

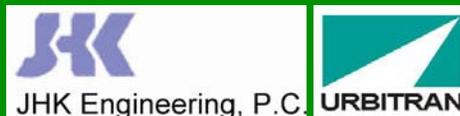
# Congested Corridors

## Project West 181<sup>st</sup> Street, Manhattan

Amsterdam Avenue to Riverside Drive

June 18, 2009

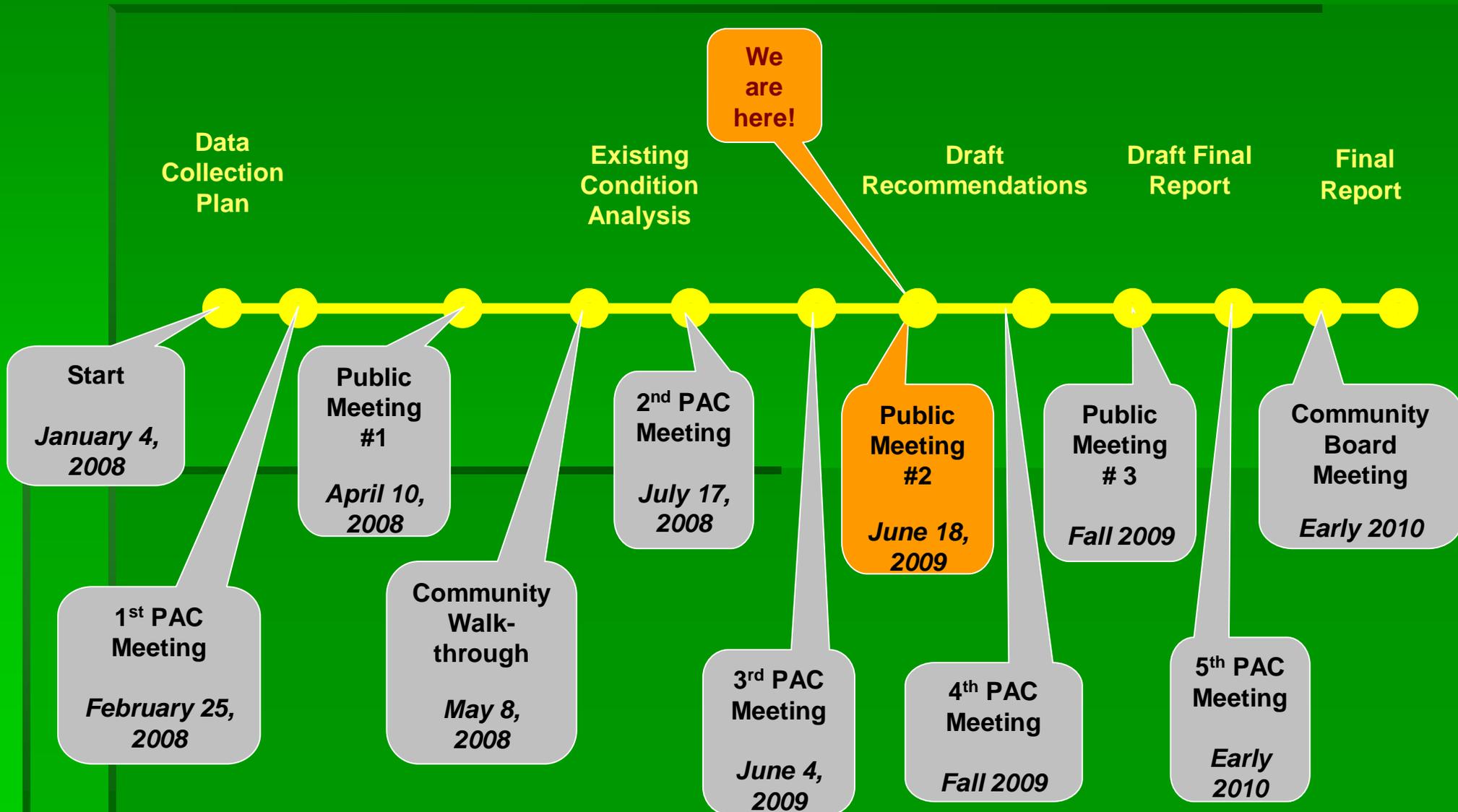
New York City Department of Transportation



