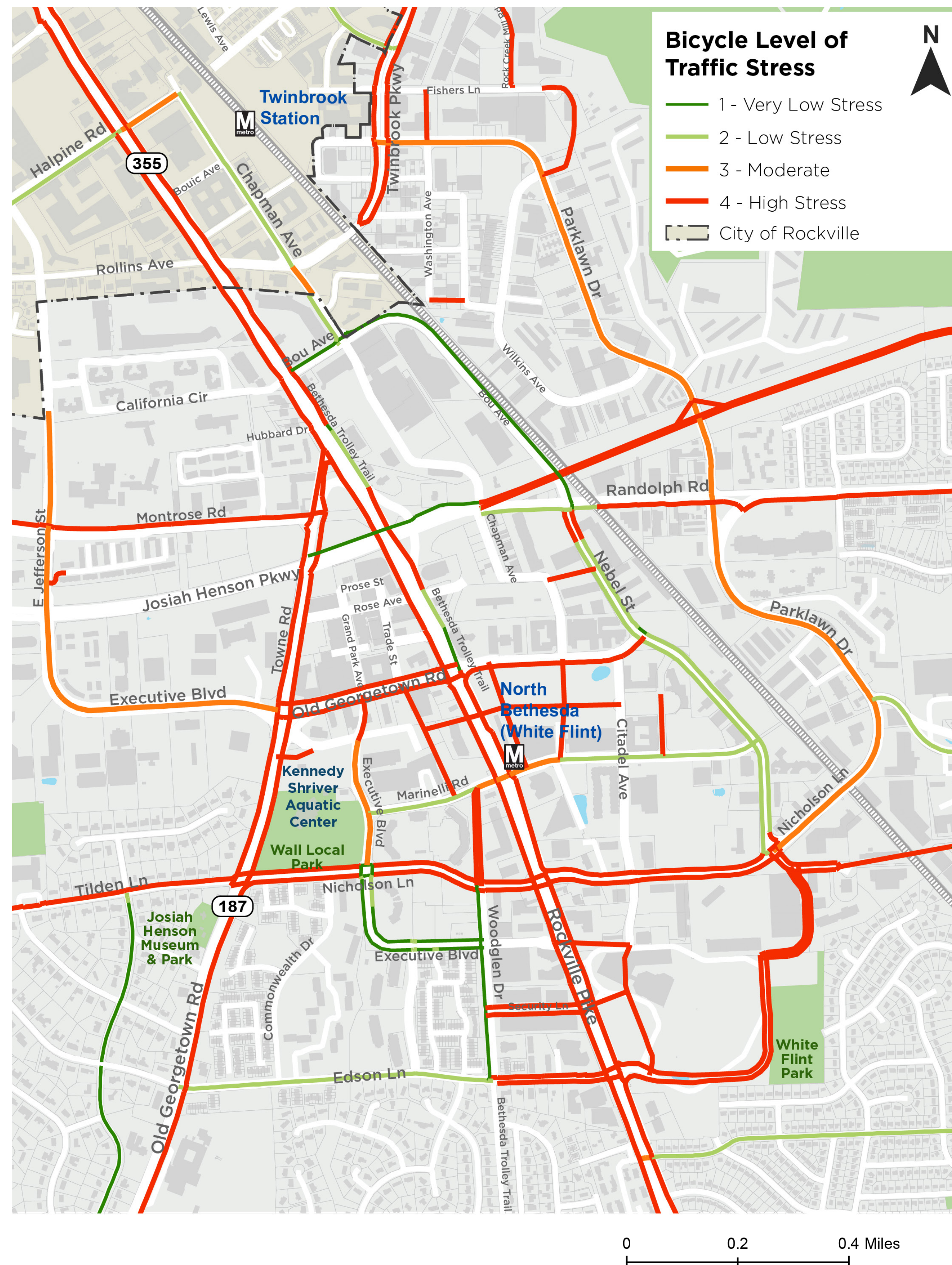


One-Way Separated Bike Lanes along Nebel Street

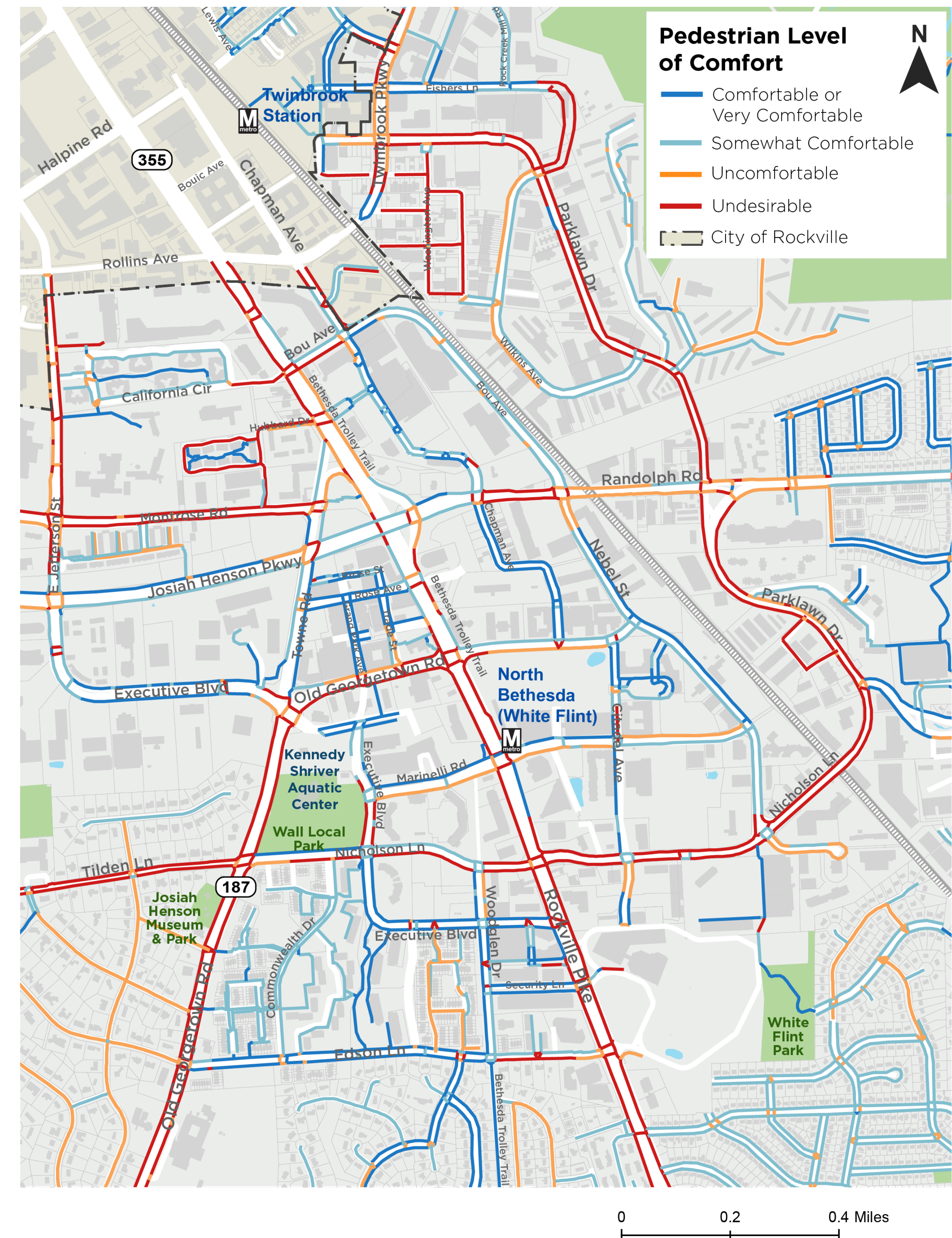


Wide Sidewalk/Shared Use Path along Nebel Street

## BICYCLE LEVEL OF TRAFFIC STRESS (LTS) AND PEDESTRIAN LEVEL OF COMFORT (LOC)

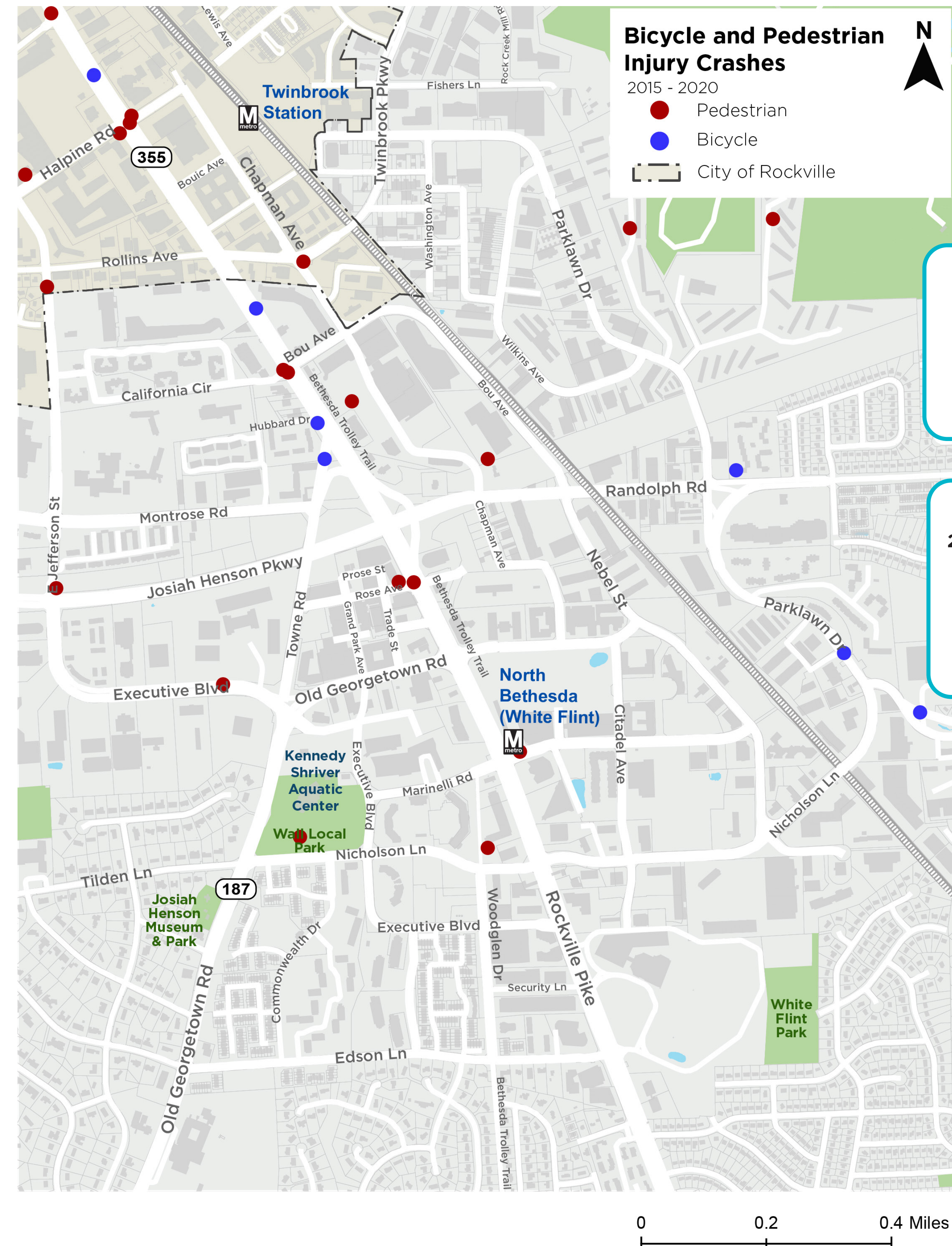
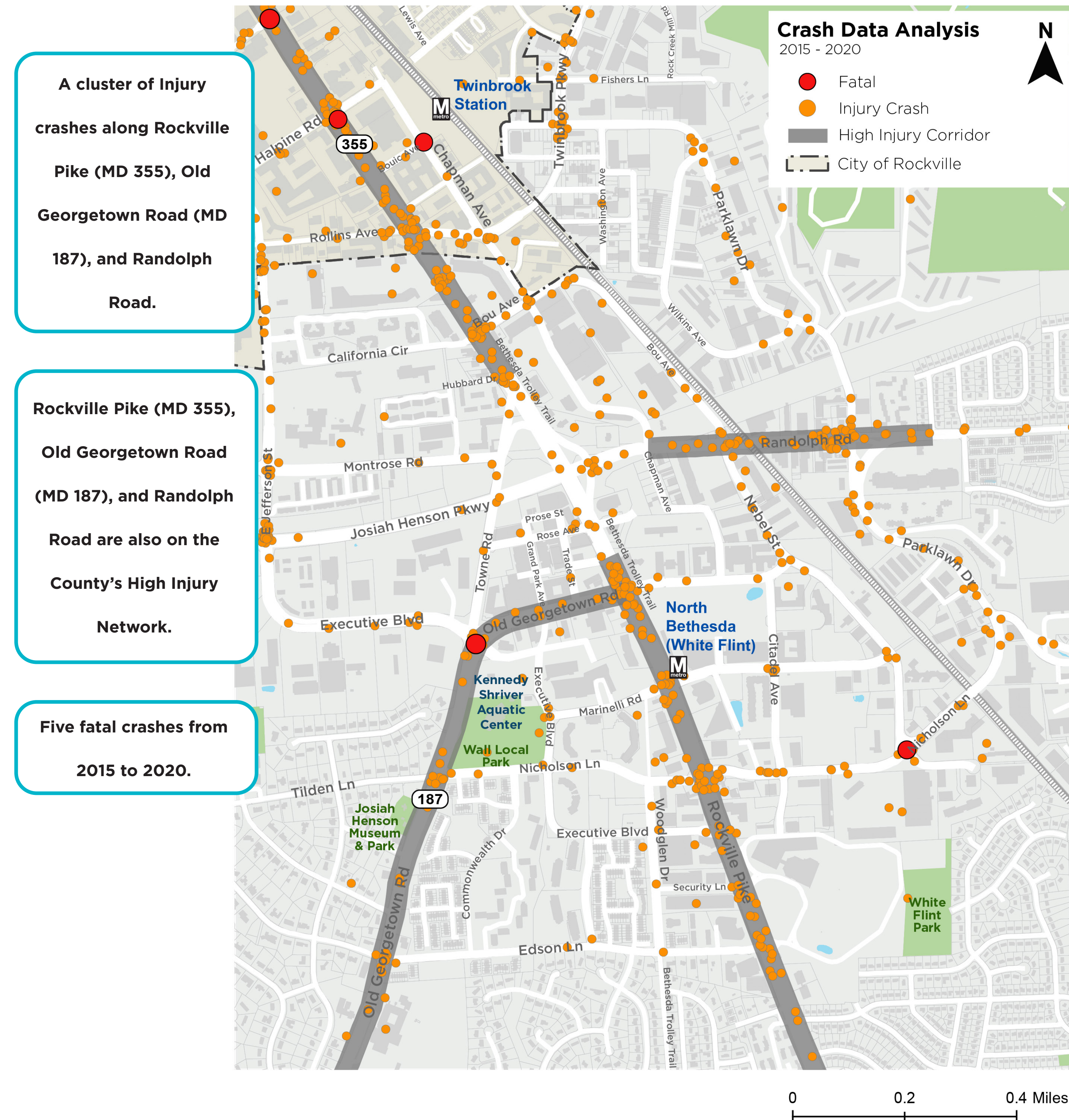


Most of the arterial roads in the study area, like Rockville Pike, Old Georgetown Road, Nicholson Lane, and Marinelli Road, are classified as High to Moderate Bicycle Level of Traffic Stress. However, several planned and under-construction projects along