Georgia Avenue (MD 97) Bus Lane Concept - Grace Church Road to 16th Street

Reasons for Tactical Bus Lanes:

- Has the potential to be a premium high-capacity transit connection that goes from residential to commercial/employment/residential mixed use
- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to WMATA Metrobus (Q2, Q4, Y2, Y7, Y8)
- Could provide operational benefits for routes between high demand areas

Existing Segment Characteristics:

- No parking and peak hour restrictions
- Single and multifamily homes
- Posted speed limit: 35 mph
- MD 97 north of 16th St is undergoing roadway improvements that may alter lane configurations. Aerial imagery shown with the bus lane concept reflects present-day conditions.

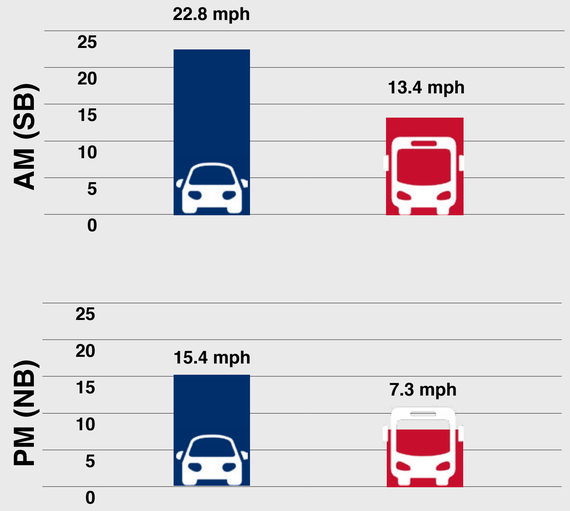
Changes to the Segment:

- The curbside lane would be re-purposed to a peak period bus lane with options to operate in both directions or peak direction only
- In the northbound direction, the bus lane would terminate at 16th St

Bus Ridership:

- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	7	9
Vehicles Per Hour	1,559	2,667

Note:
- 2019 bus frequencies provided by WMATA
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	140	171
Vehicle Person Throughput	1,840	3,147

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

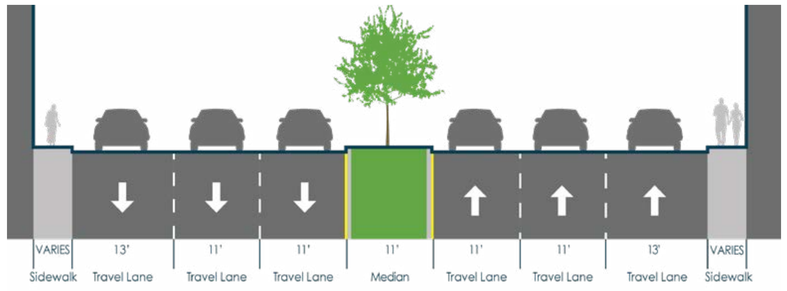
Concept Plan View

Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

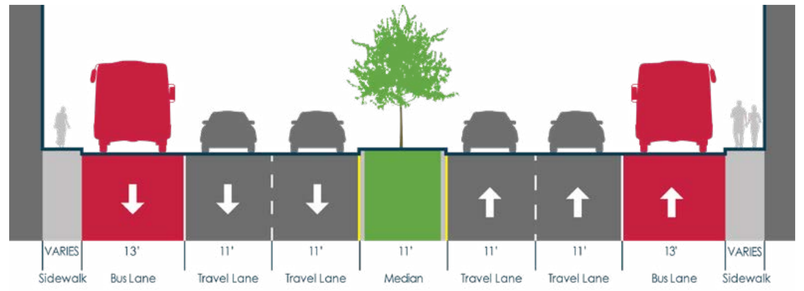
Legend

- ### — Average Peak Direction Bus Person Throughput
- Bus Stop
- Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)



Washington Metropolitan Area Transit Authority

Georgia Avenue (MD 97) Bus Lane Concept - Highland Drive to Grace Church Road

Reasons for Tactical Bus Lanes:

- Has the potential to be a premium high-capacity transit connection that goes from residential to commercial/employment/residential mixed use
- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to WMATA Metrobus (Q2, Q4, Y2, Y7, Y8)
- Could provide operational benefits for routes between high demand areas

Existing Segment Characteristics:

- No parking and peak hour restrictions
- Single and multifamily homes, places of worship
- Posted speed limit: 35 mph

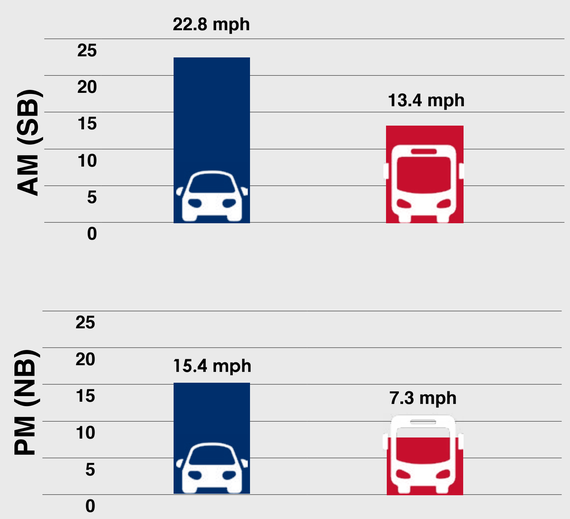
Changes to the Segment:

- The curbside lane would be re-purposed to a peak period bus lane with options to operate in both directions or peak direction only
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Bus Ridership:

- While bus ridership on the corridor iis 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	7	9
Vehicles Per Hour	1,579	1,286

Note:
- 2019 bus frequencies provided by WMATA
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	140	172
Vehicle Person Throughput	1,863	1,517