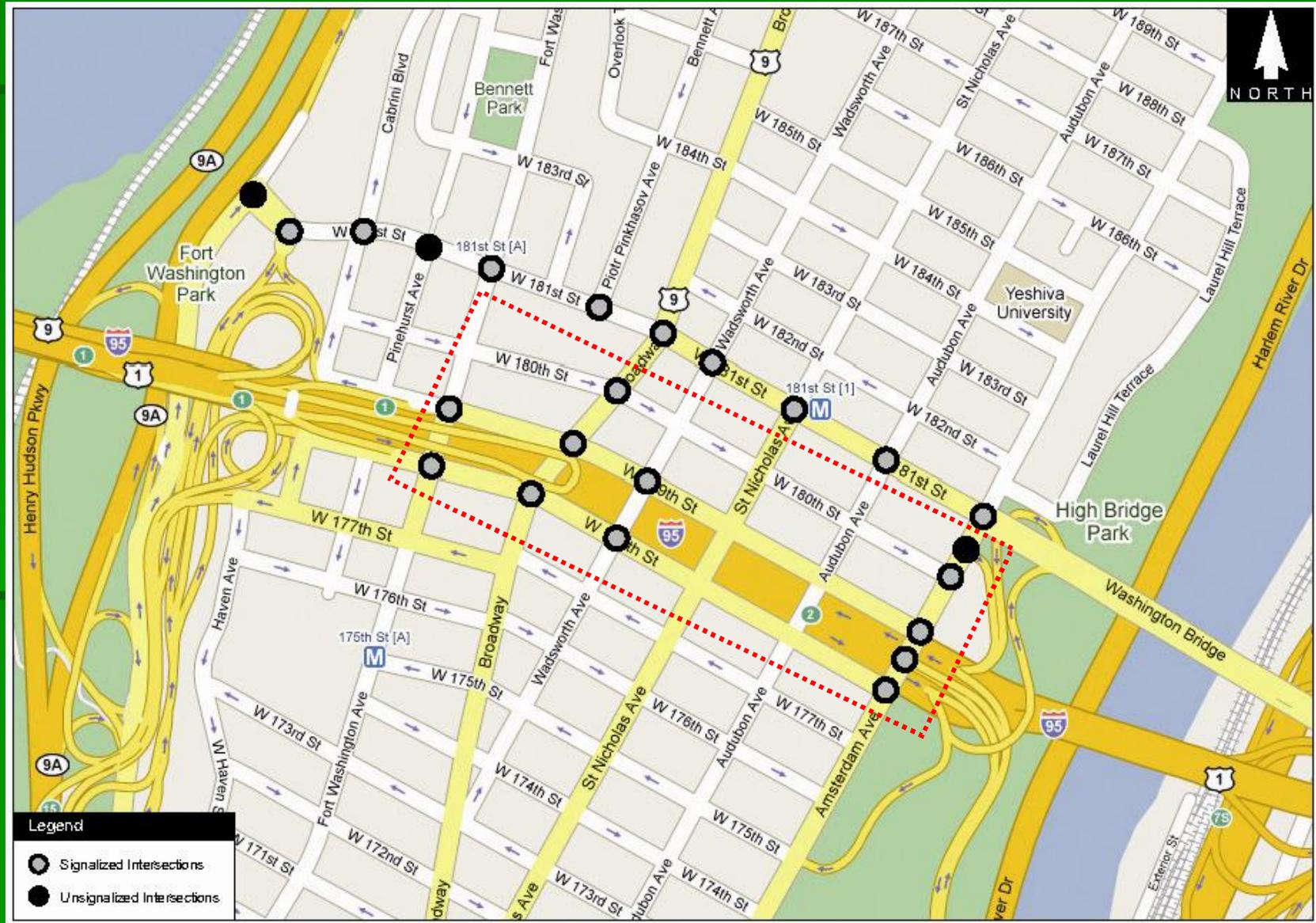
# Meeting Overview

- Summary of Existing Conditions
- Future without Improvements
- Key Issues
- Preliminary Improvement Ideas

