

# 2010 Service Evaluation Study



Public Meeting

Routes: 23A,C &  
25A,C,D

September 21 and 23, 2010

# What Will We Be Doing At This Meeting?

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- Introduce project team
- Describe study purpose and background
- Review project schedule
- Review transit assessment
- Roundtable discussion of service issues
- Describe next steps
- Explain how you can participate

# Project Staff

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- Girum Meseret, WMATA
- Tim Rosenberger, PB
- Brian Lavery, PB
- Caroline Nardi, PB

# What is the Purpose of this Project?

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- Examine the service efficiency of various routes to improve:
  - on-time performance
  - reliability
  - frequency
  - travel time, and
  - bus stop amenities



# Project Background

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- Why this project?
  - WMATA and partner jurisdictions are taking a systematic look at bus routes throughout the region
- What is the goal of the study?
  - Recommend service improvements as part of annual budget process

# Project Background

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- Project Methodology
  - Collect and analyze data
  - Talk to bus operators and service planners
  - Conduct a public meeting
  - Develop and evaluate service change plans
  - Develop recommendations and implementation strategy

# Project Schedule

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- Collect and analyze data, July to August
- Public meetings, 9/21 and 9/23
- Develop and evaluate service change plans, October
- Prepare draft recommendations, October
- Public meetings to discuss preliminary recommendations, 11/3 and 11/17
- Final recommendations, January 2011

23A,C

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## 23A,C History

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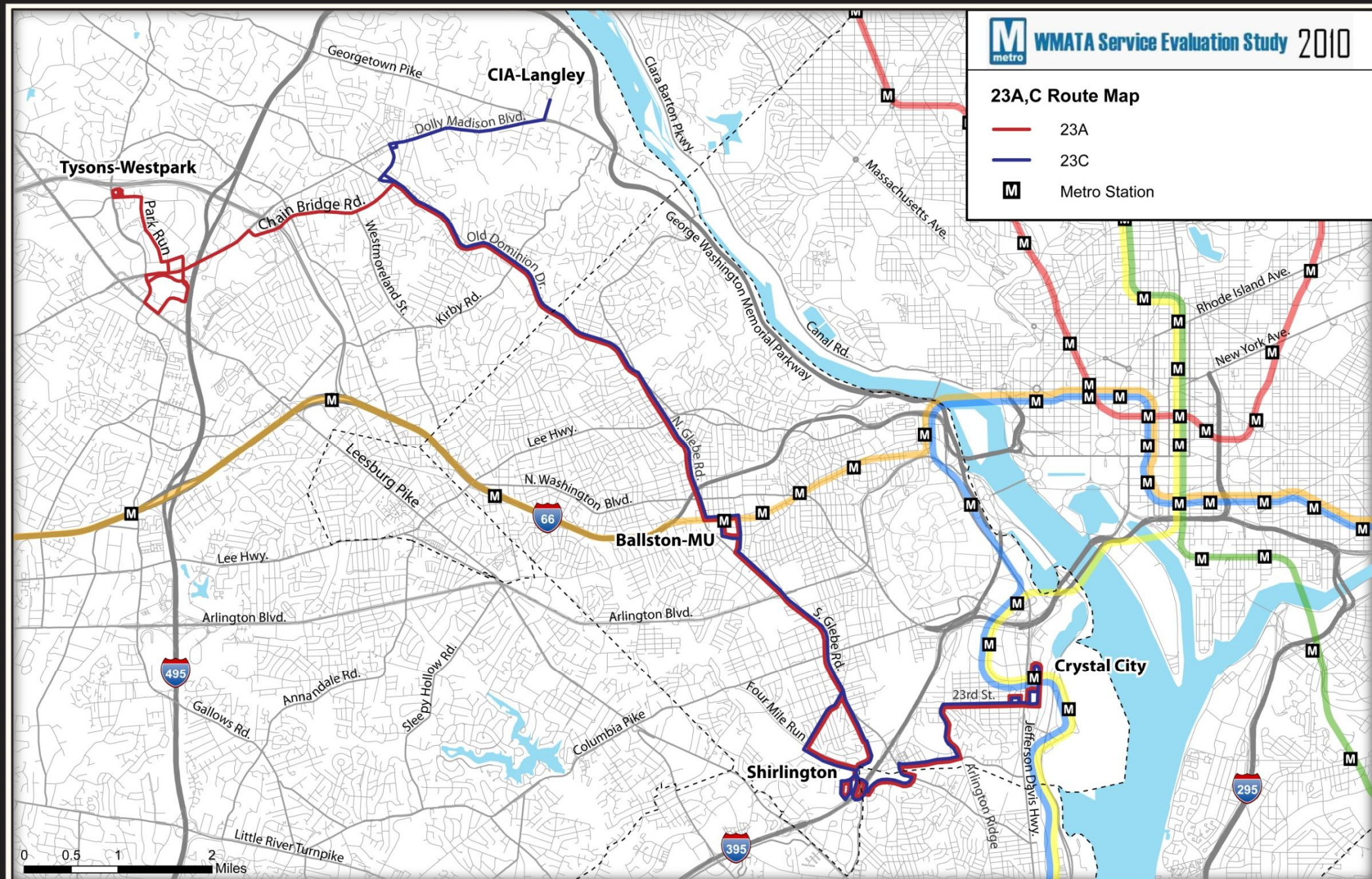
- Became a WMATA route in 1974
- Several variants between 1974 and 1979 while Orange Line under construction
- 23X, which ran between Great Falls and Ballston, eliminated in 1991
- Service extended to Tysons-Westpark Transit Station in 1999
- Line rerouted to serve new Shirlington Transit Center in 2008

