

MD 355  
Definition of Alternatives  
Final Assumptions  
11-7-18

**1. Forecasting Model Version**

- a. Version 2.3.66
- b. 2016 Constrained Long Range Plan Network

**2. BRT Elements/Stop Operations**

*a. Off-board fare collection*

- i. Assumed in Alternatives A, B, C
- ii. TSM will have regular onboard fare collection

*b. Enhanced Stations*

- i. Assumed for Alternatives A, B, C
- ii. Within current service area, TSM will stop at existing stops.
  - 1. New TSM stops outside current Ride On Extra alignment will resemble existing Ride On Extra stops

*c. Transit Signal Priority*

- i. TSP applied in Alternatives A, B, C and the TSM
  - 1. Specific TSP locations are outlined in Section 11 of this document

*d. Queue Jumps*

- i. Queue jumps applied in Alternatives A, B, C (specific queue jump locations are outlined in section 12 of this document)
  - 1. TSM will not include queue jumps – queue jumps represent capital investment beyond what is assumed for TSM

### 3. BRT Route Patterns and Operating Plan – Alternatives A, B, and C

**Note: For ridership forecasting purposes, the model relies on AM peak (6:00 AM to 9:00 AM) headways to model the peak and mid-day (9:00 AM to 3:30 PM) headways to model the off-peak. Based on the headways outlined below, the model will utilize 10 minute headways throughout the day. This holds true for all alternatives, including the TSM alternative.**

*a. BRT Route Pattern 1C (see Figure 1, containing routing for all three alternatives)*

i. Terminals

1. Northern Terminal: Clarksburg
2. Southern Terminal: Montgomery College Rockville

ii. Headways

1. Weekday

- a. 10 minutes – 6:00 AM to 9:00 PM
- b. 15 minutes - 4:15 AM to 6:00 AM and 9:00 PM to 12:00 midnight

2. Weekend

- a. 15 minutes all day on Saturday and Sunday (5:00 AM to 12:00 AM)

iii. Routing

1. See Figure 1
2. Route pattern 1C will divert from MD 355 to serve the Lakeforest Transit Center and the Shady Grove Metro Station

b. *BRT Route Pattern 1G (see Figure 2, containing routing for all three alternatives)*

i. Terminals

1. Northern Terminal: Germantown Transit Center
2. Southern Terminal: Montgomery College Rockville

ii. Headways

1. Weekday

- a. 10 minutes – 6:00 AM to 9:00 PM
- b. 15 minutes - 4:15 AM to 6:00 AM and 9:00 PM to 1:45 AM

2. Weekend

- a. 15 minutes all day on Saturday (5:00 AM – 1:45 AM)
- b. 15 minutes all day on Sunday (5:00 AM – 1:30 AM)

iii. Routing

1. See Figure 2
2. Route pattern 1G will divert from MD 355 to serve the Lakeforest Transit Center and the Shady Grove Metro Station

c. *BRT Route Pattern 2 (See Figure 3 – no difference in routing between three alternatives)*

i. Terminals

1. Northern Terminal: Lakeforest Transit Center
2. Southern Terminal: Grosvenor Metrorail Station

ii. Headways

1. Weekday

- a. 10 minutes – 6:00 AM to 9:00 PM
- b. 15 minutes - 4:15 AM to 6:00 AM and 9:00 PM to 1:45 AM

2. Weekend

- a. 15 minutes all day on Saturday (5:00 AM – 1:45 AM)
- b. 15 minutes all day on Sunday (5:00 AM – 1:30 AM)

d. *BRT Route Pattern 3 (see Figure 4 – no difference in routing between three alternatives)*

i. Terminals

1. Northern Terminal: Montgomery College Rockville
2. Southern Terminal: Bethesda Metrorail Station – South Entrance

ii. Headways

- a. 10 minutes – 6:00 AM to 9:00 PM
- b. 15 minutes - 5:00 AM to 6:00 AM and 9:00 PM to 1:45 AM

2. Weekend

- a. 15 minutes all day on Saturday and Sunday (5:00 AM – 1:00 AM)

**4. TSM Route Patterns and Operating Plan (see Figure 5)**

a. *TSM Route Pattern North – Runs on MD 355 North of Middlebrook Road*

i. Terminals

1. Northern Terminal: Clarksburg Outlets
2. Southern Terminal: Montgomery College Rockville

ii. Headway

1. Weekday

- a. 10 minutes – 6:00 AM to 9:00 PM
- b. 15 minutes - 5:00 AM to 6:00 AM and 9:00 PM to 12:00 midnight

2. Weekend

- a. 15 minutes all day on Saturday and Sunday (5:00 AM to 12:00 midnight)

iii. Routing

1. See Figure 5
2. TSM route pattern 1N will divert from MD 355 to serve the Lakeforest Transit Center and the Shady Grove Metro Station

b. *TSM Route Pattern South*

i. Terminals

1. Northern Terminal: Montgomery College Rockville
2. Southern Terminal: Bethesda Metro Station

ii. Headway

1. Weekday

- a. 10 minutes – 6:00 AM to 9:00 PM
- b. 15 minutes – 5:00 AM to 6:00 AM and 9:00 PM to 12:00 midnight

2. Weekend

- a. 15 minutes all day on Saturday and Sunday (5:00 AM to 12:00 midnight)

**5. Friction Factors**

- a. No Build – Friction factors not applied
- b. TSM – Friction factors not applied
- c. Alternative A – Friction factors not applied

d. Alternative C

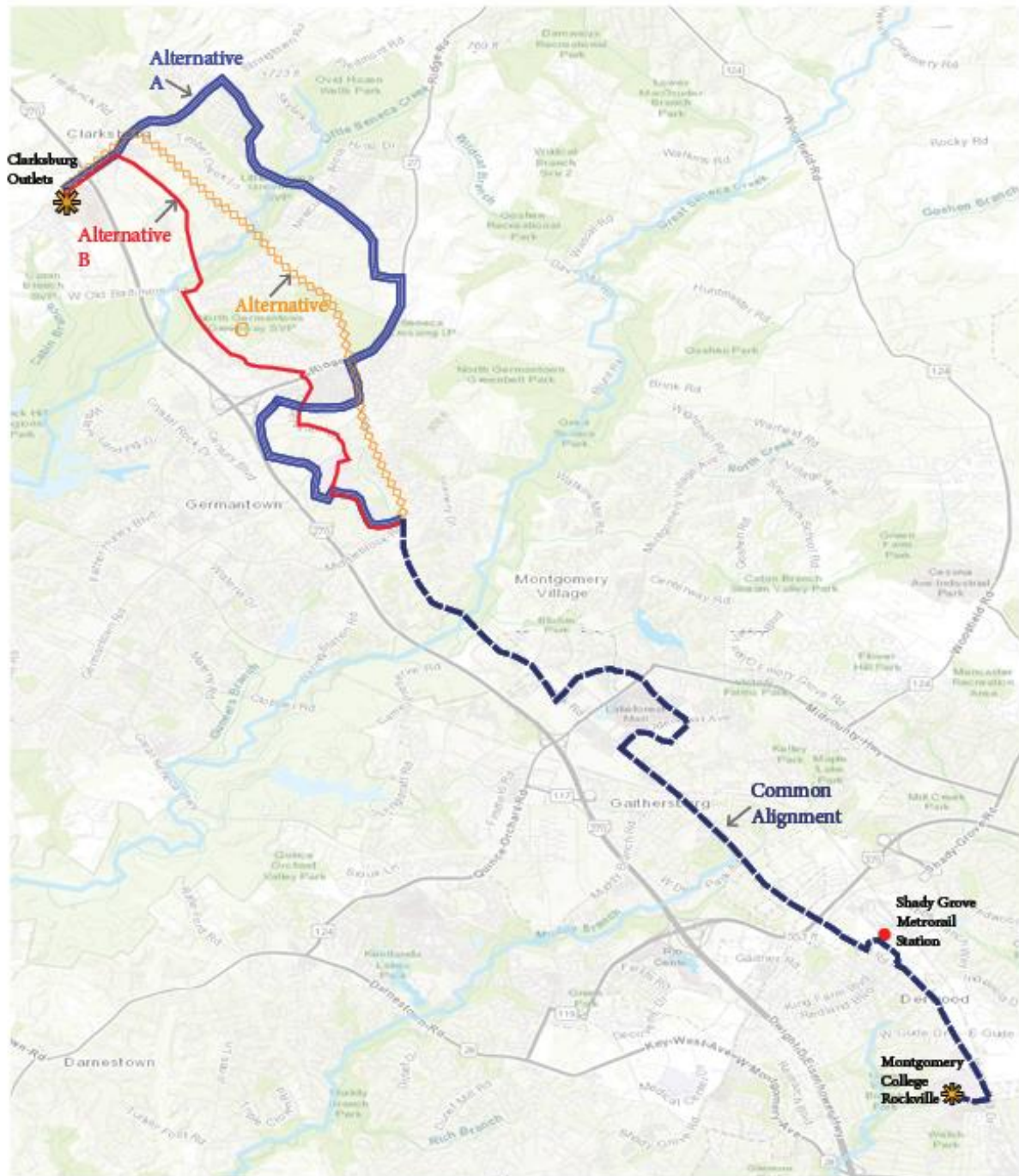
- i. Segment 1 – 2 mph penalty applied in the peak direction dedicated lane (but not in the off-peak mixed traffic direction) between Old Georgetown Road and the I-495 ramps (the I-495 ramps to Tuckerman Lane segment section is mixed traffic in both directions all day and therefore friction factor is not applied in this portion of the segment). Friction factor is applied in:
  1. AM peak southbound
  2. PM peak northbound
- ii. Segment 2 – 2 mph penalty applied in both directions for the dedicated lane portions of the segment:
  1. Applied between Tuckerman Lane and Montrose Parkway entrance ramps;
  2. Applied between Hubbard Lane and Dodge Street
- iii. Segment 3 – 2 mph penalty applied in the southbound dedicated curb lane that runs between Beall Avenue and College Parkway.
  1. The portion of Segment 3 between Dodge Street and Beall Street (at the southern end of the segment) is mixed traffic in both directions and therefore no friction factor is applied.
  2. Northbound BRT service will run in mixed traffic. No penalty will be applied to northbound service.
- iv. Segment 4 – 2 mph penalty applied in both directions in the dedicated lane portions of the segment.
  1. Two mixed traffic sections will not have penalty applied: segment section to serve to Shady Grove Metro Station and segment section under I-370.
- v. Segment 5 – no penalty applied – section is entirely mixed traffic
- vi. Segment 6 – 1 mph penalty applied in both directions in dedicated lane segment sections:
  1. Christopher Avenue & MD 355 to Game Preserve Drive
  2. Plummer Avenue and Middlebrook Road

3. Not applied in mixed traffic sections:

- a. Christopher and Montgomery Village Avenue to Christopher and MD 355
- b. Game Preserve Drive to Plummer Avenue

vii. Segment 7 - no penalty applied – section is entirely mixed traffic

Figure 1 – BRT Route Pattern 1C – all alternatives



GetOnBoardBRT MD 355 Route 1C - Alternative A, B, C



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Figure 2 – BRT Route Pattern 1G – all alternatives