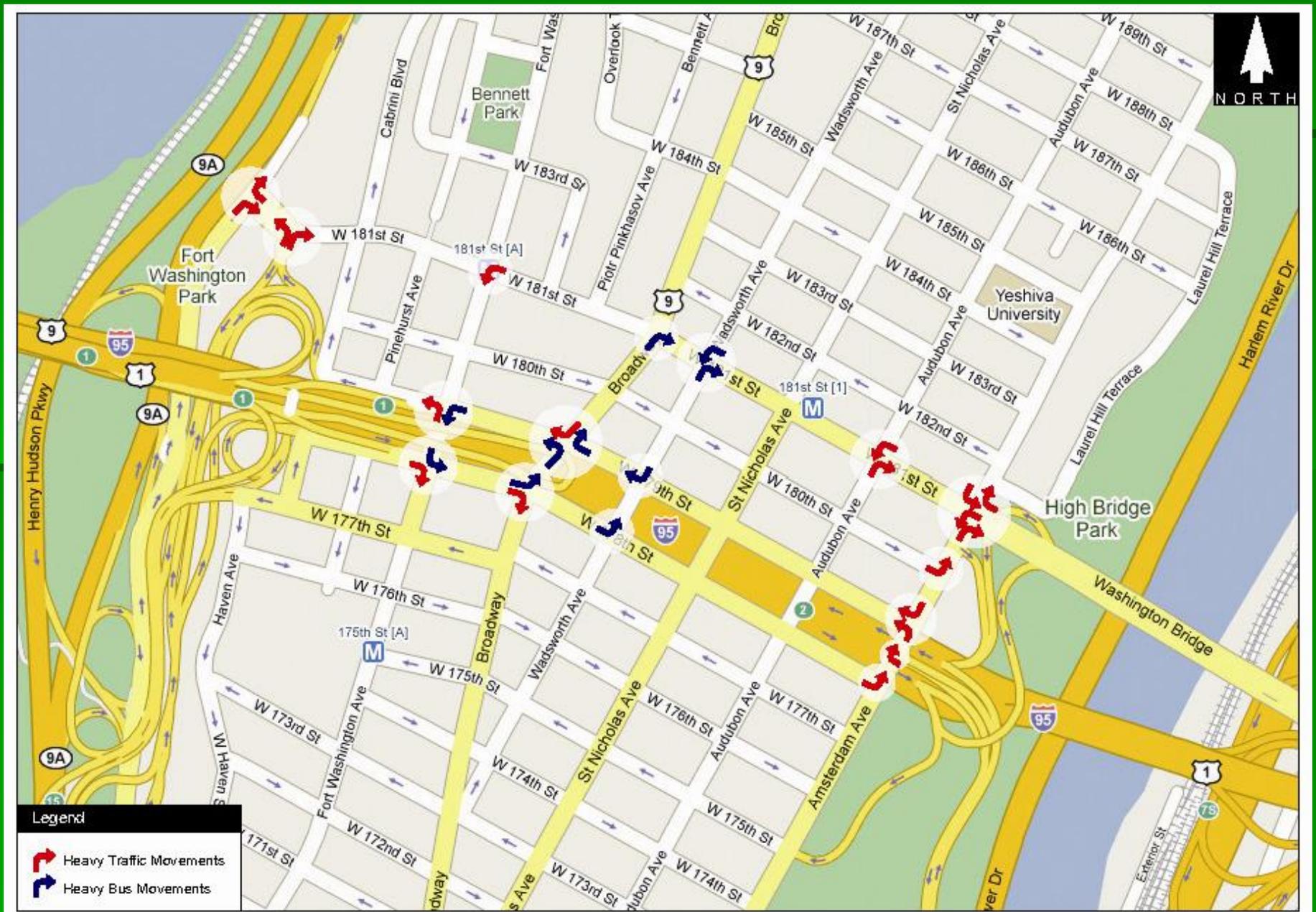
# Study Process



# Study Area Map



# Locations of Heavy Turn Movements



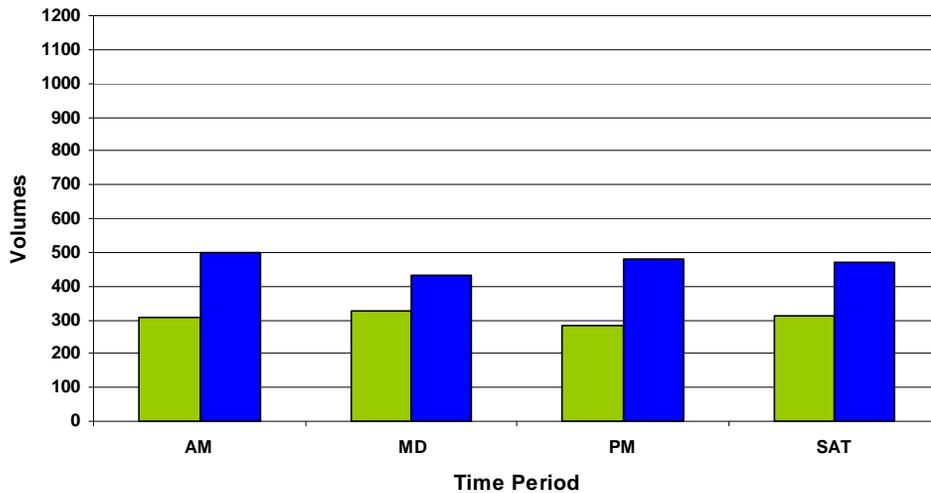
# Corridor Traffic Patterns

Higher volumes on east end of 181<sup>st</sup> Street at all times

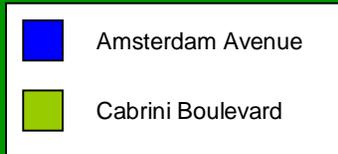
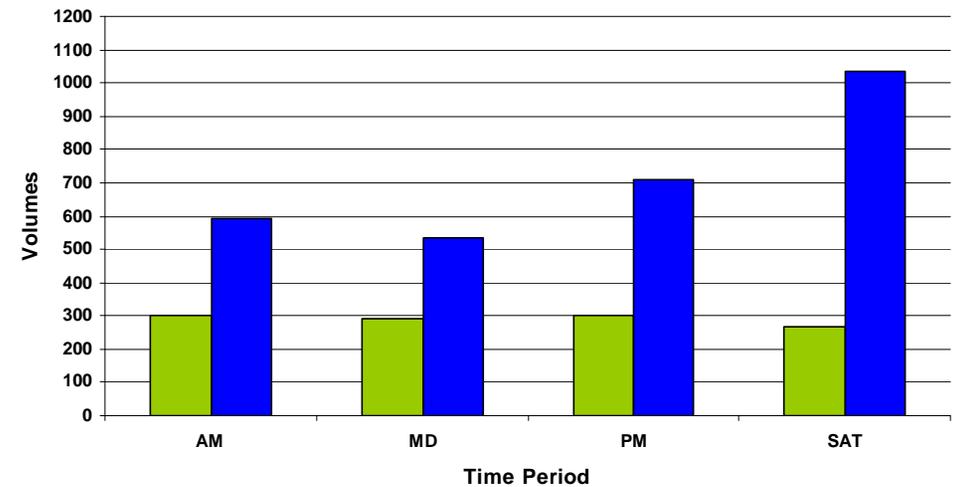
Eastbound: Volumes increase from west to east