# 23A,C Route Map

 **WMATA Service Evaluation Study 2010**

## 23A,C Route Map

-  23A
-  23C
-  Metro Station

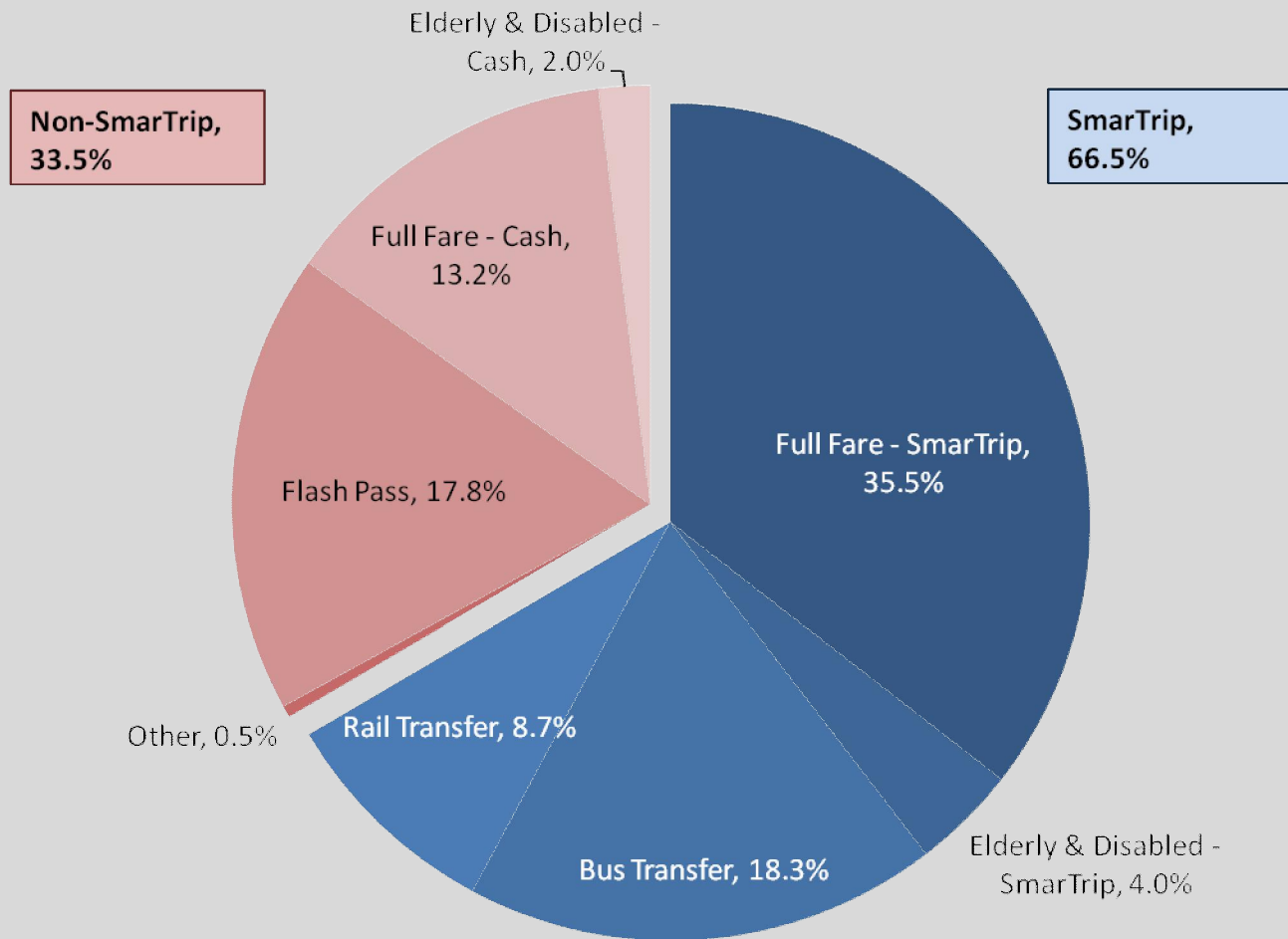


23A,C

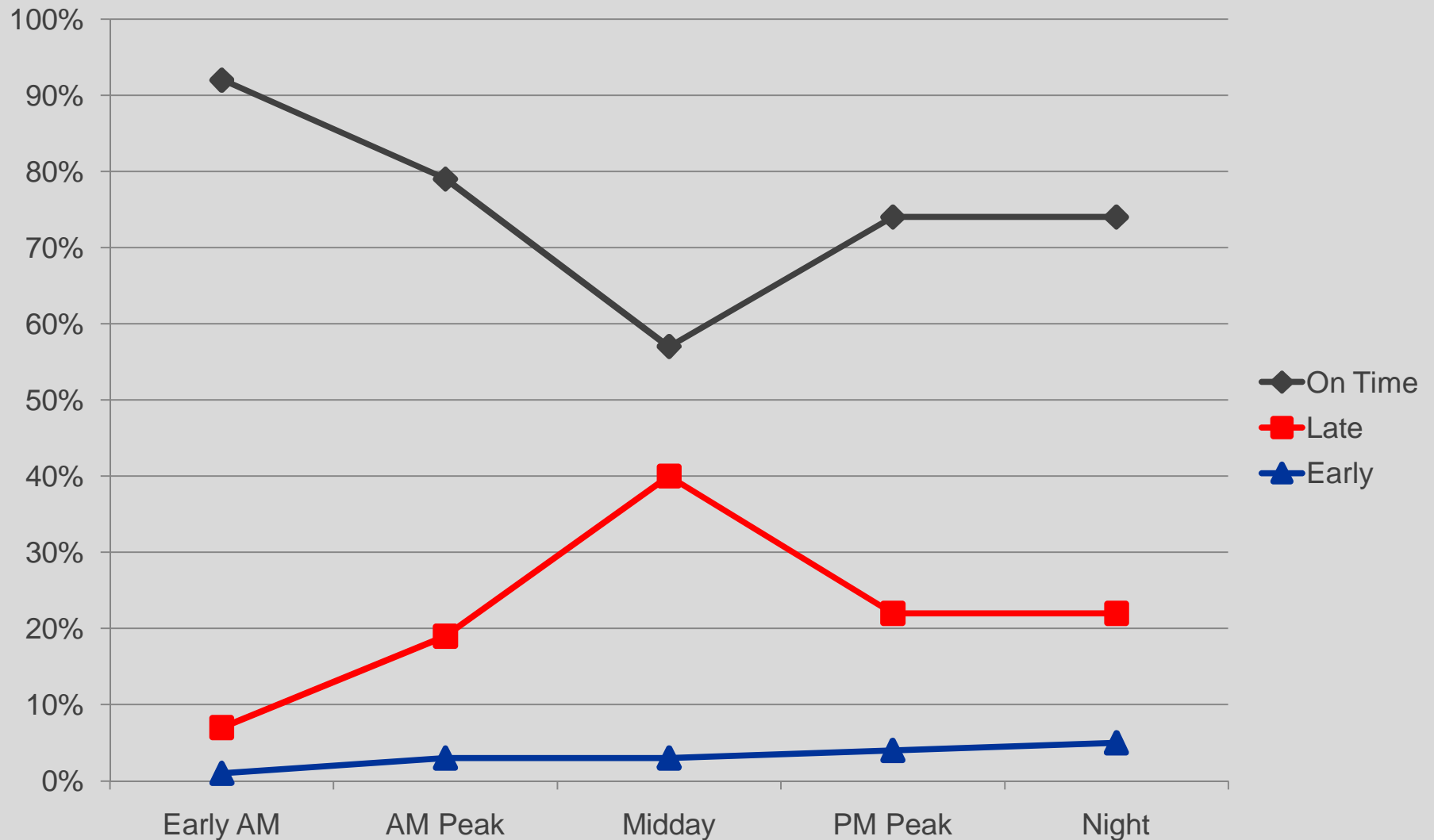
# Transit Service Assessment

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# 23A,C Fare Payment



# Weekday 23A On-Time Performance

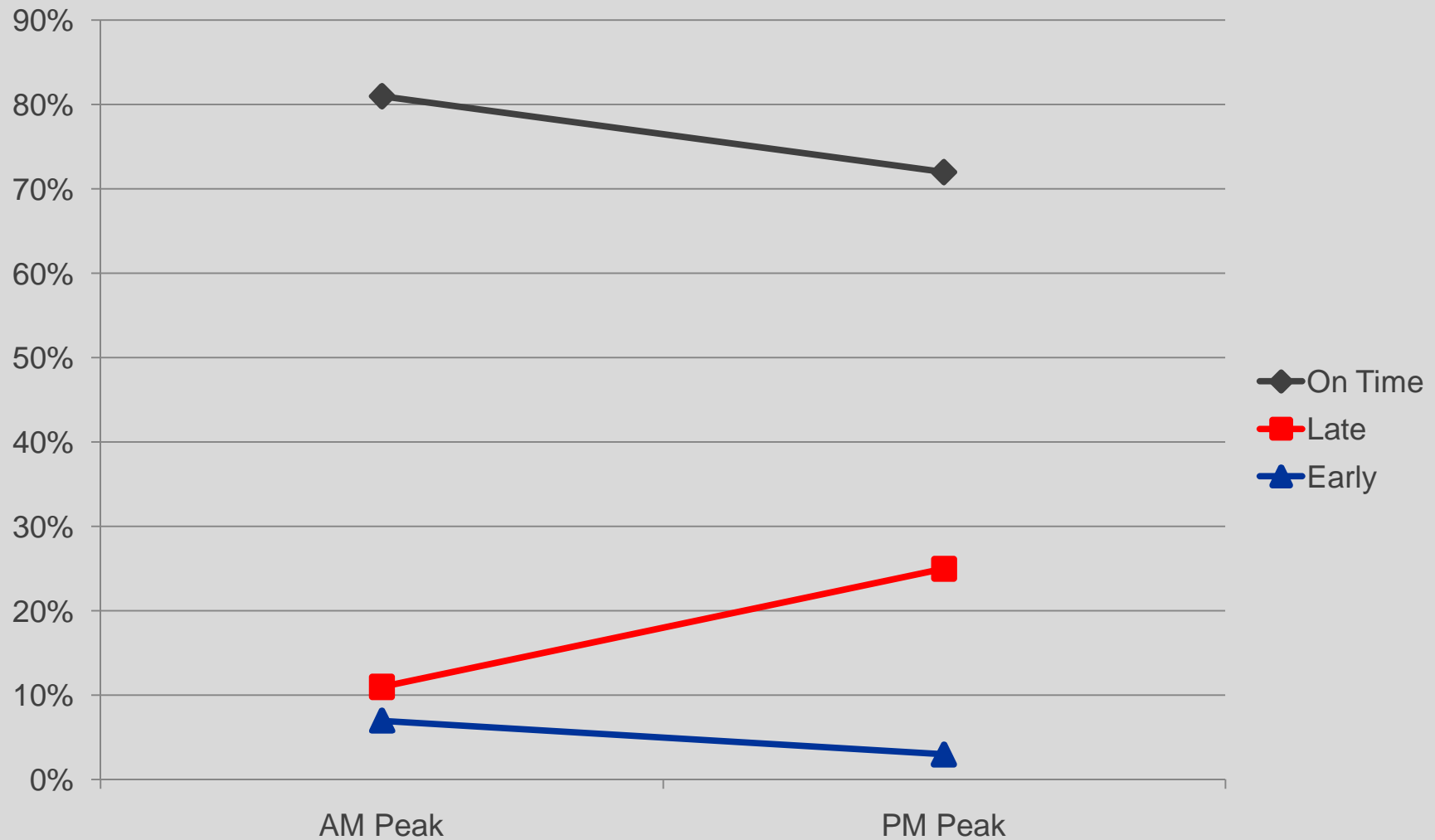


On-time performance represents average for all daily trips.

Early = more than two minutes early; Late = more than seven minutes late.



# Weekday 23C On-Time Performance



On-time performance represents average for all daily trips.

Early = more than two minutes early; Late = more than seven minutes late.

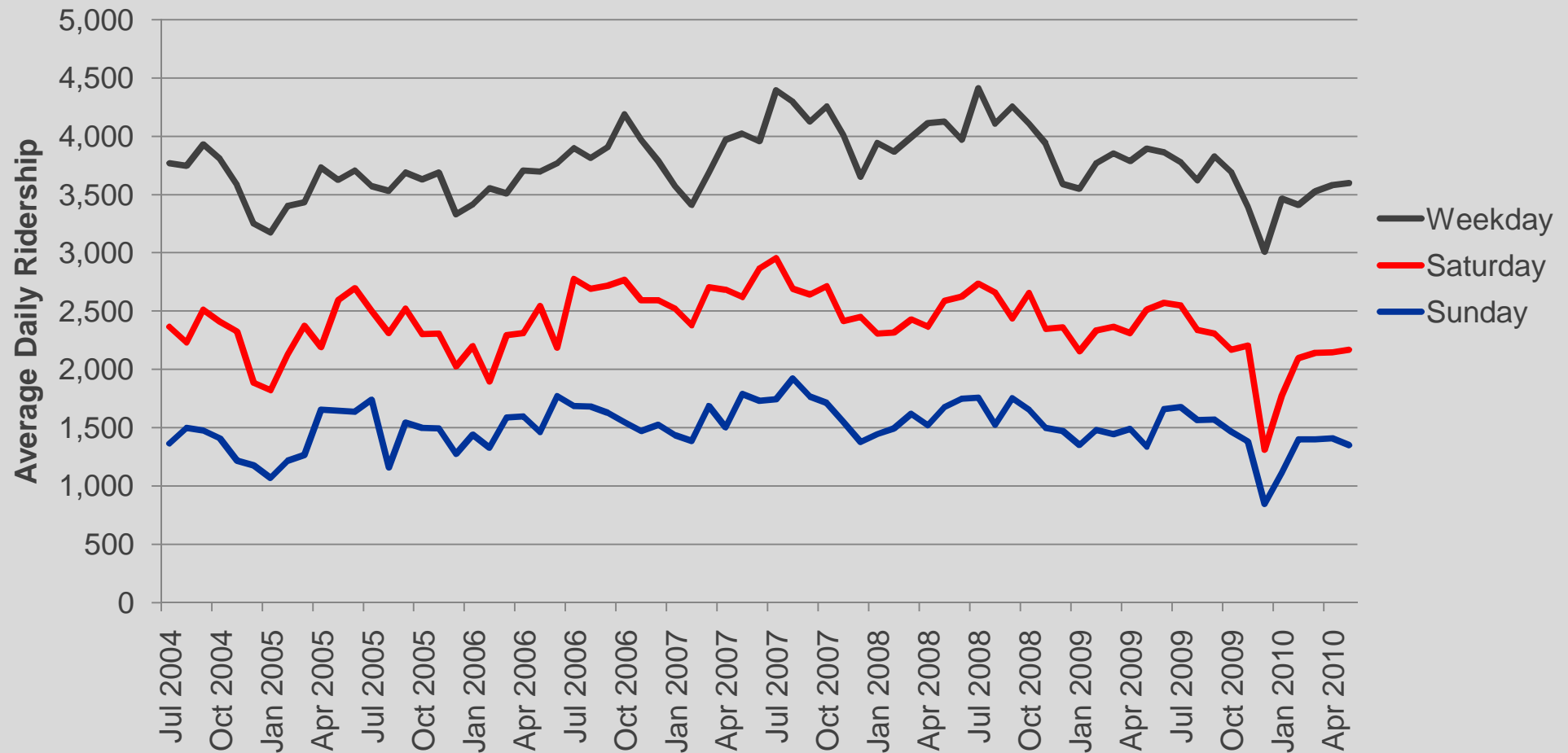


# 23A,C Ridership and Farebox Recovery

	Weekdays (23A,C)	Saturdays (23A only)	Sundays (23A only)
Average Daily Boardings	3,550	2,110	1,380
Boardings/Mile	3	2	3
Boardings/Trip	48	33	44
Farebox Recovery	18.9%	16.5%	21.9%

# 23A,C Ridership

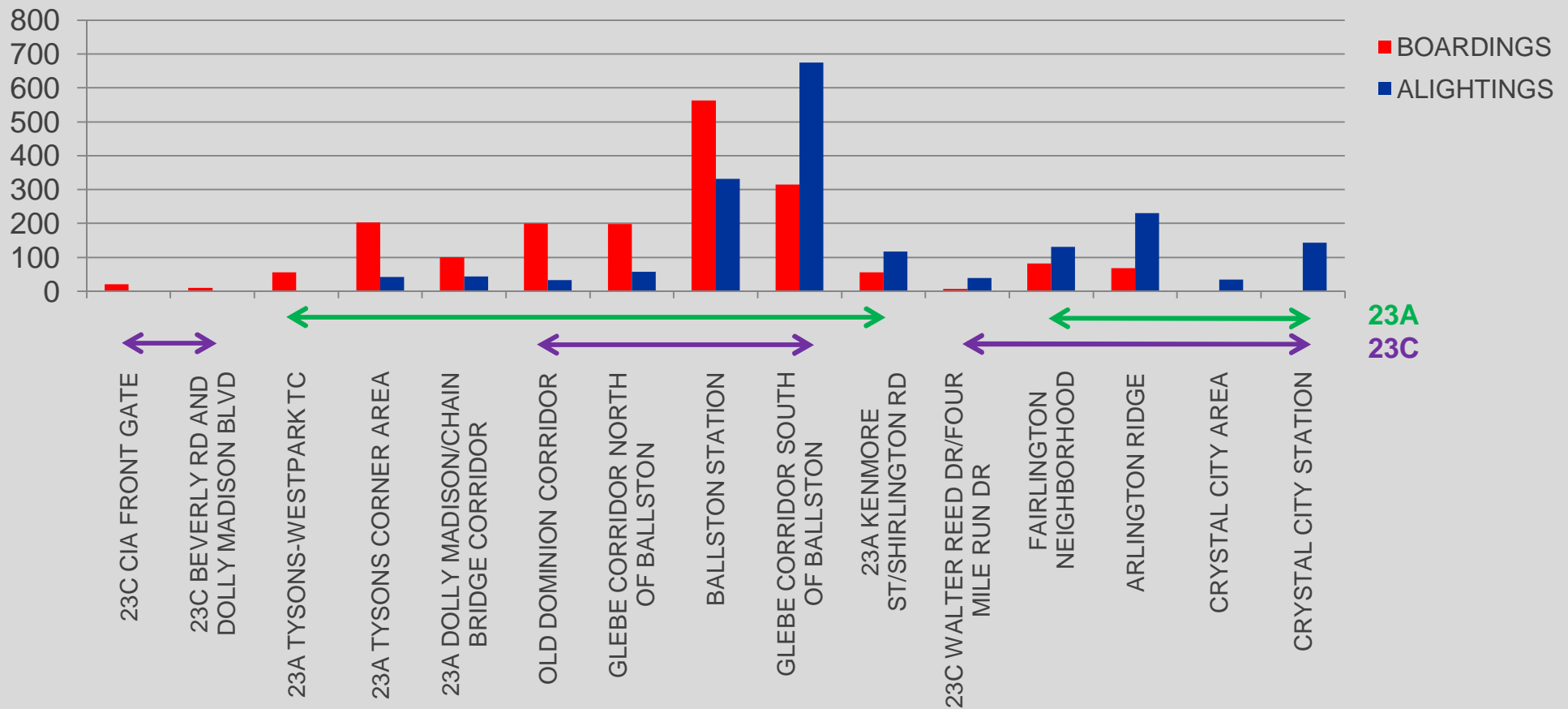
## Route 23A,C Six-year Average Daily Ridership





