









# LEGEND

**Blue Icons** ..... Findings related to Metrobus S9.

**Red Icons** ..... Findings related to Metrobus S1, S2, and S4.

**Blue + Red Icons** ..... Findings related to Metrobus S1, S2, S4, and S9.

Icon	Finding	Criteria
	Delays or operational issues caused by bus bunching.	Top three largest ranges of doors open times.
	Delays or operational issues caused by limited bus zone space available at far-side bus stop.	Proximity to intersection allows enough bus zone space for only one bus at a time.
	Delays or operational issues caused by close proximity of two bus stops.	Located within one block of another stop.
	Delays or operational issues caused by high boardings at stop.	An average of five or more boardings.
	Delays or operational issues caused by high alightings at stop.	An average of five or more alightings.
	Delays or operational issues caused by traffic congestion and/or intersection operation.	Level of Service D or worse.
	High bus-to-bus transfer activities at stop.	Monthly bus to bus transfers greater than 1500 passengers.
	Delays caused by high doors-open times.	Average doors open time of 20 seconds or greater.
NO ICON (Blue and red lines on maps)	Slow bus operations.	Average travel speed of less than 8.0 mph.
NO ICON (Call-out on maps)	Poor headway adherence.	Levels of service E and F per the Transit Capacity and Quality of Service Manual.

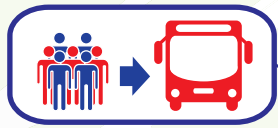
# AM Peak Southbound Direction

# PM Peak Northbound Direction

Buses already bunched at entry to Study Area.

Center reversible lane utilization is low compared to curbside lane, compounding delay.

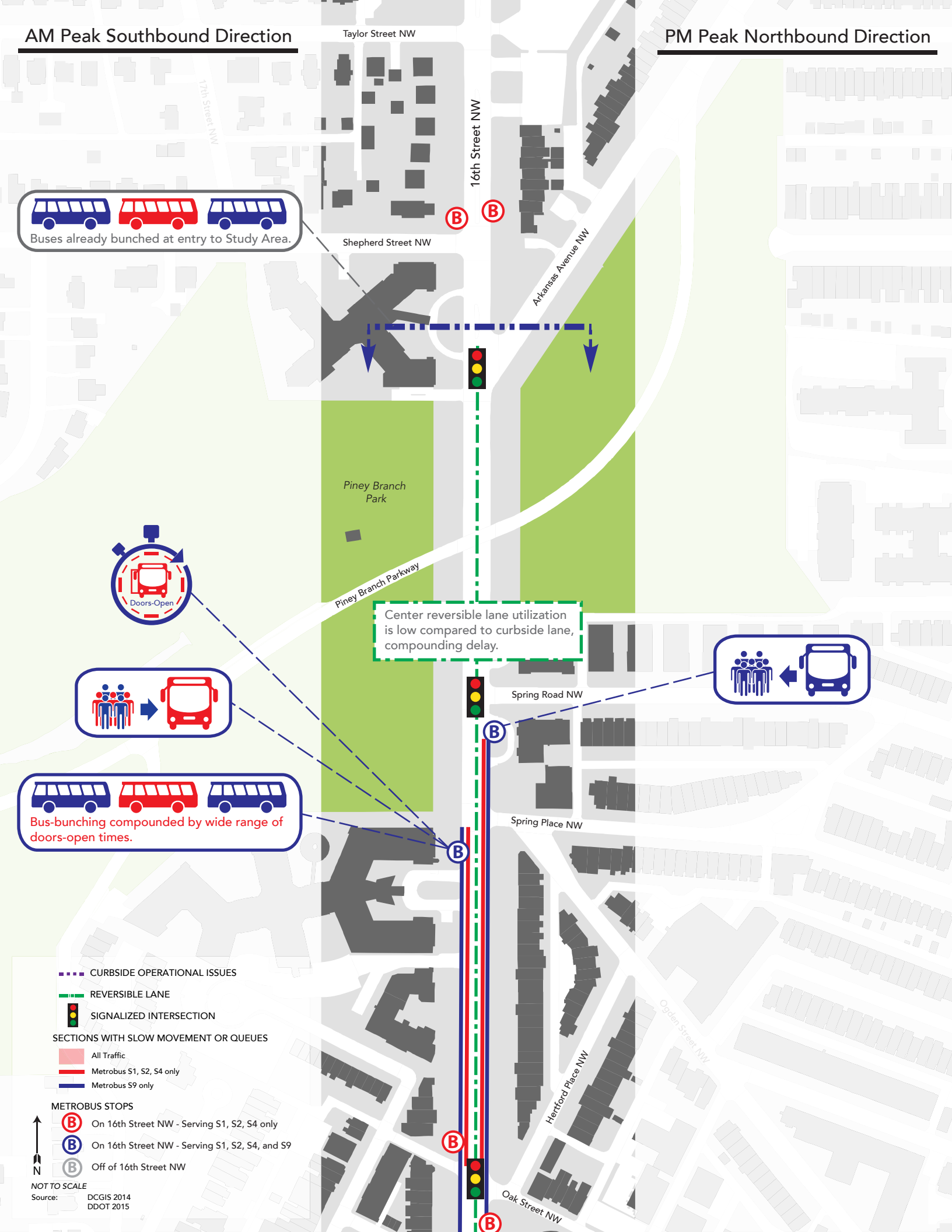
Bus-bunching compounded by wide range of doors-open times.