Westbound: Volumes decrease from east to west

EB 181st Street Traffic Volumes



WB 181st Street Traffic Volumes

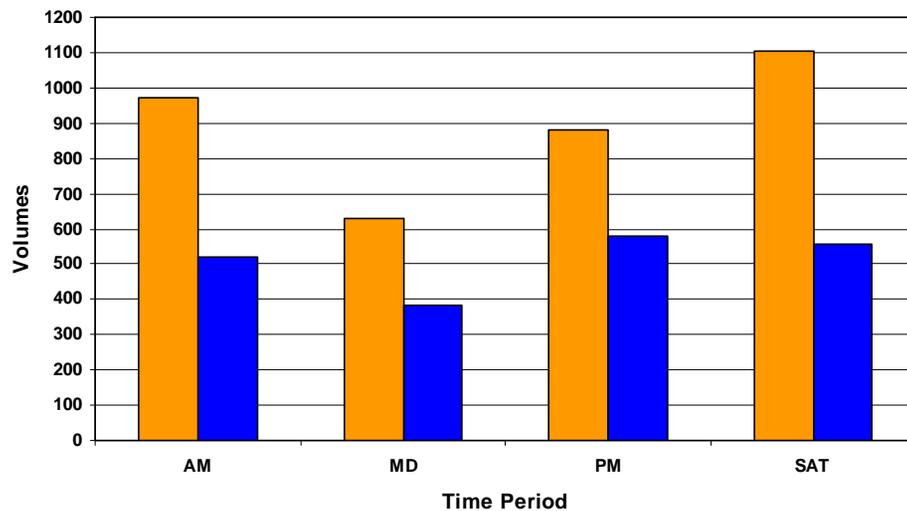


# Corridor Traffic Patterns

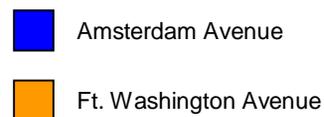
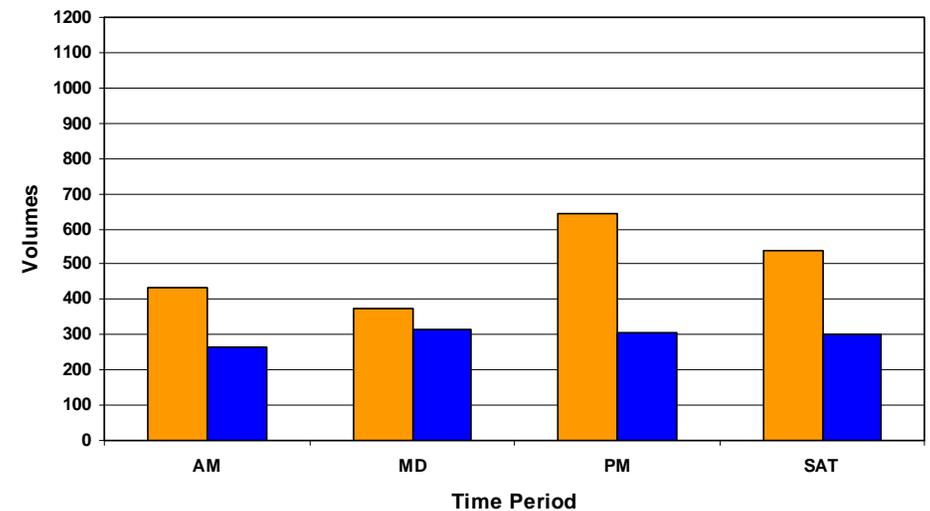
Eastbound 178<sup>th</sup> St:  
Volumes decrease  
from west to east