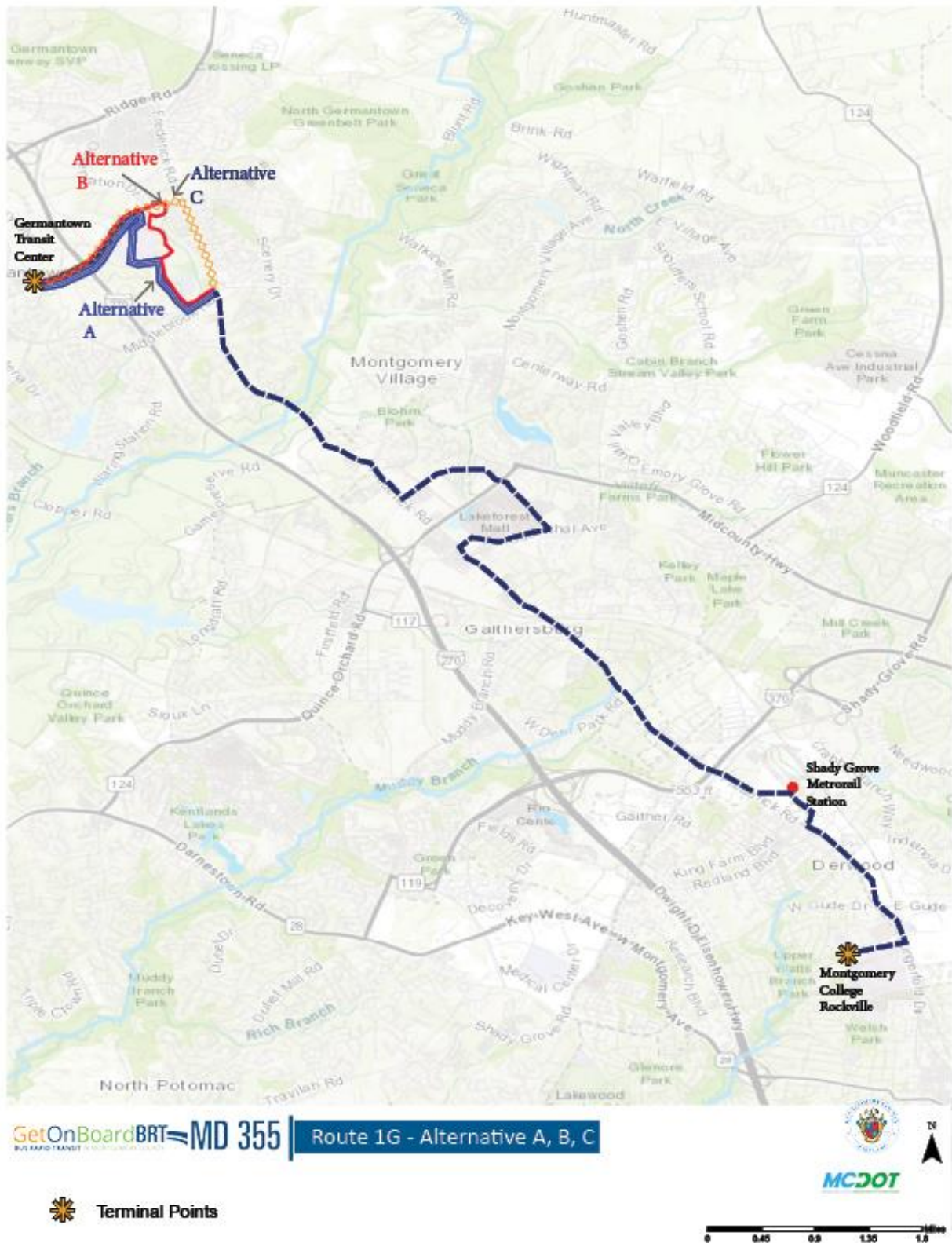
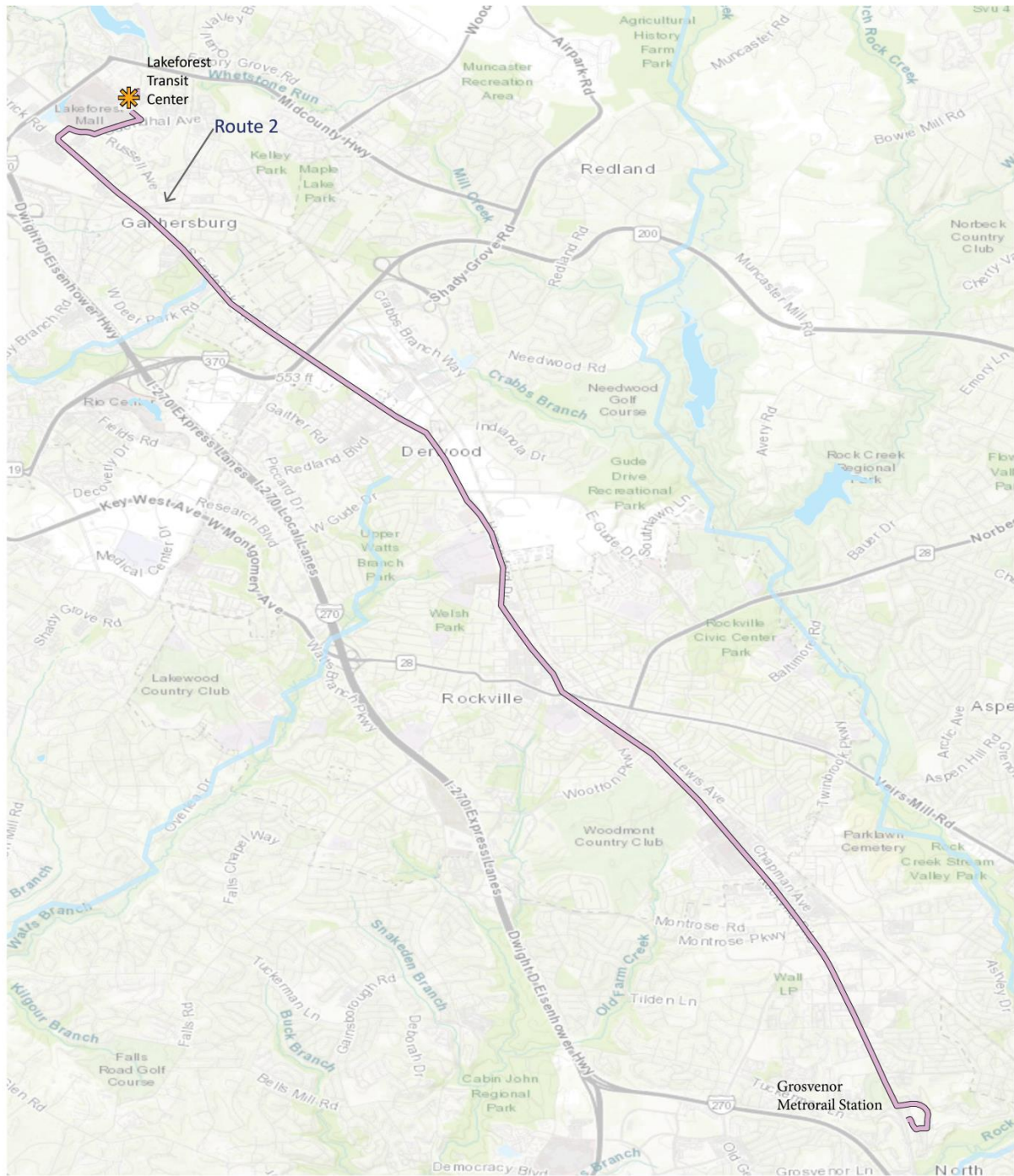


Figure 3 – BRT Route Pattern 2 – all alternatives



GetOnBoardBRT MD 355 | Route 2



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Figure 4 – BRT Route Pattern 3 – all alternatives

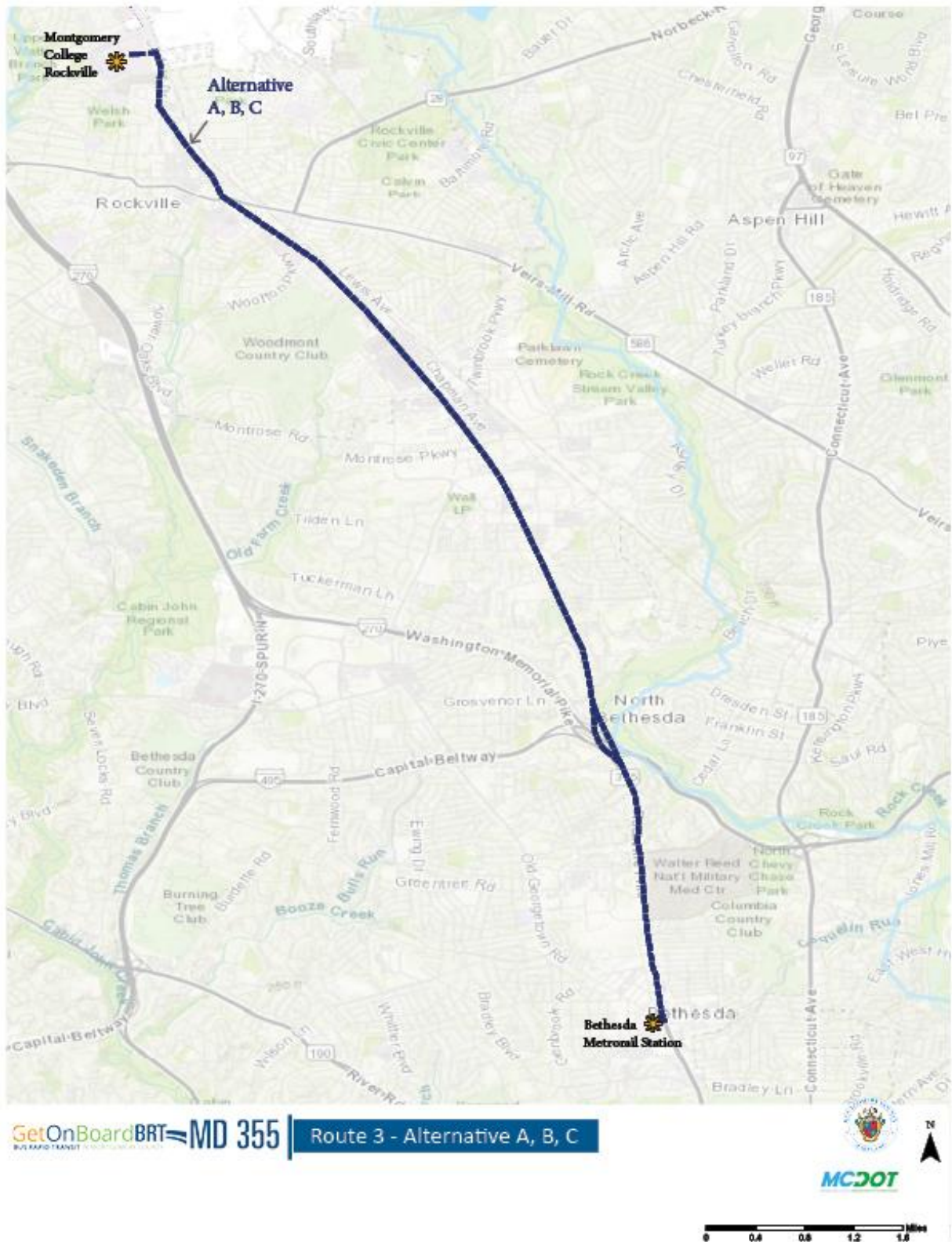
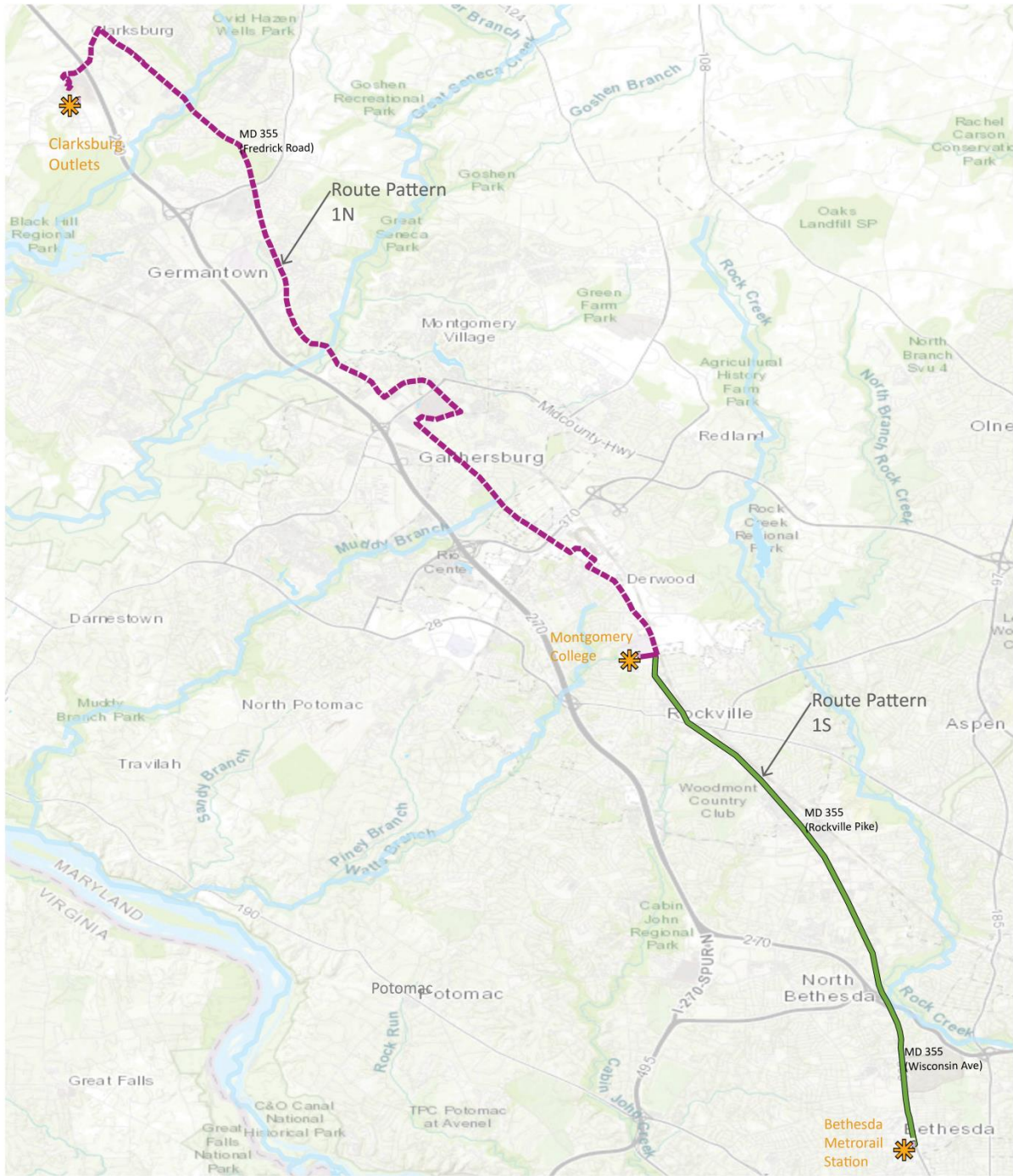


