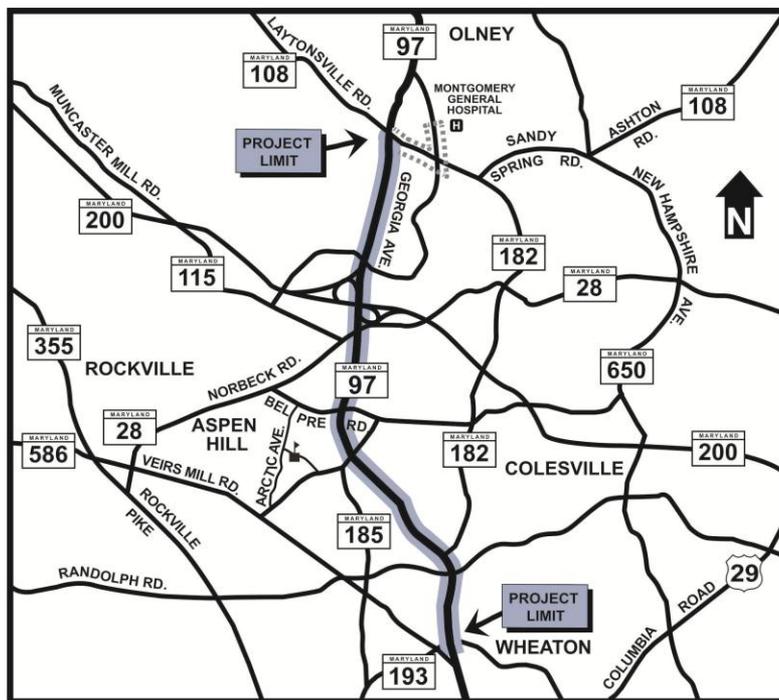


MD 97 (Georgia Avenue) Bus Rapid Transit (BRT) Study



**Presentation to Montgomery County
RTS Steering Committee 5.27.2014**



Georgia Avenue Bus Rapid Transit

Purpose of Presentation

- **Overview for MD 97 Alternative Workshop meeting**
- **Recap of Previous Activities**
- **Focus on the Conceptual Alternatives developed**
 - No Build
 - Alternative 2: Transportation Systems Management(TSM)
 - Alternative 3: Business Access Transit (BAT)
 - Alternative 4: New One-Lane Reversible BRT
 - Alternative 5: New Two-Way, Two-Lane BRT
 - Bus Options to the Montgomery General Hospital (MGH)



Georgia Avenue Bus Rapid Transit

Recap Previous Activities



Georgia Avenue Bus Rapid Transit

Recap of Previous Activities

- **Purpose and Need Presentation**
- **Project Courtesy Presentation April 2013**
 - ❖ Held MD 97 Scoping Meeting March 2013
 - ❖ Defined Bus Rapid Transit (BRT)
 - ❖ Gave an Environmental Overview
 - ❖ Discussed the types of Alternatives that would be investigated
- **Held Agency Field Review Sept 2013**



Georgia Avenue Bus Rapid Transit

Purpose and Need

- **Provided Purpose and Need presentation to the agencies:**
 - To provide a new high-efficiency bus line along Georgia Avenue
 - Enhance transit connectivity
 - Improve bus mobility and travel times
 - Address current and future bus ridership
 - Integrate Bus Rapid Transit (BRT) service with rail and other bus services
 - Attract new riders
 - Support Montgomery County's Plans to implement BRT
 - Support growth generated by development within the study limits and the County

The project is not funded for design, right-of-way, and/or construction. Montgomery County funding \$5M for study.