Westbound 179<sup>th</sup> St:  
Volumes increase from  
east to west

EB 178th Street Traffic Volumes



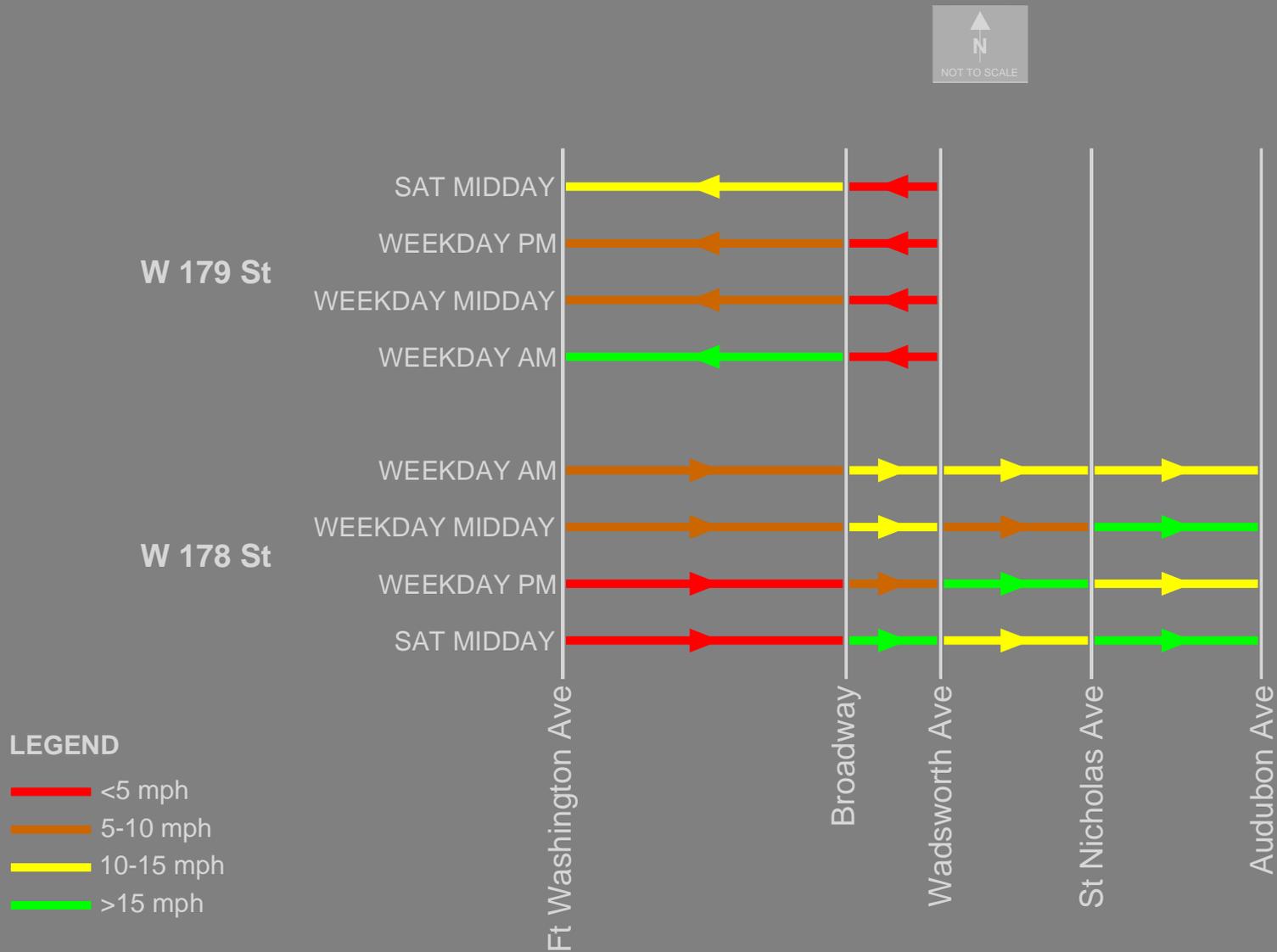
WB 179th Street Traffic Volumes





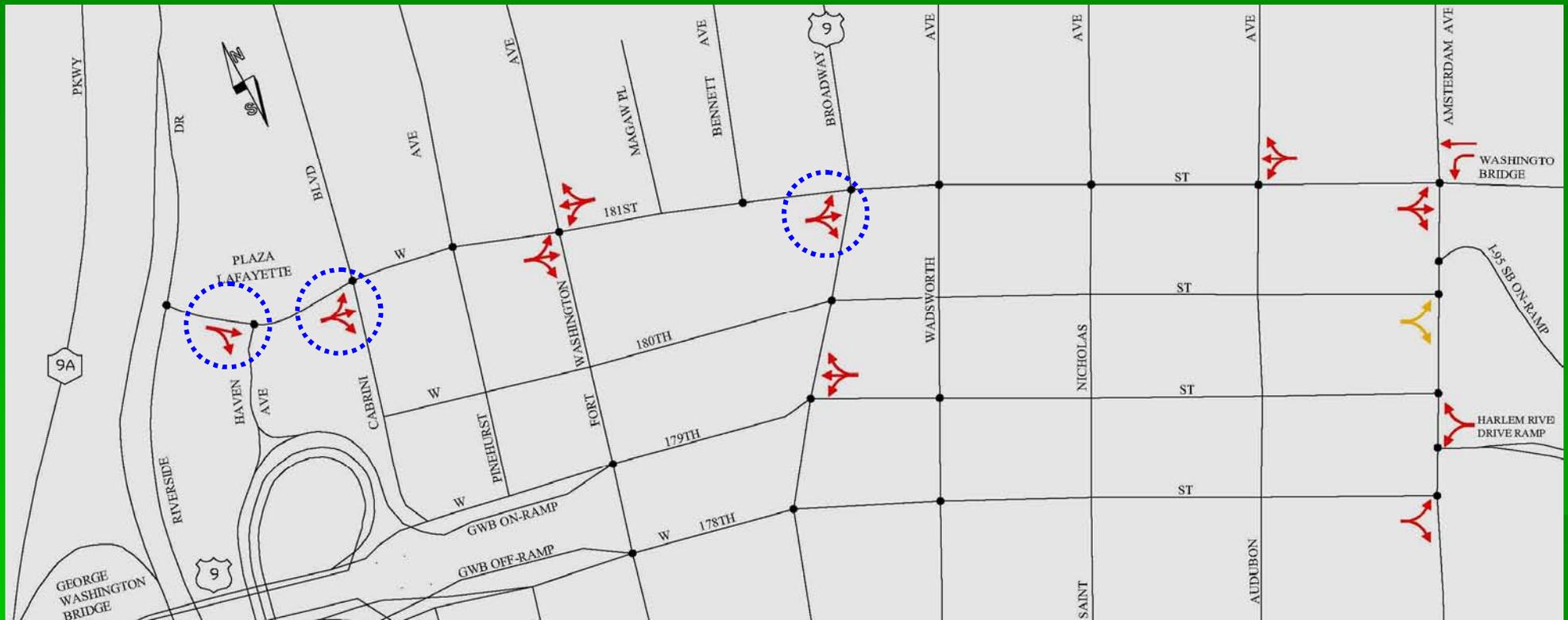