Figure 5 – TSM Route Patterns 1N and 1S

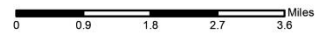


GetOnBoardBRT MD 355 | Route Patterns 1N And 1S

 Terminal Points



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## 6. Local Service Assumptions

**Table 1 – Local Bus Network Headways**

Route	Headway			
	Peak		Off-Peak	
	IB	OB	IB	OB
RO 5	10	10	27	27
RO 10	30	30	30	30
RO 10S	15	15	15	15
RO 26	15	15	20	20
RO 29	30	30	30	30
RO 30	30	30	30	30
RO 32	30	30	360	360
RO 33	20	30	60	60
RO 34	30	30	28	28
RO 36	36	36	30	30
RO 37	30	30	46	-
RO 38	-	-	30	30
RO 38L	20	20	-	-
RO 40	30	30	30	30
RO 42	36	36	40	40
RO 43	20	20	28	30
RO 45S	36	30	-	360
RO 45	30	30	33	20
RO 47N	20	20	30	30
RO 47S	20	20	30	30
RO 48	20	20	20	20
RO 49	20	20	20	20
RO 50	20	20	20	20
RO 52	30	45	-	-
RO 54	20	20	20	20
RO 56	20	20	20	20
RO 57	18	26	20	23
RO 58	26	30	30	30
RO 59	15	30	26	30
RO 61	20	30	30	28
RO 66	30	30	30	30
RO 67	25	-	41	-
RO 71	34	-	-	-
RO 73	23	30	180	360
RO 74	30	30	30	30
RO 75	23	23	30	30
RO 76	30	60	30	30
RO 76S	30	60	-	-
RO 78	30	-	360	-
RO 79	30	-	-	-
RO 83S	90	180	30	30
RO 83	30	36	-	-
RO 96	-	10	33	30
RO 97	15	-	30	-
RO 98	30	30	30	30
	Peak		Off-Peak	

	IB	OB	IB	OB
Route				
RO 100	7	7	15	15
MB C2	20	20	27	25
MB C4	20	20	28	28
MB C8	30	30	30	30
MB J1	10	10	-	-
MB J2	10	10	18	18
MB J3	-	10	60	-
MB J4	10	10	-	-
MB Q4	20	18	26	26
MB Q5	11	9	14	14
MB T2	15	15	30	30

**Table 2 – Alignment Changes – Includes Just Routes that have Alignment Changes**

Route	Change
Metrobus C8	End service at Glenmont, remove alignment between White Flint and Glenmont.
Ride On 10	Add short turn pattern between Twinbrook Station and Glenmont Station in order to replace the loss of Metrobus C8 on this segment
Ride On 5	End route at White Flint Metro, remove portion of the route between White Flint Metro and Twinbrook Metro
Ride On 6	Fold into the Ride On 47 route
Ride On 30	Remove portion of the route between Greentree Road and Bethesda
Ride On 38	Extend peak trips to Rockville via Ride On 81 and Ride On 44 alignments; remove Claridge Road loop
Ride On Route 40 (new service)	New Service – local service between Germantown Transit Center and Rockville Metro. Alignment will be comparable to current Ride On 55, which the Route 40 will replace. The new Ride On 40 will also serve a segment of the former Route 59 on Diamond Avenue and Deer Park Road.
Ride On 43	Remove route from Shady Grove Adventist Hospital in order to serve Traville Transit Center more directly. Ride On 43 will now also serve Washington Industrial Park
Ride On 44	Remove from service. The portion of the route west of MD 355 will now be served by the extended peak Ride On 38 route
Ride On 45	Alter alignment slightly to better serve Montgomery College before continuing on regular alignment
Ride On 46	Remove from service, replace with BRT service and Ride On 50
Ride On 47 N and 47 S	Split the current Ride On 47 into two routes. Northern route would run between Rockville and Montgomery Mall via current alignment and then continue to Grosvenor via current Ride On 6 alignment  Southern route would start at the Cabin John Shopping Center and utilize current alignment to Bethesda.

Route	Change
Ride On 50 (new service)	New service – will run as local service between Rockville and Medical Center. Alignment is comparable to Ride On 46, which it will replace.
Ride On 55	Remove from service, replace with BRT and Ride On 40 service
Ride On 58	Terminate route at Lakeforest Transit Center
Ride On 59	Realign route: begin in Montgomery Village; run to Lakeforest Transit Center and then to Shady Grove (follow Ride On 61 alignment) and then follow 59 alignment to Rockville
Ride On 61	Terminate service at Lakeforest Transit Center; do not continue to Shady Grove (new 59 route will cover portion of truncated route south of Lakeforest)
Ride On 63	Remove from service. Replace with improved service on Ride On 54 and Ride On 66
Ride On 66	Change alignment to follow Ride On 43 from Traville Transit Center loop, but serve Shady Grove Adventist Hospital as well.
Ride On 75	<i>Alternatives A and C:</i> Instead of running to MD 355 from intersection of Shakespeare and Observation, remain on Observation until Little Seneca Parkway. Use Little Seneca to access MD 355, then follow current Ride On 75 alignment. <i>Alternative B:</i> No alignment change
Ride On 81	Remove from service; Combine with modified Ride On 38
Ride On 83	Alternatives B and C: No changes Alternative A: Realign route to operate on Observation Drive between Ridge Road and Germantown Road, then using Germantown Road to Goldenrod to Holy Cross Hospital
Ride On 101 (Ride On Extra)	Remove from service. Replace with BRT service
Metrobus Q2,4,5,6	Remove service patterns Q2 and Q6; leave all service on the Q4 between Silver Spring and Shady Grove and on the Q5 between Wheaton and Shady Grove

## **7. Park and Ride Locations, by Alternative**

### *a. Alternative A*

- i. Lakeforest Transit Center
- ii. Milestone Shopping Center & Amber Ridge Drive
- iii. Clarksburg Outlets vicinity

### *b. Alternative B*

- i. Lakeforest Transit Center
- ii. Observation Drive and Milestone Center Drive
- iii. Clarksburg Outlets vicinity

### *c. Alternative C*

- i. Lakeforest Transit Center
- ii. MD 355 and Shakespeare Boulevard
- iii. Clarksburg Outlets vicinity

### *d. TSM*

- i. No park and rides

## **8. Summary of Alignments – North of Middlebrook Road**

- a. TSM – remains on MD 355 to Clarksburg Road to Clarksburg Outlets
- b. Alternative A – Via Observation, Seneca Meadows, Snowden Farm and Stringtown Road to Clarksburg Outlets
- c. Alternative B – Via Observation Drive and Stringtown Road
- d. Alternative C – remains on MD 355 to Clarksburg Road to Clarksburg Outlets



## 9. Alignment Description by Alternative

Table 3 – TSM Alignment Description

Alternative	Alignment
TSM (see Figure 6)	<ul style="list-style-type: none"> <li>• <b>Runs on MD 355 (Wisconsin Avenue, Rockville Pike, Hungerford Drive):</b> <i>Between Bethesda Metrorail Station and Mannakee Street/Montgomery College Rockville (Montgomery College Rockville is northern terminal of TSM south route and southern terminal of TSM north route)</i></li> <li>• <b>Runs on MD 355 (Hungerford Drive, Frederick Road):</b> <i>Between Mannakee Street and Redland Road</i></li> <li>• <b>Runs on Redland Road, Somerville Drive and Metro Station Drive:</b> <i>Diversion from MD 355 to serve the Shady Grove Metrorail Station</i></li> <li>• <b>Runs on MD 355 (Frederick Road, N. Frederick Avenue):</b> <i>Between Metro Station Drive and Lakeforest Boulevard</i></li> <li>• <b>Runs on Lakeforest Boulevard, Russell Avenue, Odendhal Avenue, Lost Knife Road, Christopher Avenue:</b> <i>Diversion from MD 355 to serve Lakeforest Transit Center</i></li> <li>• <b>Runs on MD 355 (N. Frederick Avenue, Frederick Road):</b> <i>Between Christopher Avenue and Clarksburg Road</i></li> <li>• <b>Clarksburg Road:</b> <i>Clarksburg Road to Clarksburg Outlets</i></li> </ul>