Arterial Level of Service	2012 Existing		2040 No-Build	
	AM	PM	AM	PM
MD 97 Northbound				
MD 586 to MD 193	C	C	D	D
MD 193 to Randolph Road	D	E	E	F
Randolph Road to MD 182 (Layhill Road)	D	C	C	E
MD 182 (Layhill Road) to Glenallan Avenue	E	D	D	C
Glenallan Avenue to MD 185	C	C	C	D
MD 185 to Bel Pre Road	C	E	B	C
Bel Pre Road to MD 28	E	F	F	E
MD 28 to ICC Westbound (WB) Ramps	C	C	F	C
ICC WB Ramps to Old Baltimore Road	C	C	B	D
Old Baltimore Road to Prince Phillip Drive	B	D	C	F
Prince Phillip Drive to MD 108	C	F	D	F
MD 108 to Queen Elizabeth Drive	A	B	A	C

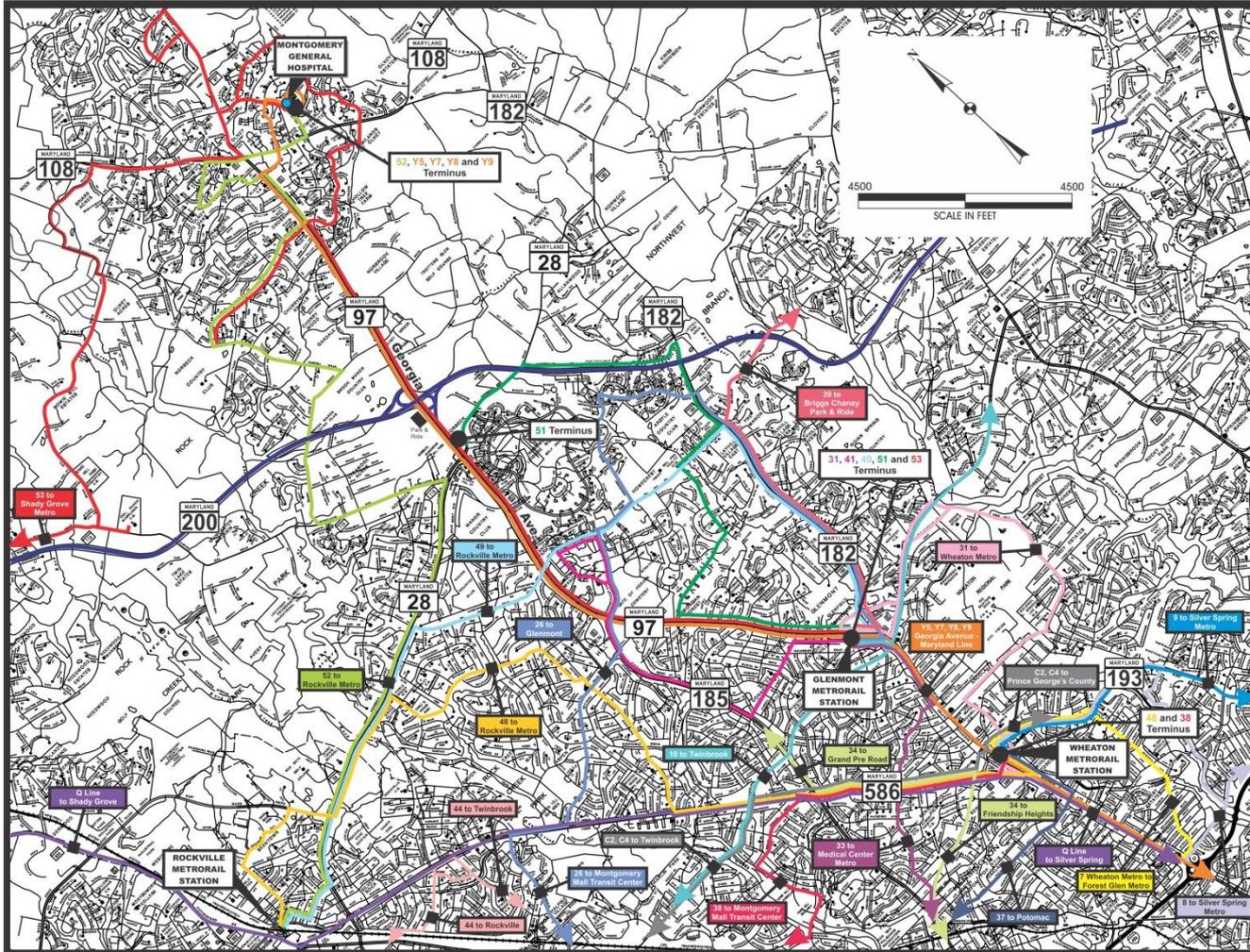
2012 Existing		2040 No-Build	
AM	PM	AM	PM