# Travel Speed Profile

## West 178<sup>th</sup> and 179<sup>th</sup> Streets



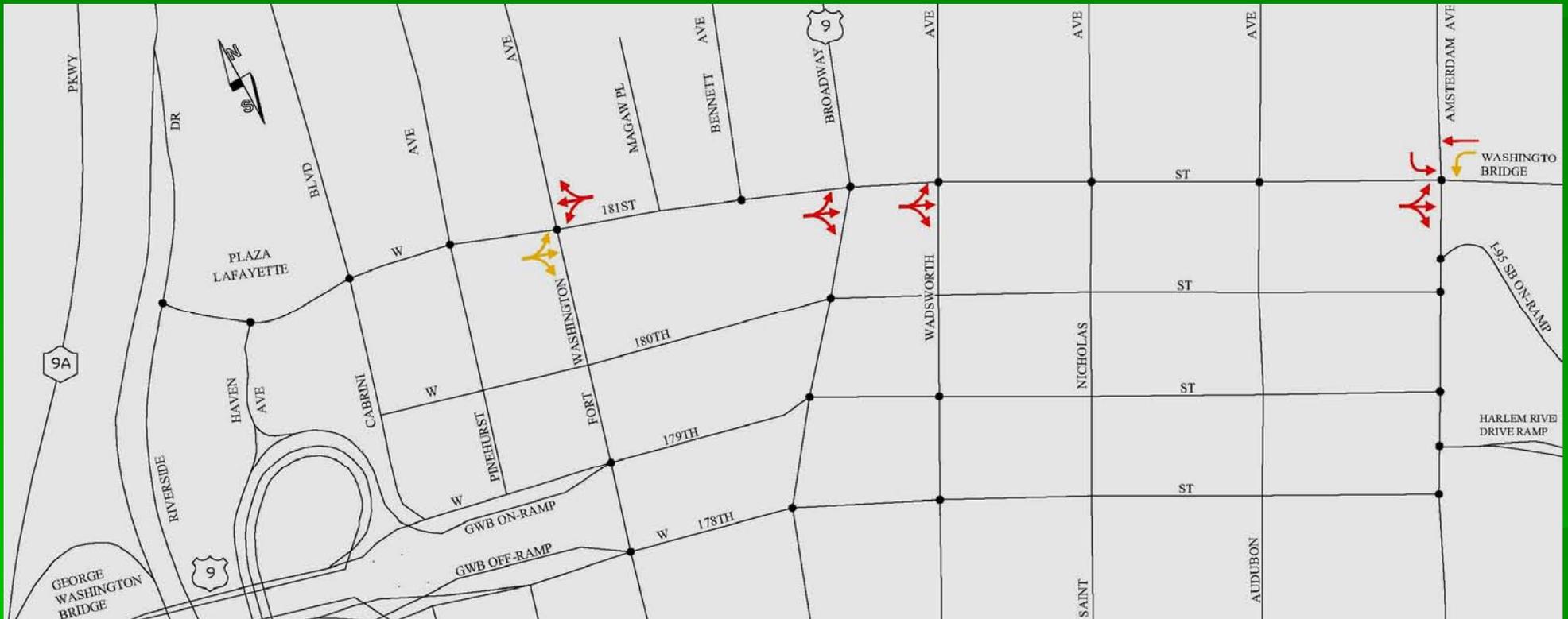


# Level of Service by Approach (Future w/o Improvements AM)



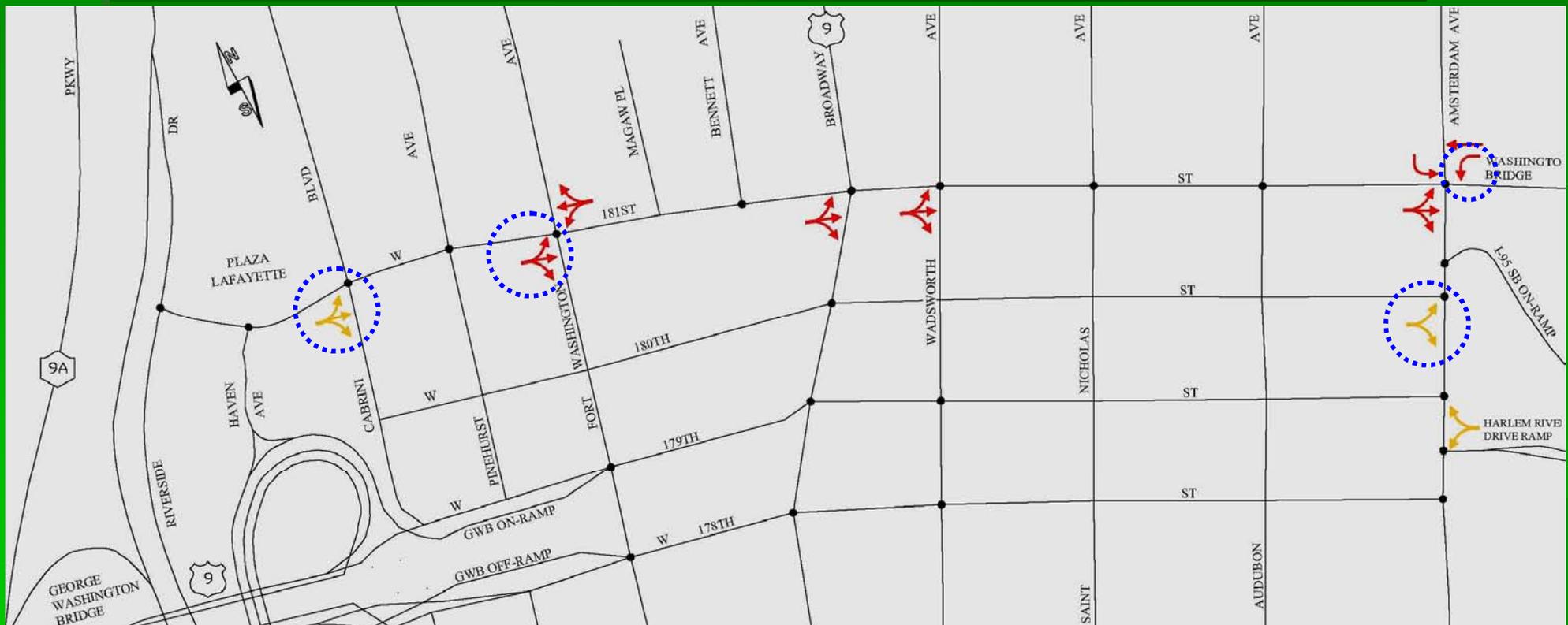
- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