**Table 4 – Alternative A Alignment Description**

Alternative	Alignment
Alt. A (see Figure 5)	<ul style="list-style-type: none"> <li>• <b>Runs on MD 355 (Wisconsin Avenue, Rockville Pike, Hungerford Drive):</b> <i>Between Bethesda Metrorail Station south entrance and Redland Road</i> <ul style="list-style-type: none"> <li>• <b>Side Alignment to Montgomery College Rockville:</b> <i>Between MD 355 (Hungerford Drive) and current Ride On 101 stop on campus via Mannakee Street (end terminal for Flash routes 1C and 1G, starting terminal for Flash route 3)</i></li> </ul> </li> <li>• <b>Runs on Redland Road, Somerville Drive and Metro Station Drive:</b> <i>Diversion from MD 355 to serve the Shady Grove Metrorail Station</i></li> <li>• <b>Runs on MD 355 (Frederick Road, N. Frederick Avenue):</b> <i>Between Metro Station Drive and Lakeforest Boulevard</i></li> <li>• <b>Runs on Lakeforest Boulevard, Russel Avenue, Odendhal Avenue, Lost Knife Road and Christopher Avenue:</b> <i>Diversion from MD 355 to serve Lakeforest Transit Center</i></li> <li>• <b>Runs on MD 355 (N. Frederick Avenue, Frederick Road):</b> <i>Between Christopher Avenue and Middlebrook Road</i></li> <li>• <b>Runs on Middlebrook Road:</b> <i>Between MD 355 (Frederick Road) and Observation Drive</i></li> <li>• <b>Runs on Observation Drive:</b> <i>Between Middlebrook Road and Goldenrod Lane</i> <ul style="list-style-type: none"> <li>• <b>Side Alignment to Germantown Transit Center:</b> <i>Observation Drive to Goldenrod Lane to Germantown Road (MD Route 118) to Germantown Transit Center (Flash Route Pattern 1G)</i></li> </ul> </li> <li>• <b>Runs on Goldenrod Lane:</b> <i>Between Observation Drive and Seneca Meadows Parkway</i></li> <li>• <b>Runs on Seneca Meadows Parkway:</b> <i>Between Goldenrod Lane and Shakespeare Boulevard</i></li> <li>• <b>Runs on Shakespeare Boulevard:</b> <i>Between Seneca Meadows Parkway (@ Observation Drive) to MD 355 (Frederick Road)</i></li> <li>• <b>Runs on MD 355 (Frederick Road):</b> <i>Between Shakespeare Boulevard and Ridge Road</i></li> <li>• <b>Runs on Ridge Road:</b> <i>Between MD 355 (Frederick Road) and Snowden Farm Parkway</i></li> <li>• <b>Runs on Snowden Farm Parkway:</b> <i>Between Ridge Road and Stringtown Road</i></li> <li>• <b>Runs on Stringtown Road/Clarksburg Road:</b> <i>Between Snowden Farm Parkway and Clarksburg Outlets</i></li> </ul>

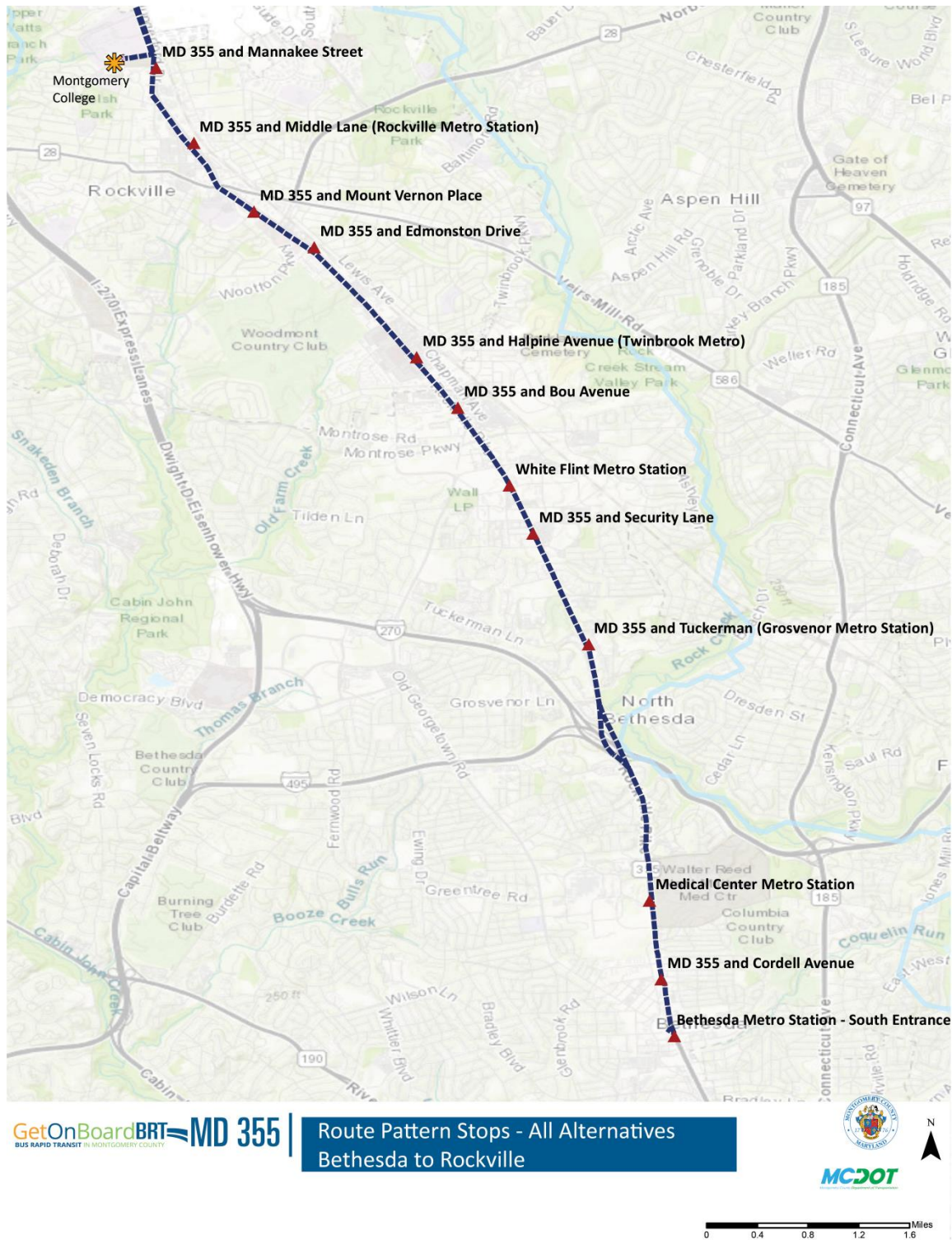
**Table 5 – Alternative B Alignment Description**

Alternative	Alignment
Alt. B (see Figure 5)	<ul style="list-style-type: none"> <li>• <b>Runs on MD 355 (Wisconsin Avenue, Rockville Pike, Hungerford Drive):</b> <i>Between Bethesda Metrorail Station south entrance and Redland Road</i> <ul style="list-style-type: none"> <li>• <b>Side Alignment to Montgomery College Rockville:</b> <i>Between MD 355 (Hungerford Drive) and current Ride On 101 stop on campus via Mannakee Street (end terminal for Flash routes 1C and 1G, starting terminal for Flash route 3)</i></li> </ul> </li> <li>• <b>Runs on Redland Road, Somerville Drive and Metro Station Drive:</b> <i>Diversion from MD 355 to serve Shady Grove Metrorail Station</i></li> <li>• <b>Runs on MD 355: (Frederick Road, N. Frederick Avenue):</b> <i>Between Metro Station Drive and Lakeforest Boulevard</i></li> <li>• <b>Runs on Lakeforest Boulevard, Russell Avenue, Odendhal Avenue, Lost Knife Road, Christopher Avenue:</b> <i>Diversion from MD 355 to serve Lakeforest Transit Center</i></li> <li>• <b>Runs on MD 355 (N. Frederick Avenue, Frederick Road) :</b> <i>Between Christopher Avenue and Middlebrook Road</i></li> <li>• <b>Runs on Middlebrook Road:</b> <i>Between MD 355 (Frederick Road) and Observation Drive</i></li> <li>• <b>Runs on Observation Drive:</b> <i>Between Middlebrook Road and Stringtown Road</i> <ul style="list-style-type: none"> <li>• <b>Side Alignment to Germantown Transit Center:</b> <i>Observation Drive to Germantown Road (MD Route 118) to Germantown Transit Center (Flash Route Pattern 1G)</i></li> </ul> </li> <li>• <b>Runs on Stringtown Road/Clarksburg Road:</b> <i>Between Observation Drive and Clarksburg Outlets</i></li> </ul>

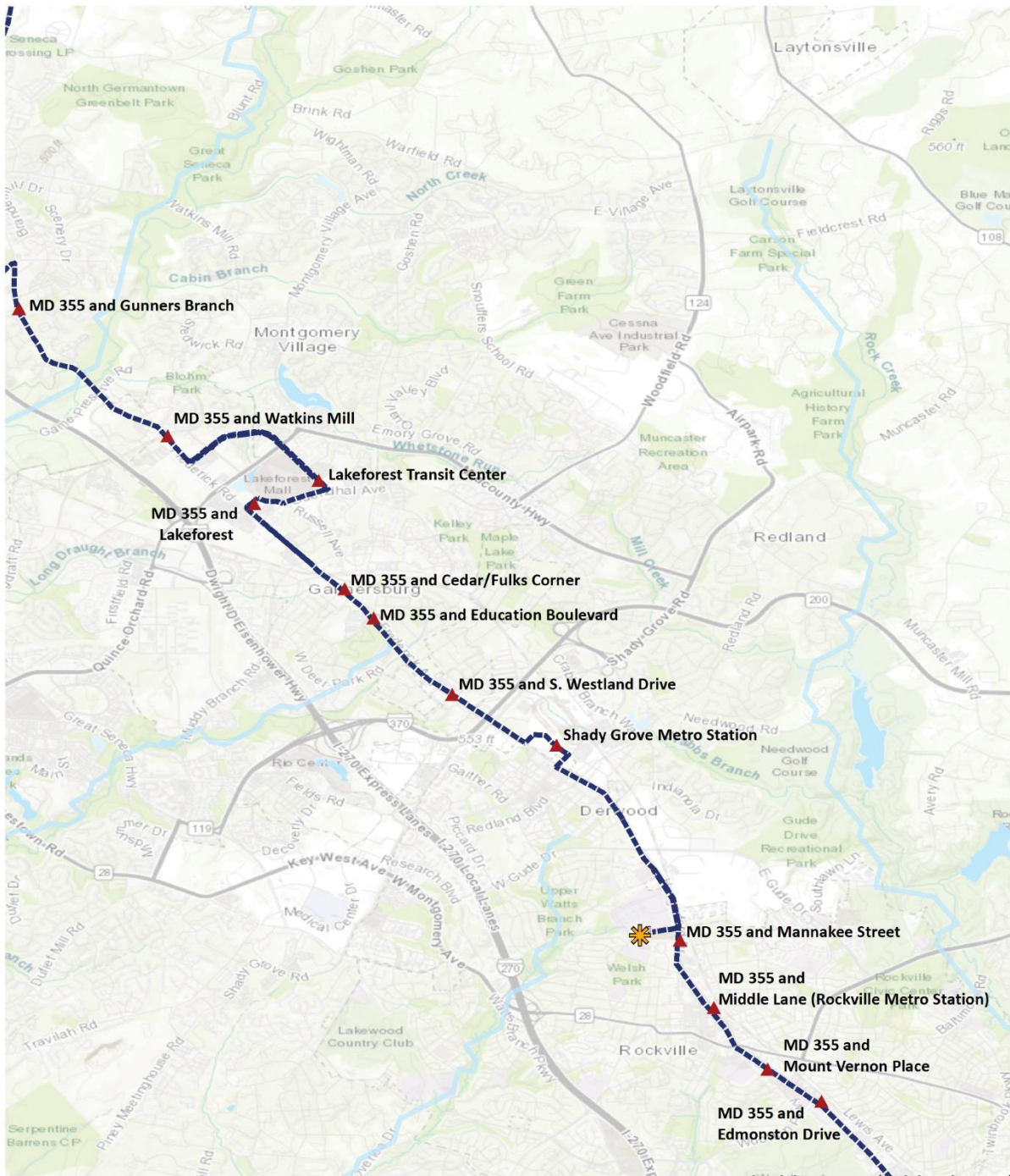
**Table 6 – Alternative C Alignment Description**