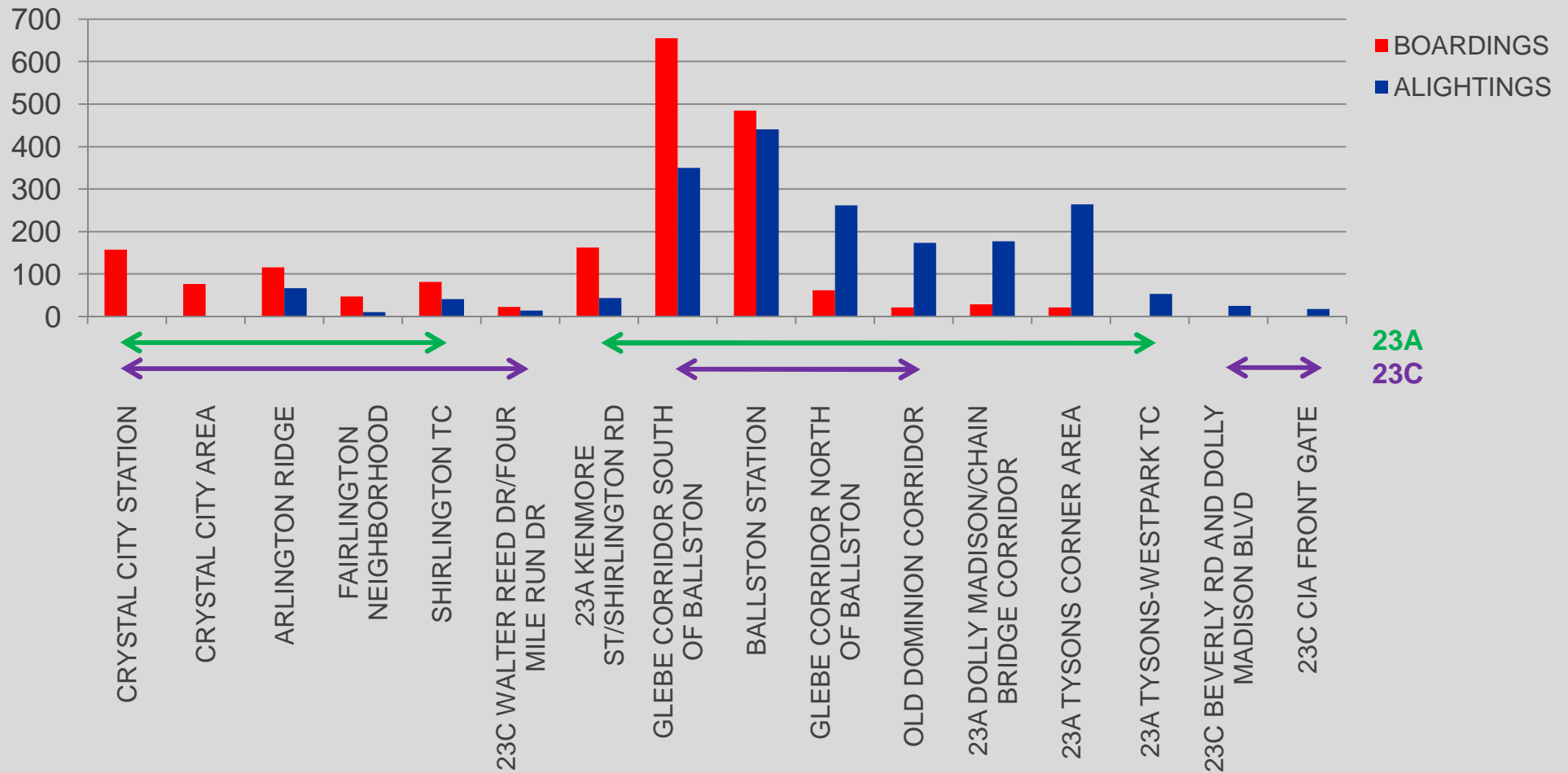
# 23A,C Boardings and Alightings—Eastbound

23A,C Eastbound Weekday Daily Boardings and Alightings



# 23A,C Boardings and Alightings—Westbound

23A,C Westbound Weekday Daily Boardings and Alightings



# 23A,C Capacity and Loading

Eastbound		
	Peak Load Point	Capacity at Point
AM Peak	Glebe Road/7th Street	23.6%
Midday	Randolph Road/Wilson Blvd.	45.7%
PM Peak	Randolph Road/Wilson Blvd.	50.9%
Night	Randolph Road/Wilson Blvd.	42.5%
Westbound		
	Peak Load Point	Capacity at Point
AM Peak	Glebe Road/Quincy Street	63.8%
Midday	Glebe Road/Quincy Street	55.7%
PM Peak	Fairfax Drive/Vermont Street	30.8%
Night	Ballston Station	19.7%

## Busiest Stops

Stop Location	Average Weekday Boardings
Ballston Station (Bus Bay E)	563
Ballston Station (Bus Bay C)	485
S Glebe Road and Columbia Pike	269
S Clark Street and 18th Street	157
N Glebe Road and Pershing Drive	74
S Glebe Road and Columbia Pike	58
Tysons Westpark Transit Station (Bus Bay D)	56
Carlin Springs Road and Columbia Pike	54
S Glebe Road and Old Glebe Road	54
N Glebe Road and Lee Highway	54

# 23A,C Bus Stop Amenities

Amenity	All Stops Requiring New or Improved Amenities	Percent of All Stops Requiring New or Improved Amenities
Bus Stop Sign	14	5%
Information Case	3	1%
System Map	8	3%
5'x8' Pedestrian Pad	147	54%
Rear Pedestrian Pad	10	4%
Sidewalk at Least 4' Wide	51	19%
Trash Can	1	< 1%
Shelter	13	5%
Seating	7	3%
Lighting	117	43%
NextBus LED	2	1%

# 23A,C Customer Complaints

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Type of Complaint	Number of Complaints
Driver behavior	34
Late arrival	22
No show	19
Pass up	12
Early departure	10
Stop change	3
<b>Total</b>	<b>100</b>

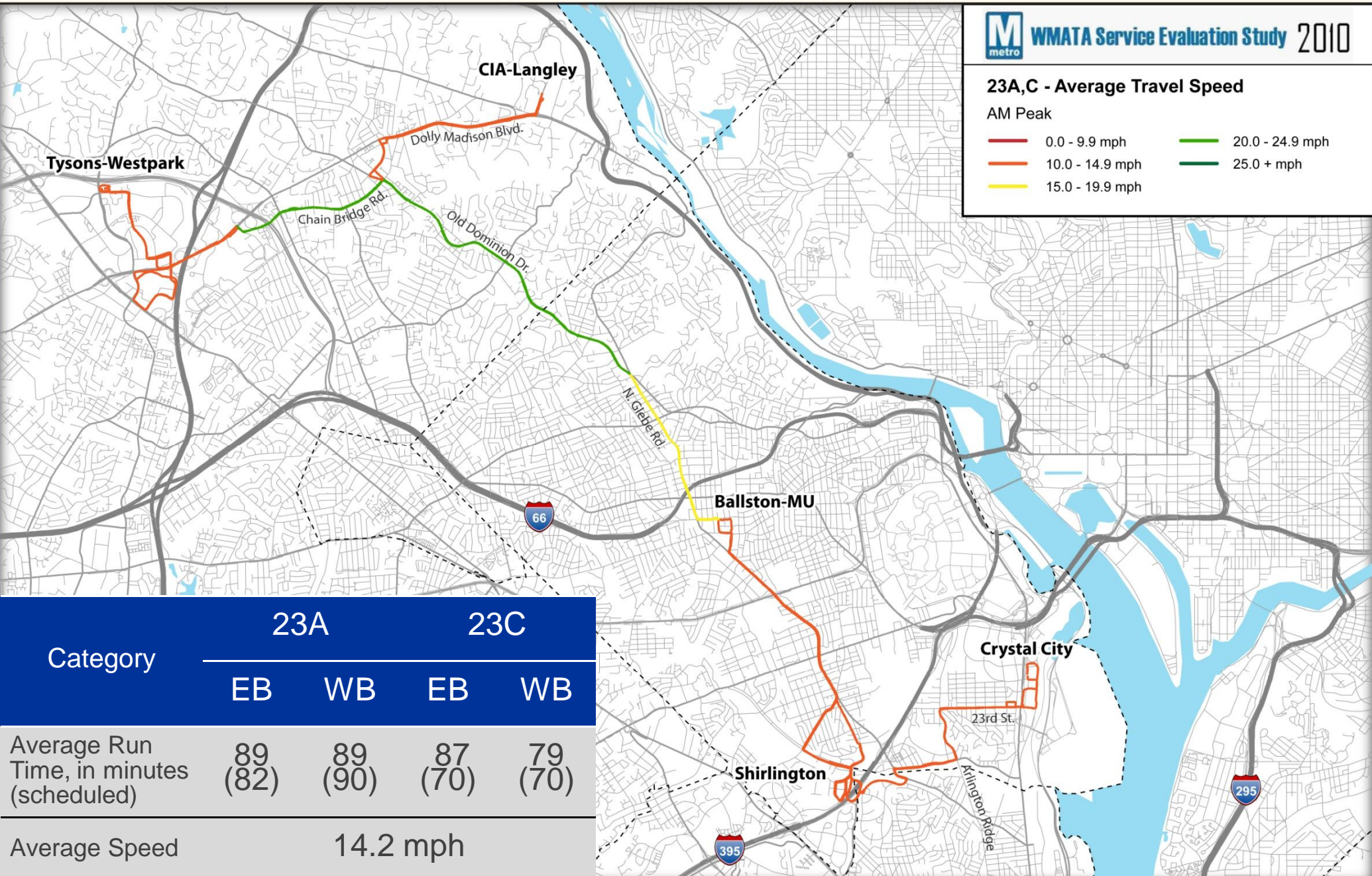
- Complaints logged between June 2009 and May 2010

23A,C  
Traffic Assessment

# 23A,C AM Average Travel Speed (Weekday)

## 23A,C - Average Travel Speed

AM Peak

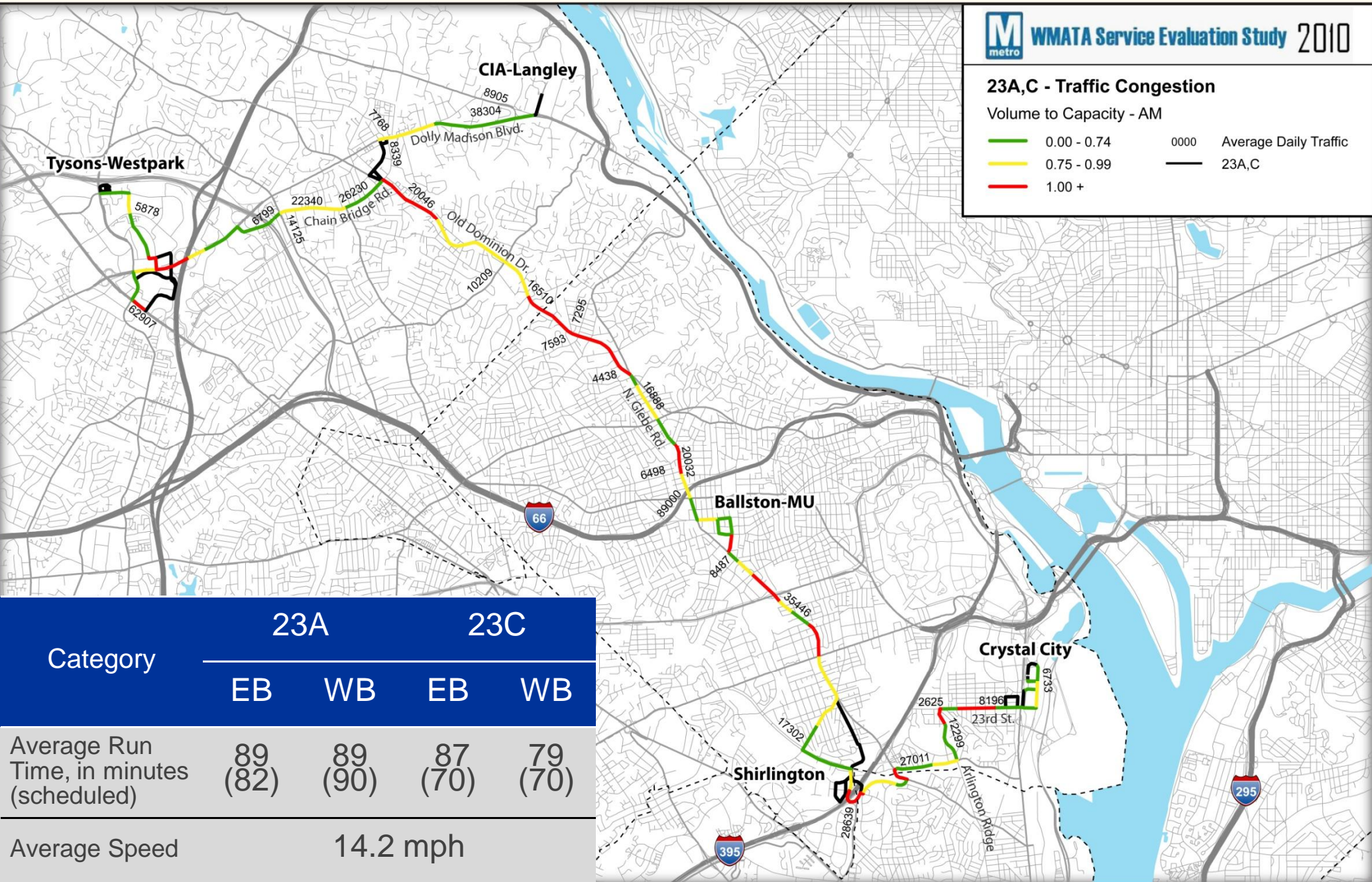


Category	23A		23C	
	EB	WB	EB	WB
Average Run Time, in minutes (scheduled)	89 (82)	89 (90)	87 (70)	79 (70)
Average Speed	14.2 mph			