# Level of Service by Approach (Existing MD)



- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

# Level of Service by Approach (Future w/o Improvements MD)



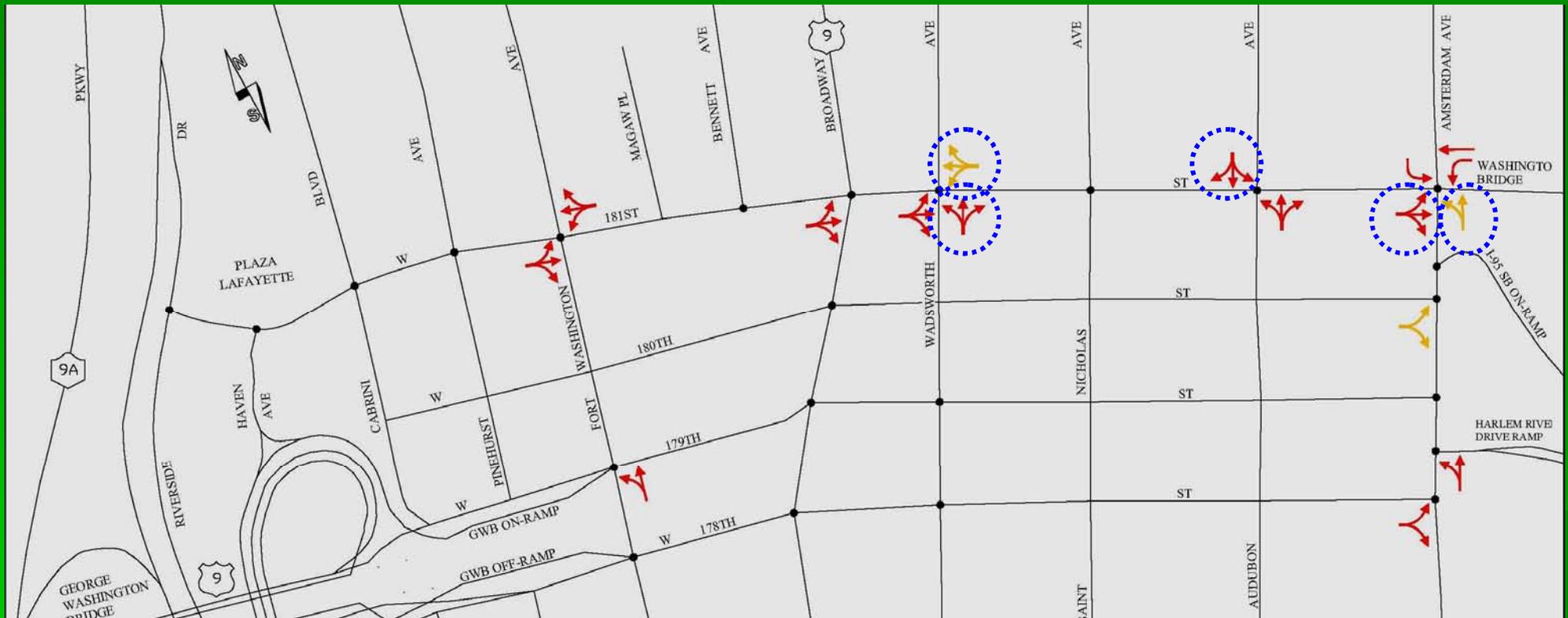
- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