<p>Alt. C (see Figure 5)</p>	<ul style="list-style-type: none"> <li>• <b>Runs on MD 355 (Wisconsin Avenue, Rockville Pike, Hungerford Drive):</b> <i>Between Bethesda Metrorail Station south entrance and Redland Road</i> <ul style="list-style-type: none"> <li>• <b>Service to Montgomery College Rockville:</b> <i>Under Alternative C, BRT vehicles will not terminate or begin service in the heart of the Montgomery College campus. Instead, service will end or start from a transit pull-off adjacent to MD 355, just south of Manakee (this facility will be the end terminal for Flash routes 1C and 1G and the starting terminal for Flash route 3)</i></li> </ul> </li> <li>• <b>Runs on Redland Road, Somerville Drive and Metro Station Drive:</b> <i>Diversion from MD to serve Shady Grove Metro Station</i></li> <li>• <b>Runs on MD 355: (Frederick Road, N. Frederick Avenue):</b> <i>Between Metro Station Drive and Lakeforest Boulevard</i></li> <li>• <b>Runs on Lakeforest Boulevard, Russell Avenue, Odendhal Avenue, Lost Knife Road, Christopher Avenue:</b> <i>Diversion from MD 355 to serve Lakeforest Transit Center</i></li> <li>• <b>Runs on MD 355 (N. Frederick Avenue, Frederick Road):</b> <i>Between Christopher Avenue and Clarksburg Road</i> <ul style="list-style-type: none"> <li>• <b>Side Alignment to Germantown Transit Center:</b> <i>Germantown Road (MD Route 118) between MD 355 (Frederick Road) to Germantown Transit Center (Flash Route Pattern 1G)</i></li> </ul> </li> <li>• <b>Runs on Clarksburg Road:</b> <i>Clarksburg Road to Clarksburg Outlets</i></li> </ul>
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**Figure 6 – Alternative Alignments and Station Locations - Bethesda to MD 355 and Mannakee Street – All Alternatives**



**Figure 6 Cont. - Alternative Alignments and Station Locations – Mannakee Street to Gunners Branch Road – All Alternatives**



**GetOnBoardBRT** **MD 355**  
BUS RAPID TRANSIT IN MONTGOMERY COUNTY

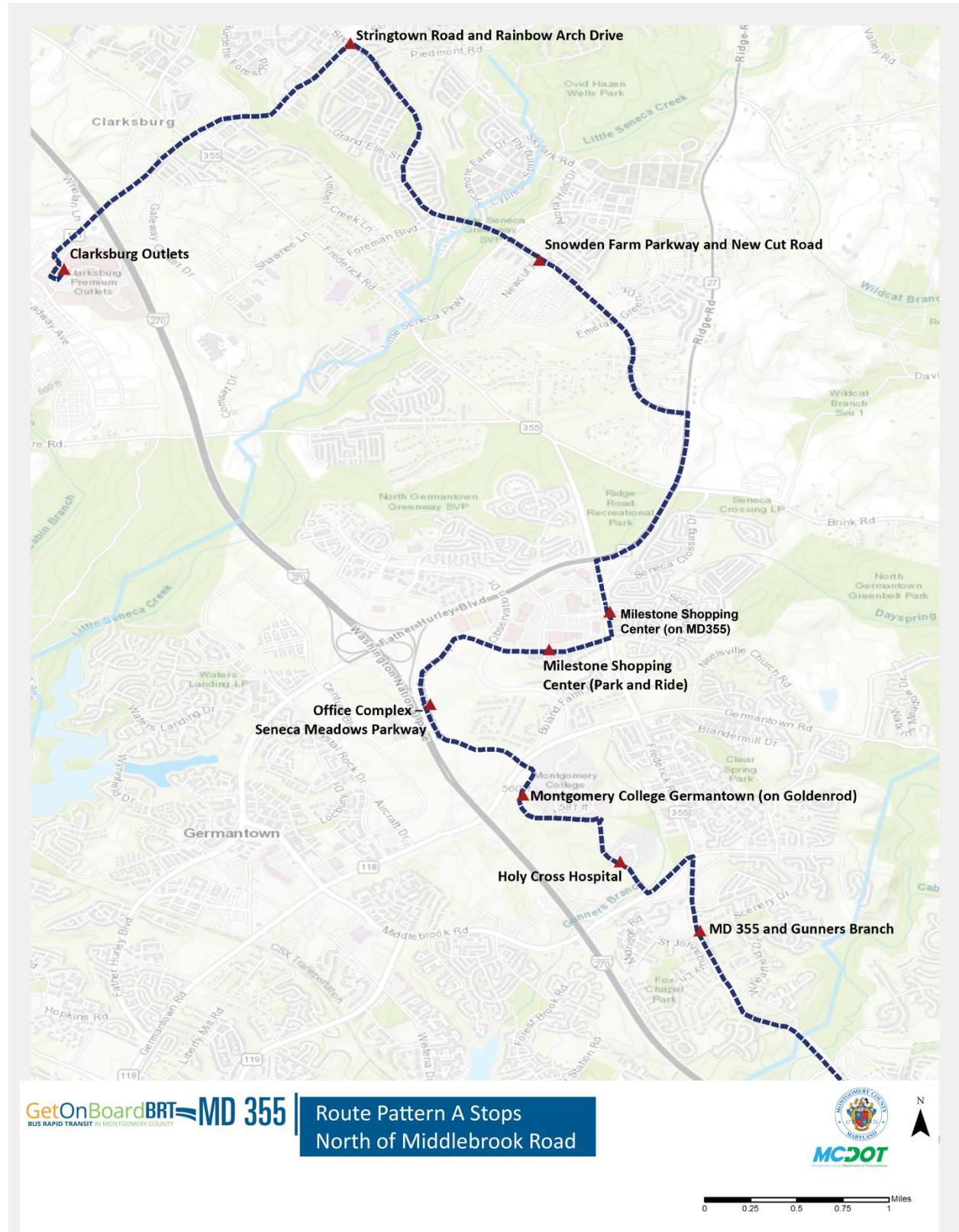
**Route Pattern Stops - All Alternatives**  
**Rockville to Middlebrook Road**



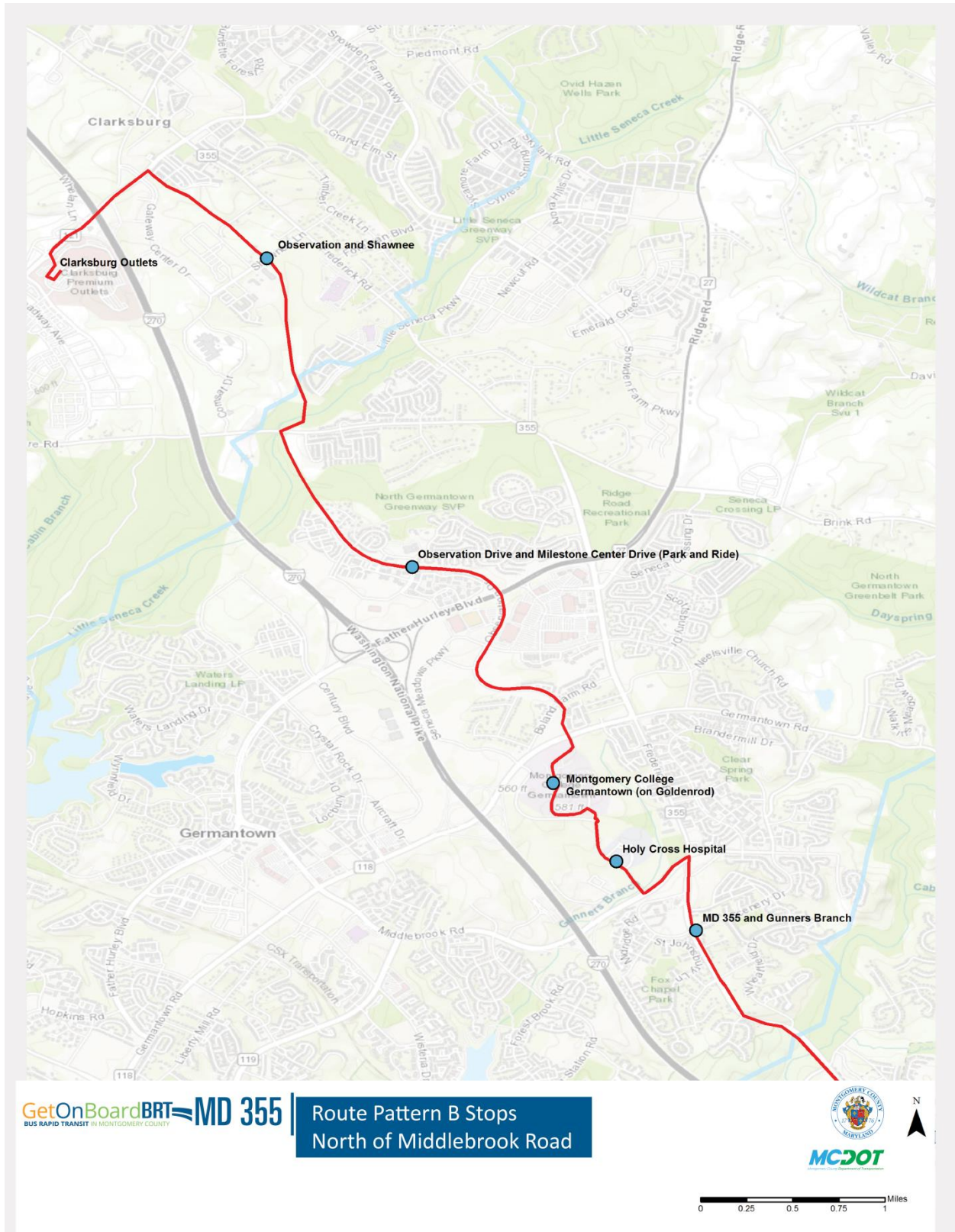
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**Figure 6 Cont. - Alternative Alignments and Station Locations – North of Middlebrook Road – Alternative A**