# 23A,C AM Traffic (Weekday)

**23A,C - Traffic Congestion**  
 Volume to Capacity - AM

- 0.00 - 0.74      0000 Average Daily Traffic
- 0.75 - 0.99      — 23A,C
- 1.00 +



Category	23A		23C	
	EB	WB	EB	WB
Average Run Time, in minutes (scheduled)	89 (82)	89 (90)	87 (70)	79 (70)
Average Speed	14.2 mph			



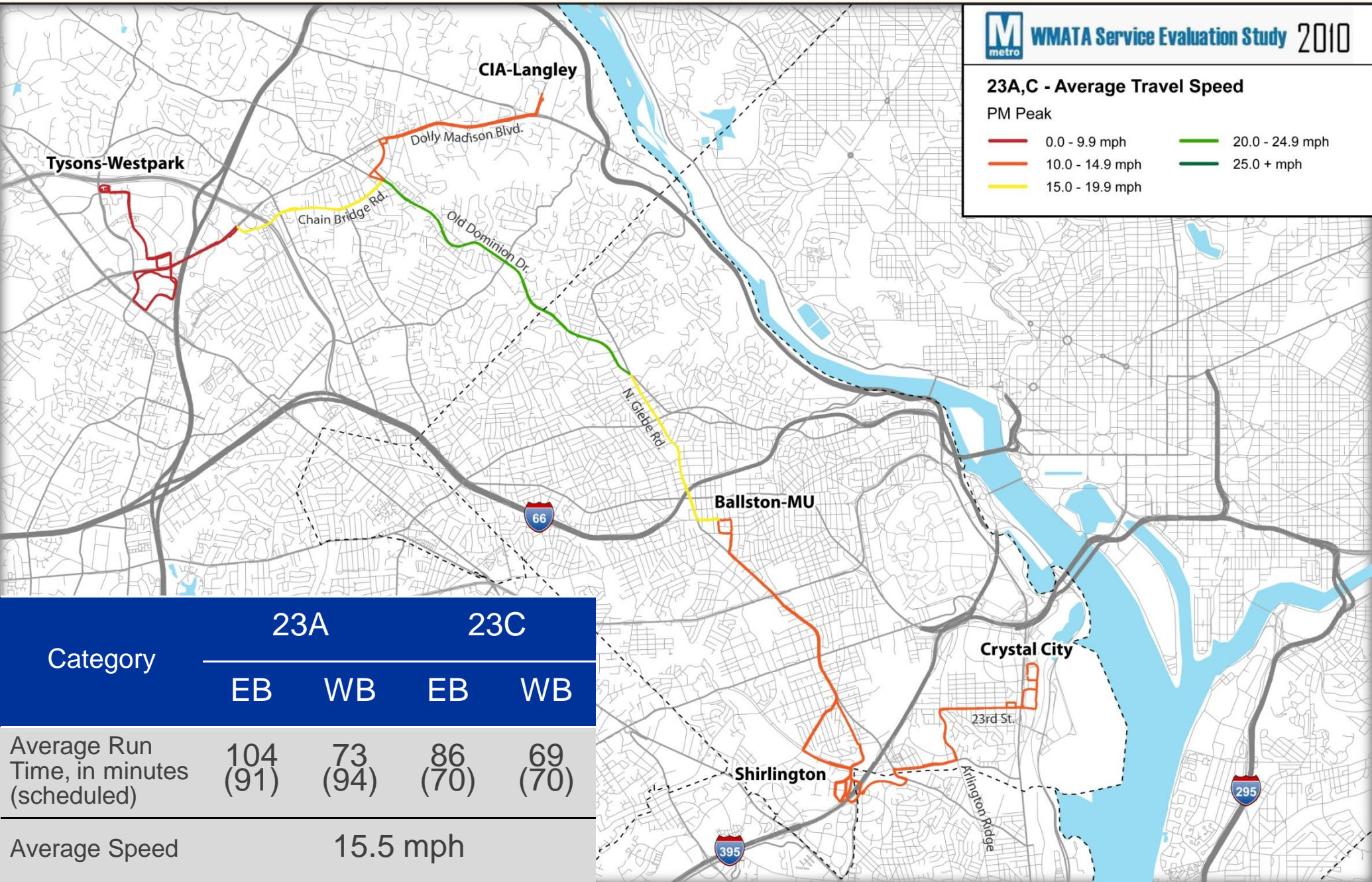
# 23A,C PM Average Travel Speed (Weekday)

**M metro** WMATA Service Evaluation Study 2010

## 23A,C - Average Travel Speed

PM Peak

- 0.0 - 9.9 mph
- 10.0 - 14.9 mph
- 15.0 - 19.9 mph
- 20.0 - 24.9 mph
- 25.0 + mph

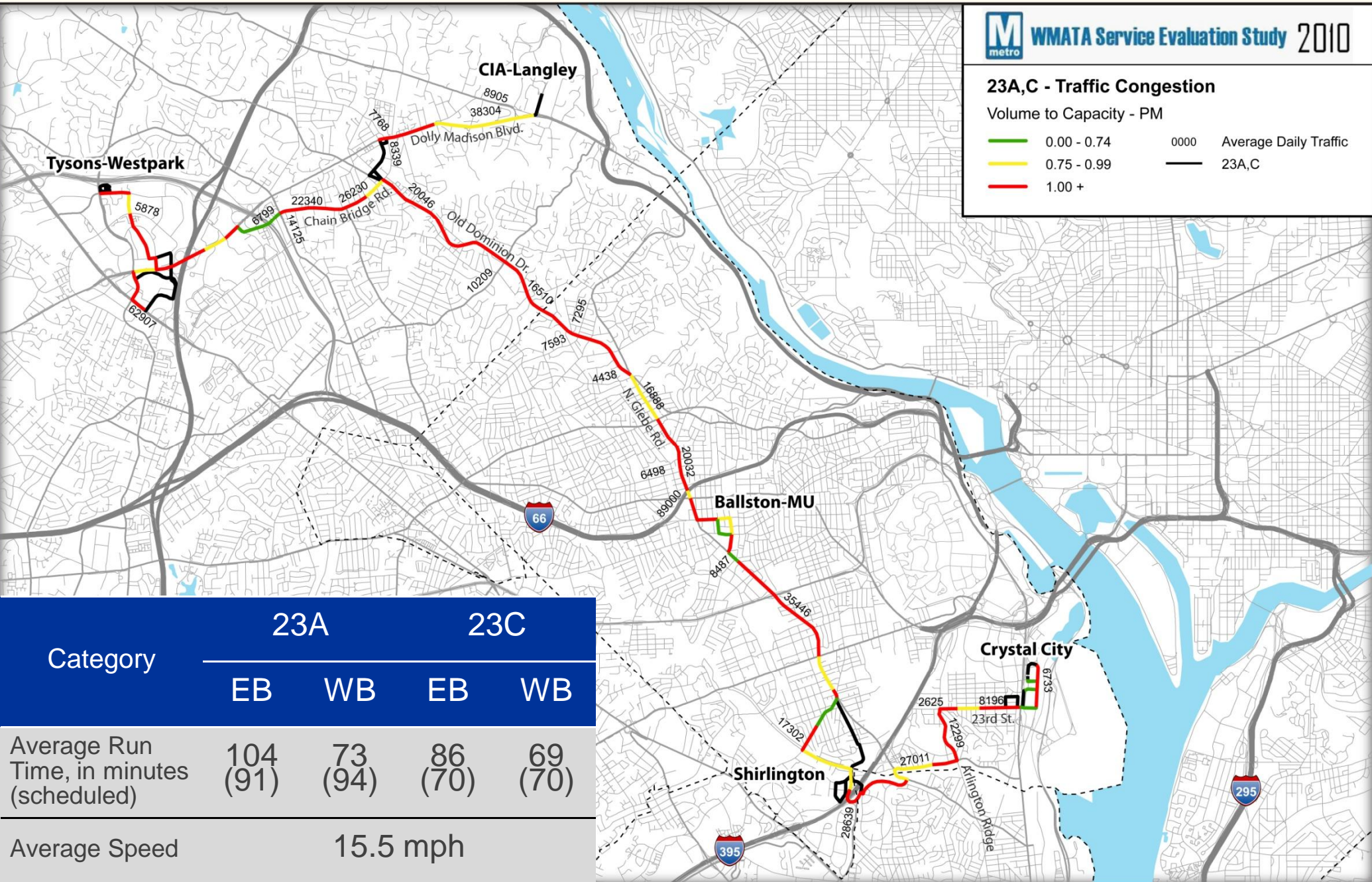
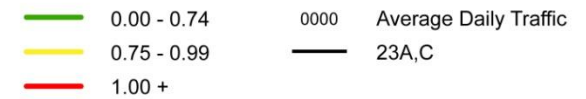


Category	23A		23C	
	EB	WB	EB	WB
Average Run Time, in minutes (scheduled)	104 (91)	73 (94)	86 (70)	69 (70)
Average Speed	15.5 mph			

# 23A,C PM Traffic (Weekday)

## 23A,C - Traffic Congestion

Volume to Capacity - PM



Category	23A		23C	
	EB	WB	EB	WB
Average Run Time, in minutes (scheduled)	104 (91)	73 (94)	86 (70)	69 (70)
Average Speed	15.5 mph			

# Summary of 23A,C Operator Comments

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- Schedule delays occur at all times of the day.
- During rain, lack of concrete pedestrian pads on Old Dominion Road lead to delays when operators try not to drop off passengers in mud
- Many transfers at S Glebe Road and Columbia Pike
- A holiday shopping plan for the Tysons Corner portion of the route would help the route stay on schedule.
- When bus bunching occurs, it is usually on the roadways shared between the 23A and 23C

## 23A,C Summary

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- Route reliability is by far the worst in the midday, with 40% of time points late
- Off-peak trips have nine less minutes in the schedule to complete the trip than peak periods
- Average daily ridership peaked in 2007-08, but has since dropped
- Low farebox recovery and productivity
- Sundays are surprisingly more productive than weekdays
- Over half of stops on route (54%) need a concrete pedestrian waiting area
- Route has slightly more accidents than average Four Mile Run route
- Many delays during Christmas season in Tysons Corner

