

## Appendix C

### Identification of Station Locations

#### Introduction and Context

Identification of New Hampshire Avenue Flash BRT station locations was an iterative and collaborative process that built on recommendations identified in previous plans, takeaways from the existing conditions analysis, and feedback received from the TAC and community stakeholders. The 2013 Countywide Transit Corridors Functional Master Plan (BRT Master Plan) provided broad guidance on corridor elements, including the locations of twelve (12) potential BRT stations.

The project team evaluated whether to eliminate, add, or modify the locations of BRT stations identified in the BRT Master Plan for implementing Flash BRT service (Flash) along New Hampshire Avenue. This appendix summarizes the approach for evaluating BRT station locations. Recommended station locations identified in this planning study may be further refined in future phases on the New Hampshire Avenue Flash BRT project based on additional evaluation and engineering design.

#### Potential Station Locations

The process of identifying station locations started by considering suggested station locations in the BRT Master plan. The following 12 locations were identified in the BRT Master Plan:

1. The Colesville Park-and-Ride
2. New Hampshire Ave (MD 650) and Randolph Road
3. New Hampshire Ave (MD 650) and Valley Brook Drive
4. New Hampshire Ave (MD 650) and Jackson Road
5. The White Oak Transit Center
6. FDA White Oak Campus
7. New Hampshire Ave (MD 650) at Hillandale (Powder Mill Road)
8. New Hampshire Ave (MD 650) and Oakview Drive
9. New Hampshire Ave (MD 650) and Northampton Drive
10. The Takoma Langley Transit Center
11. New Hampshire Ave (MD 650) and Ethan Allen Ave (MD 410)
12. New Hampshire Ave (MD 650) and Eastern Avenue

The station identification process also considered feedback from the public and agency stakeholders in the Technical Advisory Committees (TAC) members, including the Washington Metropolitan Area Transit Authority (WMATA), the District Department of Transportation (DDOT), the City of Takoma Park, the US Food and Drug Administration (FDA), the Maryland- National Capital Park and Planning Commission (M-NCPPC) - Montgomery County Planning Department, Maryland State Highway Administration (SHA), and Prince George's County staff.

Public feedback was gathered through the Corridor Advisory Committee (CAC), which includes local bus riders, business owners, residents, and employees also informed the recommended station locations. The feedback included direct recommendations for stop locations as well as feedback that could affect stop locations. The following additional potential station locations were considered based on existing conditions analysis, stakeholder input, and community feedback:

- Hollywood Avenue
- Heartfields Drive
- Hillandale Park / CHI Center
- Elton Road
- Adelphi Road
- Metzerott Road
- Merwood Road / Takoma Park Recreation Center
- Erskine Road
- Poplar Ave
- Sheridan Street

## **Evaluation Criteria for Potential Stations**

With potential station locations identified, these locations were evaluated for consistency with the BRT Program Goals, area plans, and with BRT best practices. The BRT Program Goals include:

- **Mobility Choices** - Improving access to jobs, activity centers, and community facilities
- **Sustainable Solutions** - Minimizing environmental impacts and utilizing cost-effective design
- **Corridor Safety** - Improving safety of our streets and the livability and wellness of our communities
- **Economic Growth** - Promoting economic development with appealing and functional transit
- **Quality Service** - Providing a fast, reliable, efficient, and connected transit service
- **Community Equity** - Providing improved and accessible transit service for underserved populations

Planned projects were also considered in the process of identifying station locations. There are many plans and studies for transportation facilities or for land use development along the corridor. The plans and projects most relevant to identifying station locations include:

- Existing BRT service on US 29
- Potential future BRT service on Randolph Road and University Boulevard
- Future Purple Line light rail service on University Boulevard and corresponding improvements to the Takoma Langley Transit Center
- The Viva White Oak development and the Hillandale Gateway development
- FDA Campus Expansion
- Improvements to and expansion of the White Oak Transit Center
- Joint development at Fort Totten Metro Station

In addition, national best practices were considered. National best practices suggest the following parameters for locating BRT stations:

- Provide approximately 0.5 to 0.75 miles between stations to balance access and quality of service.
- Locate stations at significant land use hubs, including near job density, commercial uses, and multifamily housing.
- Co-locate BRT stations with local bus stops and other transit options to maximize transfer opportunities.
- Assume 0.25 miles as a “walkable” distance between an origin or destination and a transit stop.