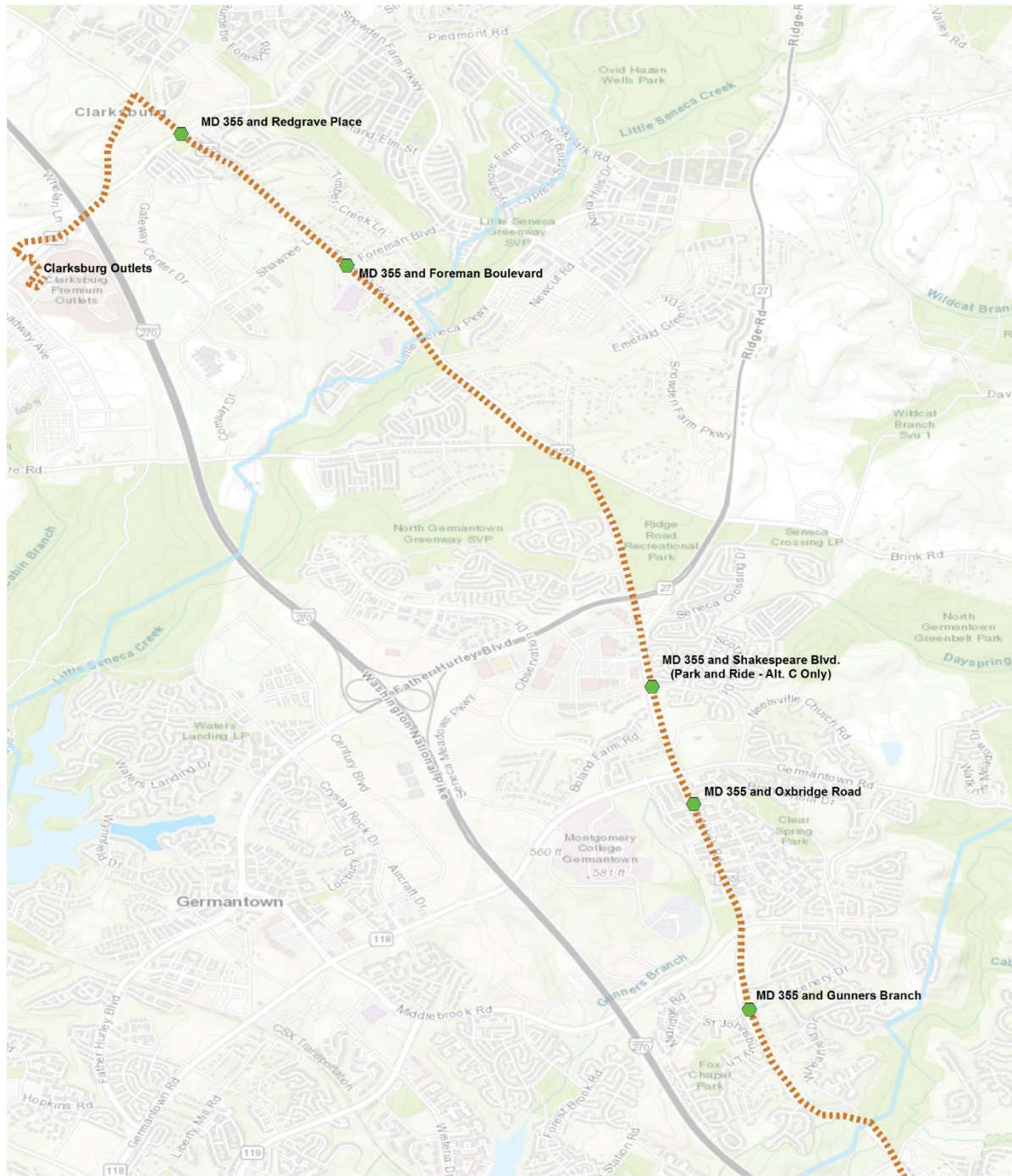


**Figure 6 Cont. - Alternative Alignments and Station Locations – North of Middlebrook Road – Alternative B**

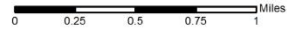




**Figure 6 Cont. - Alternative Alignments and Station Locations – North of Middlebrook Road – Alternative C and TSM**



**GetOnBoardBRT** **MD 355** | Route Pattern C & TSM Stops North of Middlebrook Road



**10. Guideway Description (see Appendix A for Alternative B Map and Appendix B for Alternative C Maps)**

*a. Guideway Description – TSM and Alternative A*

- i. Operations are in mixed traffic for the entire alignment for both alternatives

b. *Guideway Description – Alternative B*

Segment	Guideway Description
<b>1 – Bethesda Metrorail Station (south entrance) to Tuckerman Lane</b>	Mixed traffic – entire length of segment 1
<b>2 – Tuckerman Lane to Dodge Street</b>	Median dedicated lanes in each direction – entire length of segment 2.
<b>3 – Dodge Street to College Parkway</b>	<p>There are two guideway types within Segment 3, as described below:</p> <ul style="list-style-type: none"> <li>• <b>Guideway Type #1</b> – A single dedicated median lane for the large majority of this segment (between Dodge Street and North Campus Drive). The dedicated median lane accommodates BRT service in the southbound direction throughout the day; northbound BRT service runs in mixed traffic all day.</li> <li>• <b>Guideway Type #2</b> - Median dedicated lanes, in each direction, beginning at North Campus Drive and continuing to the northern end of Segment #3 at College Parkway (this guideway configuration also continues into Segment 4).</li> <li>• <b>Guideway Transitions Between Segment 2 and Segment 3, by direction:</b> <ul style="list-style-type: none"> <li>• Northbound – BRT vehicle must transition from dedicated northbound median lane in Segment 2 to mixed traffic running in Segment 3. Transition out of dedicated median lane will be done via a slip ramp located approximately between Wooton Parkway to the south and Dodge Street to the north. Once BRT is in mixed traffic it will further transition to the curb lane so that it and serve the station platform at Middle Lane.</li> <li>• Southbound – no southbound transition is required. BRT vehicle will be in a dedicated southbound median lane in Segment 3 and will continue into the southbound dedicated median lane in Segment 2. No change in signal cycle requirement. BRT movement will be with general traffic signal phase.</li> </ul> </li> </ul>

<p><b>3 – Dodge Street to College Parkway cont.</b></p>	<ul style="list-style-type: none"> <li>• <b>Guideway transition at the northern end of Segment 3 between single dedicated lane and dual dedicated median lanes (dedicated median lanes in each direction).</b> <ul style="list-style-type: none"> <li>• Northbound – BRT vehicle will be in mixed traffic, with last stop before transition located at Mannakee Street. BRT vehicle will transition to median dedicated northbound lane via a slip ramp located between North Campus Drive and College Parkway.</li> <li>• Southbound – Southbound BRT vehicle will be in median dedicated lane and will continue into the single southbound dedicated median lane with the general traffic signal phase.</li> </ul> </li> </ul>
<p><b>4 – College Parkway to Summit Avenue</b></p>	<p>The majority of Segment 4 consists of dual dedicated median lanes in each direction, with small sections varying from this predominant configuration.</p> <ul style="list-style-type: none"> <li>• <b>Segment 3/Segment 4 Boundary to Redland Road</b> - Median dedicated lanes in each direction continue from Segment 3 into Segment 4 and run to Redland Road.</li> <li>• <b>Leave dedicated lanes at Redland Road to serve Shady Grove Metrorail Station and reenter dedicated lanes at King Farm Boulevard</b> – The BRT vehicle will leave the dedicated median lane at Redland Road in order to serve the Shady Grove Metro Station. In the northbound direction, it will run in mixed traffic via Redland Road, Somerville Drive, and Metro Station Drive. The same alignment in the reverse direction will occur in the southbound direction.</li> </ul> <p style="text-align: center;"><i>Signal operations at Redland Drive, by direction are as follows:</i></p> <p>Northbound – BRT vehicles will require a transit only phase in order to leave the northbound dedicated median lane and cross traffic to access Redland Road</p> <p>Southbound – BRT will move with left turning general traffic in order to access the southbound dedicated median lane</p>

	<p><i>Signal operations at King Farm Boulevard, by direction, are as follows:</i></p> <p>Northbound – BRT vehicles will move with right turning/through traffic in order to access the northbound dedicated median lane</p> <p>Southbound - BRT vehicles will require a transit only phase in order to leave the southbound dedicated median lane and cross traffic to access Metro Station Drive.</p> <ul style="list-style-type: none"> <li>• <b>King Farm Boulevard to Shady Grove Road</b> – The guideway configuration in this section of Segment 4 consists of dual median dedicated lanes running in each direction.</li> <li>• <b>Shady Grove Road to Westland Drive</b> - A short single bi-directional lane runs between Shady Grove Road and Westland Drive. Entry into this bi-directional lane is on a first come, first serve basis.</li> <li>• <b>Westland Drive to Summit Avenue (northern boundary of Segment 4)</b> - North of Westland Drive the alignment transitions back to median dedicated lanes in each direction and continues to the end of Segment 4 at Summit Avenue (dedicated lanes in each direction then continue into Segment 5 for a short distance).</li> </ul>
<p><b>5 – Summit Avenue to Montgomery Village Avenue (MD 124)</b></p>	<p>There are three guideway configurations within Segment 5. These are described below:</p> <ul style="list-style-type: none"> <li>• <b>Segment 4/Segment 5 Boundary to Cedar Avenue</b> – The median dedicated lanes in each direction continue a short distance from Segment 4 to Cedar Avenue/Fulks Corner Avenue in Segment 5.</li> <li>• <b>Cedar Avenue/Fulks Corner Avenue to Odendhal Avenue</b> - A single median dedicated lane begins at Cedar Avenue/Fulks Corner Avenue and runs to Odendhal Avenue. The dedicated lane will be used by vehicles running in the peak direction (southbound in AM and northbound in PM).</li> </ul>

*Transitions between the dual dedicated lanes at the southern end of Segment 5 and the single dedicated lane at Cedar Avenue/Fulks Corner Avenue would occur as follows, by time of day and direction.*

**AM Peak Northbound** – Vehicles traveling in the AM peak northbound direction would have to transition from the northbound dedicated lane to mixed traffic. In this instance, the BRT will cross the Cedar/Fulks Corner & MD 355 intersection and enter a short segment of median guideway on the north side of intersection that merges with the northbound through lanes prior to the Father Cuddy bridge. The merge point will need to be Yield controlled on the BRT guideway, requiring the BRT to wait for a gap in the left lane to enter through traffic. There is insufficient distance to design a full accel lane for the BRT to merge at free flow speed.

**AM Peak Southbound** – Southbound BRT vehicles would already be in the single dedicated lane and thus would transition from the single dedicated lane to the dual dedicated lanes with the general traffic through movement signal phase.

**PM Peak Northbound** – Northbound BRT vehicles would be transitioning to the single dedicated lane in the PM peak and therefore would move to the single dedicated lane with the general traffic through movement signal phase

**PM Peak Southbound** – Southbound BRT vehicles will be in general traffic and will move across from the curb lane to the center lane in order to get into the southbound left turn at Cedar/Fulks Corner. The vehicle will transition to the dual dedicated lanes via the left turn lane. The northbound left will have to be a separate phase so BRT does not conflict with northbound lefts.

- **Odendhal Avenue to Lakeforest Boulevard** – In this link BRT will run in mixed traffic in the northbound direction throughout the day and will run in a dedicated lane in the southbound direction throughout the day.

*Transitions between the single dedicated lane ending at Odendhal and the configuration between Odendhal and Lakeforest at the northern end of the single dedicated lane section would occur as follows, by time and direction.*

	<p>AM Peak Northbound – BRT vehicles would remain in mixed traffic between Odendhal and Lakeforest Boulevard.</p> <p>PM peak Northbound – BRT vehicles would leave the dedicated lane before Odendhal Avenue and merge right to make the right turn at Lakeforest.</p> <p>AM Peak Southbound – BRT vehicles would transition from Lakeforest Boulevard into the southbound dedicated lane, moving with the general traffic left turn signal. At Odendhal the southbound BRT vehicle would continue in the one-way dedicated lane, moving with the general traffic through phase.</p> <p>PM Peak Southbound – PM peak southbound BRT vehicles would be in the one-way dedicated lane between Lakeforest and Odendhal and would have to transition to mixed traffic at Odendhal. A transit only signal phase would be required to make the transition.</p> <ul style="list-style-type: none"> <li>• <b>Lakeforest Boulevard to Lost Knife &amp; Montgomery Village Avenue</b> - The alignment leaves MD 355 at Lakeforest Boulevard to serve the Lakeforest Transit Center. BRT runs in mixed traffic from the intersection of Lakeforest Boulevard to intersection of MD 355 and Christopher Avenue (point where BRT enters back onto MD 355).</li> </ul> <p>Segment 5 ends at MD 124 (Montgomery Village Avenue), about halfway through mixed traffic section.</p>
<p><b>6 – Montgomery Village Avenue (MD 124) to Middlebrook Road</b></p>	<ul style="list-style-type: none"> <li>• <b>Lost Knife &amp; Christopher Avenue to Christopher Avenue &amp; MD 355</b> - Continued mixed traffic operations on Christopher Avenue, from the intersection of Montgomery Village Avenue (MD 124) and Christopher (start of Segment 6) to the intersection of Christopher and MD 355.</li> <li>• <b>Christopher Avenue &amp; MD 355 to Gunners Branch Road</b> - Median dedicated lanes in each direction begin at the intersection of Christopher Avenue and MD 355 and continue to Gunners Branch Road.</li> </ul> <p><i>Transitions into and out of mixed traffic at Christopher Avenue, by direction, are as follows:</i></p> <p><b>Southbound</b> – BRT vehicles exiting the median guideway will make the SB left turn concurrently with the general traffic SB left turn phase, creating a dual left-turn condition and using the dual</p>