- CURBSIDE OPERATIONAL ISSUES
- REVERSIBLE LANE
- SIGNALIZED INTERSECTION
- SECTIONS WITH SLOW MOVEMENT OR QUEUES
  - All Traffic
  - Metrobus S1, S2, S4 only
  - Metrobus S9 only

- METROBUS STOPS**
- On 16th Street NW - Serving S1, S2, S4 only
  - On 16th Street NW - Serving S1, S2, S4, and S9
  - Off of 16th Street NW

NOT TO SCALE  
Source: DCGIS 2014  
DDOT 2015



AM Peak Southbound Direction

PM Peak Northbound Direction

Limited Bus Zone Capacity

Doors-Open

Bus-bunching compounded by wide range of doors-open times.

Doors-Open

Close Proximity of Stops

Close Proximity of Stops

Close Proximity of Stops

Center reversible lane utilization is low compared to curbside lane, compounding delay.

- CURBSIDE OPERATIONAL ISSUES
- REVERSIBLE LANE
- SIGNALIZED INTERSECTION

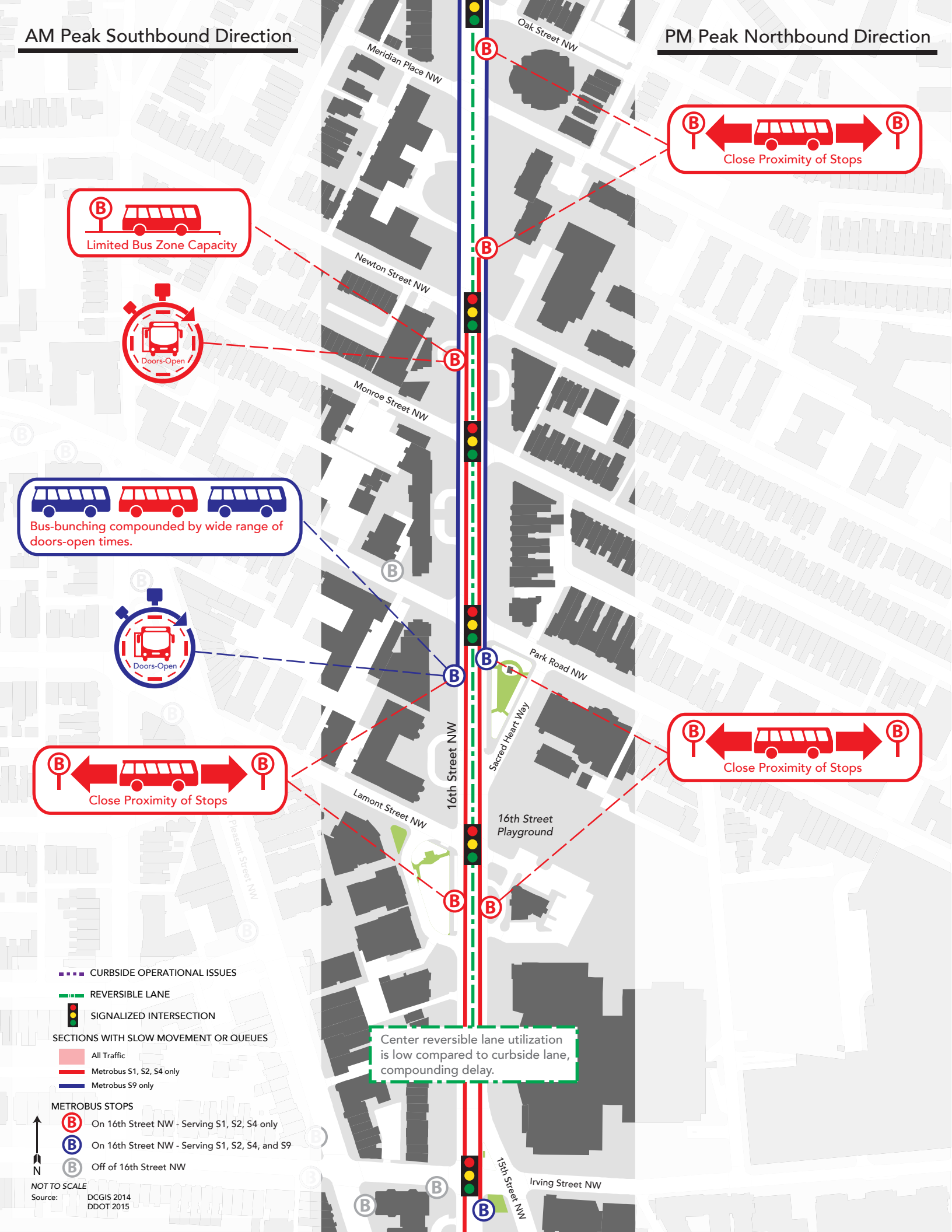
SECTIONS WITH SLOW MOVEMENT OR QUEUES

- All Traffic
- Metrobus S1, S2, S4 only
- Metrobus S9 only

METROBUS STOPS

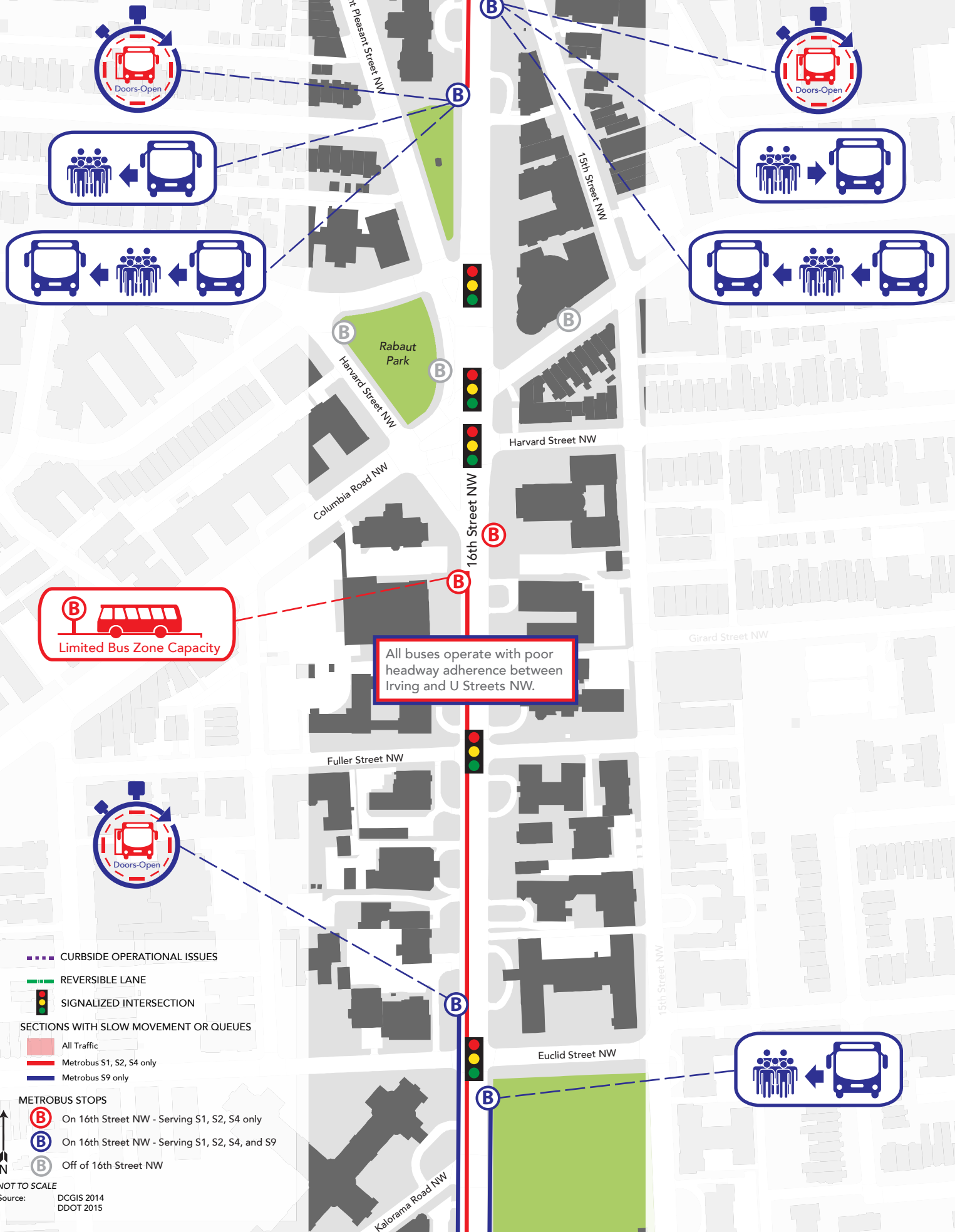
- On 16th Street NW - Serving S1, S2, S4 only
- On 16th Street NW - Serving S1, S2, S4, and S9
- Off of 16th Street NW