Based on these resources and best practices as well as an understanding of the corridor derived from existing conditions analysis and public and stakeholder outreach, the project team developed broad criteria consistent with these resources and best practices to identify station locations. These criteria prioritized potential station locations which provide the following:

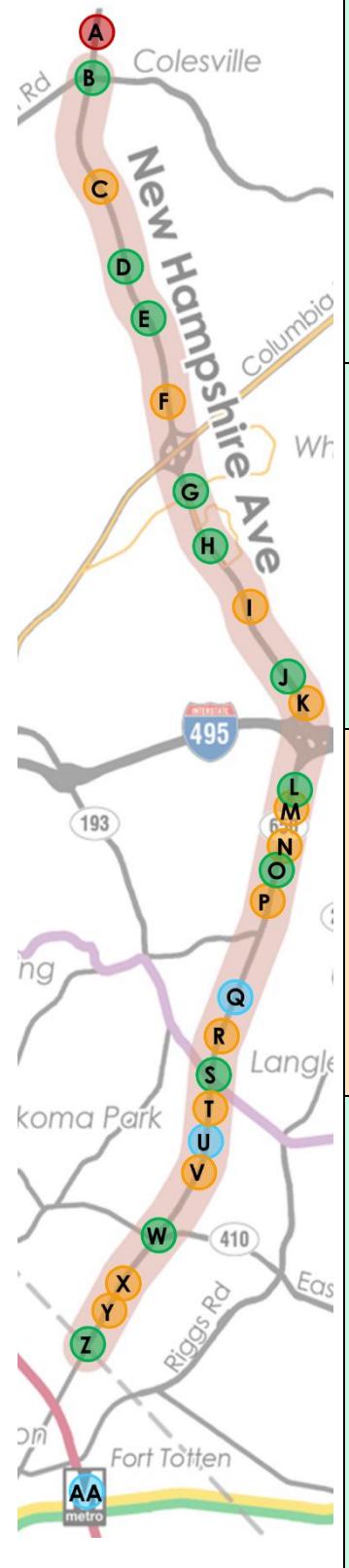
- Opportunity for connecting to existing or planned transit service
- Bus ridership
- Proximity to dense residential land uses with a high concentration of equity communities
- Proximity to commercial services and employment opportunities
- Ability to relatively easily construct a station
- Consistency of spacing between stations

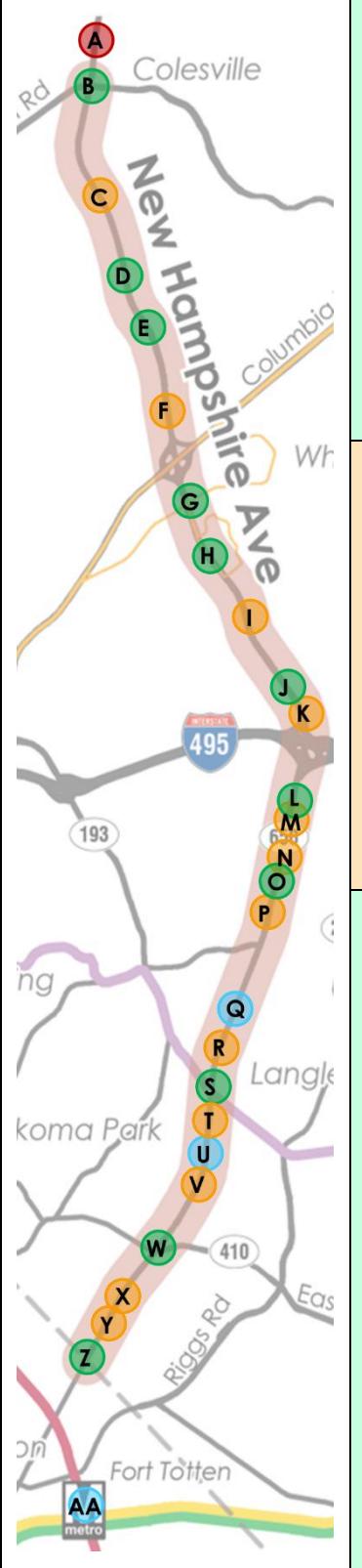
These basic criteria were then used to consider the potential station locations.