	<p>receiving lanes on Christopher Avenue.</p> <p><b>Northbound</b> – Northbound BRT vehicles will make the westbound right turn from Christopher directly into the median guideway with the westbound approach signal phase.</p> <ul style="list-style-type: none"> <li>• <b>Gunners Branch to Middlebrook</b> - There is a very short distance between Gunners Branch Road and Middlebrook Road where service is in mixed traffic (Middlebrook Road is the northern limit of Segment 6).</li> </ul> <p><i>Transitions into and out of mixed traffic at Gunners Branch Road, by direction, are as follows:</i></p> <p><b>Northbound</b> – BRT vehicles will be transitioning out of the median dedicated lane into mixed traffic. In this instance, the BRT vehicle will proceed through the Gunners Branch intersection during standard through traffic phase and enter a short segment of median guideway on the north side of the intersection that merges with the back end of the left-most northbound left turn lane for the Middlebrook Road intersection. The merge point into the left turn lane will need to be yield controlled on the BRT guideway. The design may extend the BRT merge area into part of the left turn lane so that auto traffic has longer to see the BRT entering into the left turn lane and facilitate a smoother merging condition.</p> <p><b>Southbound</b> – BRT vehicles will be transitioning from mixed traffic to the dedicated median lane. The vehicle will merge to the left while in mixed traffic and then utilize a BRT only guideway ramp in the wide median prior to Gunners Branch Road. The vehicle will then enter the dedicated guideway with the general traffic through movement.</p>
<p><b>7 – Middlebrook Road to Clarksburg Outlets</b></p>	<p>Segment 7 is entirely mixed traffic.</p>



C. *Guideway Description – Alternative C*

Segment	Guideway Description
<p><b>1 – Bethesda Metrorail Station (south entrance) to Tuckerman Lane</b></p>	<p>There are two guideway types within Segment 1, as described below:</p> <ul style="list-style-type: none"> <li>• <b>Guideway Type #1</b> - Repurposed curb lane to provide dedicated BRT lane in the peak direction. Middle general traffic lanes would be reversible, allowing changes in directions throughout the day to accommodate BRT peak direction dedication. Operation begins at <u>Old Georgetown Road in downtown Bethesda and runs approximately to Beltway entrance ramps.</u></li> <li>• <b>Guideway Type #2</b> - Mixed traffic operations, at two locations: <ul style="list-style-type: none"> <li>• Between Bethesda Metrorail Station and Old Georgetown Road; and</li> <li>• Between the Beltway and Tuckerman Lane.</li> </ul> </li> <li>• Tuckerman Lane is the northern limit of Segment 1.</li> </ul>
<p><b>2 – Tuckerman Lane to Dodge Street</b></p>	<p>There are two guideway types within Segment 2, as described below:</p> <ul style="list-style-type: none"> <li>• <b>Guideway Type #1</b> - Dedicated curb lane in each direction, at two locations: <ul style="list-style-type: none"> <li>• Between Tuckerman Lane (northbound dedicated lane)/Strathmore Avenue (southbound dedicated lane) AND Montrose Parkway entrance ramps; and</li> <li>• Between Hubbard Lane and Dodge Street</li> </ul> </li> <li>• <b>Guideway Type #2</b> - Mixed traffic across Montrose Parkway overpass. Dedicated lanes in each direction begin again at Hubbard Lane.</li> <li>• Dodge Street is the northern limit of Segment 2.</li> </ul>

Segment	Guideway Description
<b>3 – Dodge Street to College Parkway</b>	<p>There are two guideway types within Segment 3, as described below:</p> <ul style="list-style-type: none"> <li>• <b>Guideway Type #1</b> - Mixed traffic operations in each direction between Dodge Street and Beall Avenue.</li> <li>• <b>Guideway Type #2</b> –Hybrid Operation Between Beall Street and College Parkway, consisting of: <ul style="list-style-type: none"> <li>• Single dedicated curb lane in <u>southbound</u> direction</li> <li>• Mixed traffic operation in the <u>northbound</u> direction</li> </ul> </li> <li>• College Parkway is the northern limit of Segment 3.</li> </ul>
<b>4 – College Parkway to Summit Avenue</b>	<p>There are two guideway types within Segment 4, as described below:</p> <ul style="list-style-type: none"> <li>• <b>Guideway Type #1</b> - Dedicated curb lanes in each direction at three locations <ul style="list-style-type: none"> <li>• Between <u>College Parkway and Redland Road</u>.</li> <li>• Dedicated curb lane between approximately <u>Metro Station Drive and Shady Grove Road</u>: <ul style="list-style-type: none"> <li>• In the northbound direction dedicated lane begins at Metro Station Drive. In the southbound direction at the dedicated lane ends at Ridgemont Avenue.</li> </ul> </li> <li>• Dedicated curb lanes in each direction between <u>Westland Drive and the vicinity of Summit Avenue</u>. Northbound dedicated lane ends a short distance south of Summit at Education Boulevard. Southbound dedicated lane ends at Summit Avenue.</li> </ul> </li> <li>• <b>Guideway Type #2</b> – Mixed traffic in two locations: <ul style="list-style-type: none"> <li>• Service into Shady Grove Metrorail Station via Redland Road, Sommerville Drive, and Metro Station Drive is in mixed traffic.</li> <li>• At Shady Grove Road, BRT runs in mixed traffic under the I-370 overpass. Southbound dedicated lane begins again at O’Neil Drive. Northbound dedicated lane begins a short distance farther north at Westland Drive to accommodate I-370 northbound exit ramp.</li> </ul> </li> </ul>

Segment	Guideway Description
<b>5 – Summit Avenue to Montgomery Village Avenue (MD 124)</b>	<p>Segment 5 is entirely mixed traffic operations:</p> <ul style="list-style-type: none"> <li>• <b>Along MD 355</b> - BRT runs in mixed traffic between Summit Avenue and Lakeforest Boulevard on MD 355.</li> <li>• <b>Service to Lakeforest Transit Center</b> - Alignment leaves MD 355 at Lakeforest Boulevard to serve Lakeforest Transit Center. Runs in mixed traffic between intersection of Lakeforest Boulevard &amp; MD 355 and intersection of Christopher Avenue and MD 355 (via Lakeforest Boulevard, Russell Avenue, Odendhal Avenue, Lost Knife Road, and Christopher Avenue)</li> <li>• Montgomery Village Avenue (MD 124) is northern limit of Segment 5.</li> </ul>
<b>6 – Christopher Avenue to Middlebrook Road</b>	<p>There are two guideway types within Segment 6, as described below:</p> <ul style="list-style-type: none"> <li>• <b>Guideway Type #1</b> – Mixed Traffic in two locations: <ul style="list-style-type: none"> <li>• Between intersection of Christopher Avenue &amp; Montgomery Village Avenue and intersection of Christopher Avenue and MD 355</li> <li>• Mixed traffic operations over bridge over middle branch of Great Seneca Creek, between Game Preserve Drive and Plummer Drive</li> </ul> </li> <li>• <b>Guideway Type #2</b> – Dedicated curb lane in each direction at two locations <ul style="list-style-type: none"> <li>• Intersection of Christopher Avenue &amp; MD 355 to bridge over Middle Branch of Great Seneca Creek</li> <li>• Between Plummer Drive and Middlebrook Road <ul style="list-style-type: none"> <li>• Northbound BRT operates in mixed traffic</li> <li>• Southbound dedicated curb lane from Middlebrook Road to Plummer Drive</li> </ul> </li> </ul> </li> <li>• Middlebrook Road is northern limit of Segment 6.</li> </ul>

<b>Segment</b>	<b>Guideway Description</b>
<b>7 – Middlebrook Road to Clarksburg Outlets</b>	<ul style="list-style-type: none"><li data-bbox="418 340 1242 441">• Mixed traffic from Middlebrook Road to the terminal at Clarksburg Outlets (Alternative C alignment runs via MD 355 north of Middlebrook Road).</li></ul>

## 11. Station Locations and Configuration

**Table 7 – Station Locations and Configuration – TSM (see Figure 5)**

<b>Station/Segment</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>	<b>Ride On Extra Stop?</b>
Bethesda Metro Station – South Entrance (Segment 1) -	On Elm Street (adjacent to Metro and future Purple Line entrance)	Far Side	No – added for TSM
MD 355 and Cordell Avenue (Segment 1)	Far Side of West Virginia Avenue	Far Side	No – added for TSM
Medical Center Metro Station (Segment 1)	Near Side	Far Side	Yes
MD 355 and Tuckerman (Grosvenor Metro Station) (Segment 1)	Near Side (located away from intersection, @ tunnel under tracks to station)	Far Side @ Intersection	Yes
MD 355 and Security Lane (Segment 2)	Far Side	Far Side	Yes
White Flint Metro Station (@ Marinelli Road) (segment 2)	Far Side	Near Side	Yes
MD 355 and Bou Avenue (segment 2)	Near Side	Far Side	No – added for TSM
MD 355 and Halpine Avenue (Twinbrook Metro) (segment 2)	Near Side	Far Side	Yes
MD 355 and Edmonston Drive (segment 2)	Near Side	Far Side	Yes
MD 355 and Mount Vernon Place (segment 2)	Near Side	Near Side	No – added for TSM
MD 355 and Middle Lane (Rockville Metro Station) (segment 3)	Far Side	Near Side	Yes
MD 355 and Mannakee Street (Montgomery College) (segment 3)	Near Side (located at Ivy League Lane, one block south of Manakee)	Far Side (located at Ivy League Lane, one block south of Manakee)	Yes
Shady Grove Metro Station (on Somerville) (segment 4)	Mid-block (opposite southbound platform)	Mid-block (opposite northbound platform)	Yes
MD 355 and S. Westland Drive (segment 4)	Far Side	Far Side	Yes
MD 355 and Education Boulevard (segment 4)	Near Side (not directly at intersection)	Far Side	No – added for TSM

<b>Station/Segment</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>	<b>Ride On Extra Stop?</b>
MD 355 and Cedar/Fulks Corner (segment 5)	Far Side	Near Side	No – added for TSM
MD 355 and Lakeforest Blvd. (segment 5)	Northbound on Lakeforest Blvd.	On MD 355 – Far side of intersection	No – added for TSM
Lakeforest Transit Center (segment 5)	On Long Knife @ Transit Center (northbound side of Long Knife)	On Long Knife @ Transit Center (southbound side of Long Knife)	Yes
MD 355 and Watkins Mill (segment 6)	Near Side	Far Side	No – added for TSM
MD 355 and Gunners Branch (segment 6)	Near Side	Far Side	No – added for TSM
Germantown Transit Center (route pattern 1G only)	In Transit Center Bay	In Transit Center Bay	No – added for TSM
MD 355 and Oxbridge Road (segment 7)	Near Side	Far Side	No – added for TSM
MD 355 and Shakespeare Blvd. (segment 7)	Near Side	Far Side	No – added for TSM
MD 355 and Foreman Boulevard (segment 7)	Far Side	Far Side	No – added for TSM
MD 355 and Redgrave Place (segment 7)	Near Side (not directly at intersection)	Far Side (not directly at intersection)	No – added for TSM
Clarksburg Outlets (segment 7)			No – added for TSM