25A,C,D

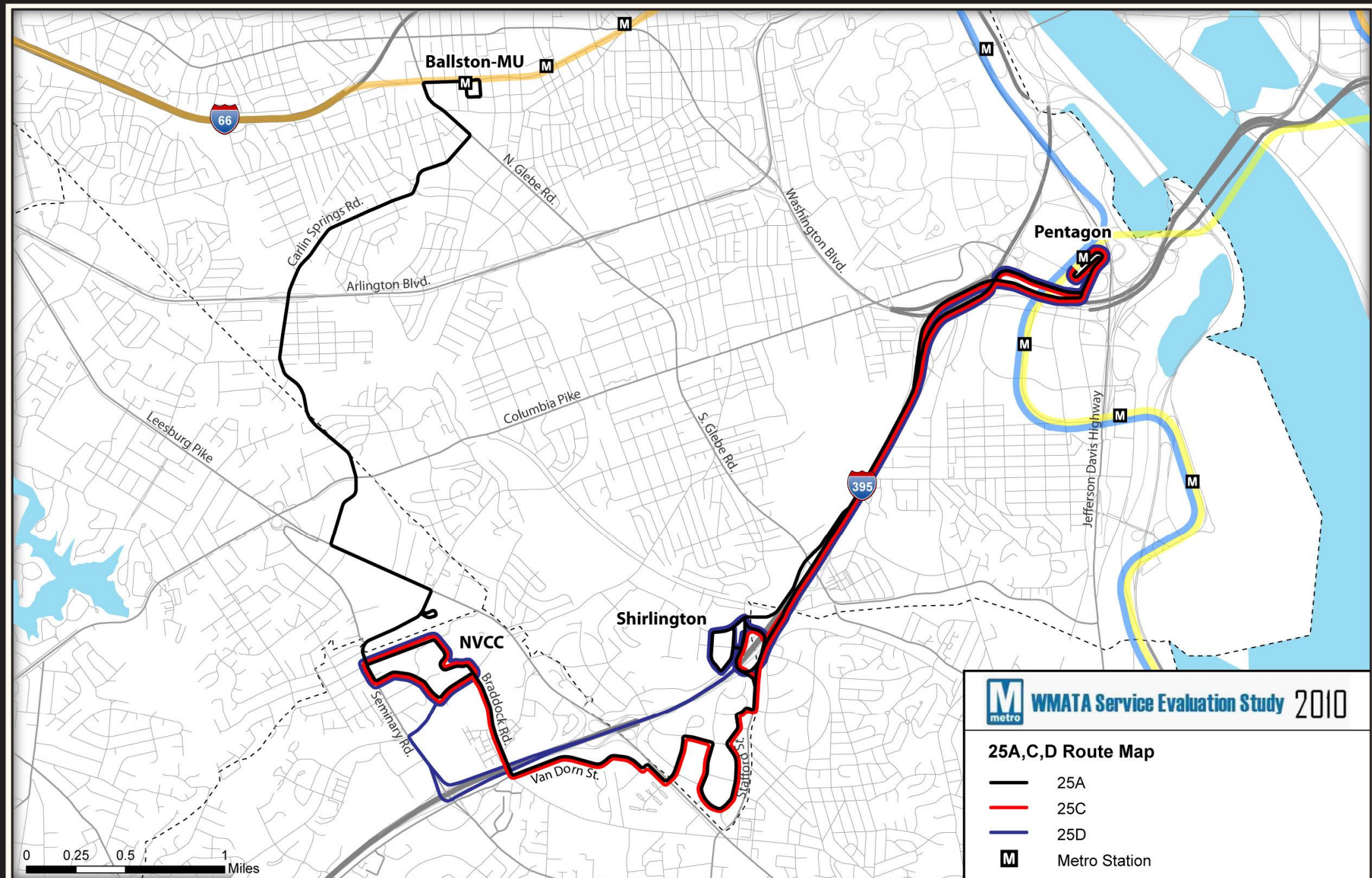
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## 25A,C,D History

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- Route began in 1980 with opening of Orange Line
- Restructured in 1990 to add route variants (25A,F,G,J,P,R)
- Restructured in 2007 to simplify service to 25A,C,D
- 25A,D rerouted to serve new Shirlington Transit Center in 2008

# 25A,C,D Route Map



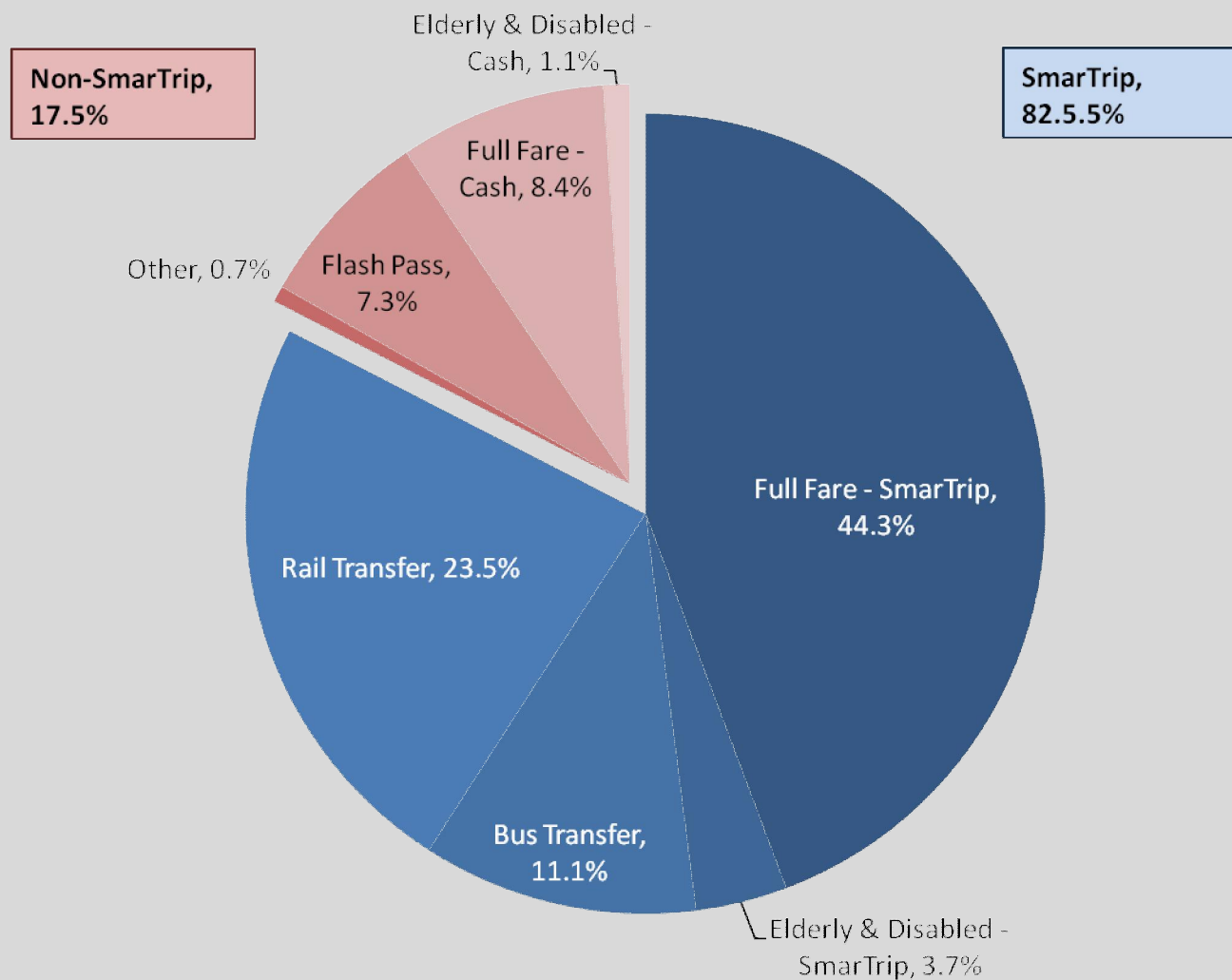
25A,C,D

# Transit Service Assessment

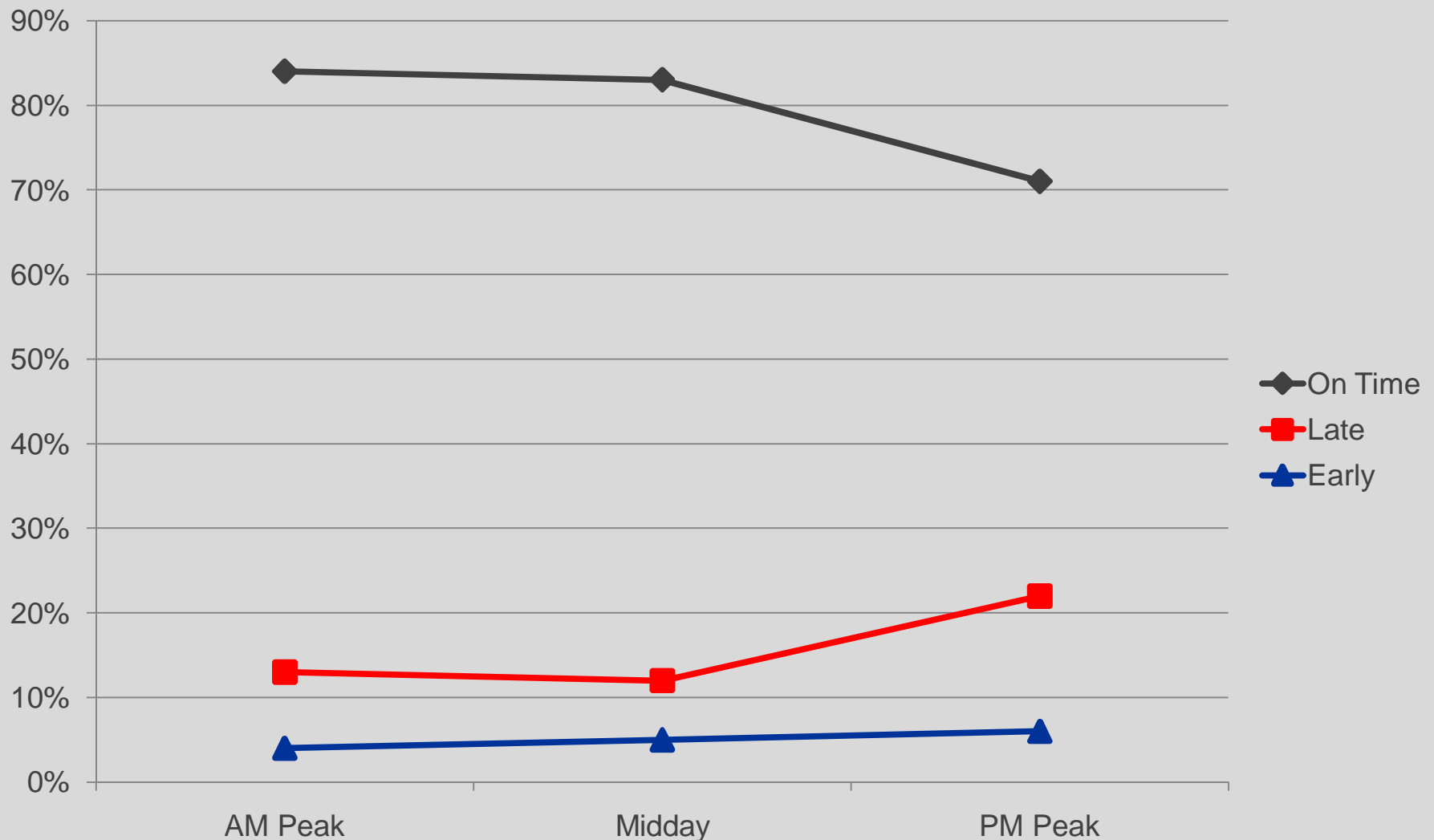
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# 25A,C,D Fare Payment