these roads will assist in decreasing the Bicycle Level of Traffic Stress on these roads.

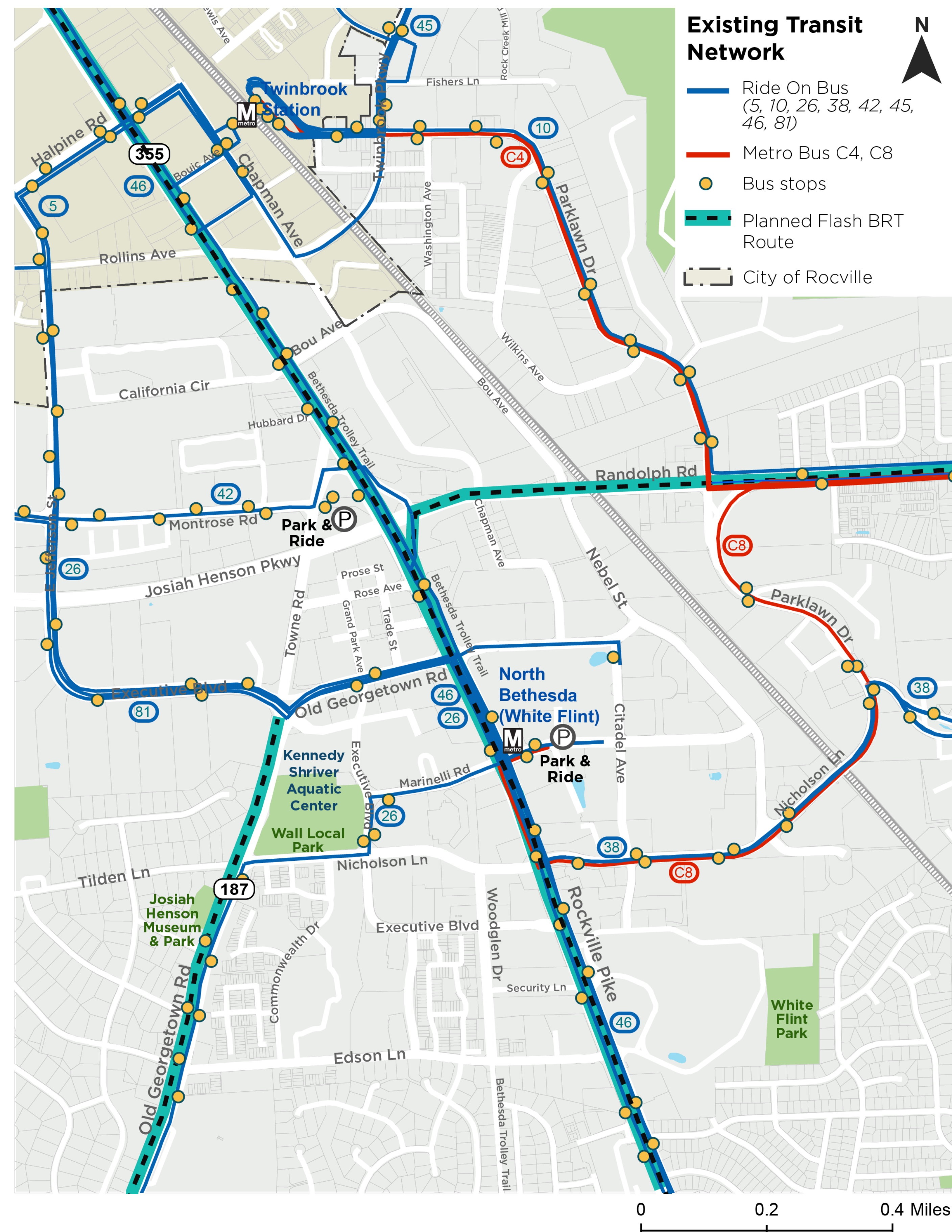


Many segments of Rockville Pike, Nicholson Lane, Marinelli Road, and Old Georgetown Road are classified as Uncomfortable or Undesirable as per the Pedestrian Level of Comfort Analysis. Several Shared Use Paths are currently under construction or planned along Old Georgetown Road and Rockville Pike. These Shared Use Paths will enhance pedestrian comfort along these roads. Future projects along Marinelli Road and Nicholson Lane could improve pedestrian facilities.