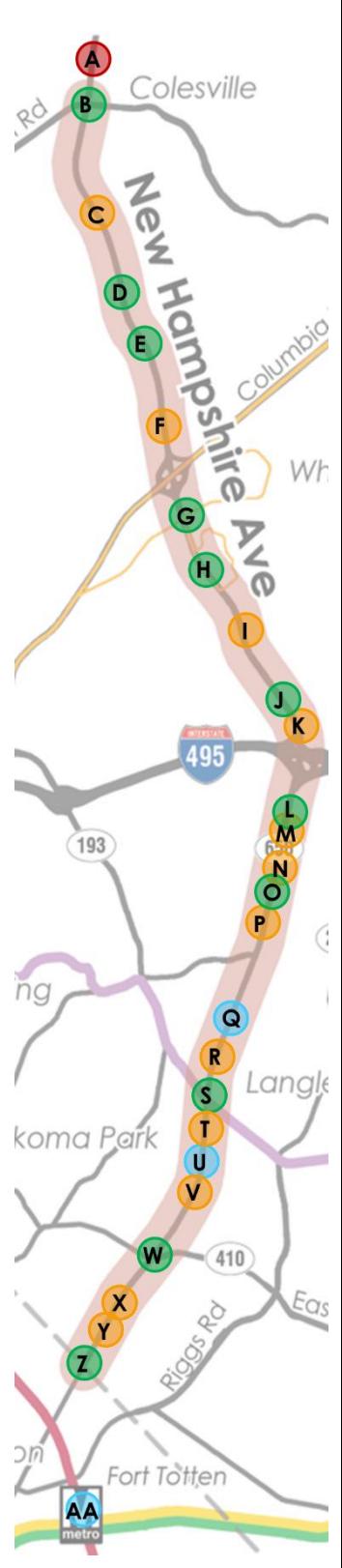
## Station Location Screening

All reasonable potential station locations have been considered and evaluated. A summary of the analysis of each location and the corresponding justification for eliminating, adding, and/or modifying station locations proposed and not proposed are provided.