MD 97 Southbound				
Queen Elizabeth Drive to MD 108	F	C	F	D
MD 108 to Prince Phillip Drive	C	B	C	C
Prince Phillip Drive to Old Baltimore Road	D	B	F	B
Old Baltimore Road to ICC WB Ramps	C	C	D	B
ICC WB Ramps to MD 28	F	E	F	D
MD 28 to Bel Pre Road	D	C	C	C
Bel Pre Road to MD 185	E	D	F	C
MD 185 to Glenallan Avenue	B	C	E	C
Glenallan Avenue to MD 182 (Layhill Road)	D	B	D	B
MD 182 (Layhill Road) to Randolph Road	F	F	F	F
Randolph Road to MD 193	C	D	D	E
MD 193 to MD 586	C	E	D	E



Georgia Avenue Bus Rapid Transit

Existing Bus Service (cont.)



- **Metro Bus Routes:**
Y5, Y7, Y8, and Y9
C2, C4 and
Q (Q1, Q2, Q4, Q5 and Q6)

- **RideOn Routes:**
7, 8, 9, 10, 26, 31, 33, 34,
37, 38, 39, 41, 44, 48, 49,
51, 52, 53

- **MTA MD 200 Routes:**
201, 202, 203, 204,
and 205

- **Time Interval Between Buses:**

Metro Buses: 10 to 30 minutes
(all day weekdays and weekends)

Ride-On Buses: 20 to 35 minutes
(peak hour weekdays)

MTA MD 200 Routes: 30 to 60 minutes
(peak hour weekdays)

What is Bus Rapid Transit (BRT)?



Georgia Avenue Bus Rapid Transit

What is Bus Rapid Transit (BRT)?

- BRT is an integrated bus-based “rapid” transit system typically utilizing highly-flexible service and advanced technologies (e.g., transit signal priority) to improve customer convenience and reduce delays.
- “Bus that acts like rail” combines ride quality of rail transit with the flexibility and lower cost of bus service.
- Integrated system of elements:
 - Running Way
 - Stations
 - Service and Operations
 - Fare Collection
 - ITS
 - Marketing and Branding



Georgia Avenue Bus Rapid Transit

BRT Stations and Vehicles

Stations typically include:

- Platforms and level bus boarding passenger shelters
- Real-time bus arrival information
- Automated fare purchase
- Station site treatments such as landscaping and lighting

BRT vehicles feature:

- Specialized bus design
- Low-floors
- Multiple doors on both sides of bus
- Higher capacity through use of articulated buses
- Increased passenger circulation and bicycle provisions
- Strong brand identity



Georgia Avenue Bus Rapid Transit

CTCFMP Alternatives – GA Ave North

- **Mixed Traffic: Olney – MD 108 & Prince Phillip Drive**
- **One Dedicated Lane - MD 97 – from MD 108 to Reddie Rd in Wheaton**
- **Mixed Traffic – MD 97 from Reddie Rd to Veirs Mill Rd**
- **Cycle Track – Queen Mary Drive to Glenallan Ave**