# Weekday 25A On-Time Performance

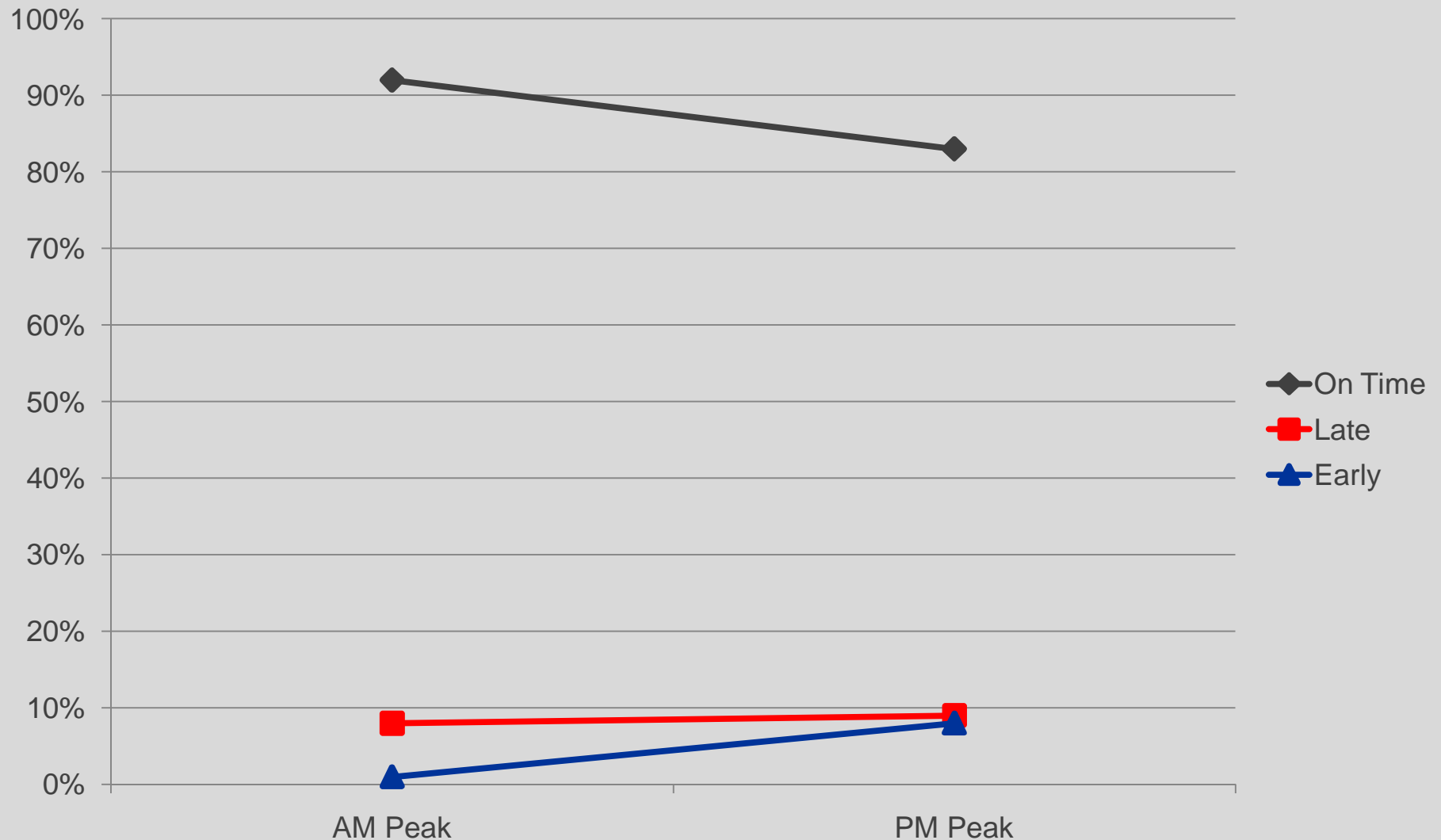


On-time performance represents average for all daily trips.

Early = more than two minutes early; Late = more than seven minutes late.



# Weekday 25C On-Time Performance

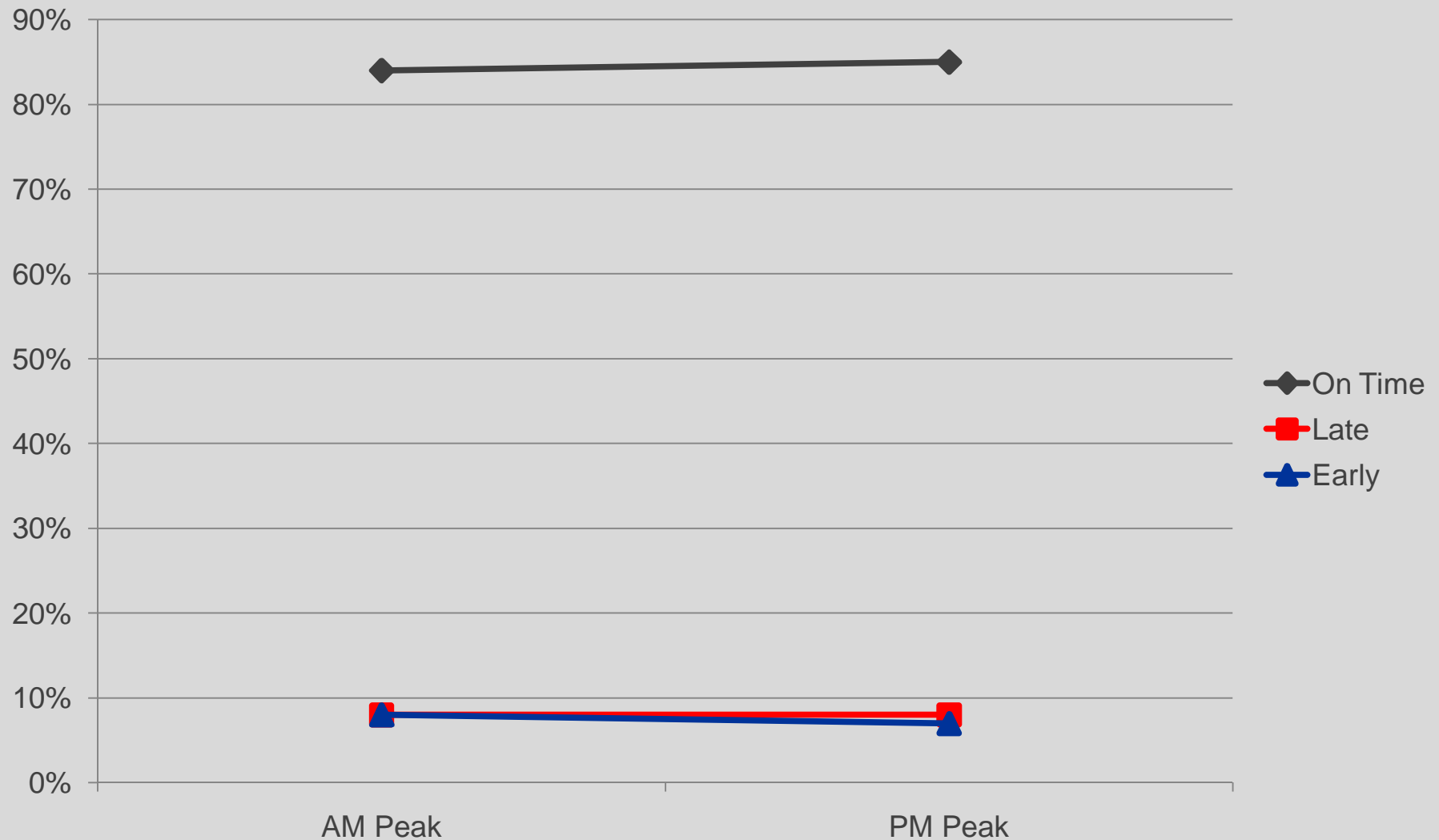


On-time performance represents average for all daily trips.

Early = more than two minutes early; Late = more than seven minutes late.



# Weekday 25D On-Time Performance



On-time performance represents average for all daily trips.

Early = more than two minutes early; Late = more than seven minutes late.

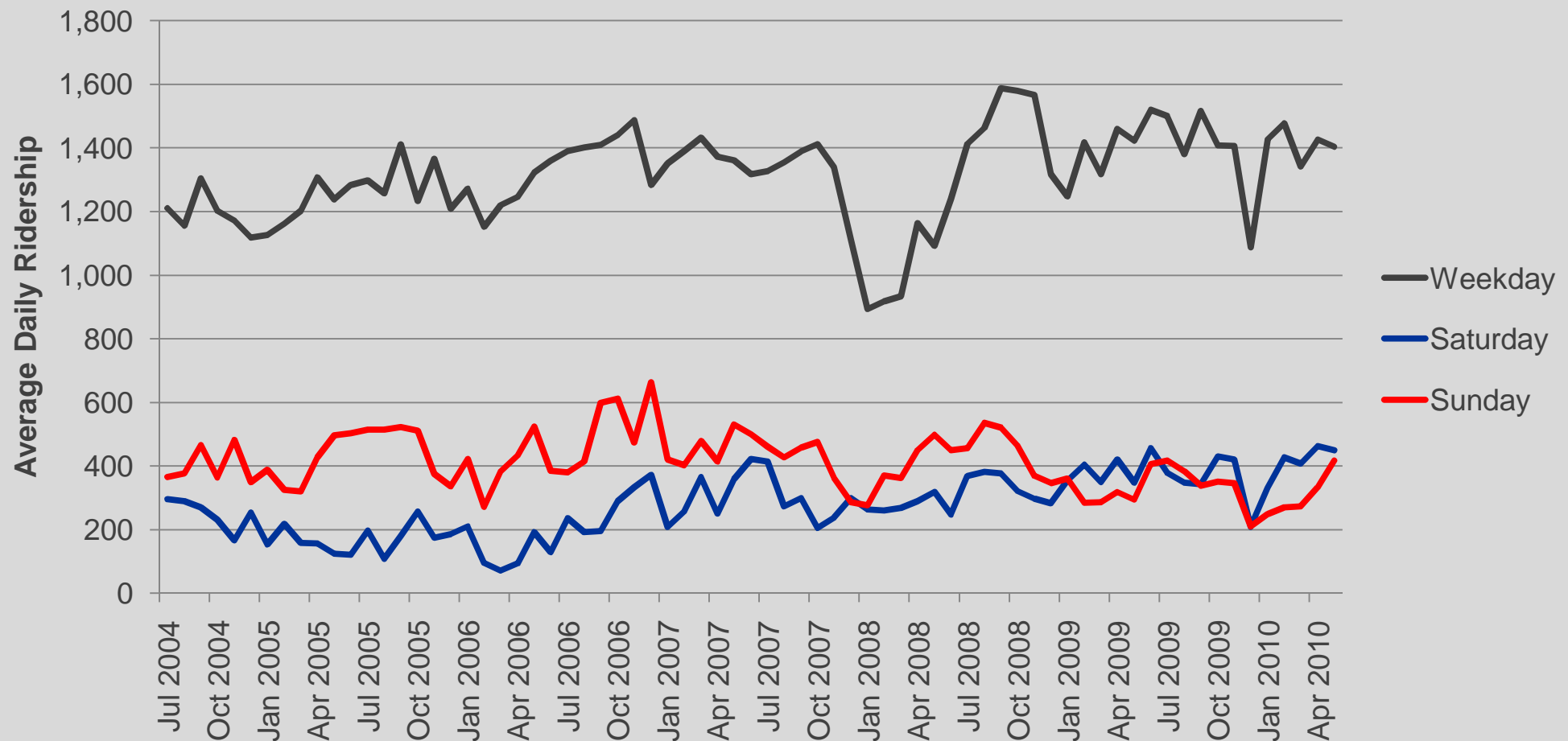


# 25A,C,D Ridership and Farebox Recovery

	Weekdays (25A,C,D)	Saturdays (25A only)	Sundays (25A only)
Average Daily Boardings	1,400	380	330
Boardings/Mile	2	2	2
Boardings/Trip	30	14	13
Farebox Recovery	18.0%	11.2%	10.7%