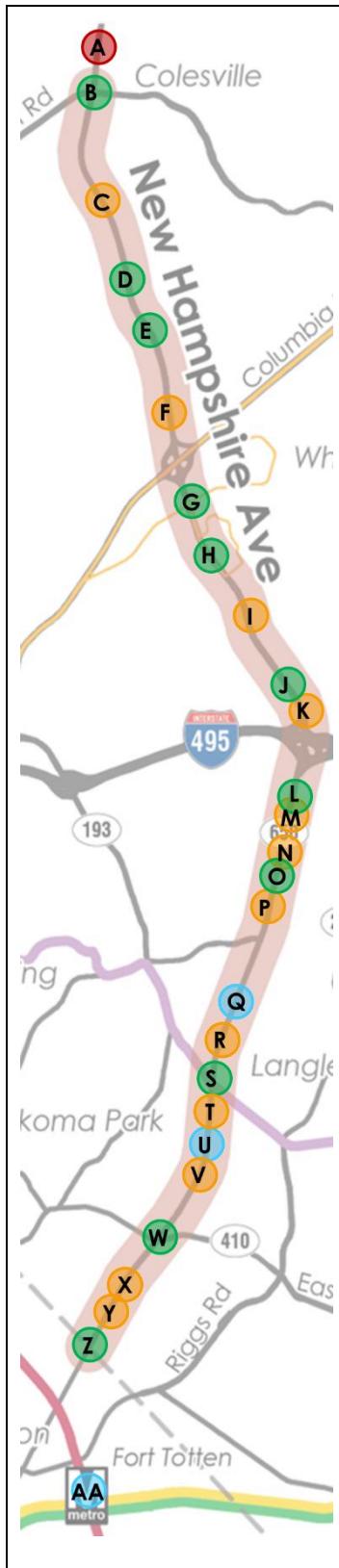
| Key:  | BRT MP - yes<br>BRT Study - no | BRT MP - yes<br>BRT Study - yes  | BRT MP - no<br>BRT Study - yes | BRT MP - no<br>BRT Study - no   |
|---|--------------------------------|--|--------------------------------|---|
| <i>MP = Proposed in Master Plan; BRT Study = Proposed in this BRT study</i>   |                                |  |                                |   |
|   |                                | <b>A. Colesville Park-and-Ride</b> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>0.15 miles to Randolph Road</li> <li>Very low ridership</li> <li>Park-and-ride is underutilized</li> </ul> |                                | <b>Eliminate this station.</b> It is walkable to Randolph Road and people are unlikely to park and ride. It might be used for a bus turnaround. |
| <b>B. Randolph Road</b> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>0.15 miles to Park-and-Ride</li> <li>1.25 miles to Valley Brook Drive</li> <li>Colesville Shopping Center</li> <li>Future BRT on Randolph Road</li> <li>High congestion</li> <li>Very low ridership</li> <li>On High Injury Network</li> </ul> |                                | <b>Propose this station location.</b> This location is at a community node and provides a connection to the future Randolph Road BRT.  |                                |   |
| <b>C. Hollywood Avenue</b> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>Suggested by community</li> <li>0.85 miles to Randolph Road</li> <li>0.40 miles to Valley Brook Drive</li> <li>Commercial uses, single family housing</li> <li>Very low ridership</li> </ul>  |                                | <b>Do not propose this station location.</b> Given the low ridership between Colesville and White Oak, fewer stations are proposed in this segment to ensure quality service.  |                                |   |

|   |   |   |
|---|---|---|
|   | <p><b>D. Valley Brook Drive</b></p> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>1.25 miles to Randolph Road</li> <li>0.25 miles to Jackson Road</li> <li>Springbrook High School, Churches, Single Family Housing</li> <li>Moderate ridership</li> </ul> | <p><b>Propose this station location.</b> While it is close to the Jackson Road station, there are key communities being served by each station.</p> |
| <p><b>E. Jackson Road</b></p> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>0.25 miles to Valley Brook Road</li> <li>1.10 miles to White Oak</li> <li>MLK Recreational Park, Schools</li> <li>Very low ridership</li> </ul>  | <p><b>Propose this station location.</b> While it is close to the Valley Brook Drive station, there are key communities being served by each station.</p>   |   |
| <p><b>F. Heartfields Drive</b></p> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>Suggested by community</li> <li>0.55 miles to Jackson Road</li> <li>0.55 miles to White Oak</li> <li>Near White Oak Library and an assisted living facility</li> <li>Very low ridership</li> </ul>  | <p><b>Do not propose this station location.</b> Given the low ridership between Colesville and White Oak, fewer stations are proposed in this segment to ensure quality service.</p>  |   |
| <p><b>G. White Oak Transit Center</b></p> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>1.10 miles to Jackson Road</li> <li>0.50 miles to FDA Campus</li> <li>Near White Oak Shopping Center and multifamily housing</li> <li>Access to US 29 Flash Service</li> <li>High congestion</li> <li>Very high ridership</li> <li>Equity Area to east side</li> </ul> | <p><b>Propose this station location.</b> This location is key for transfer to US 29 and to local bus service. There are ongoing planning efforts to locate the transit center either on New Hampshire Avenue or on Lockwood Drive.</p>  |   |