Conceptual Alternatives



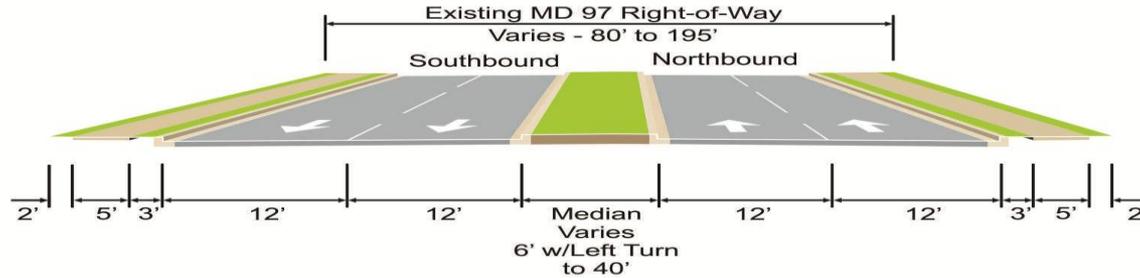
Georgia Avenue Bus Rapid Transit

Conceptual Alternatives

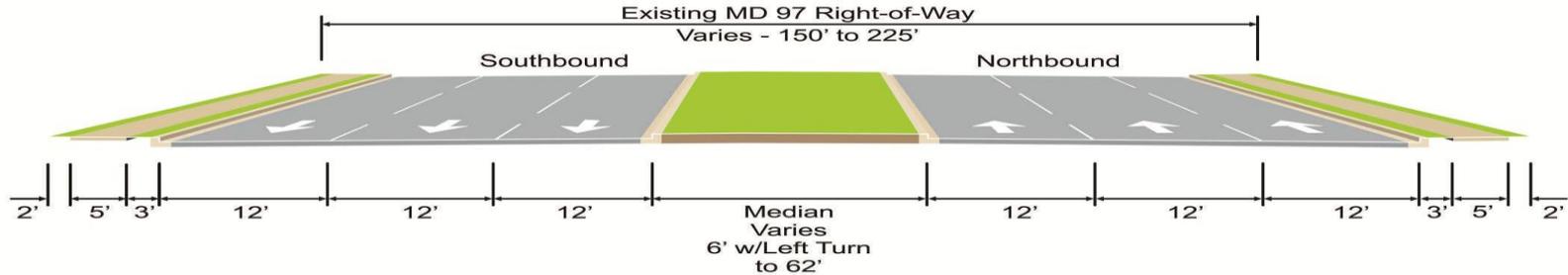
- **Alternative 1: No-Build**
- **Alternative 2: Transportation System Management (TSM)**
- **Alternative 3: Business Access Transit (BAT)**
- **Alternative 4: One-Lane Reversible BRT**
- **Alternative 5: Two Lane-Two Way BRT**
- **Related Typical Sections**