## CRASH DATA ANALYSIS



## TRANSIT NETWORK

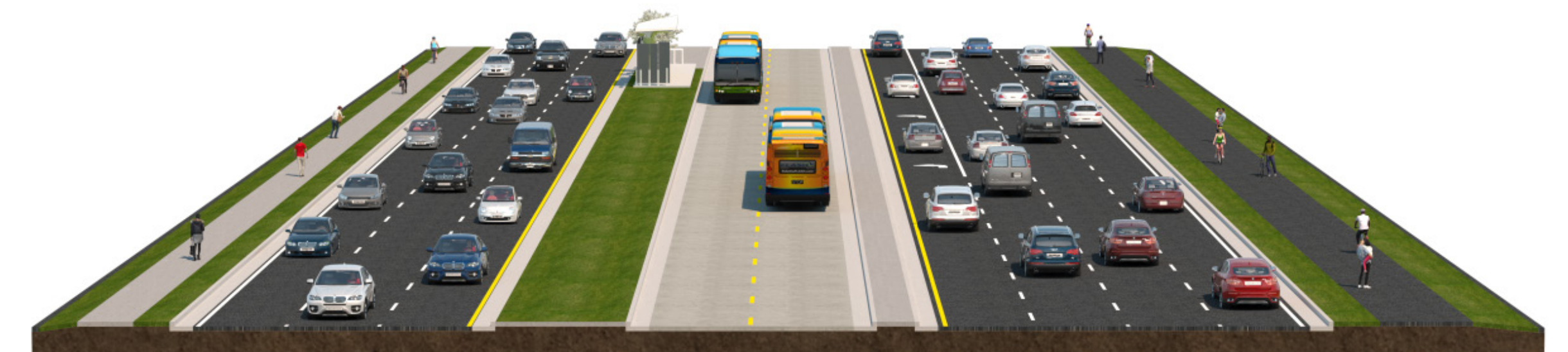


Two FLASH BRT projects are being planned in the study area:

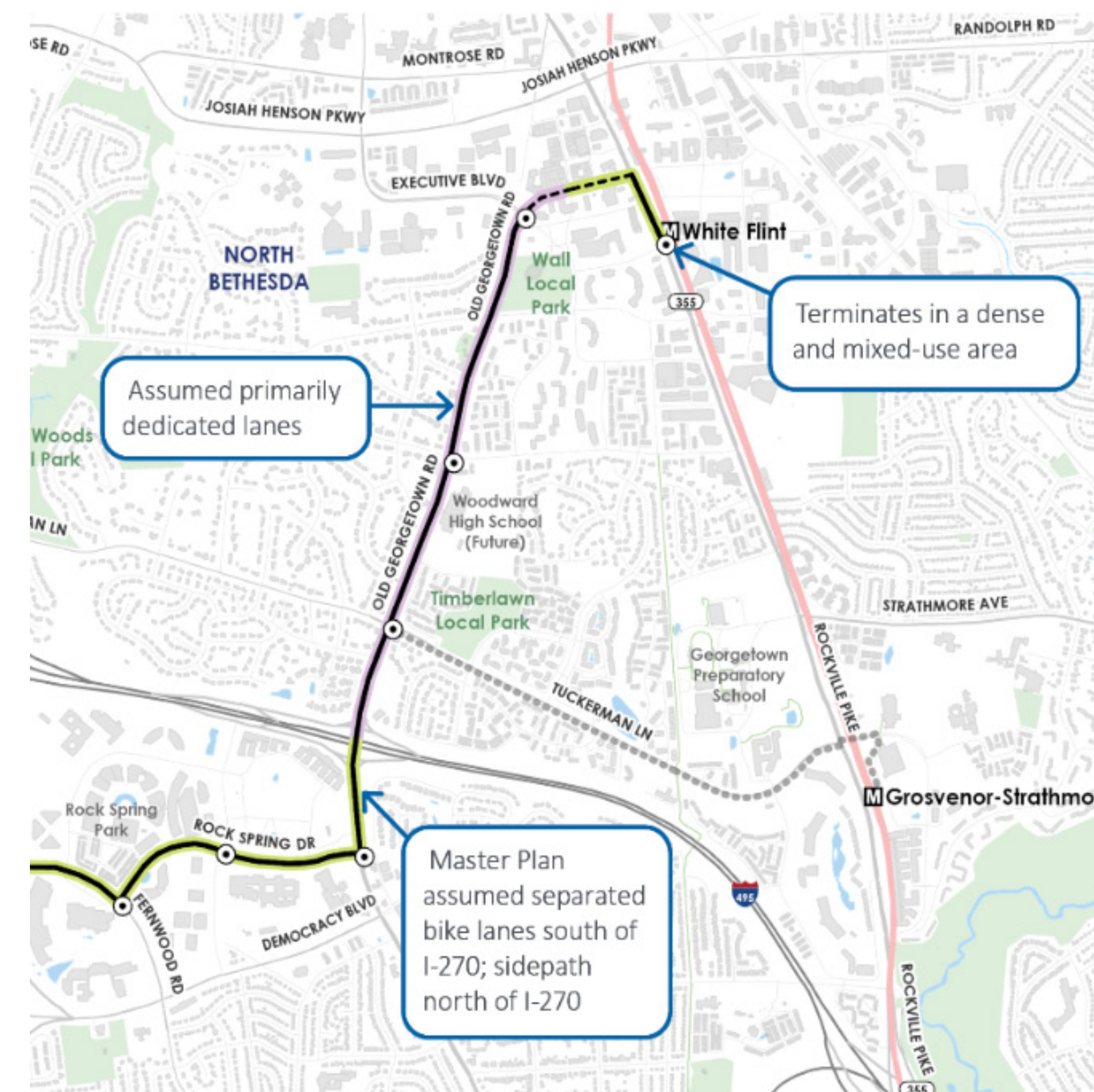
Rockville Pike (MD 355)

Old Georgetown Road (MD 187)

FLASH BRT along Rockville Pike (MD 355) in North Bethesda

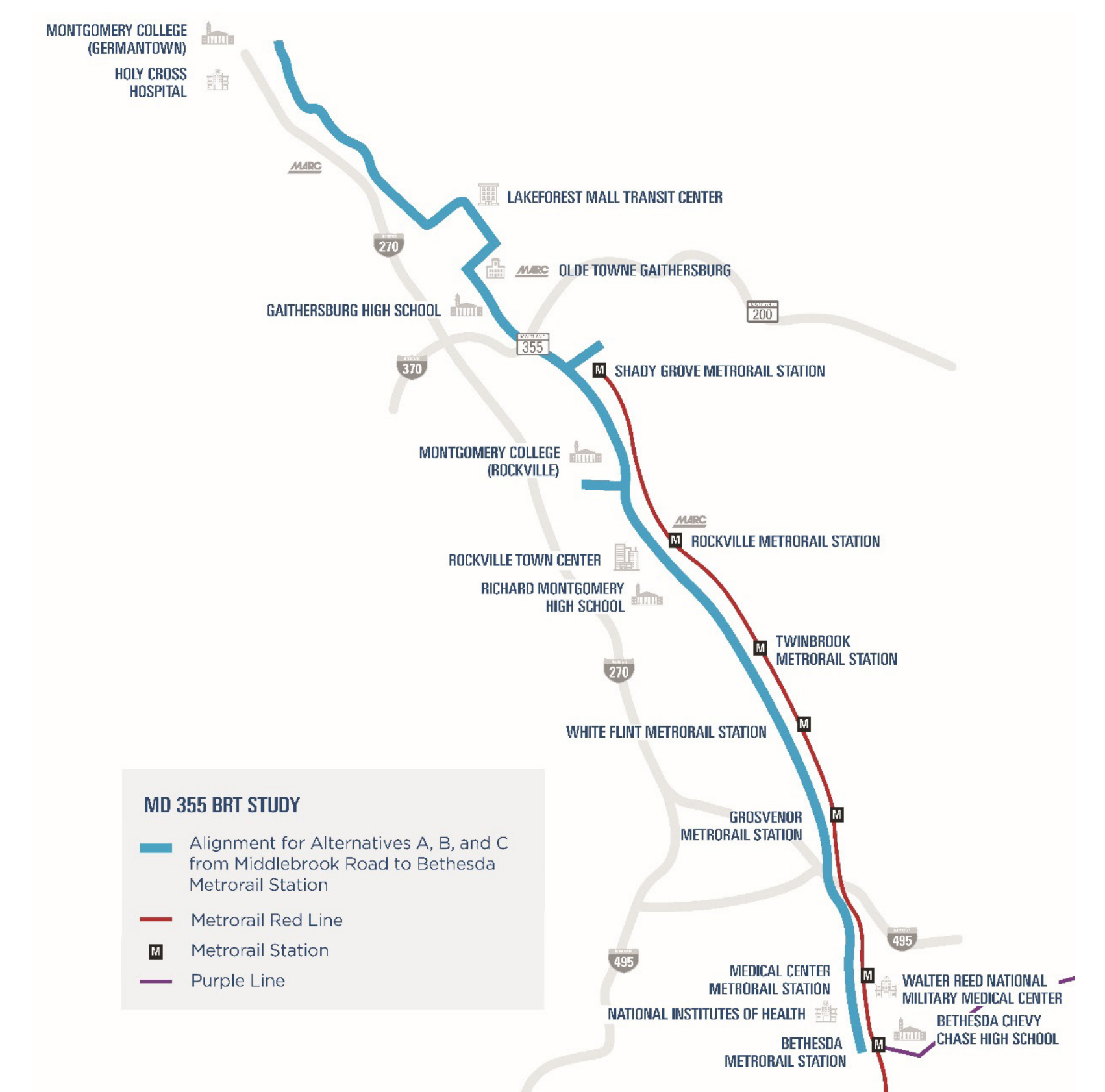


Recommended alignment for FLASH BRT along Old Georgetown Road (MD 187) in North Bethesda