|  |  |   |
|--|--|---|
|  | <p><b>H. FDA White Oak Campus</b></p> <ul style="list-style-type: none"> <li>• Recommended in Master Plan</li> <li>• 0.50 miles to White Oak</li> <li>• 0.90 miles to Powder Mill Road</li> <li>• Near FDA Campus and single family housing</li> <li>• Moderate ridership</li> <li>• Equity area to east side</li> </ul>                                   | <p><b>Propose this station location.</b> This station is proposed on New Hampshire Avenue to provide a relatively close connection to the campus and serve local residents while minimizing the travel time to circulate into the campus.</p> |
|  | <p><b>I. Hillandale Park</b></p> <ul style="list-style-type: none"> <li>• Not recommended in Master Plan</li> <li>• Suggested by community</li> <li>• 0.35 miles to FDA Campus</li> <li>• 0.50 miles to Powder Mill Road</li> <li>• Access to park and CHI Center</li> <li>• Very low ridership</li> <li>• Equity Area to east side</li> </ul>             | <p><b>Do not propose this station location.</b> While the park is an important destination, there is low existing ridership here. This station would be located close to other stations with higher need.</p>                                 |
|  | <p><b>J. Powder Mill Road</b></p> <ul style="list-style-type: none"> <li>• Recommended in Master Plan</li> <li>• 0.90 miles to FDA Campus</li> <li>• 0.50 miles to Oakview Drive</li> <li>• Near Hillandale Shopping Center and a new development</li> <li>• High congestion</li> <li>• Very high ridership</li> <li>• Equity area to east side</li> </ul> | <p><b>Propose this station location.</b> There is higher ridership at this location as compared to at Elton Road. The new development will add riders.</p>  |

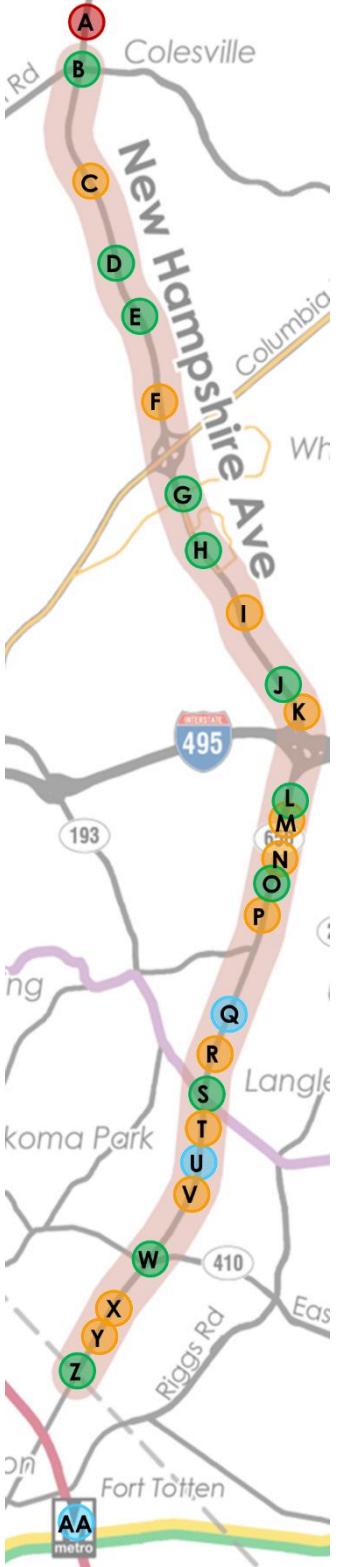
|   |   |  |
|---|---|--|
|   | <p><b>K. Elton Road</b></p> <ul style="list-style-type: none"> <li>• Not recommended in Master Plan</li> <li>• Suggested by community</li> <li>• 0.15 miles to Powder Mill Road</li> <li>• 0.35 miles to Oakview Drive</li> <li>• High congestion</li> <li>• Very high ridership</li> <li>• Equity area to east side</li> </ul> | <p><b>Do not propose this station location.</b> There is higher existing ridership at Powder Mill Road. Constructability at Elton Road would likely be a challenge, being located so close to the interchange.</p> |
| <p><b>L. Oakview Drive</b></p> <ul style="list-style-type: none"> <li>• Recommended in Master Plan</li> <li>• 0.50 miles to Powder Mill Road</li> <li>• 0.60 miles to Northampton Drive</li> <li>• Near single and multifamily housing</li> <li>• High ridership</li> <li>• High congestion</li> <li>• Fatal bike/pedestrian crash location, High Injury Network</li> <li>• Equity areas to both sides</li> </ul> | <p><b>Propose this station location.</b> This location has high ridership and provides access for equity communities.</p>   |  |
| <p><b>M. Adelphi Road</b></p> <ul style="list-style-type: none"> <li>• Not recommended in Master Plan</li> <li>• Suggested by community</li> <li>• 0.30 miles to Oakview Drive</li> <li>• 0.30 miles to Northampton Drive</li> <li>• Connectivity to UMD</li> <li>• High congestion</li> <li>• Low ridership</li> <li>• High Injury Network</li> <li>• Equity areas to both sides</li> </ul>                      | <p><b>Do not propose this station location.</b> To maximize access while providing quality service, it is recommended that Northampton Road be the station location in this area.</p>   |  |