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

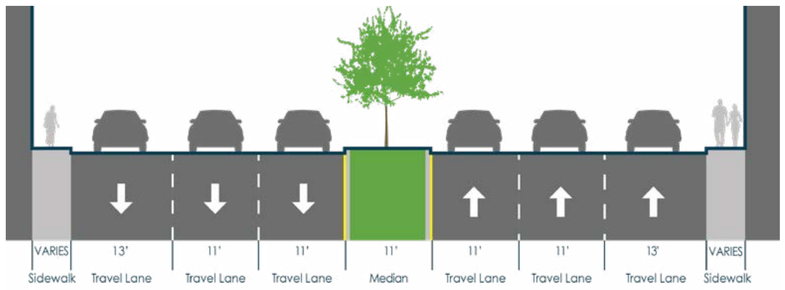
Concept Plan View

Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

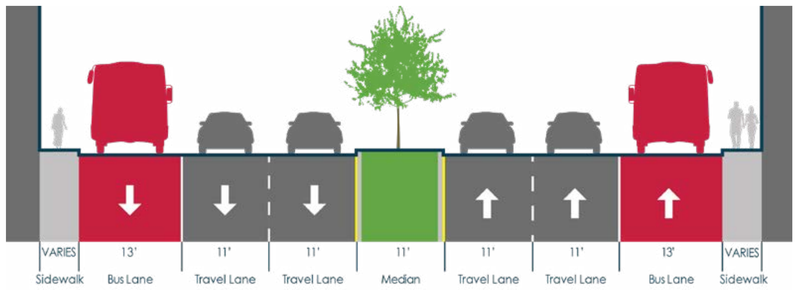
Legend

- ### — Average Peak Direction Bus Person Throughput
- Bus Stop
- Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)



Washington Metropolitan Area Transit Authority

Georgia Avenue (MD 97) Bus Lane Concept - Noyes Drive to Highland Drive

Reasons for Tactical Bus Lanes:

- Has the potential to be a premium high-capacity transit connection that goes from residential to commercial/employment/residential mixed use
- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to WMATA Metrobus (Q2, Q4, Y2, Y7, Y8)
- Could provide operational benefits for routes between high demand areas

Existing Segment Characteristics:

- No parking and peak hour restrictions
- Single and multifamily homes, places of worship
- Posted speed limit: 35 mph

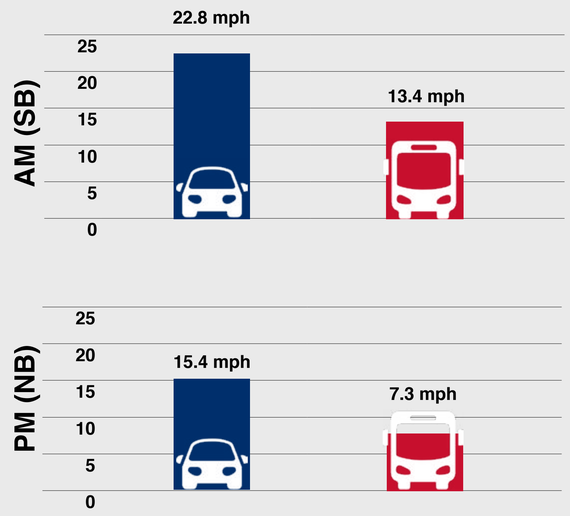
Changes to the Segment:

- The curbside lane would be re-purposed to a peak period bus lane with options to operate in both directions or peak direction only
- Right turns will not be restricted
- Skipped reds striping will indicate where vehicles are allowed to enter the bus lane

Bus Ridership:

- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	7	9
Vehicles Per Hour	1,555	1,310

Note:
- 2019 bus frequencies provided by WMATA
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	141	172
Vehicle Person Throughput	1,835	1,546

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

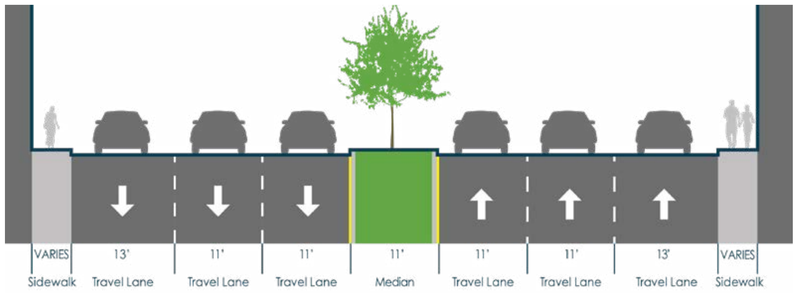
Concept Plan View

Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

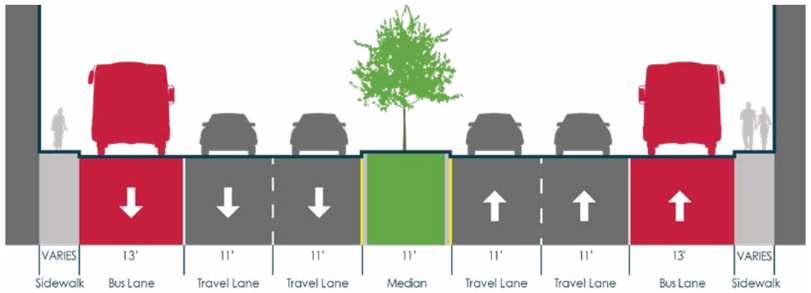
Legend

- ### Average Peak Direction Bus Person Throughput
- Bus Stop
- Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)



Washington Metropolitan Area Transit Authority

Georgia Avenue (MD 97) Bus Lane Concept - Ballard Street to Noyes Drive

Reasons for Tactical Bus Lanes:

- Has the potential to be a premium high-capacity transit connection that goes from residential to commercial/employment/residential mixed use
- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to WMATA Metrobus (Q2, Q4, Y2, Y7, Y8)
- Could provide operational benefits for routes between high demand areas

Existing Segment Characteristics:

- No parking and peak hour restrictions
- Single and multifamily homes
- Posted speed limit: 35 mph