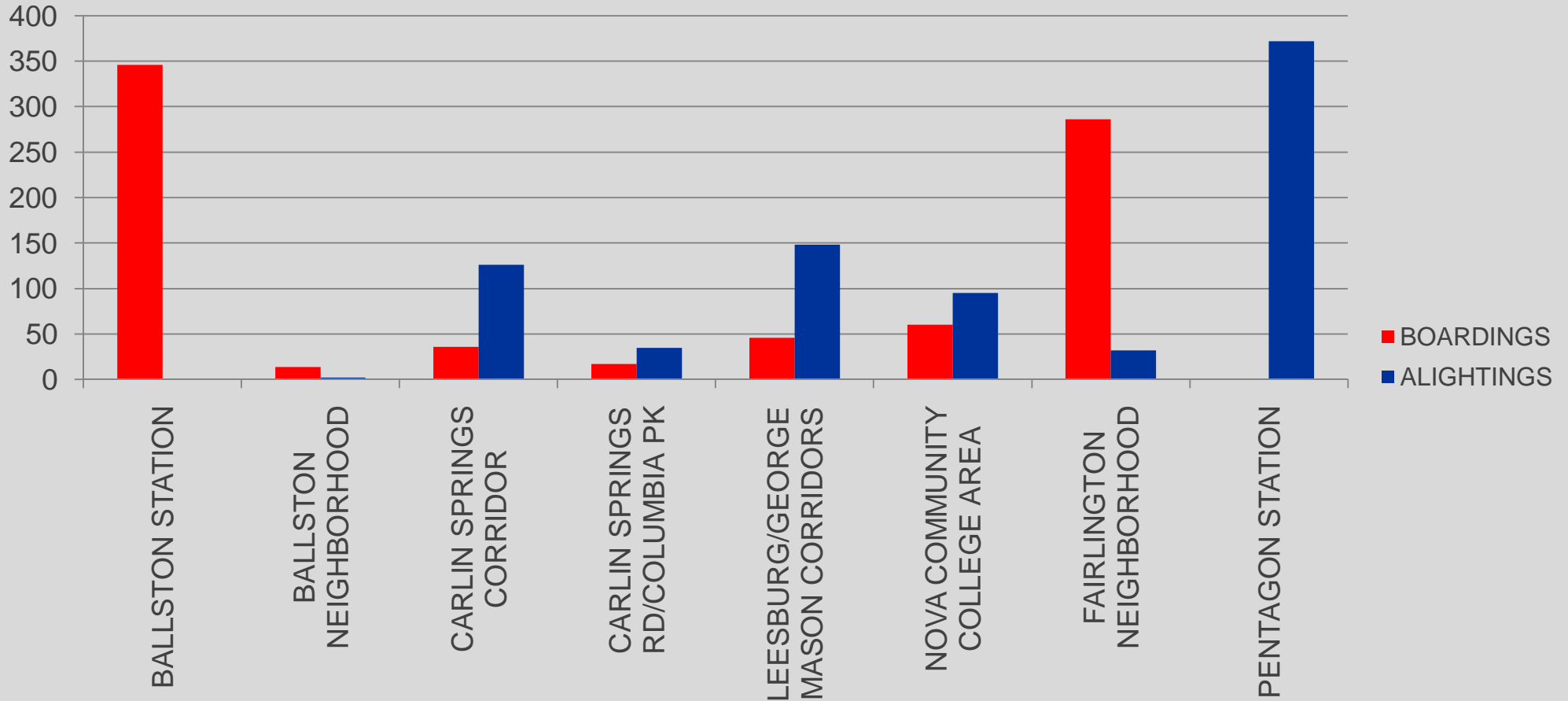
# 25A,C,D Ridership

## Route 25A,C,D Six-year Average Daily Ridership



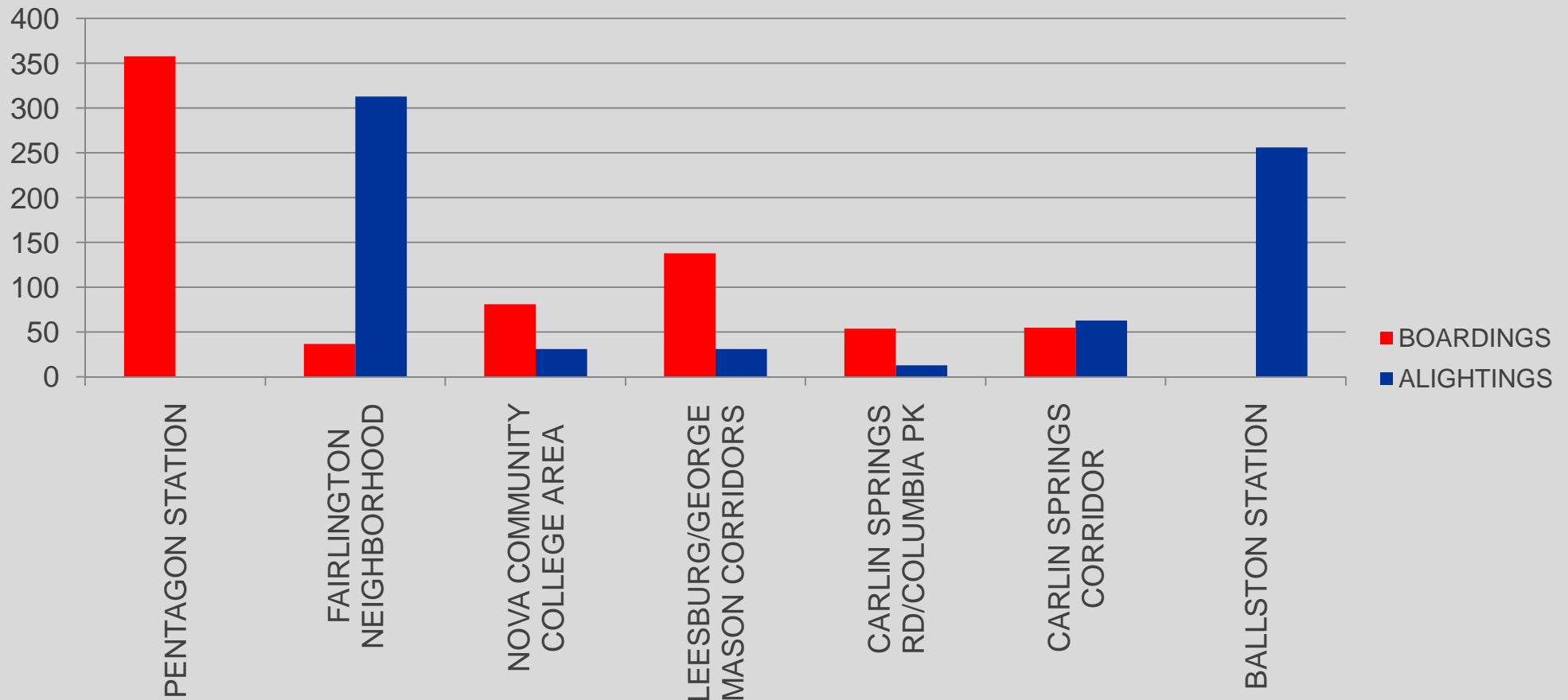
# 25A Boardings and Alightings—Eastbound

25A Eastbound Weekday Daily Boardings and Alightings



# 25A Boardings and Alightings—Westbound

25A Westbound Weekday Daily Boardings and Alightings





# 25A,C,D Capacity and Loading

Eastbound		
	Peak Load Point	Capacity at Point
AM Peak	Quaker Lane/ 32nd Road	42.9%
Midday	Carlin Springs Road/ N Edison Street	33.8%
PM Peak	Carlin Springs Road/ N Thomas Street	31.7%
Night	N Glebe Road/ 7th Street	32.1%

Westbound		
	Peak Load Point	Capacity at Point
AM Peak	Carlin Springs Road/ N Edison Street	28.9%
Midday	Carlin Springs Road/ S. 3rd Street	39.2%
PM Peak	Pentagon Station	34.9%
Night	Pentagon Station	24.1%

## Busiest Stops

Stop Location	Average Weekday Boardings
Pentagon Station (Bus Bay U3)	358
Ballston Station (Bus Bay B)	346
S Stafford Street and 35th Street crossing	45
S Stafford Street and 32nd Road (S) crossing	42
36th Street and Utah Street crossing	33
Fillmore Avenue and W Campus Drive	29
King Street service roadway and Menokin Drive	26
N Van Dorn Street and Park Place Condominiums	26
King Street service roadway and Dearing Street	21
Carlin Springs Road and S 8th Street	17

# 25A,C,D Bus Stop Amenities

Amenity	All Stops Requiring New or Improved Amenities	Percent of All Stops Requiring New or Improved Amenities
Bus Stop Sign	9	11%
Information Case	1	1%
System Map	0	0%
5'x8' Pedestrian Pad	37	44%
Rear Pedestrian Pad	2	2%
Sidewalk at Least 4' Wide	6	7%
Trash Can	0	0%
Shelter	9	11%
Seating	3	4%
Lighting	40	48%
NextBus LED	2	2%

# 25A,C,D Customer Complaints

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Type of Complaint	Number of Complaints
Driver behavior	16
No show	15
Pass up	14
Late arrival	8
Early departure	3
Stop changes	3
Overcrowding	2
Low ridership	1
Passenger behavior	1
<b>Total</b>	<b>63</b>

- Complaints logged between June 2009 and May 2010

25A,C,D  
Traffic Assessment

# 25A,C,D Observed and Scheduled Run Times

## AM Peak

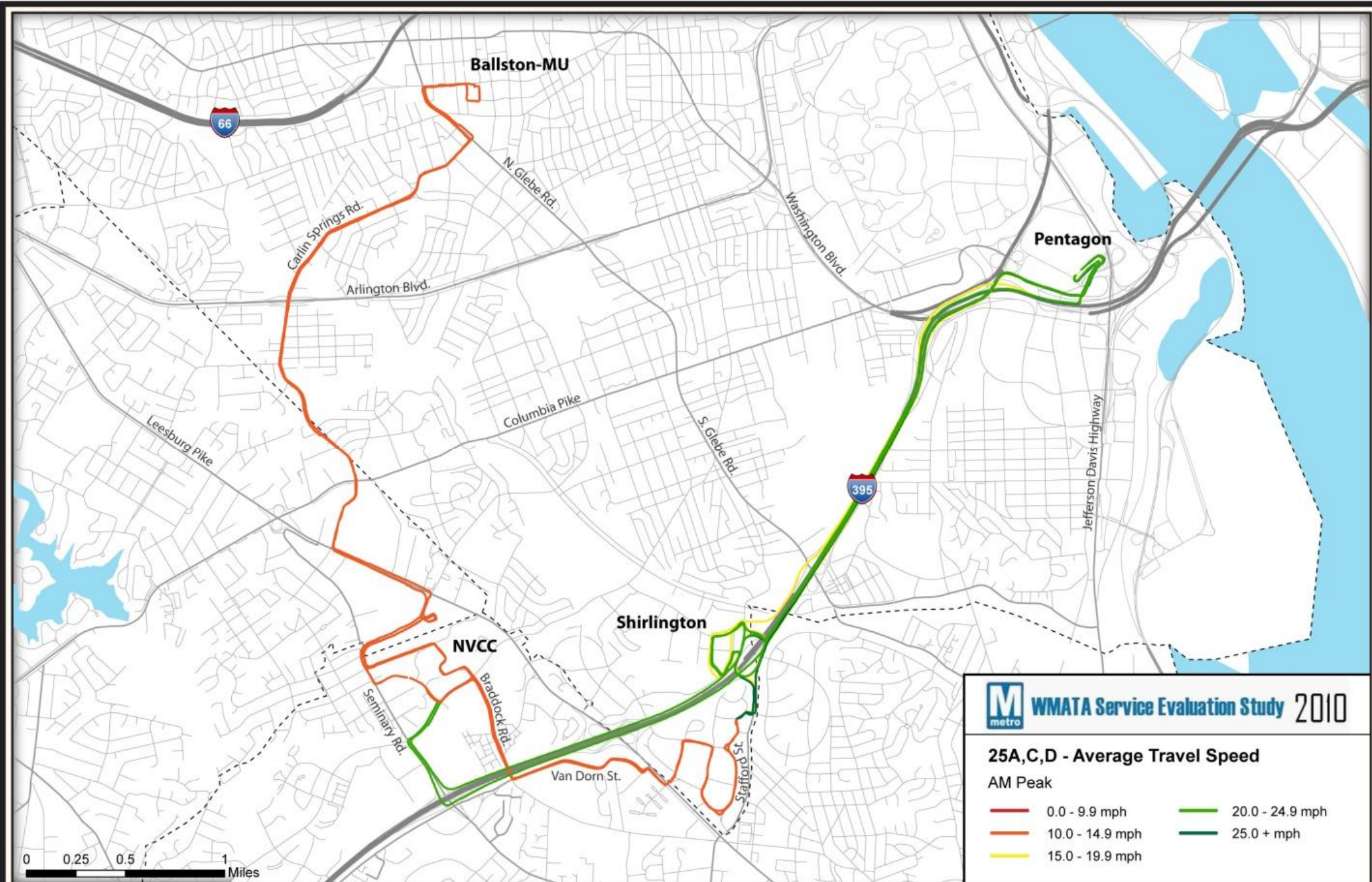
Category	25A		25C		25D	
	EB	WB	EB	WB	EB	WB
Average Run Time, in minutes (scheduled)	55 (52)	49 (45)	24 (22)	-	-	17 (23)
Average Speed*	18.9 mph	18.9 mph	18.9 mph	18.9 mph	18.9 mph	18.9 mph