|  |  |  |
|--|--|--|
|  | <b>N. Fox Street</b> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>0.50 miles to Oakview Drive</li> <li>0.10 miles to Northhampton Drive</li> <li>Near multifamily housing</li> <li>Low ridership</li> <li>High Injury Network</li> <li>Equity areas to both sides</li> <li>Prince George's County</li> </ul>   | <b>Do not propose this station location.</b> To maximize access while providing quality service, it is recommended that Northhampton Road be the station location in this area.  |
|  | <b>O. Northhampton Drive</b> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>0.60 miles to Oakview Drive</li> <li>0.75 miles to Quebec Street</li> <li>Near multifamily housing</li> <li>Moderate ridership</li> <li>High Injury Network</li> <li>Equity areas to both sides</li> </ul>   | <b>Propose this station location.</b> This location has higher existing ridership as compared to other nearby options. It is also most evenly spaced between Oakview Drive and Quebec Street.  |
|  | <b>P. Metzerott Road</b> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>Suggested by community</li> <li>0.20 miles to Northhampton Drive</li> <li>0.55 miles to Quebec Street</li> <li>Near multifamily housing</li> <li>Low ridership</li> <li>Fatal bike/pedestrian crash location, High Injury Network</li> <li>Equity areas to both sides</li> <li>Prince George's County</li> </ul> | <b>Do not propose this station location.</b> The grade at this location inhibits sight distance, making it a more challenging location to safely cross New Hampshire Ave. To maximize access while providing quality service, it is recommended that Northhampton Road be the station location in this area. |
|  | <b>Q. Quebec Street</b> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>0.75 miles to Northhampton Drive</li> </ul>   | <b>Propose this station location.</b> Given the distance between Northhampton Drive and Takoma Langley and the high ridership, an  |



The map shows New Hampshire Ave running through Colesville and Takoma Langley. Proposed station locations are marked with letters A through AA. Locations A, B, C, D, E, G, H, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, and AA are marked with green circles. Locations F, I, and Z are marked with orange circles. The map also shows Interstate 495, Maryland Route 193, and Maryland Route 410. Other labels include Riggs Rd, Columbia, Wh, Fort Totten, and a Metro station icon.

|  |  |  |
|--|--|--|
|  | <ul style="list-style-type: none"> <li>0.50 miles to Takoma Langley</li> <li>Moderate ridership</li> <li>Equity Areas on both sides</li> <li>High Injury Network</li> <li>Located within Prince George's County</li> </ul> | <p>additional station is needed. While Merrimac Drive has higher ridership, Quebec Street is more optimally spaced from other proposed stations.</p> |
| <b>R. Merrimac Street</b> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>0.25 miles to Quebec Street</li> <li>0.25 miles to Takoma Langley</li> <li>Near multifamily housing</li> <li>High ridership</li> <li>Equity Areas on both sides</li> <li>High Injury Network</li> <li>Located within Prince George's County</li> </ul>  | <p><b>Do not propose this station location.</b> While Merrimac Drive has higher ridership, much of the multifamily housing in the area is walkable to Quebec Street or to the Takoma Langley Transit Center.</p>           |  |
| <b>S. Takoma Langley Transit Center</b> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>0.50 miles to Quebec Street</li> <li>0.40 miles to Merwood Drive</li> <li>Near Langley Park Plaza, along with single and multifamily housing</li> <li>Access to the Purple Line</li> <li>High congestion</li> <li>Fatal bike/pedestrian crash location, High Injury Network</li> <li>Very high ridership</li> <li>Equity Areas on both sides</li> </ul> | <p><b>Propose this station location.</b> This location connects Flash riders to the Purple Line and several local bus routes.</p>  |  |
| <b>T. Holton Lane</b> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>Suggested by community</li> <li>0.20 miles to Takoma Langley</li> <li>0.20 miles to Merwood Drive</li> <li>High ridership</li> </ul>  | <p><b>Do not propose this station location.</b> While there is higher ridership at Holton Lane, much of this land use is walkable to Takoma Langley or Merwood Drive.</p>  |  |