NOT TO SCALE  
Source: DCGIS 2014  
DDOT 2015



# AM Peak Southbound Direction

# PM Peak Northbound Direction



**Limited Bus Zone Capacity**

All buses operate with poor headway adherence between Irving and U Streets NW.

- CURBSIDE OPERATIONAL ISSUES
- REVERSIBLE LANE
- SIGNALIZED INTERSECTION
- SECTIONS WITH SLOW MOVEMENT OR QUEUES
  - All Traffic
  - Metrobus S1, S2, S4 only
  - Metrobus S9 only

- METROBUS STOPS**
- (B) On 16th Street NW - Serving S1, S2, S4 only
  - (B) On 16th Street NW - Serving S1, S2, S4, and S9
  - (B) Off of 16th Street NW

NOT TO SCALE  
Source: DCGIS 2014  
DDOT 2015

**AM Peak Southbound Direction**

**PM Peak Northbound Direction**



Transition from three lanes to two lanes.



All buses operate with poor headway adherence between Irving and U Streets NW.

Bus-bunching compounded by wide range of doors-open times.

Close Proximity of Stops

Limited Bus Zone Capacity

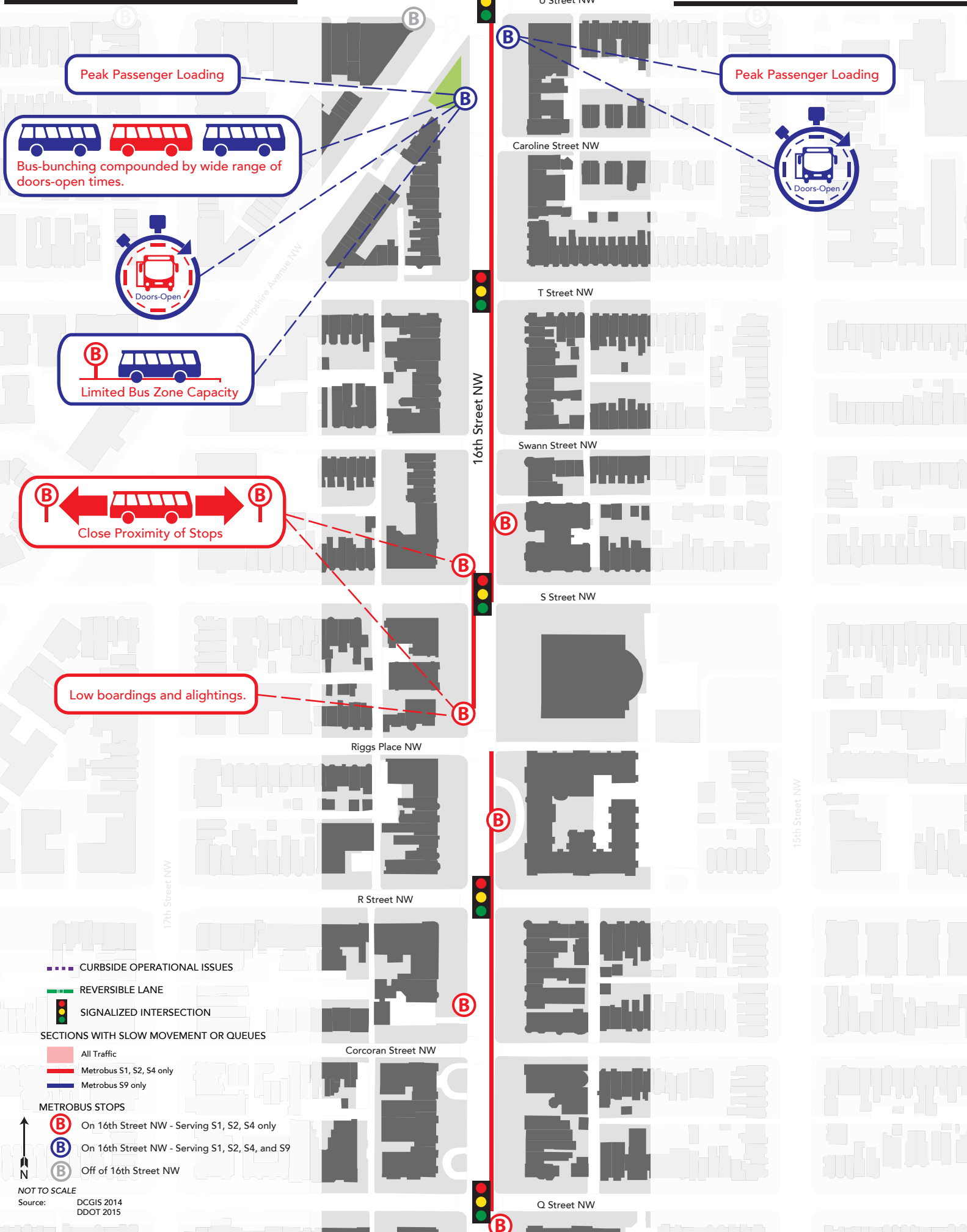
Close Proximity of Stops

- CURBSIDE OPERATIONAL ISSUES
- REVERSIBLE LANE
- 🚦 SIGNALIZED INTERSECTION
- SECTION WITH SLOW MOVEMENT OR QUEUES
- 👉 All Traffic
- 👉 Metrobus S1, S2, S4 only
- 👉 Metrobus S9 only

- METROBUS STOPS**
- 🅑 On 16th Street NW - Serving S1, S2, S4 only
  - 🅒 On 16th Street NW - Serving S1, S2, S4, and S9
  - 🅓 Off of 16th Street NW