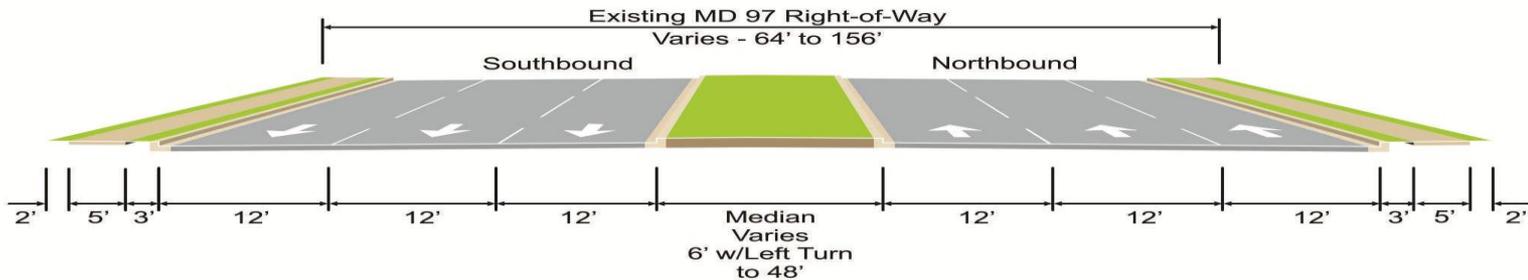
Alternative 1 - No-Build



Northern Segment - MD 108 (Sandy Spring Road / Olney Road) to Emory Church Road



Central Segment - Emory Church Road to Aspen Hill Road



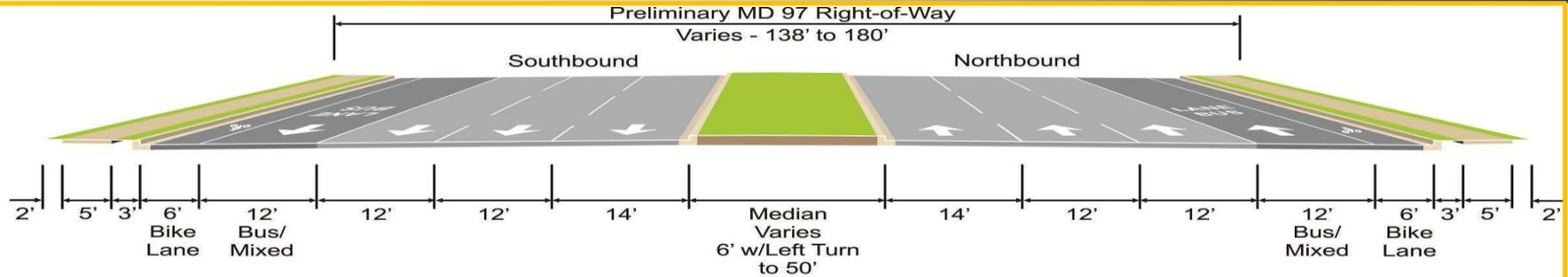
Southern Segment - Aspen Hill Road to Wheaton Metrorail Station

Conceptual Build Alternatives

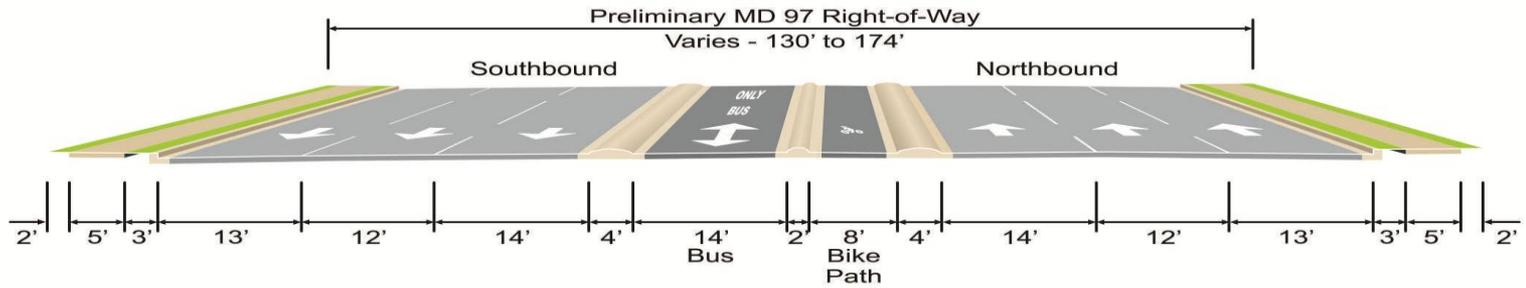
- **Alternative 2: Transportation System Management (TSM)**
- **Alternative 3: Business Access Transit (BAT)**
- **Alternative 4: One-Lane Reversible BRT**
- **Alternative 5: Two Lane-Two Way BRT**
- **Related Typical Sections**