The map shows New Hampshire Ave running east-west through Colesville, Takoma, and Langley Park. A red shaded area highlights the stretch from approximately 19th Street to 41st Street. Proposed station locations are marked with colored circles: green (A, B, C, D, E, G, H, J, K, L, M, N, O, W, X, Y, Z), orange (F, I, P, R, S, T, U, V), and blue (Q, AA). Other labels on the map include Interstate 495, Maryland Route 193, Maryland Route 410, Riggs Rd, Columbia Rd, and Fort Totten. A 'metro' logo is at the bottom left.

|  |  |  |
|--|--|--|
|  | <p><b>U. Merwood Drive</b></p> <ul style="list-style-type: none"> <li>• Not recommended in Master Plan</li> <li>• Suggested by community</li> <li>• 0.40 miles to Takoma Langley</li> <li>• 0.60 miles to Ethan Allen Avenue</li> <li>• Near Takoma Park Recreation Center and Sligo Creek Trail</li> <li>• Moderate ridership</li> </ul>  | <p><b>Propose this station location.</b> There is a need for an additional station to better serve demand. This location provides good spacing with the Takoma Langley station and serves the land use node south of University Boulevard.</p> |
|  | <p><b>V. Erskine Street</b></p> <ul style="list-style-type: none"> <li>• Not recommended in Master Plan</li> <li>• Suggested by community</li> <li>• 0.15 miles to Merwood Drive</li> <li>• 0.50 miles to Ethan Allen Avenue</li> <li>• Near Sligo Creek Trail</li> <li>• Low ridership</li> </ul>   | <p><b>Do not propose this station location.</b> While this station would be evenly spaced between Takoma Langley and Ethan Allen Avenue, the location is too far from the land use node.</p>   |
|  | <p><b>W. Ethan Allen Avenue (MD 410)</b></p> <ul style="list-style-type: none"> <li>• Recommended in Master Plan</li> <li>• 0.60 miles to Merwood Drive</li> <li>• 0.80 miles to Eastern Avenue</li> <li>• Near Takoma Parking Shopping Center, along with single and multifamily housing</li> <li>• High congestion</li> <li>• High ridership</li> <li>• Equity Area on southeast side</li> </ul> | <p><b>Propose this station location.</b> This is a high ridership location at a major intersection.</p>  |

|   |  |  |
|---|--|--|
|   | <p><b>X. Poplar Avenue / Ray Road</b></p> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>Suggested by community</li> <li>0.35 miles to Ethan Allen Avenue</li> <li>0.45 miles to Eastern Avenue</li> <li>Near Takoma substation and multifamily housing</li> <li>Moderate ridership</li> <li>Equity area to east side</li> </ul> | <p><b>Do not propose this station location.</b> Stop spacing is not optimal between Eastern Avenue and Ethan Allen Avenue. There is also not enough ridership demand to warrant a station.</p> |
| <p><b>Y. Sheridan Street</b></p> <ul style="list-style-type: none"> <li>Not recommended in Master Plan</li> <li>Suggested by community</li> <li>0.55 miles to Ethan Allen Avenue</li> <li>0.25 miles to Eastern Avenue</li> <li>Near Takoma substation and commercial land uses</li> <li>Moderate ridership</li> <li>Equity area to east side</li> </ul>  | <p><b>Propose this station location.</b> First signalized intersection in Montgomery County north of Maryland-Washington D.C. Line. Within walking distance of Eastern Avenue. Can potentially capture ridership at Eastern Avenue.</p>  |  |
| <p><b>Z. Eastern Avenue</b></p> <ul style="list-style-type: none"> <li>Recommended in Master Plan</li> <li>1.50 miles to Fort Totten (depending on route)</li> <li>Near shopping, along with single and multifamily housing</li> <li>High congestion</li> <li>High ridership</li> <li>Equity Area on northeast side</li> <li>This section of Eastern Avenue is on the High Injury Network</li> <li>Intersection within Washington D.C.</li> </ul> | <p><b>Do not Propose this station location.</b> This intersection is within Washington D.C. and not in Montgomery County. MCDOT may have to rely on DDOT to construct this station. Implement.</p>   |  |