Source: MCDOT

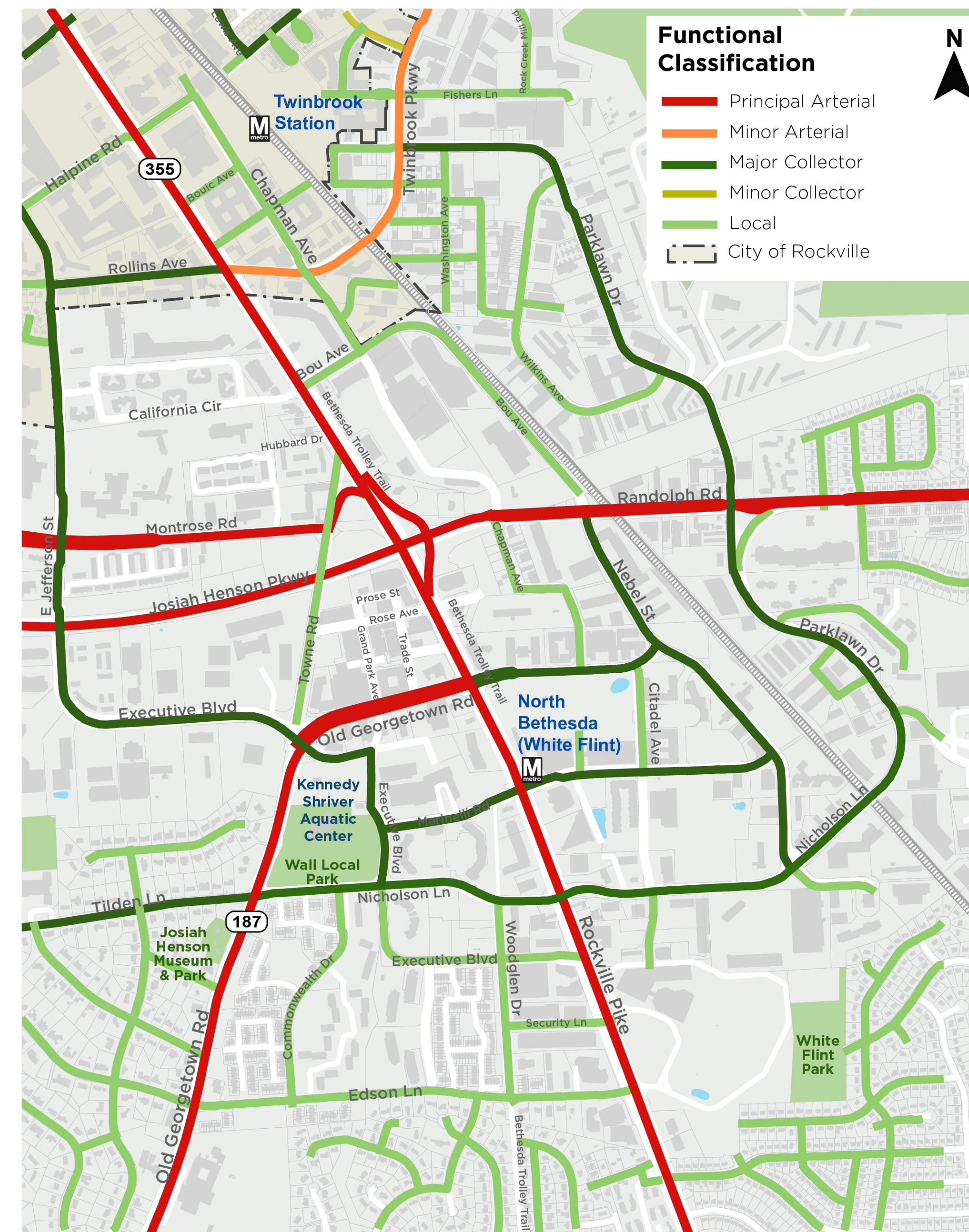
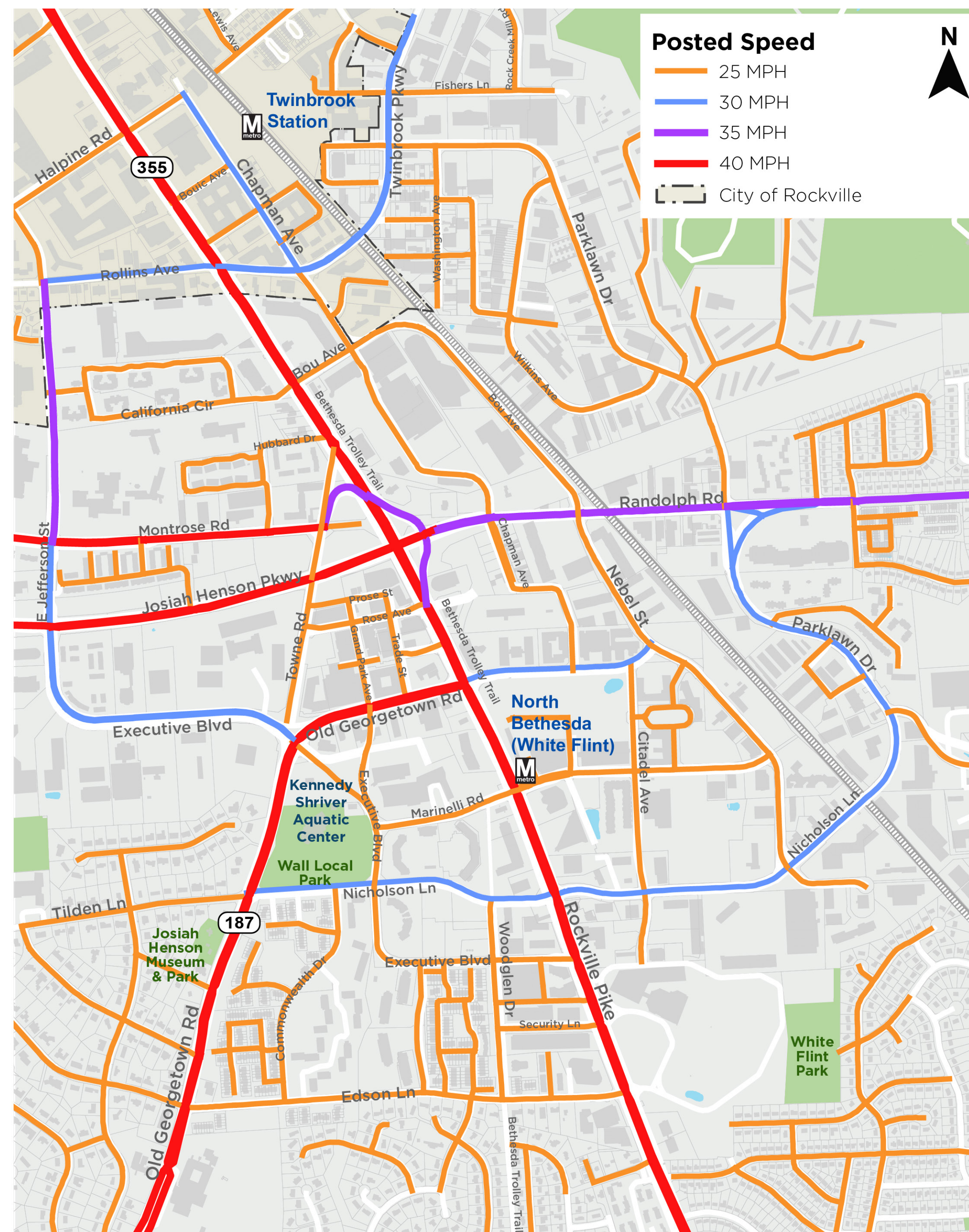
FLASH BRT along Rockville Pike (MD 355)



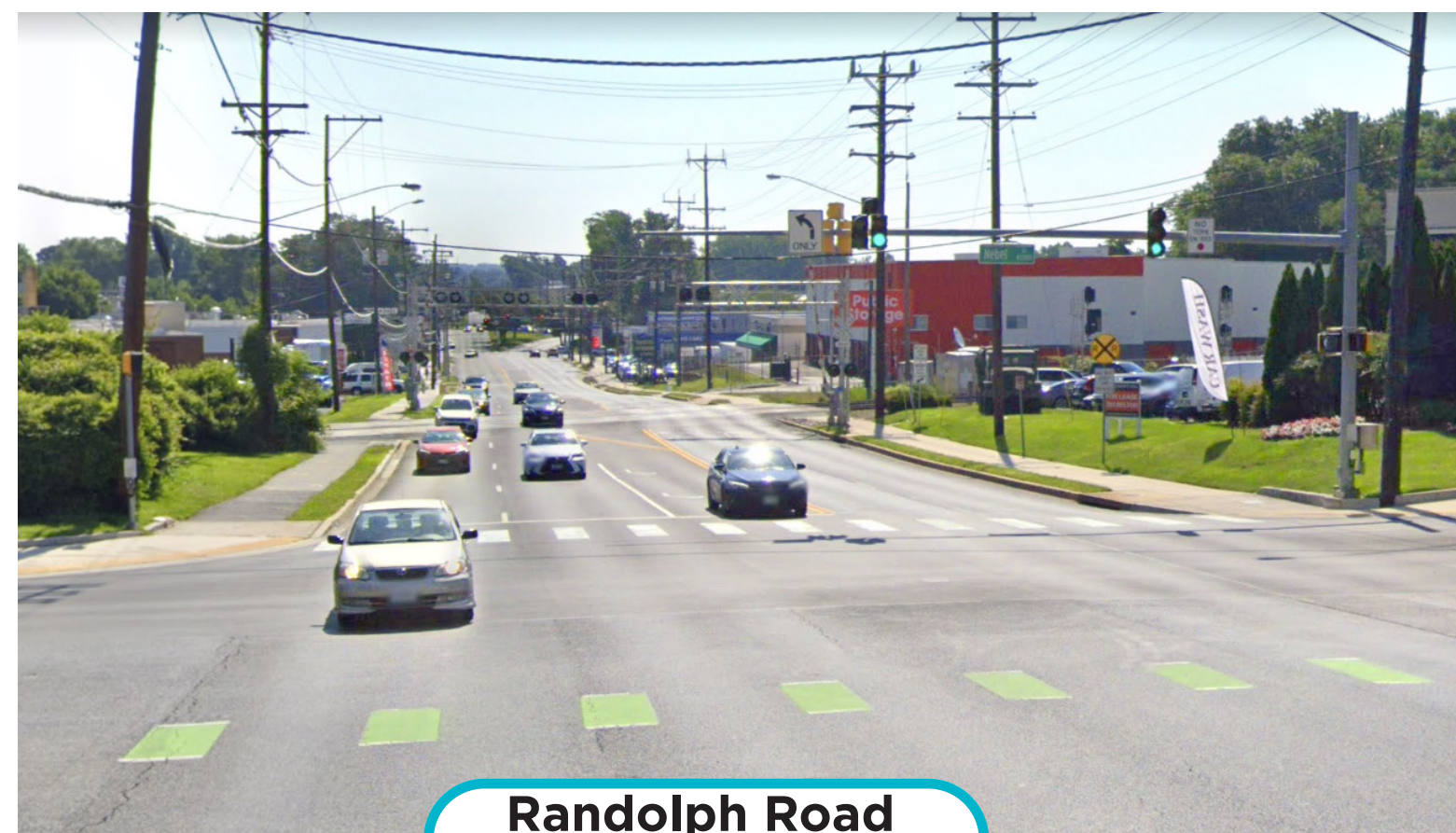
Source: MCDOT

## ROADWAY CHARACTERISTICS

Roads like Rockville Pike (MD 355), Old Georgetown Road (MD 187) Randolph Road are posted at 35 MPH and higher and do not feel safe and comfortable for pedestrians and bicyclists.