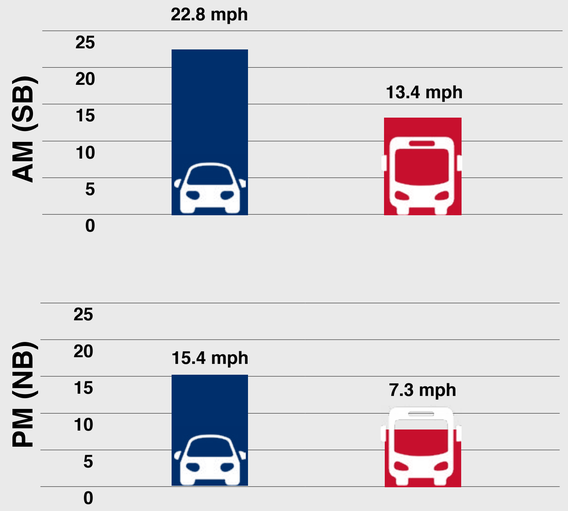
Changes to the Segment:

- The curbside lane would be re-purposed to a peak period bus lane with options to operate in both directions or peak direction only
- Right turns will not be restricted
- Skipped reds striping will indicate where vehicles are allowed to enter the bus lane

Bus Ridership:

- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	7	9
Vehicles Per Hour	1,548	1,310

Note:
- 2019 bus frequencies provided by WMATA
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	141	172
Vehicle Person Throughput	1,827	1,546

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

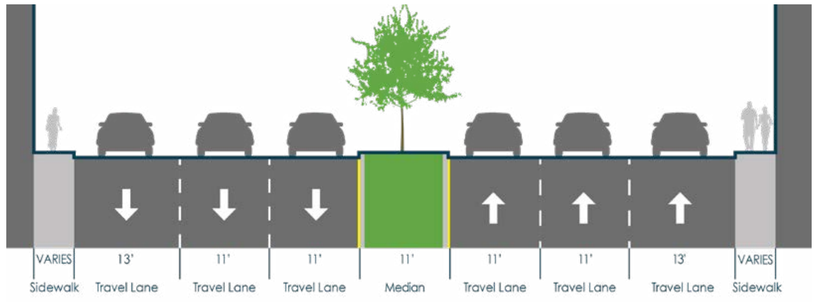
Concept Plan View

Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

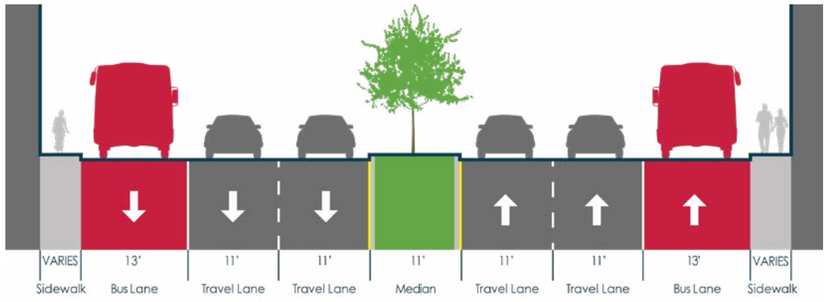
Legend

- ### Average Peak Direction Bus Person Throughput
- Bus Stop
- Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)



Washington Metropolitan Area Transit Authority

Georgia Avenue (MD 97) Bus Lane Concept - Spring Street to Ballard Street

Reasons for Tactical Bus Lanes:

- Has the potential to be a premium high-capacity transit connection that goes from residential to commercial/employment/residential mixed use
- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to WMATA Metrobus (Q2, Q4, Y2, Y7, Y8)
- Could provide operational benefits for routes between high demand areas

Existing Segment Characteristics:

- No parking and peak hour restrictions
- Single and multifamily homes and open space
- Posted speed limit: 30 mph
- Southbound right turn volume @ Spring St intersection in the AM peak hour is >100

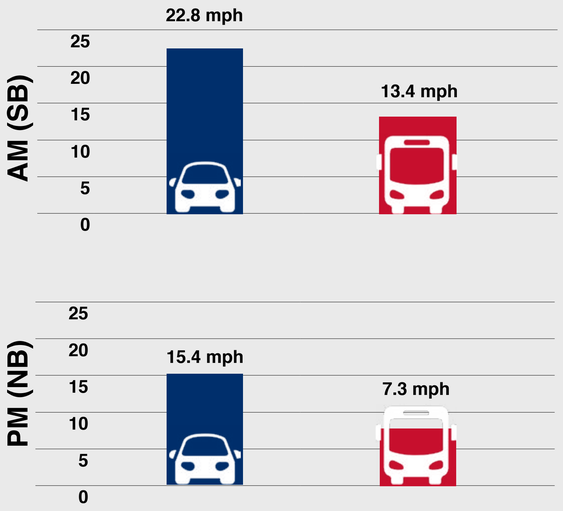
Changes to the Segment:

- The curbside lane would be re-purposed to a peak period bus lane with options to operate in both directions or peak direction only
- Right turns will not be restricted
- Skipped reds striping will indicate where vehicles are allowed to enter the bus lane

Bus Ridership:

- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	7	9
Vehicles Per Hour	1,548	1,296

Note:
- 2019 bus frequencies provided by WMATA
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	141	172
Vehicle Person Throughput	1,827	1,529