## PM Peak

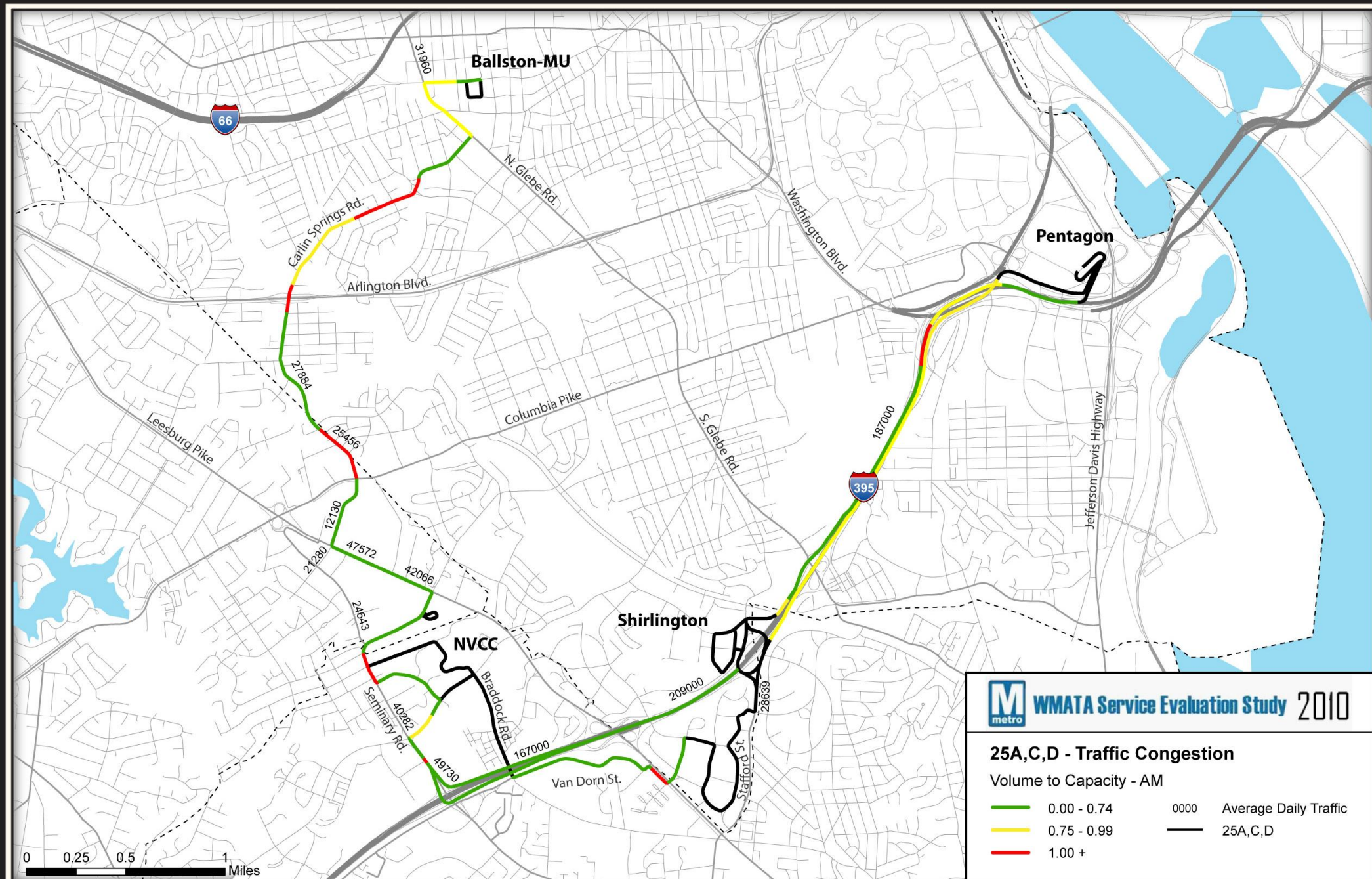
Category	25A		25C		25D	
	EB	WB	EB	WB	EB	WB
Average Run Time, in minutes (scheduled)	50 (51)	57 (51)	-	22 (28)	23 (20)	-
Average Speed*	16 mph	16 mph	16 mph	16 mph	16 mph	16 mph

\* For all three routes

# 25A,C,D AM Average Travel Speed (Weekday)



# 25A,C,D AM Traffic (Weekday)

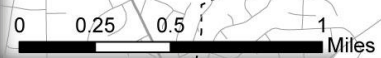


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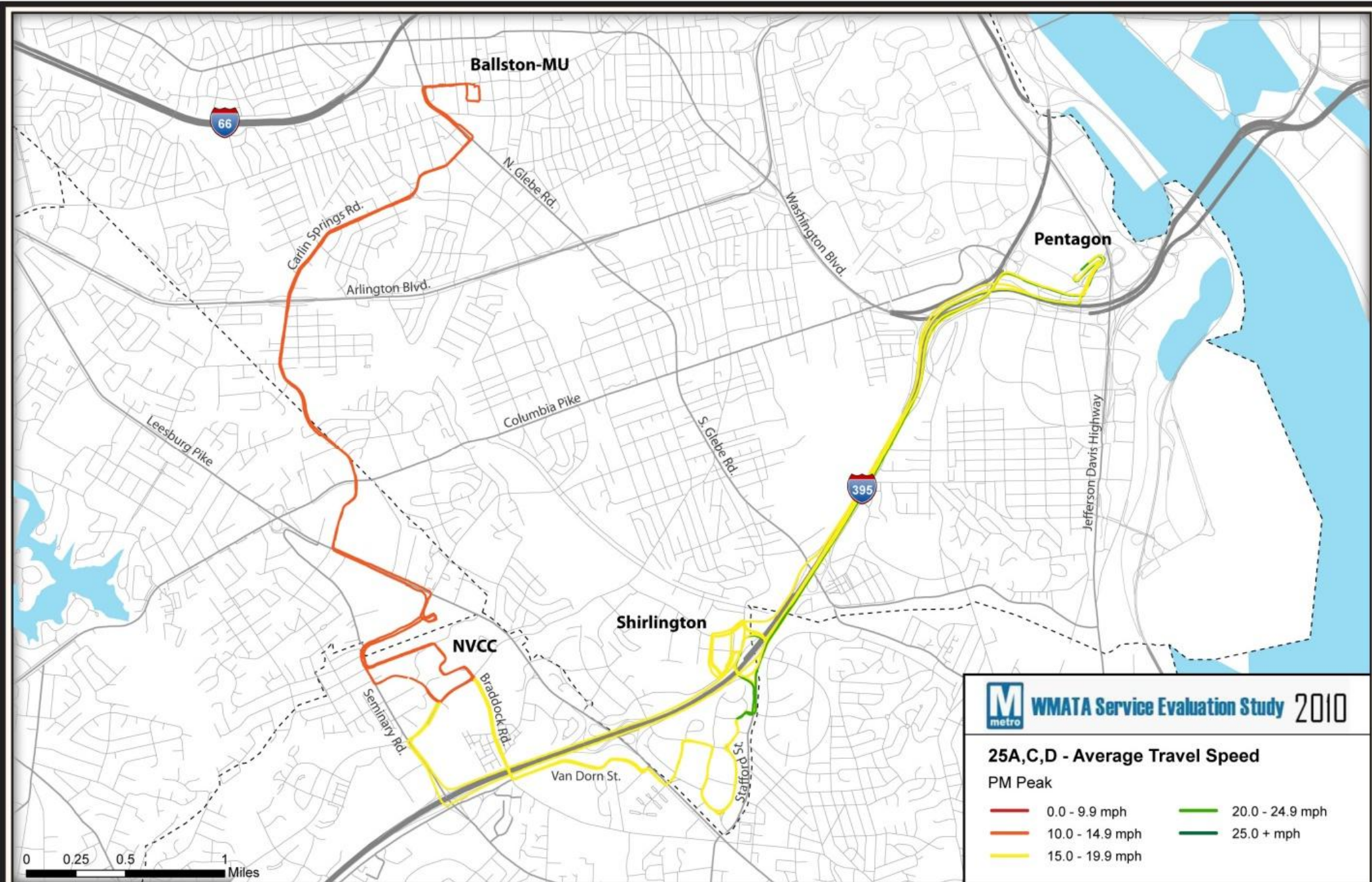
**25A,C,D - Traffic Congestion**  
 Volume to Capacity - AM

- 0.00 - 0.74
- 0.75 - 0.99
- 1.00 +

0000 Average Daily Traffic  
 — 25A,C,D

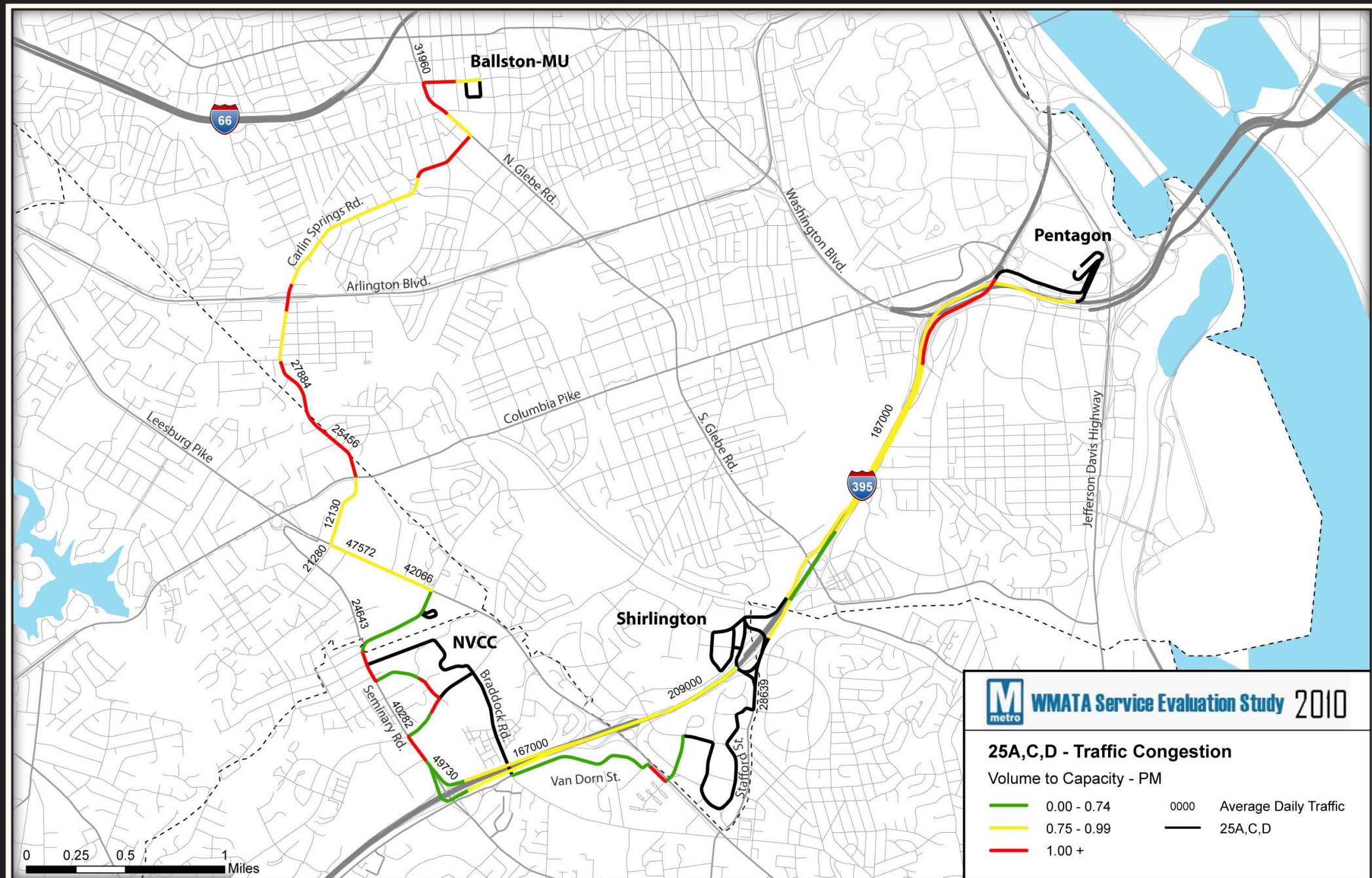


# 25A,C,D PM Average Travel Speed (Weekday)





# 25A,C,D PM Traffic Congestion (Weekday)



# Summary of 25A,C,D Operator Comments

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- Most delays are from unpredictable events, like rain or vehicle collisions. Other delays caused by:
  - Kenmore Middle School around 3pm
  - Lack of parallel routes for Carlin Springs Road
  - Out-of-synch traffic signals
  - Passengers adding credit to SmarTrip cards on the bus
- 25C trips sometimes extended to Ballston to make up for lost 25A trip
- AM and PM peak trips mostly to Pentagon, though midday trips mostly to Shirlington
- Supervisors suggest extending route to Virginia Square due to congestion at Ballston

# 25A,C,D Summary

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- Average daily riders dropped after 2007 restructuring, but have rebounded since then
- Route operates “on time” at 80-90% of time points
- Low farebox recovery and productivity relative to Metrobus averages
- South Fairlington area has operational issues with narrow, curvilinear streets and on-street parking
- Stop amenities are mostly provided. The largest missing amenity is a concrete pedestrian waiting area.
- Congestion at Ballston Station hampers operations and layover of the route.
- Route has slightly more accidents than average Four Mile Run route

# Roundtable Discussion

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- Break up into small groups.
- Each group will have a moderator.
- Moderator will run through a list of questions.
- Each group will appoint a representative to summarize their discussion.

# Next Steps

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- Incorporate public comments
  - Next public meetings 11/3/2010 and 11/17/2010
- Develop and evaluate alternative service improvement plans
- Prepare recommendations
- Develop implementation plan
- Incorporate into budget process
- Implement phased improvements

# How Can You Participate?

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- Project Hot Line:
  - 202-370-2915
- Website:
  - [www.Metrobus-Studies.com](http://www.Metrobus-Studies.com)