Many arterial and collector roads create barriers for pedestrians and bicyclists subdividing the study area.



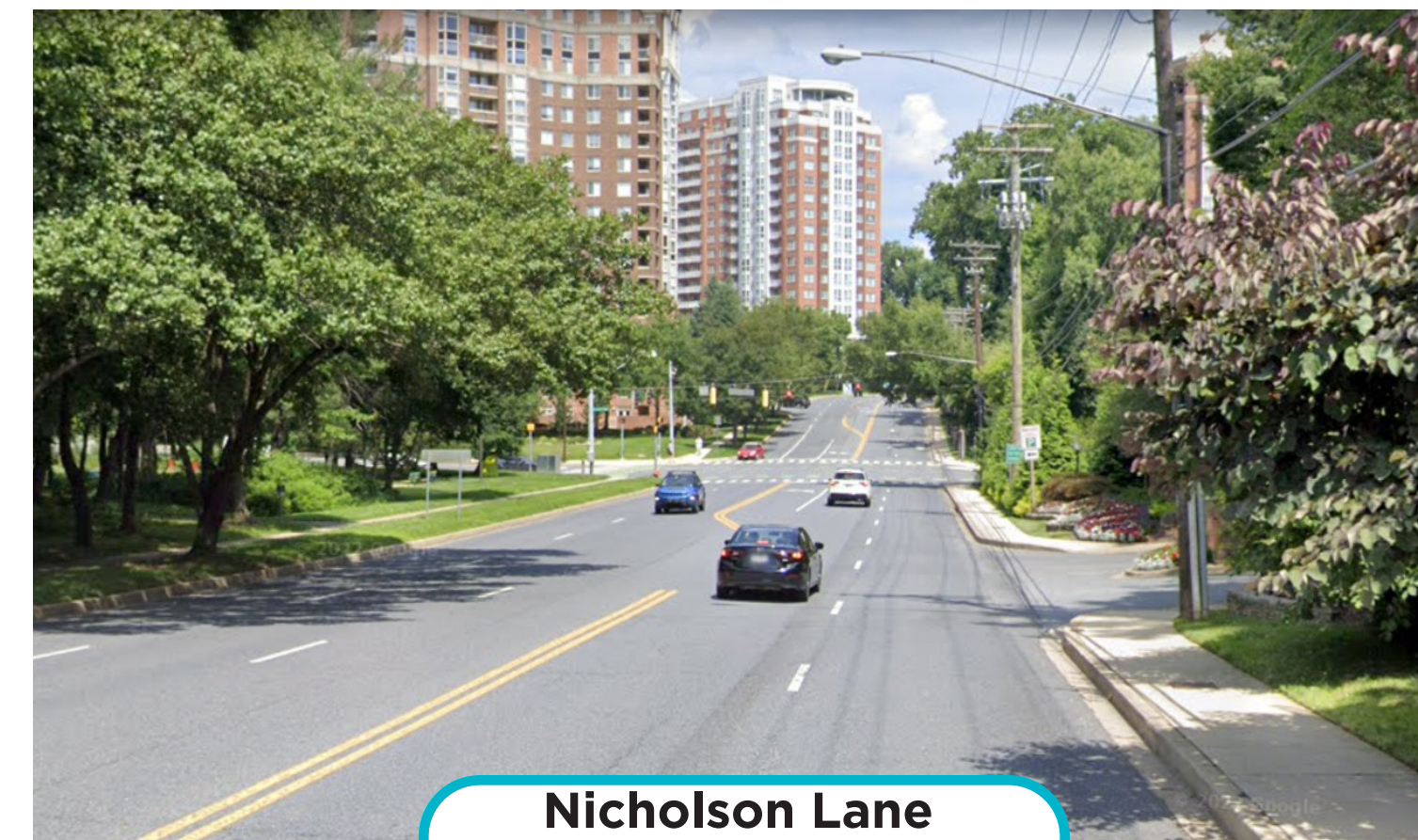
Randolph Road (Looking East)

Source: Google earth



Old Georgetown Road (Looking East)

Source: Google earth



Nicholson Lane (Looking East)

Source: Google earth



Marinelli Road (Looking East)

Source: Google earth

## WAYFINDING IDEAS

A wayfinding system helps people orient themselves, explore new areas, and navigate to reach their destinations. A well-designed wayfinding and signage system can be integrated with place-making to foster a sense of place. The study area will benefit from a well-designed wayfinding system to connect new development with various destinations such as retail, recreational, transit, and regional trails.

### Hierarchy Of Signs

A hierarchy of four types of signs Provides users with key information based on where they are in the network, reinforcing an engaging experience on the trail.