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

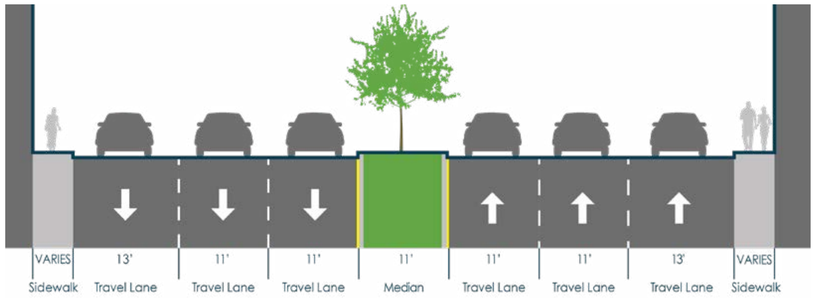
Concept Plan View

Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

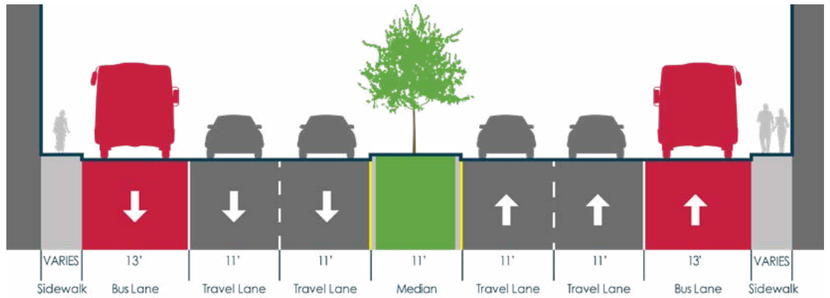
Legend

- ### — Average Peak Direction Bus Person Throughput
- Bus Stop
- RIGHT LANE BUSES BIKES RIGHT TURNS ONLY 6:30AM-9:30AM 3:30PM-7:00PM MON-FRI / BUSES BIKES RIGHT TURNS ONLY 6:30AM-9:30AM 3:30PM-7:00PM MON-FRI — Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)



Washington Metropolitan Area Transit Authority

Georgia Avenue (MD 97) Bus Lane Concept - Cameron Street to Spring Street

Reasons for Tactical Bus Lanes:

- Has the potential to be a premium high-capacity transit connection that goes from residential to commercial/ employment/residential mixed use
- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to WMATA Metrobus (Q2, Q4, Y2, Y7, Y8)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- Some parking and peak hour restrictions
- Street-facing commercial storefronts, as well as high rise office and residential uses
- Posted speed limit: 30 mph
- Southbound right turn volume @ Cameron St Intersection in the AM peak hour is >100

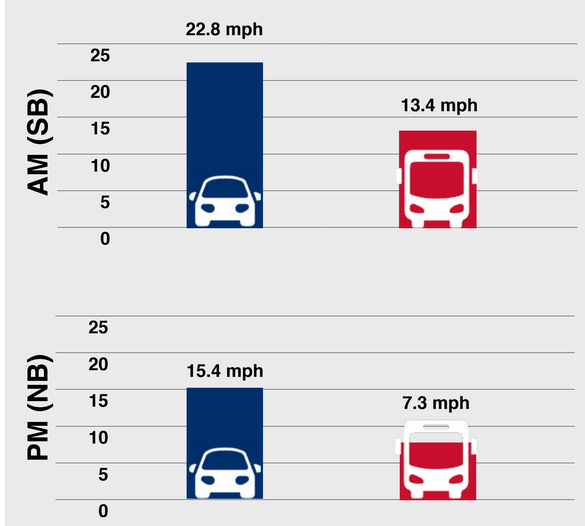
Changes to the Segment:

- The curbside lane would be re-purposed to a peak period bus lane with options to operate in both directions or peak direction only
- Right turns will not be restricted
- Skipped reds striping will indicate where vehicles are allowed to enter the bus lane

Bus Ridership:

- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	7	9
Vehicles Per Hour	1,548	1,102

Note:
- 2019 bus frequencies provided by WMATA
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	141	172
Vehicle Person Throughput	1,827	1,300

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

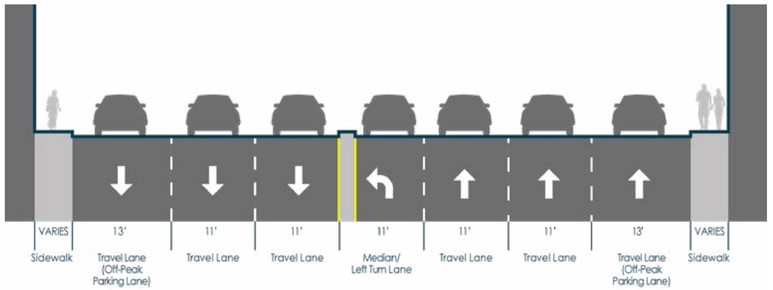
Concept Plan View

Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

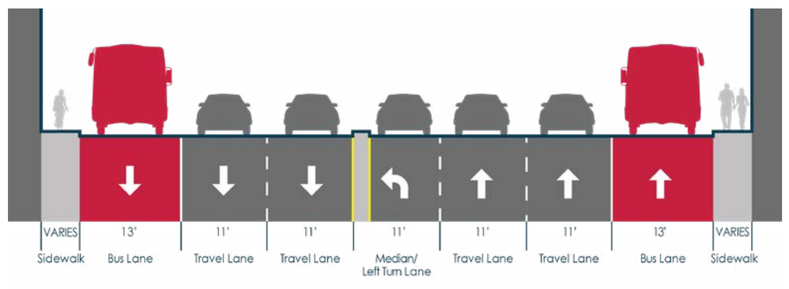
Legend

- ### — Average Peak Direction Bus Person Throughput
- Bus Stop
- Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)



Washington Metropolitan Area Transit Authority

Georgia Avenue (MD 97) Bus Lane Concept - Colesville Road (US 29 / MD 384)

Reasons for Tactical Bus Lanes:

- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to WMATA Metrobus (Q2, Q4, Y2, Y7, Y8)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- Some parking and peak hour restrictions
- Street-facing commercial storefronts, as well as high rise office and residential uses
- Posted speed limit: 30 mph
- Northbound right turn volume @ Colesville Rd intersection
  - AM > 100
  - PM > 200

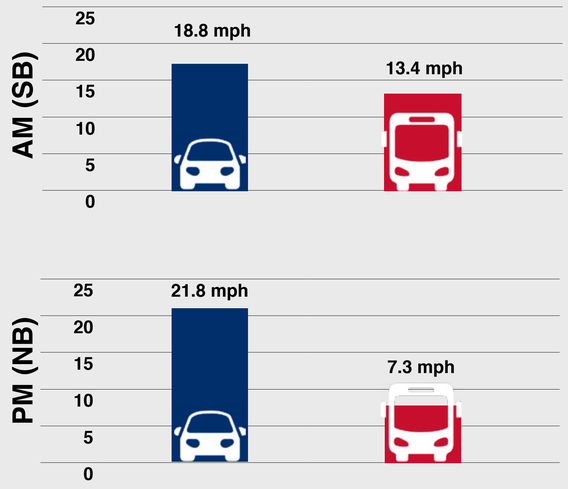
Changes to the Segment:

- The curbside lane would be re-purposed to a peak period bus lane with options to operate in both directions or peak direction only
- The re-purposed lane is a travel lane, but there are some locations where it is currently used for parking and loading between 9:30 am – 6:00 pm southbound and 9:30 am – 3:30 pm northbound
- Right turns will not be restricted
- Skipped reds striping will indicate where vehicles are allowed to enter the bus lane

Bus Ridership:

- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	7	9
Vehicles Per Hour	1,431	1,464

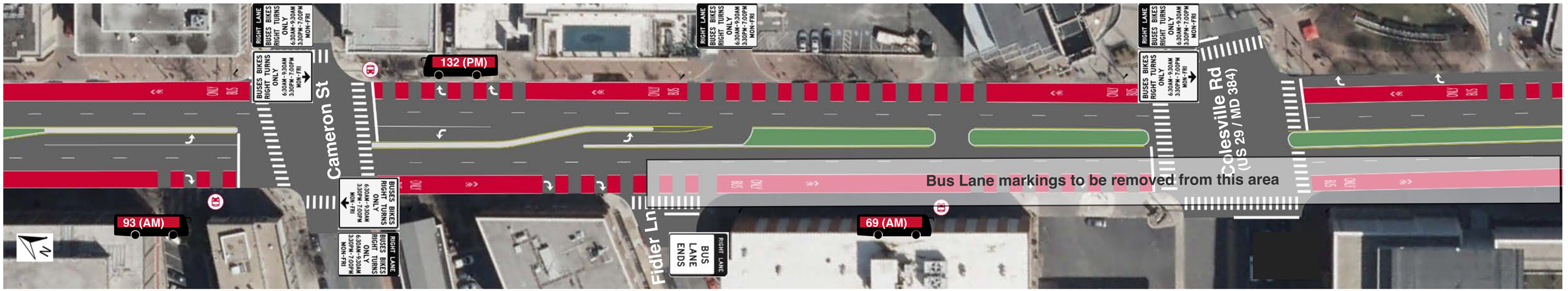
Note:
- 2019 bus frequencies provided by WMATA
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	141	172
Vehicle Person Throughput	1,689	1,728

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

Concept Plan View

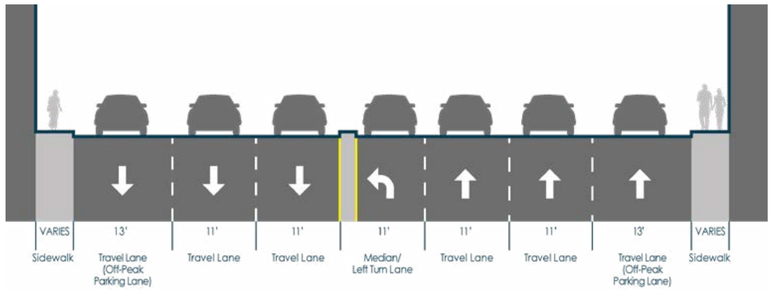


Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

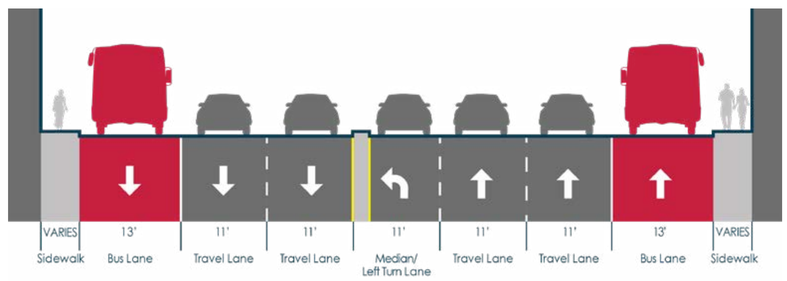
Legend

- ### — Average Peak Direction Bus Person Throughput
- Bus Stop
- Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)



Washington Metropolitan Area Transit Authority

Georgia Avenue (MD 97) Bus Lane Concept - Wayne Avenue (MD 594A) to Colesville Road (US 29 / MD 384)

Reasons for Tactical Bus Lanes:

- Provides an important connection to the Metrorail Red Line, MARC Brunswick Line, as well as Ride On, Flash BRT, Metrobus, and intercity bus services at Silver Spring Transit Center
- Provides access to both WMATA Metrobus (F4, Q2, Q4, Y2, Y7, Y8) and Montgomery County Ride On (12, 14, 16, 17, 20)
- Could provide operational benefits for many routes in a high demand area, including the Flash Orange line

Existing Segment Characteristics:

- No parking and peak hour restrictions
- Street-facing commercial storefronts and high rise office, residential, and hotel uses
- Posted speed limit: 30 mph
- Southbound right turn volume @ Wayne Ave intersection in the AM peak hour is > 200

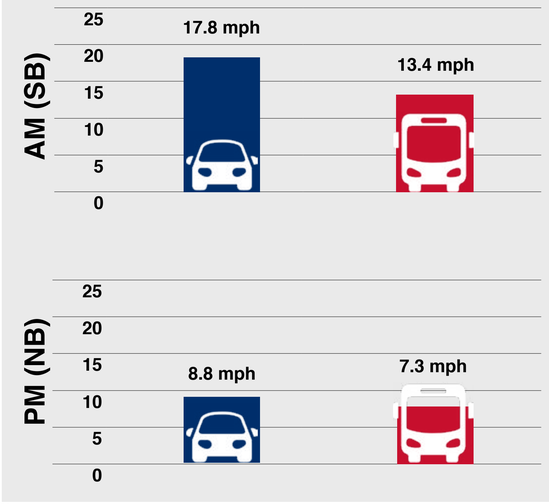
Changes to the Segment:

- The curbside lanes would be re-purposed to a peak period bus lane except for the northbound right turn lane at Colesville Rd. Options for bus lane operations include peak period in both directions or peak direction only.
- During the off-peak period: the southbound curbside bus lane is a travel lane and retains the existing no parking restriction; the northbound curbside bus lane from Wayne Ave and Ellsworth Dr is a travel lane and retains existing no parking and no standing restrictions; and the northbound offset bus lane from Ellsworth Dr to Colesville Rd is a travel lane.
- Right turns will not be restricted
- Skipped reds striping will indicate where vehicles are allowed to enter the bus lane

Bus Ridership:

- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result has increased the frequency of service.