# AM Peak Southbound Direction

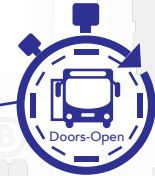
# PM Peak Northbound Direction





**AM Peak Southbound Direction**

**PM Peak Northbound Direction**



17th Street NW

16th Street NW

15th Street NW

Scott Circle

Massachusetts Avenue NW

M Street NW

--- CURBSIDE OPERATIONAL ISSUES

REVERSIBLE LANE

SIGNALIZED INTERSECTION

SECTIONS WITH SLOW MOVEMENT OR QUEUES

All Traffic

Metrobus S1, S2, S4 only

Metrobus S9 only

METROBUS STOPS

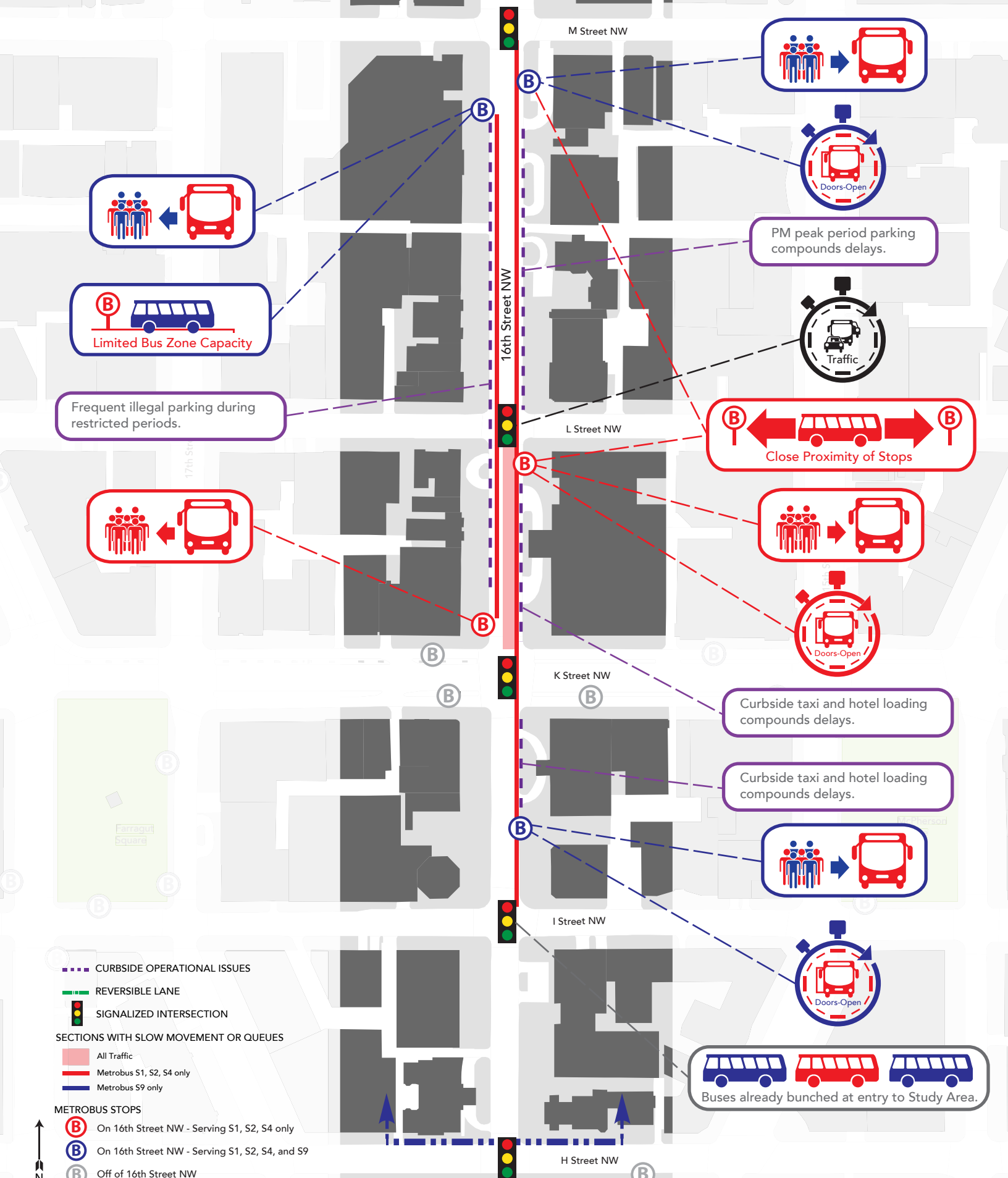
**(B)** On 16th Street NW - Serving S1, S2, S4 only

**(B)** On 16th Street NW - Serving S1, S2, S4, and S9

**(B)** Off of 16th Street NW

NOT TO SCALE

Source: DCGIS 2014  
DDOT 2015



--- CURBSIDE OPERATIONAL ISSUES

REVERSIBLE LANE

SIGNALIZED INTERSECTION

SECTIONS WITH SLOW MOVEMENT OR QUEUES

All Traffic  
 Metrobus S1, S2, S4 only  
 Metrobus S9 only

METROBUS STOPS

(B) On 16th Street NW - Serving S1, S2, S4 only  
 (B) On 16th Street NW - Serving S1, S2, S4, and S9  
 (B) Off of 16th Street NW

NOT TO SCALE  
 Source: DCGIS 2014  
 DDOT 2015

Lafayette Square