#### 1. Kiosks



Source: Pennsylvania Highlands

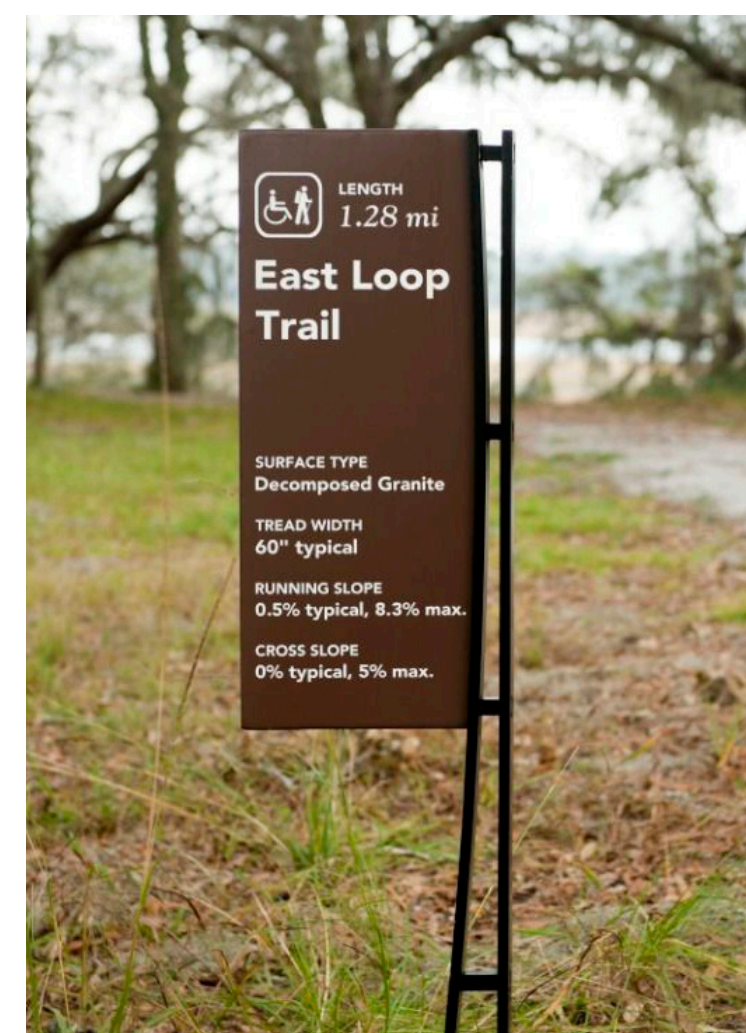


Source: Kittelson & Associates

#### 2. Trail Identification



Source: The Intertwine Alliance, OR



Source: Ayers Saint Gross

#### 3. Directional Signs



Source: Montgomery Planning



Source: Volpe, USDOT

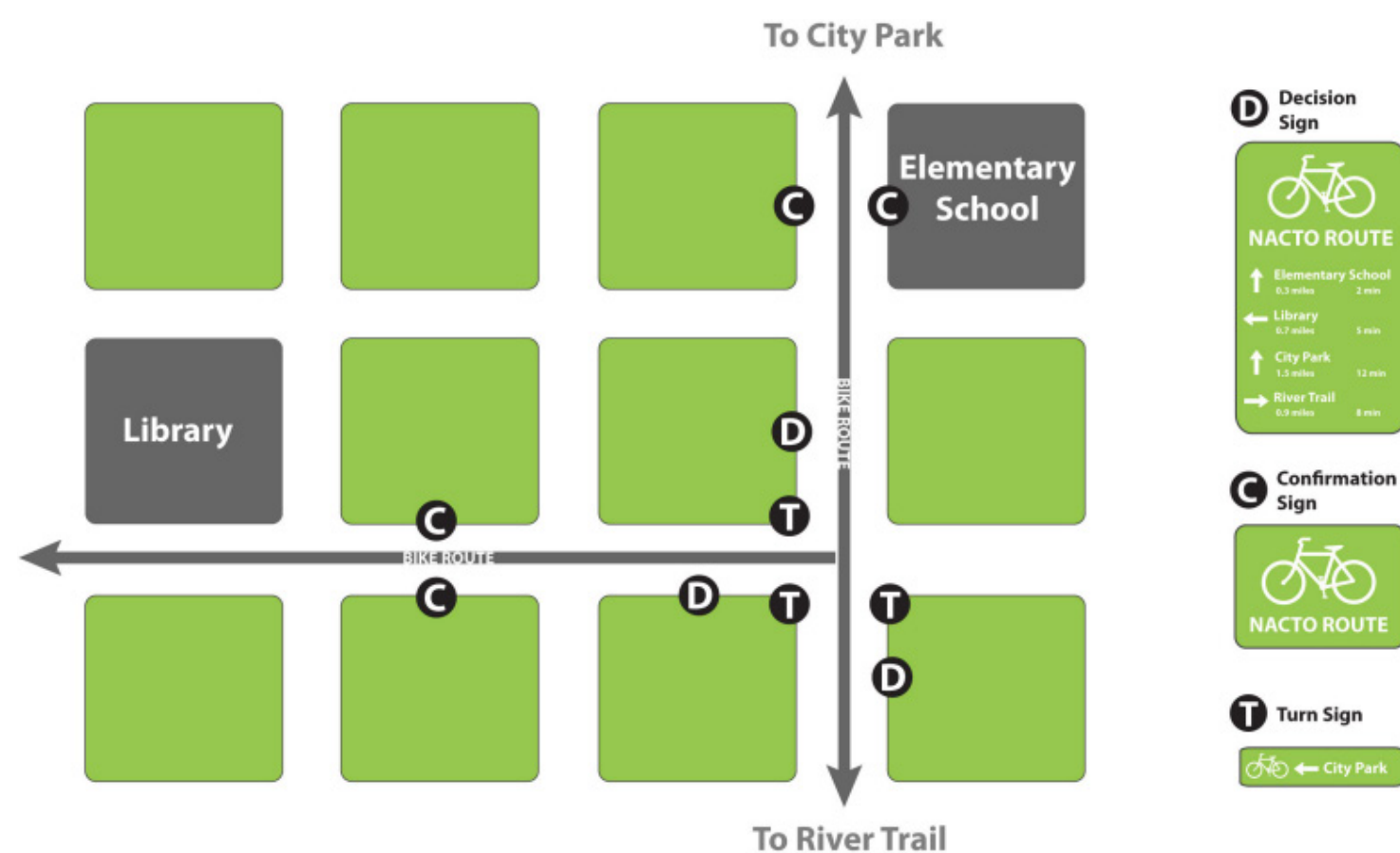
#### 4. Amenity & Regulatory Signs



Source: www.e3signs.com

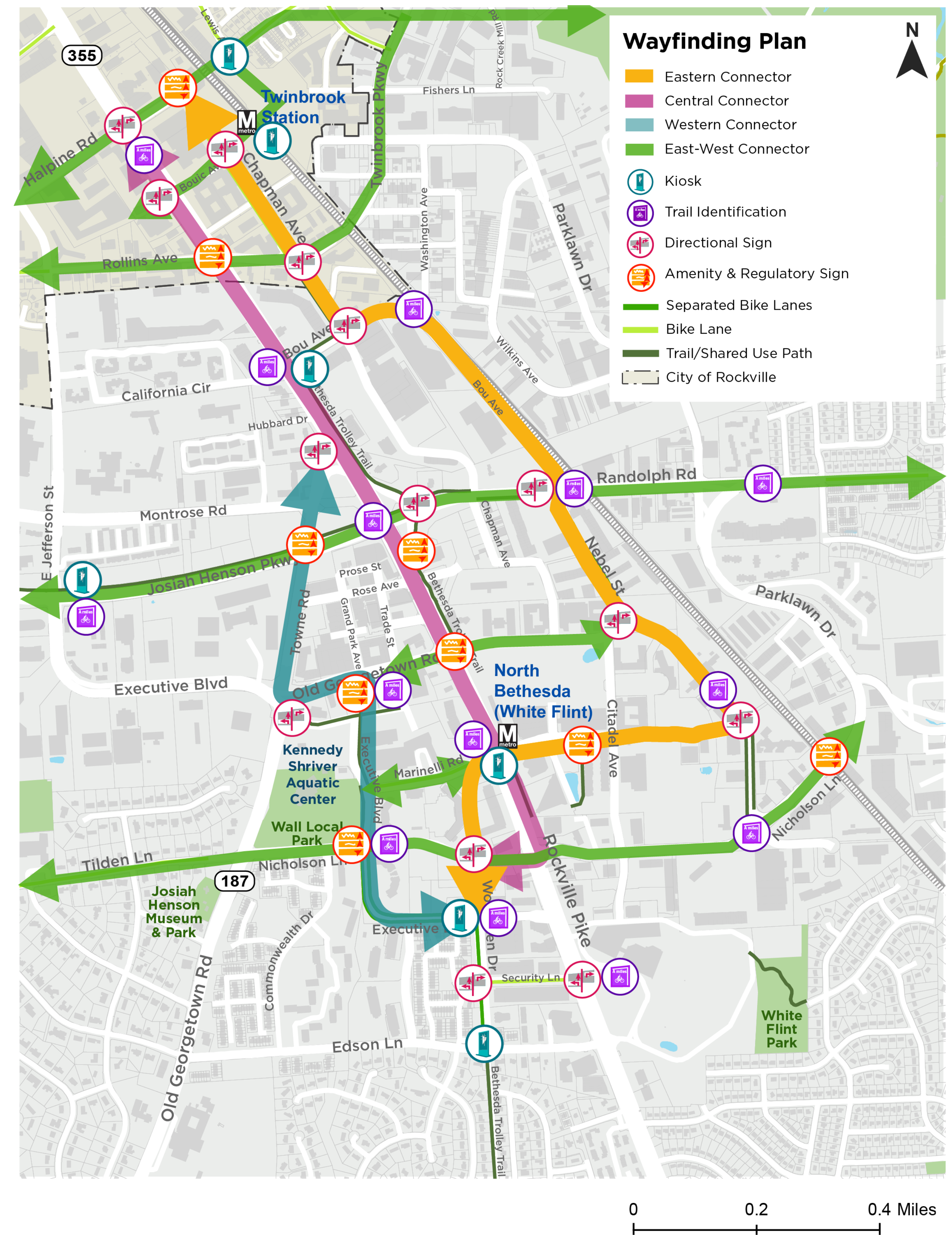


Source: www.dreamstime.com. Photo: Stuart Perry



Design Guidance for Bicycle Wayfinding System

Source: NACTO



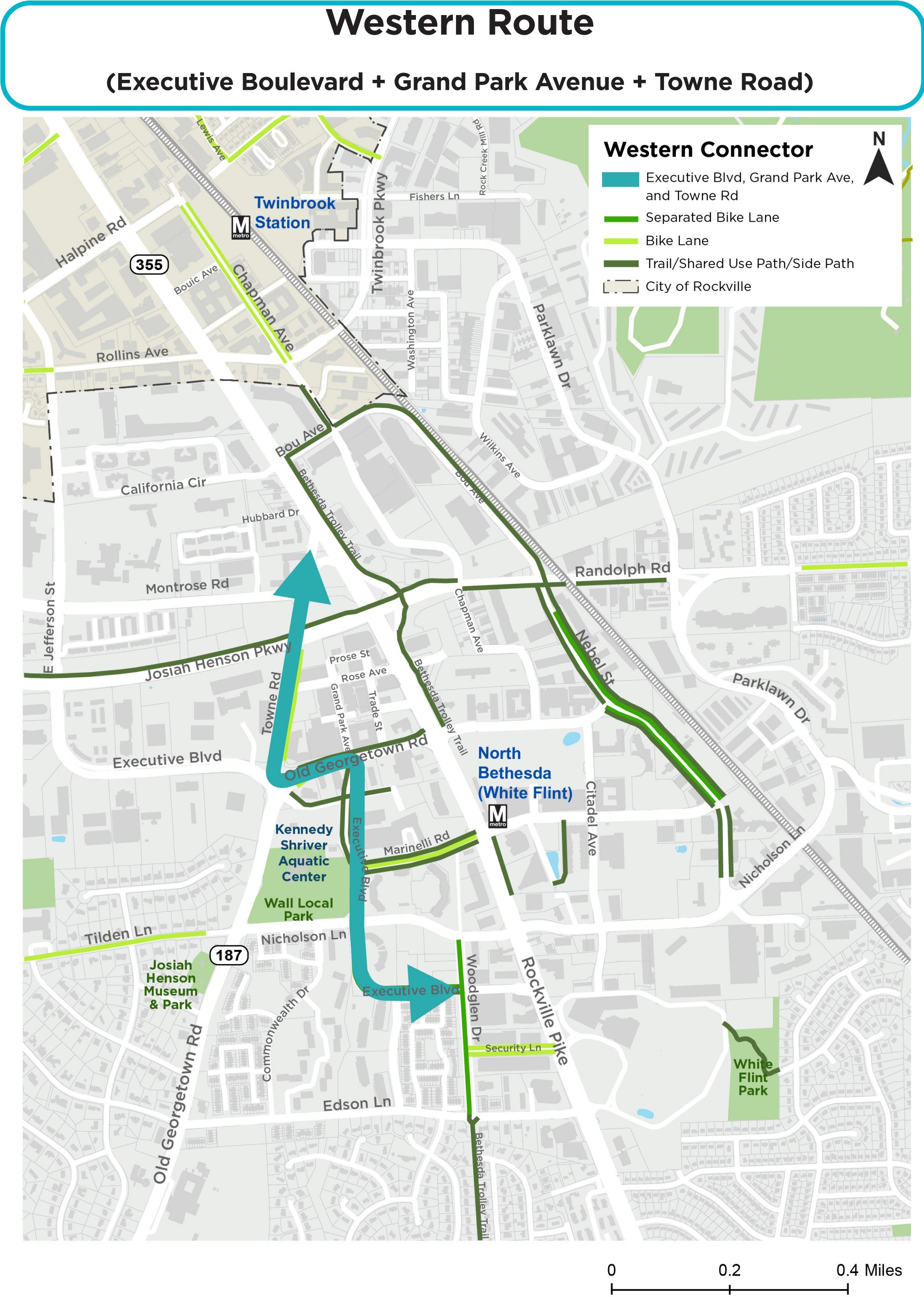
**Tell us the destinations you bike or walk to**  
Please use the blue sticker to indicate your frequent destinations