Speeds



Note:
- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume

	AM (SB)	PM (NB)
Buses Per Hour	19	26
Vehicles Per Hour	1,773	1,532

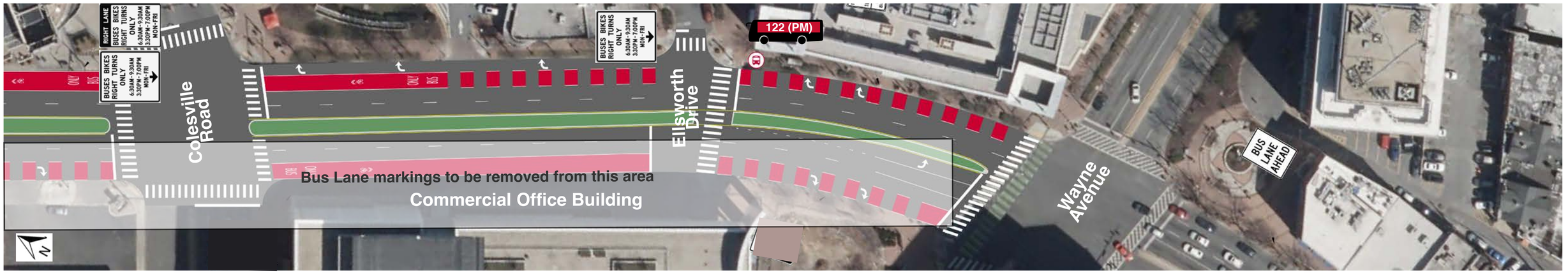
Note:
- 2019 Metrobus and RideOn bus frequencies. Metrobus frequencies provided by WMATA.
- 2022 vehicle volumes provided by MCDOT

Person Throughput Per Hour

	AM (SB)	PM (NB)
Bus Person Throughput	104	151
Vehicle Person Throughput	2,092	1,808

Note:
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Bus person throughput only includes WMATA passengers
- Vehicle person throughput = 1.18 pax per vehicle * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)

Concept Plan View

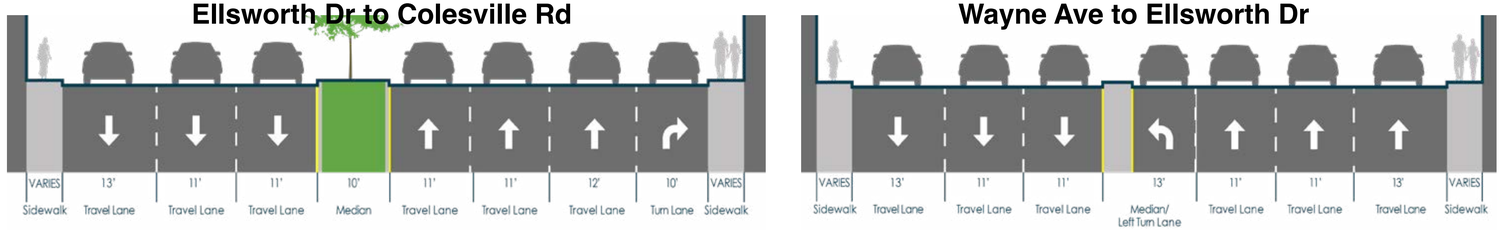


Note: Average passenger load of all weekday bus routes in the peak direction (AM southbound, PM northbound)
Note: All signs are not shown

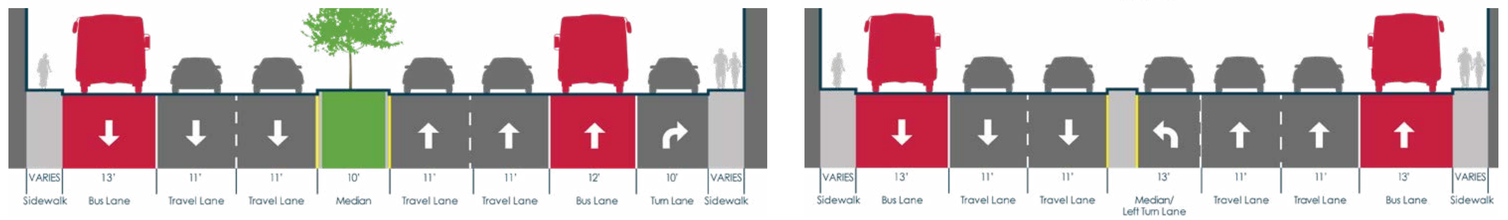
Legend

- ### — Average Peak Direction Bus Person Throughput
- Bus Stop
- Bus Lane Signs (Ground Mounted, Overhead)

Existing Typical Cross-Section



Proposed Typical Cross-Section (Peak Period)**



** Bus lanes to operate as travel lanes for all vehicles in off-peak periods and maintain existing no parking restrictions during demonstration phase

Washington Metropolitan Area Transit Authority

Queue Jump – Georgia Avenue (MD 97) at Cameron Street

Queue jumps allow buses to move ahead of other traffic stopped at red lights by giving bus operators special signals before the traffic light turns green. This allows bus transportation to be safer and more reliable.