|   |   |   |
|---|---|---|
|  <p>The map illustrates the New Hampshire Ave corridor in Colesville, Maryland. The corridor runs roughly north-south, with various proposed station locations marked by colored circles (green, orange, blue) and labeled with letters A through AA. Key locations include: A (Red circle, near Colesville Rd), B (Green circle, near 193), C (Orange circle, near Columbia Rd), D (Green circle, near 193), E (Green circle, near Columbia Rd), F (Orange circle, near 193), G (Green circle, near Columbia Rd), H (Green circle, near Columbia Rd), I (Orange circle, near Columbia Rd), J (Green circle, near 495), K (Orange circle, near 495), L (Green circle, near 495), M (Orange circle, near 495), N (Green circle, near 495), O (Green circle, near 495), P (Orange circle, near 495), Q (Blue circle, near 495), R (Orange circle, near 495), S (Green circle, near 495), T (Orange circle, near 495), U (Blue circle, near 495), V (Orange circle, near 495), W (Green circle, near Riggs Rd), X (Orange circle, near Riggs Rd), Y (Orange circle, near Riggs Rd), Z (Green circle, near Riggs Rd), and AA (Blue circle, near Fort Totten). The map also shows Interstate 495, Maryland Route 193, and Maryland Route 410. Other labels include 'Colesville', 'Columbia', 'Wh', 'Langley', 'Takoma Park', 'Riggs Rd', 'Eas', 'Fort Totten', and 'AA metro'.</p> | <p><b>AA. Fort Totten Station</b></p> <ul style="list-style-type: none"> <li>• Recommended in the County's Service Planning and Integration Report</li> <li>• Suggested by stakeholders and community, including WMATA, DDOT, and Takoma Park</li> <li>• 1.50 miles from Eastern Avenue (depending on route)</li> <li>• Access to Red, Green, and Yellow metro lines</li> <li>• Extremely high ridership</li> <li>• Within Equity Area</li> </ul> | <p><b>Propose this station location.</b> There is agreement among County Leaders, corridor stakeholders, and the community to terminate service at Fort Totten Station.</p> |
|---|---|---|

The Project Team did not consider stations north of Colesville or south of Maryland-Washington D.C. Line (except for Fort Totten Station) because these station locations would be outside the scope of the BRT Master Plan recommendations and outside the scope of this BRT study.

Given this thorough evaluation, the following station locations were proposed (as shown in adjacent image):

1. New Hampshire Ave (MD 650) and Randolph Road
2. New Hampshire Ave (MD 650) and Valley Brook Drive
3. New Hampshire Ave (MD 650) and Jackson Road
4. White Oak Transit Center
5. FDA White Oak Campus
6. New Hampshire Ave (MD 650) and Powder Mill Road
7. New Hampshire Ave (MD 650) and Oakview Drive
8. New Hampshire Ave (MD 650) and Northampton Drive
9. New Hampshire Ave (MD 650) and Quebec Street
10. Takoma/Langley Transit Center
11. New Hampshire Ave (MD 650) and Merwood Drive
12. New Hampshire Ave (MD 650) and Ethan Allen Avenue (MD 410)
13. New Hampshire Ave (MD 650) and Sheridan Street
14. Fort Totten Metro Station