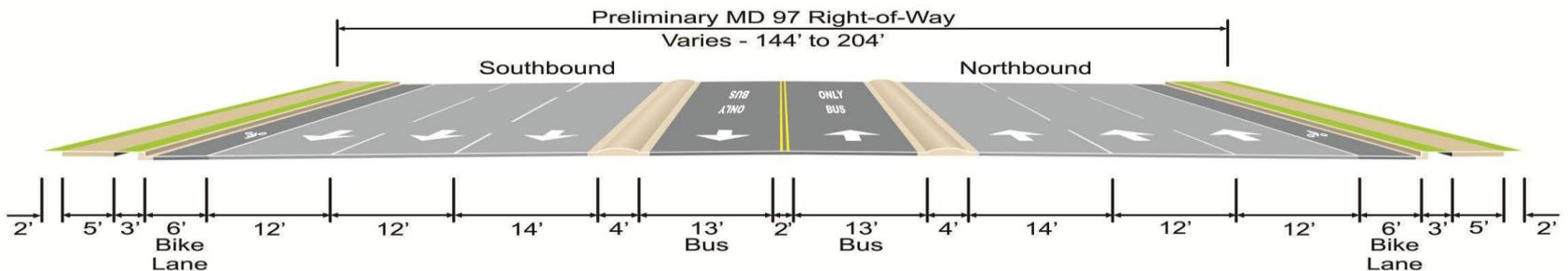
Typical Sections



Alternative 3 - Business Access Transit (BAT) Lane



Alternative 4 - One-Lane Reversible BRT



Alternative 5 - Two-Lane, Two-Way BRT



Summary of Potential Environmental Impacts



Georgia Avenue Bus Rapid Transit

Summary of Potential Environmental Impacts

Potential Displacements (No.)

Alt 2. TSM	Alt 3. BAT			Alt 4. 1-Lane (BRT)			Alt 5. 2-Lane (BRT)		
	North	Central	South	North	Central	South	North	Central	South
None	10	0	102	11	2	129	14	2	139
	112			142			155		

* Potential minority and low income populations in the southern limits of the project.

Properties Affected (No.)

Alt 2. TSM			Alt 3. BAT			Alt 4. 1-Lane (BRT)			Alt 5. 2-Lane (BRT)		
North	Central	South	North	Central	South	North	Central	South	North	Central	South
1-5	1-3	6-7	62	52	230	48	31	243	70	57	259
8-15			344			322			386		

* Majority of impacts are on the southern end of the project limits



Summary of Potential Environmental Impacts

Historic/Park Impacts (No.)

	Alt 2. TSM			Alt 3. BAT			Alt 4. 1-Lane (BRT)			Alt 5. 2-Lane (BRT)		
	North	Central	South	North	Central	South	North	Central	South	North	Central	South
Historic*	0	0	0	0	1	2	0	1	2	0	2	2
Park**	0	0	1	0	1	4	0	1	4	0	1	4

*NR-Eligible: Americana Glenmont (Apartments), Oakdale-Emory United Methodist Church, Aspen Hill Memorial Park and White's Hardware Store.

**Glenmont Greenway Urban Park, Wheaton Youth Center, Olney Manor Recreational Park, Harmony Hills Neighborhood Park, Matthew Henson State Park and Trail MD 97 (Georgia Avenue).

Right-of-Way (Acres)

Alt 2. TSM			Alt 3. BAT			Alt 4. 1-Lane (BRT)			Alt 5. 2-Lane (BRT)		
North	Central	South	North	Central	South	North	Central	South	North	Central	South
.01-0.2	.01-.3	.05-0.3	13	6	48	8	5	51	16	9	58
Up to 0.8			67			64			83		

* Majority of impacts are on the southern end of the project limits

Georgia Avenue Bus Rapid Transit



Summary of Potential Environmental Impacts

Natural Resources

Resource	Alt 2. TSM	Alt 3. BAT	Alt 4. 1-Lane (BRT)	Alt 5. 2-Lane (BRT)
Wetlands (acres)	0	0	0	0
Stream Crossing (no.)	2	2	2	2
Stream* (LF)	0	120	95	160
Woodlands (acres)	0.21	14.9	11.9	20.4
100-Year Floodplain** (acres)	0.7	0.7	0.8	0.9

* Stream crossings – Turkey Branch (Use I) and a smaller stream that is part of the Turkey Branch system.

** 100-year floodplain associated with Turkey Branch traverses MD 97 (Georgia Avenue)

USFWS and DNR coordination identified no documented rare, threatened, or endangered species within the study area



Next Steps and Schedule

2013

- Final Purpose and Need
- Develop Preliminary Alternatives

2014

- Alternatives Public Workshop – **5/14/2014**
- Provide presentation on Alternatives Retained for Detailed Studies – Late Spring 2014
- Develop Detailed Alternatives
- Conduct Impact Analysis

2015

- Public Hearing

The Project is NOT funded for Design, Right-of-way or Construction.



For More Information

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