Reasons for Queue Jumps:
- A queue jump reduces bus delays by an average of 12 seconds
- Complements reliability and on-time performance improvements from bus lanes
- Provides operational benefits for Metrobus Q2, Q4, Y2, Y7, and Y8

Existing Intersection Characteristics:
- Bus Frequency: 7 buses per hour (once every 8 minutes)
- Nearside stop in right turn only lane
- Commercial and residential

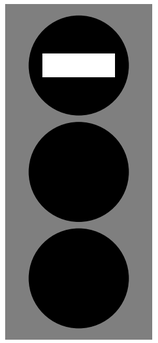
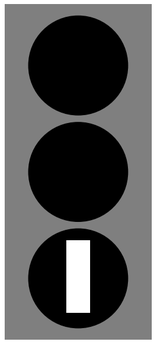
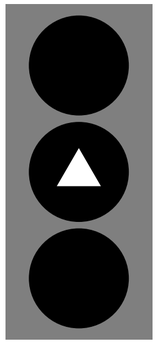
Bus Ridership:
- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day
- WMATA expects ridership to continue to grow and as a result, has increased the frequency of service

Changes to Signal Operations:
- Queue jump locations have a separate bus-only signal
- Bus operators will look at this bus-only signal to know if they can proceed safely
- Drivers only follow the traffic signal (RED, YELLOW, GREEN) phases
- Drivers do not use the bus signal phases at an intersection
- Pedestrians use the pedestrian signal phases (WALK, DON'T WALK)

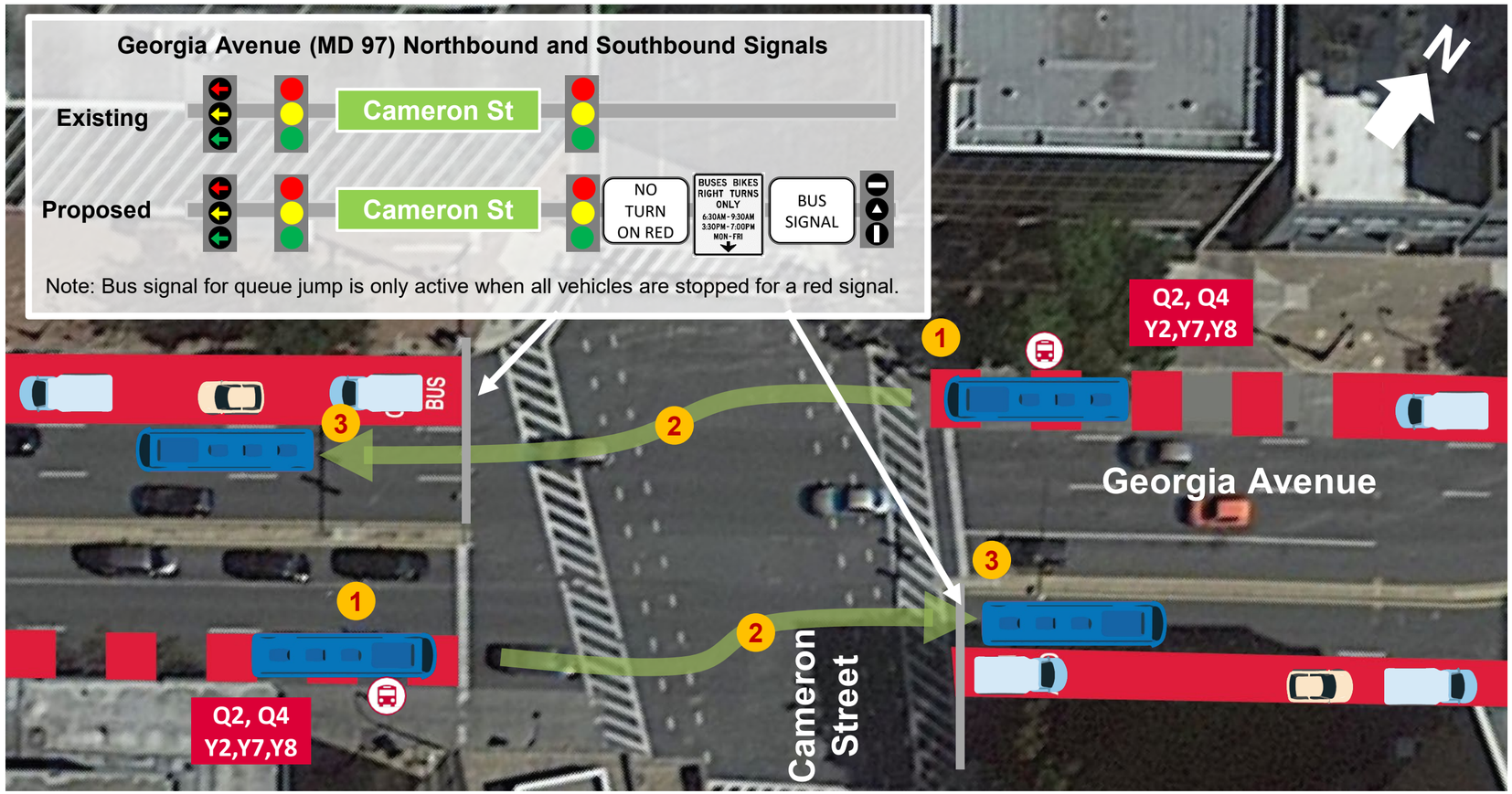
Legend:
Bus Stop

Bus Route

Phases of Bus-Only Queue Jump Signals

1 Horizontal Bar	2 Vertical Bar	3 Flashing Triangle
		
No Queue Jump The horizontal bar is similar to the stop signal in the traditional traffic signal. The bus does not have priority, but it obeys the traffic signal like other vehicles.	**Use Queue Jump** The vertical bar is similar to the green signal, indicating bus operators can move ahead of other vehicles.	**Clear Intersection** The flashing triangle tells the bus operator to clear the intersection. It is similar to a yellow signal.

Concept Plan View



Note: All signs are not shown

Washington Metropolitan Area Transit Authority

Queue Jump – Georgia Avenue (MD 97) at International Drive

Queue jumps allow buses to move ahead of other traffic stopped at red lights by giving bus operators special signals before the traffic light turns green. This allows bus transportation to be safer and more reliable.