■ Please mark any other destination missing on the map

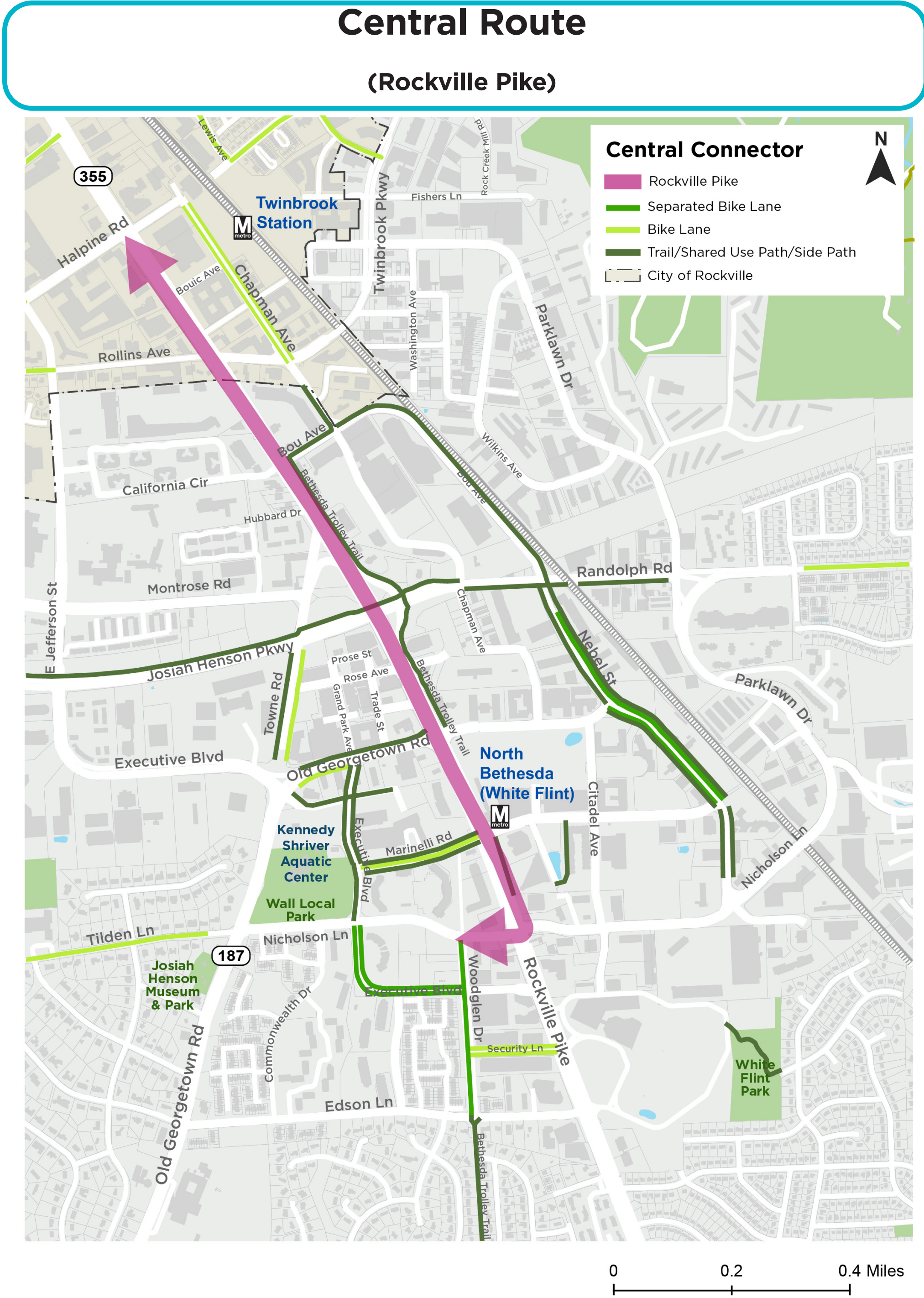


WE WANT TO HEAR FROM YOU!

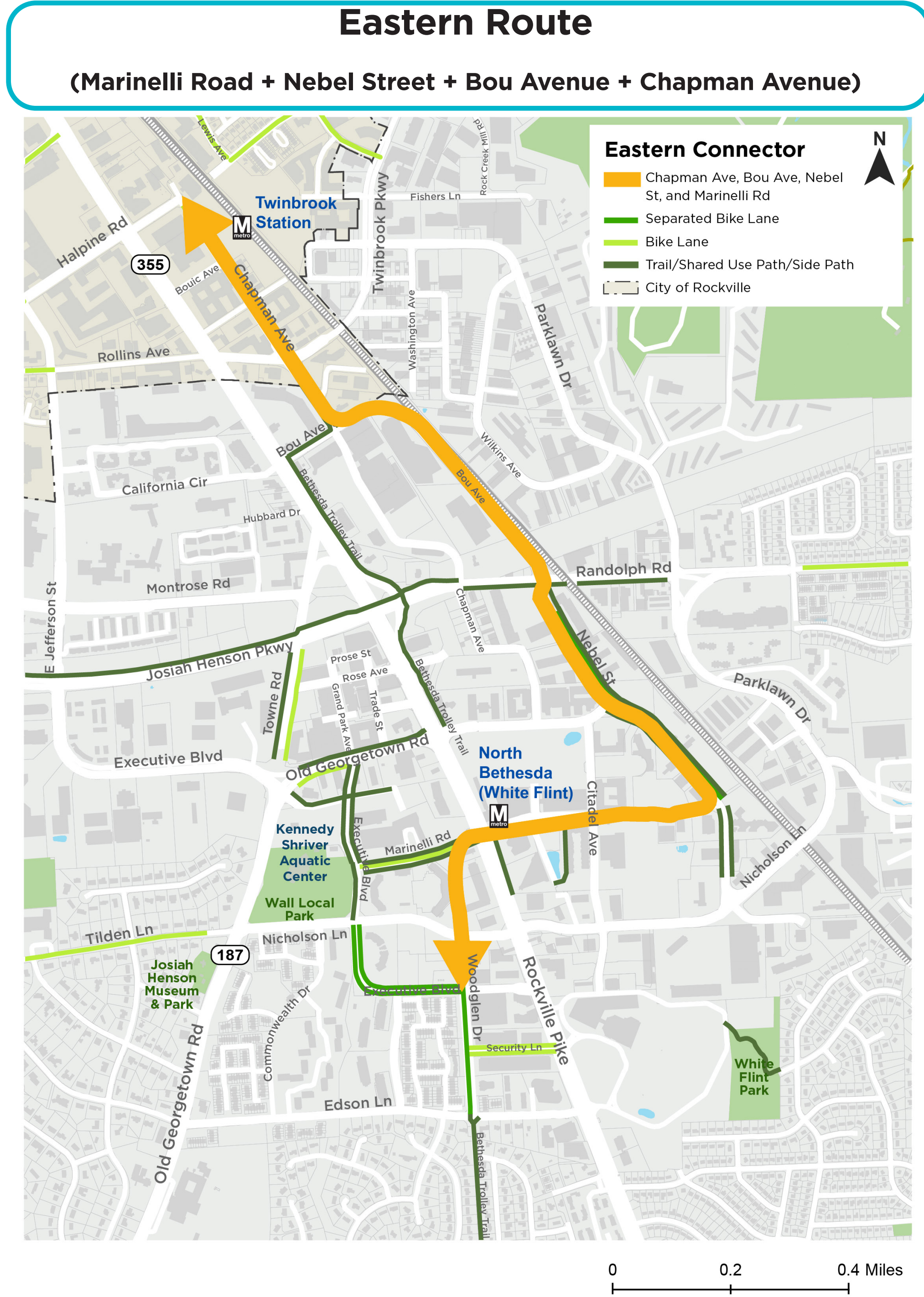
Which route do you think should be signed as the Bethesda Trolley Trail?  
Please use the green sticker to indicate your preferred alternative.



Place your sticker here:



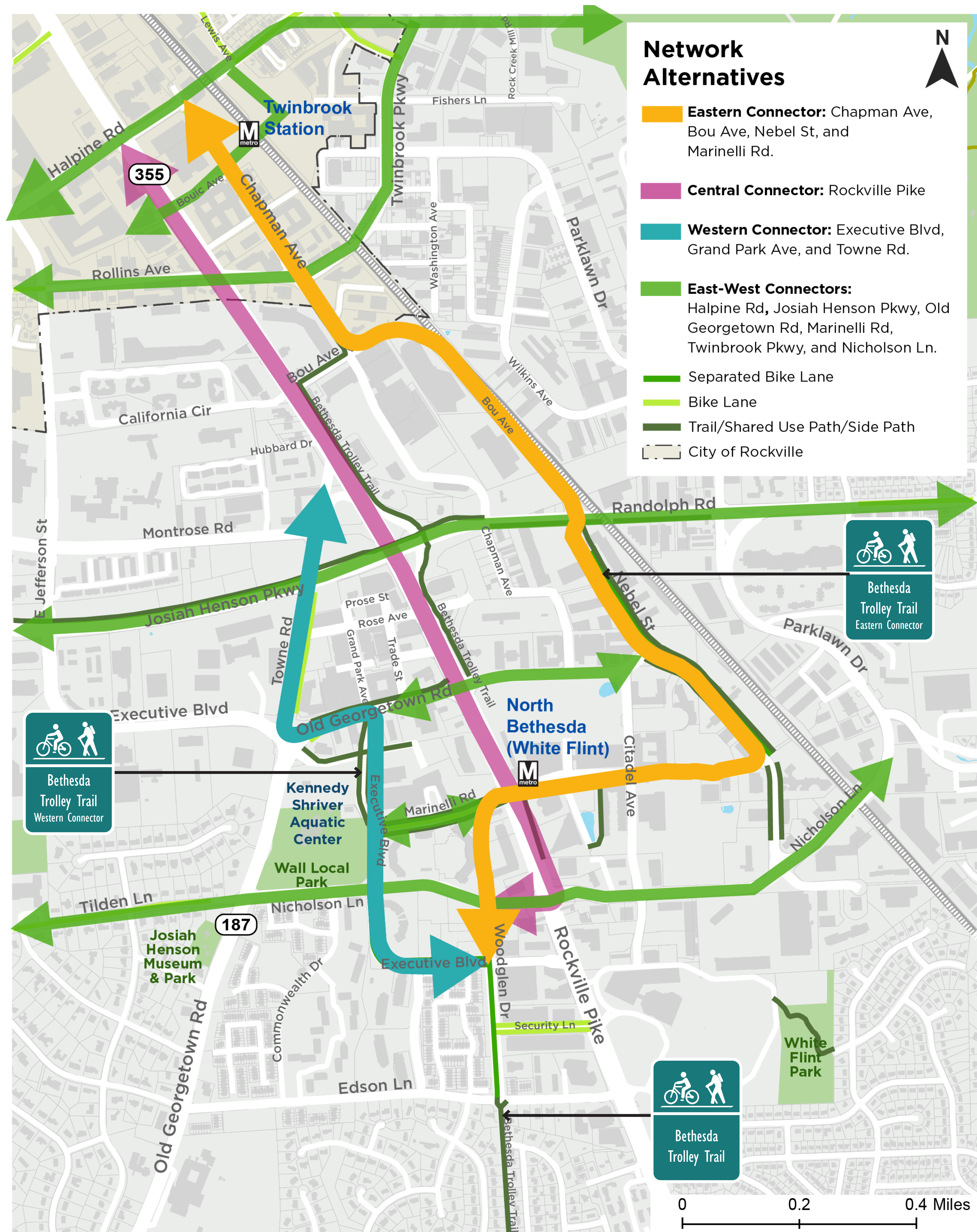
Place your sticker here:



Place your sticker here:

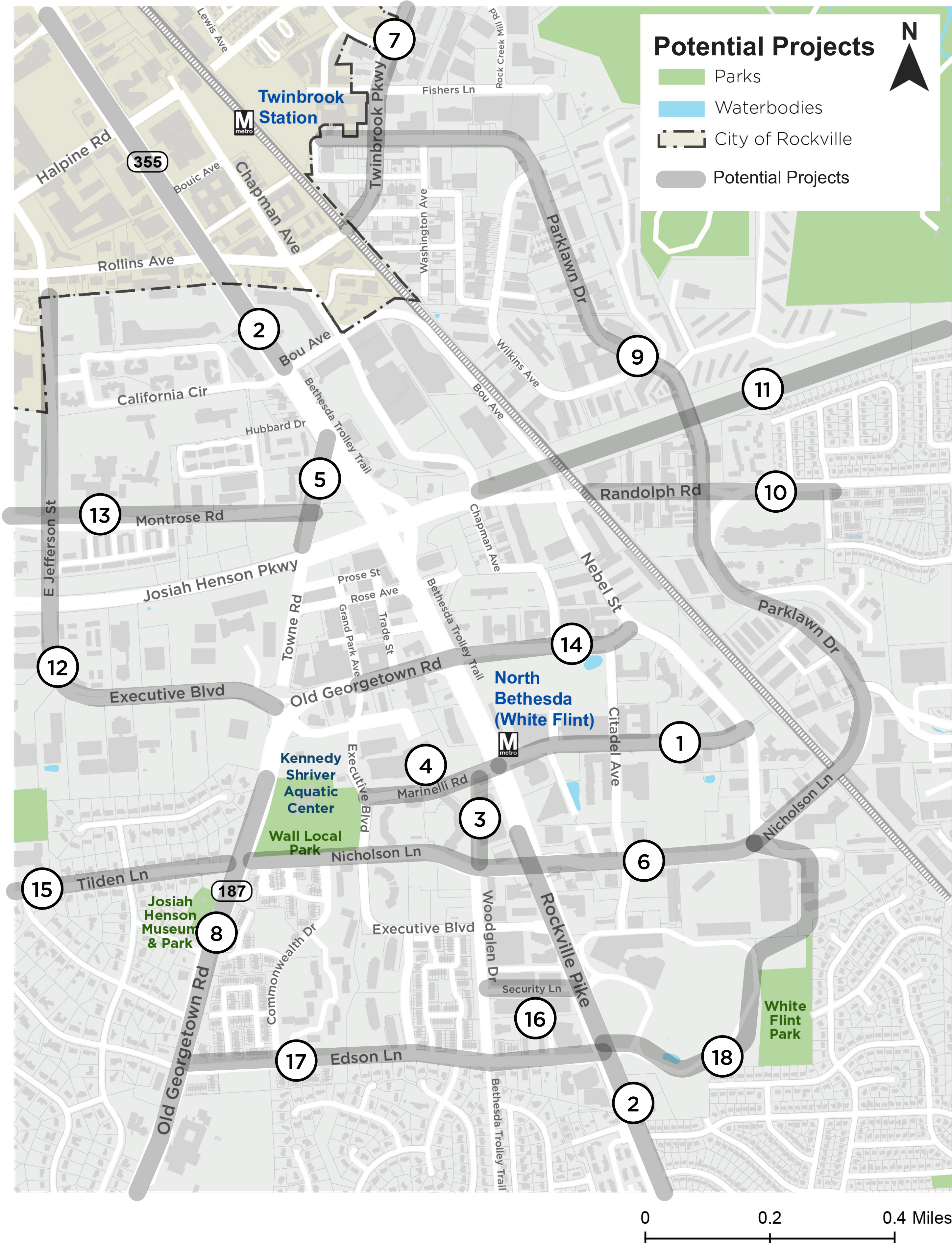
WE WANT TO HEAR FROM YOU!

- Should we assign this entire network as the Bethesda Trolley Trail with individual route names (e.g., Bethesda Trolley Trail - Eastern Connector)?
- Please draw any other routes on the map with the potential to be signed as the Bethesda Trolley Trail.



Place your green sticker here:

POTENTIAL PROJECTS TO COMPLETE THE NETWORK

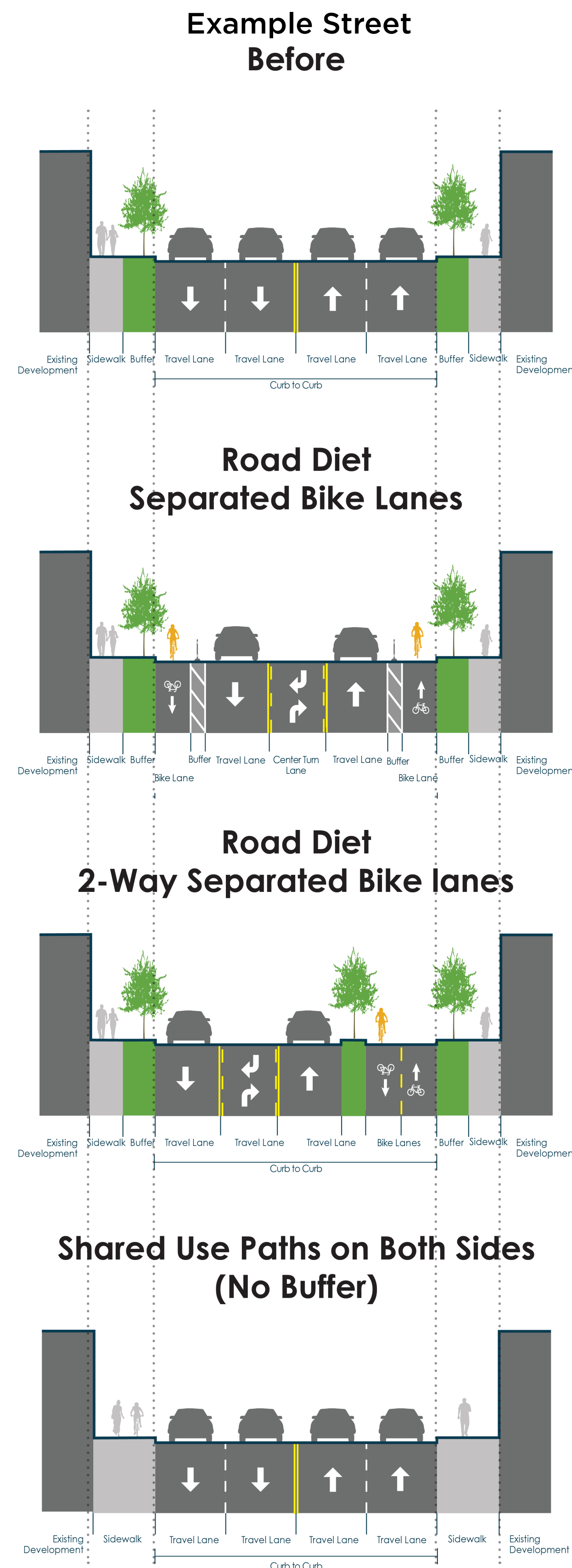


No.	Street Name	Extents	Potential Facility Type Recommendation
1	Marinelli Road	Rockville Pike to Nebel Street	Separated Bike Lanes (Design and construction funded for 2023)
2	Rockville Pike (MD 355)	North of Bou Avenue & South of Nicholson Lane	Shared Use Path (To be constructed as part of MD 355 FLASH BRT project)
3	Woodglen Drive	Nicholson Lane to Nebel Street	Separated Bike Lanes/Shared Use Path (Can be constructed as part of Saul Centers White Flint development)
4	Marinelli Road	Executive Boulevard to Rockville Pike	Separated Bike Lanes
5	Towne Road	Josiah Henson Parkway to Rockville Pike	Separated Bike Lanes/Shared Use Path
6	Nicholson Lane	Old Georgetown Road to Nebel Street	Separated Bike Lanes
7	Twinbrook Parkway	Rockville Pike to Veirs Mill Road	Separated Bike Lanes/Shared Use Path
8	Old Georgetown Road (MD 187)	Charles Street (Bethesda Trolley Trail) to Banneker Avenue	Separated Bike Lanes/Shared Use Path
9	Parklawn Drive	Nebel Street to Twinbrook Parkway	Shared Use Path
10	Randolph Road	Rail Tracks to Putnam Road	Separated Bike Lanes/Shared Use Path
11	Montrose Parkway (ROW)	Randolph Road to Veirs Mill Road	Shared Use Path/Trail
12	Executive Boulevard/ Jefferson Street	Old Georgetown Road to Rollins Avenue	Separated Bike Lanes/Shared Use Path
13	Montrose Road	Josiah Henson Parkway to Towne Road	Shared Use Path
14	Old Georgetown Road	Grand Park Avenue to Nebel Street	Separated Bike Lanes/Shared Use Path
15	Tilden Lane	Danville Drive to Old Georgetown Road	Shared Use Path
16	Security Lane	Woodglen Drive to Rockville Pike	Separated Bike Lanes
17	Edson Lane	Old Georgetown Road to Rockville Pike	Separated Bike Lanes/Shared Use Path
18	Nebel Street Extension	Rockville Pike to Nicholson Lane	Separated Bike Lanes

## POTENTIAL OPTIONS TO IMPLEMENT PROJECTS

### Options to Implement Separated Bike Lanes or Shared Use Paths

#### Options to Implement Without Property or Curb Impacts



#### Options to Implement With Widening/Easement/Redevelopment