**Table 8 - Station Locations and Configuration – Alternative A**

<b>Station</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>
Bethesda Metro Station – South Entrance (segment 1)	On Elm Street (adjacent to Metro and future Purple Line entrance)	Far Side
MD 355 and Cordell Avenue (segment 1)	Far Side of West Virginia Avenue	Far Side
Medical Center Metro Station (segment 1)	Near Side	Far Side
MD 355 and Tuckerman (Grosvenor Metro Station) (segment 1)	Near Side (located away from intersection, @ tunnel under tracks to station)	Far Side @ Intersection
MD 355 and Security Lane (segment 2)	Far Side	Far Side
White Flint Metro Station (@ Marinelli Road) (segment 2)	Far Side	Near Side
MD 355 and Bou Avenue (segment 2)	Near Side	Far Side
MD 355 and Halpine Avenue (Twinbrook Metro) (segment 2)	Far Side	Far Side
MD 355 and Edmonston Drive (segment 2)	Near Side	Far Side
MD 355 and Mount Vernon Place (segment 2)	Near Side	Near Side
MD 355 and Middle Lane (Rockville Metro Station) (segment 3)	Near Side	Near Side
MD 355 and Mannakee Street (Montgomery College) (segment 3)	Near Side of Manakee Street	Near Side of Ivy League Lane
Shady Grove Metro Station (on Somerville) (segment 4)	Mid-block (opposite southbound platform)	Mid-block (opposite northbound platform)
MD 355 and S. Westland Drive (segment 4)	Far Side	Far Side
MD 355 and Education Boulevard (segment 4)	Near Side (not directly at intersection)	Far Side
MD 355 and Cedar/Fulks Corner (segment 5)	Far Side	Near Side
MD 355 and Lakeforest Blvd. (segment 5)	Northbound on Lakeforest Blvd.	On MD 355 – Far side of intersection
Lakeforest Transit Center (segment 5) (Park and Ride)	On Long Knife @ Transit Center (northbound side of Long Knife)	On Long Knife @ Transit Center (southbound side of Long Knife)
MD 355 and Watkins Mill (segment 6)	Near Side	Far Side

<b>Station</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>
MD 355 and Gunners Branch (segment 6)	Near Side	Far Side
Germantown Transit Center (route pattern 1G only)	In Transit Center Bay	In Transit Center Bay
Observation Drive and Holy Cross Hospital (segment 7)	No major intersection (directly opposite southbound platform between Hospital entrances)	No major intersection (directly opposite northbound platform between Hospital entrances)
Montgomery College Germantown (on Goldenrod) (segment 7)	No major intersection (directly opposite southbound platform adjacent to Data Lab USA building on Goldenrod)	No major intersection (directly opposite northbound platform adjacent to Data Lab USA building on Goldenrod)
Office Complex – Seneca Meadows Parkway (just north of Germantown Road) (segment 7)	No major intersection (directly opposite southbound platform adjacent to office complex on Seneca Meadows Parkway)	No major intersection (directly opposite northbound platform adjacent to office complex on Seneca Meadows Parkway)
Milestone Shopping Center (on Shakespeare) (segment 7 – Park and Ride)	No major intersection (directly opposite southbound platform adjacent to shopping center entrance off of Shakespeare)	No major intersection (directly opposite northbound platform adjacent to shopping center entrance off of Shakespeare)
Milestone Shopping Center (on MD 355) (segment 7)	No major intersection (directly opposite southbound platform adjacent to shopping center entrance off of MD 355)	No major intersection (directly opposite northbound platform adjacent to shopping center entrance off of MD 355)
Snowden Farm Parkway and New Cut Road (segment 7)	Near Side	Far Side
Stringtown Road and Rainbow Arch Drive (segment 7)	Far Side	Far Side
Clarksburg Outlets (segment 7) (Park and Ride)		



**Table 9 - Station Locations and Configuration – Alternative B**

<b>Station</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>
Bethesda Metro Station – South Entrance (segment 1)	On Elm Street (adjacent to Metro and future Purple Line entrance)	Far Side
MD 355 and Cordell Avenue (segment 1)	Far Side of West Virginia Avenue	Far Side
Medical Center Metro Station (segment 1)	Near Side	Far Side
MD 355 and Tuckerman (Grosvenor Metro Station) (segment 1)	Near Side (located away from intersection, @ tunnel under tracks to station)	Far Side @ Intersection
MD 355 and Security Lane (segment 2)	Far Side	Far Side
White Flint Metro Station (@ Marinelli Road) (segment 2)	Far Side	Far Side
MD 355 and Bou Avenue (segment 2)	Far Side	Far Side
MD 355 and Halpine Avenue (Twinbrook Metro) (segment 2)	Far Side	Far Side
MD 355 and Edmonston Drive (segment 2)	Far Side	Far Side
MD 355 and Mount Vernon Place (segment 2)	Near Side	Near Side
MD 355 and Middle Lane (Rockville Metro Station) (segment 3)	Far Side	Far Side
MD 355 and Mannakee Street (Montgomery College) (segment 3)	Near Side	Far Side
Shady Grove Metro Station (on Somerville) (segment 4)	Mid-block (opposite southbound platform)	Mid-block (opposite northbound platform)
MD 355 and S. Westland Drive (segment 4)	Far Side	Far Side
MD 355 and Education Boulevard (segment 4)	Far Side	Far Side
MD 355 and Cedar/Fulks Corner (segment 5)	Near Side	Far Side
MD 355 and Lakeforest Blvd. (segment 5)	Northbound on Lakeforest Blvd.	On MD 355 – Far side of intersection
Lakeforest Transit Center (segment 5) (Park and Ride)	On Long Knife @ Transit Center (northbound side of Long Knife)	On Long Knife @ Transit Center (southbound side of Long Knife)

<b>Station</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>
MD 355 and Watkins Mill (Segment 6)	Near Side	Far Side
MD 355 and Gunners Branch (segment 6)	Near Side	Far Side
Germantown Transit Center (route pattern 1G only)	In Transit Center Bay	In Transit Center Bay
Observation and Holy Cross Hospital (segment 7)	No major intersection (directly opposite southbound platform between Hospital entrances)	No major intersection (directly opposite northbound platform between Hospital entrances)
Montgomery College Germantown (on Observation) (segment 7)	Platforms off Observation in mini-transit center in parking lot.	Platforms off Observation in mini-transit center in parking lot.
Observation Drive and Milestone Center Drive (segment 7) (Park and Ride)	Far Side	Near Side
Observation and Shawnee (segment 7)	Far Side	Far Side
Clarksburg Outlets (segment 7) (Park and Ride)		

**Table 10 - Station Locations and Configuration – Alternative C**

<b>Station</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>
Bethesda Metro Station – South Entrance (segment 1)	On Elm Street (adjacent to Metro and future Purple Line entrance)	Far Side
MD 355 and Cordell Avenue (segment 1)	On Elm Street (adjacent to Metro and future Purple Line entrance)	Far Side
Medical Center Metro Station (segment 1)	Near Side	Far Side
MD 355 and Tuckerman (Grosvenor Metro Station) segment 1)	Near Side (located away from intersection, @ tunnel under tracks to station)	Far Side @ Intersection
MD 355 and Security Lane (segment 2)	Far Side	Far Side
White Flint Metro Station (@ Marinelli Road) (segment 2)	Near Side (mid-block)	Near Side
MD 355 and Bou Avenue (segment 2)	Far Side	Near Side
MD 355 and Halpine Avenue (Twinbrook Metro) (segment 2)	Far Side	Far Side
MD 355 and Edmonston Drive (segment 2)	Near Side	Far Side
MD 355 and Mount Vernon Place (segment 2)	Near Side	Near Side
MD 355 and Middle Lane (Rockville Metro Station) (segment 3)	Far Side	Near Side
MD 355 and Mannakee Street (Montgomery College) (segment 3)	No Platform	Far Side
Shady Grove Metro Station (on Somerville) (segment 4)	Mid-block (opposite southbound platform)	Mid-block (opposite northbound platform)
MD 355 and S. Westland Drive (segment 4)	Far Side	Far Side
MD 355 and Education Boulevard (segment 4)	Near Side (not directly at intersection)	Far Side
MD 355 and Cedar/Fulks Corner (segment 5)	Far Side	Near Side
MD 355 and Lakeforest (Segment 5)	Northbound on Lakeforest Blvd.	On MD 355 – Far side of intersection
Lakeforest Transit Center (Segment 5)	On Long Knife @ Transit Center (northbound side of Long Knife)	On Long Knife @ Transit Center (southbound side of Long Knife)
MD 355 and Watkins Mill (Segment 6)	Near Side	Far Side

<b>Station</b>	<b>Northbound Direction – Near Side/Far Side</b>	<b>Southbound Direction – Near Side/Far Side</b>
MD 355 and Gunners Branch (segment 6)	Near Side	Far Side
Germantown Transit Center (route pattern 1G only)	In Transit Center Bay	In Transit Center Bay
MD 355 and Oxbridge Road (segment 7)	Near Side	Far Side
MD 355 and Shakespeare Blvd. (segment 7) (Park and Ride)	Near Side	Far Side
MD 355 and Foreman Boulevard (segment 7)	Far Side	Far Side
MD 355 and Redgrave Place (segment 7)	Near Side (not directly at intersection)	Far Side (not directly at intersection)
Clarksburg Outlets (segment 7) (Park and Ride)		

## 12. Potential Future Stations

<b>Station</b>	<b>Segment</b>
MD 355 and Cedar Avenue	Segment 1
MD 355 and Pooks Hill Road	Segment 1
MD 355 and Templeton Place	Segment 2
MD 355 and future Dawson	Segment 3
MD 355 and College Parkway	Segment 4
MD 355 and Indianola Drive	Segment 4
MD 355 and Chestnut/Walker	Segment 5
MD 355 and Professional Drive	Segment 6
Observation Drive and Comsat (Alternative B)	Segment 7
Stringtown Road and St. Clair Rd. (Alternative A)	Segment 7

**13. TSP Locations (Alternatives A, B, C, TSM, except where noted)**

MD 355 and Woodmont Avenue
MD 355 and Jones Bridge Road
MD 355 and South Drive
MD 355 and Wilson Drive
MD 355 and North Wood Road
MD 355 and Inner Loop Off Ramp
MD 355 and Tuckerman Lane (south)
MD 355 and Security Lane
MD 355 and MD 187 (Old Georgetown Road)
MD 355 and Mid-Pike Plaza Entrance
MD 355 and Shopping Center Entrance (Bou Avenue)
MD 355 and Rollins Avenue
MD 355 and Halpine Avenue
MD 355 and Richard Montgomery Drive
MD 355 and Church Street
MD 355 and Park Road
MD 355 and Mannakee Street
MD 355 and North Campus Drive
MD 355 and College Parkway
MD 355 and Lexus Dealership Driveway
MD 355 and Indianola Drive
MD 355 and King Farm Boulevard
MD 355 and Shady Grove Road
MD 355 and Westland Drive
MD 355 and West Deer Park Road
MD 355 and Education Boulevard
MD 355 and S. Summit Avenue
MD 355 and Chestnut Street
MD 355 and Auto Dealerships Driveway
MD 355 and Christopher Avenue
MD 355 and Travis Avenue
MD 355 and Professional Drive
MD 355 and Gunners Branch Road
MD 355 and Middlebrook Road
MD 355 and Shakespeare Boulevard (Alternative C, TSM)
MD 355 and Little Seneca Parkway (Alternative C, TSM)
MD 355 and Foreman Boulevard (Alternative C, TSM)
MD 355 and Stringtown Rd (Alternative C, TSM)

**14. Queue Jump Locations – Alternatives A and C**

Intersection	Northbound	Receiving Lane	Southbound	Receiving Lane
Gude Drive			X	No
Rockville Corporate Center			X	Yes
Watkins Pond Boulevard			X	Yes
Redland Boulevard	X	No		
Middlebrook Road	X	Yes		
Germantown Road	X	Yes		
Little Seneca Parkway			X	Yes
Foreman Boulevard	X	Yes	X	Yes
East Middle Lane	X	No	X	No
Monroe Place	X	No		
Wooton Parkway	X	No	X	No
Edmonston Drive	X	No		
Marinelli Road	X	Yes		
Nicholson Lane	X	Yes		
Strathmore Avenue	X	No	X	No
Tuckerman Lane	X	No		