Reasons for Queue Jumps:
- A queue jump reduces bus delays by an average of 12 seconds
- Complements reliability and on-time performance improvements from bus lanes
- Provides operational benefits for Metrobus Q2, Q4, Y2, Y7, and Y8

Existing Intersection Characteristics:
- Bus Frequency: 7 buses per hour (once every 8 minutes)
- Nearside stop in right turn only lane
- Commercial and residential

Bus Ridership:
- While bus ridership on the corridor is 12% lower than pre-COVID conditions, ridership is recovering, currently serving 15,799 Metrobus passengers per day
- WMATA expects ridership to continue to grow and as a result, has increased the frequency of service

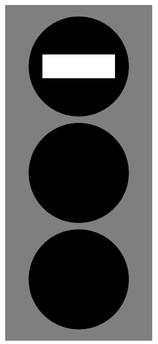
Changes to Signal Operations:
- Queue jump locations have a separate bus-only signal
- Bus operators will look at this bus-only signal to know if they can proceed safely
- Drivers only follow the traffic signal (RED, YELLOW, GREEN) phases
- Drivers do not use the bus signal phases at an intersection
- Pedestrians use the pedestrian signal phases (WALK, DON'T WALK)

Legend:
Bus Stop

Bus Route

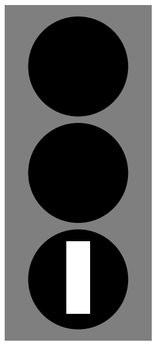
Phases of Bus-Only Queue Jump Signals

1 Horizontal Bar



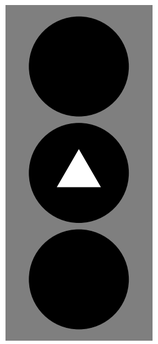
No Queue Jump
The horizontal bar is similar to the stop signal in the traditional traffic signal. The bus does not have priority, but it obeys the traffic signal like other vehicles.

2 Vertical Bar



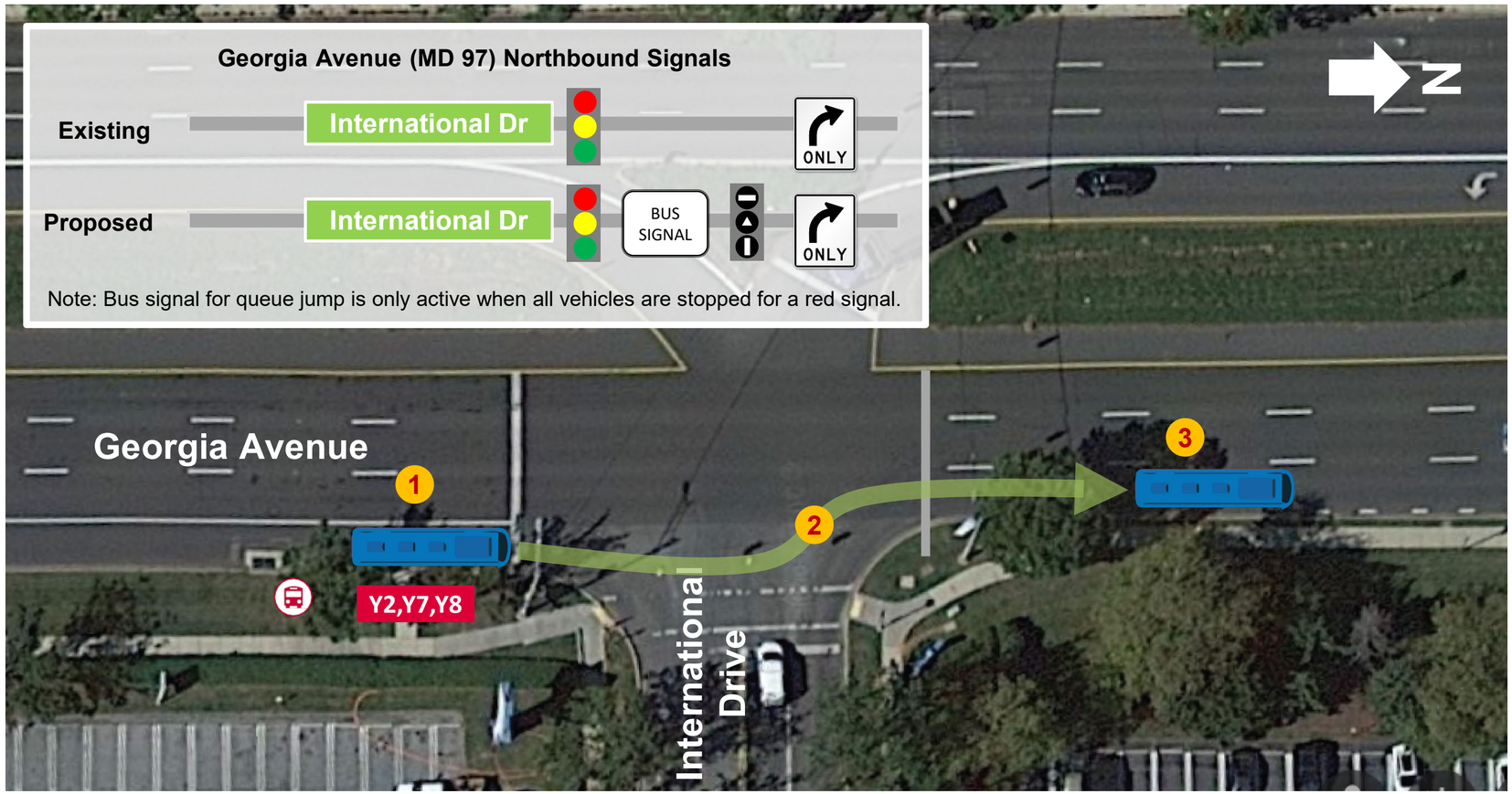
Use Queue Jump
The vertical bar is similar to the green signal, indicating bus operators can move ahead of other vehicles.

3 Flashing Triangle



Clear Intersection
The flashing triangle tells the bus operator to clear the intersection. It is similar to a yellow signal.

Concept Plan View



Note: All signs are not shown

Washington Metropolitan Area Transit Authority