# Level of Service by Approach (Existing PM)



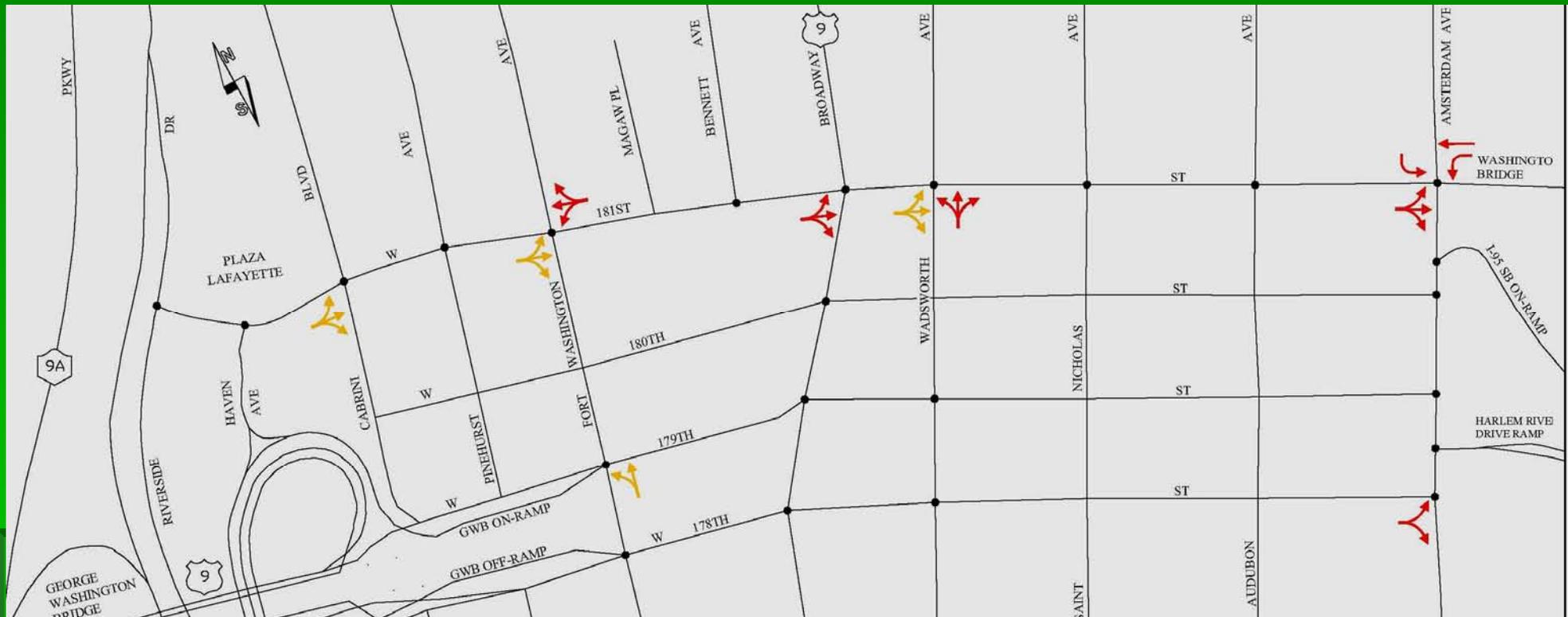
- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

# Level of Service by Approach (Future w/o Improvements PM)



- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

# Level of Service by Approach (Existing SAT MD)



- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

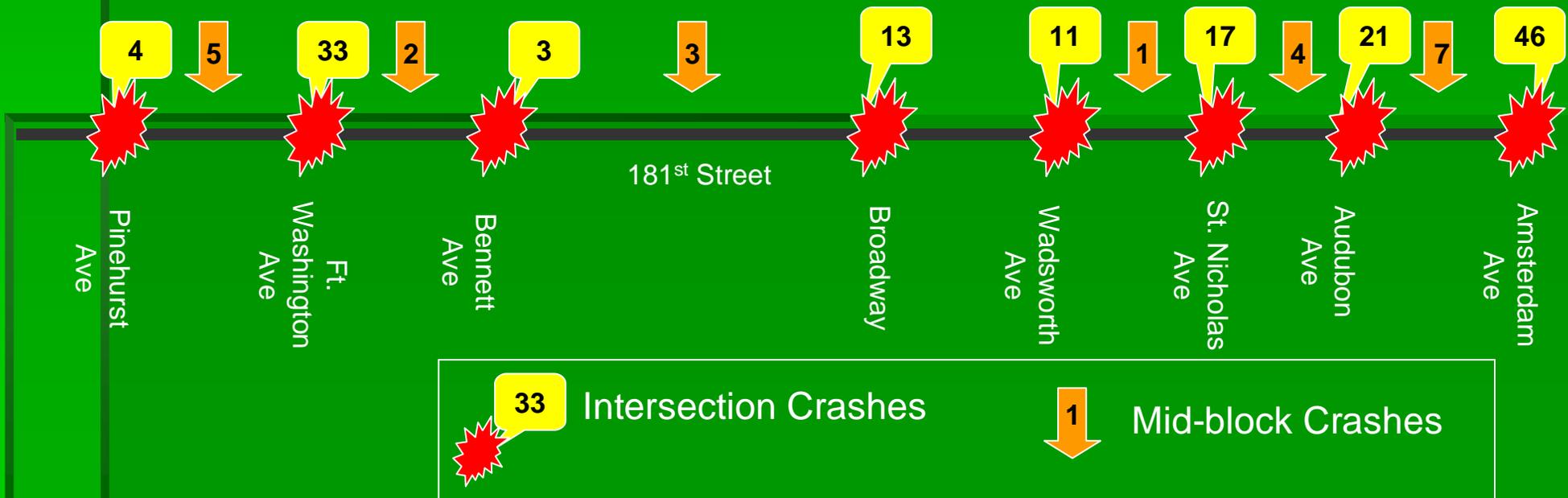
# Level of Service by Approach (Future w/o Improvements SAT)



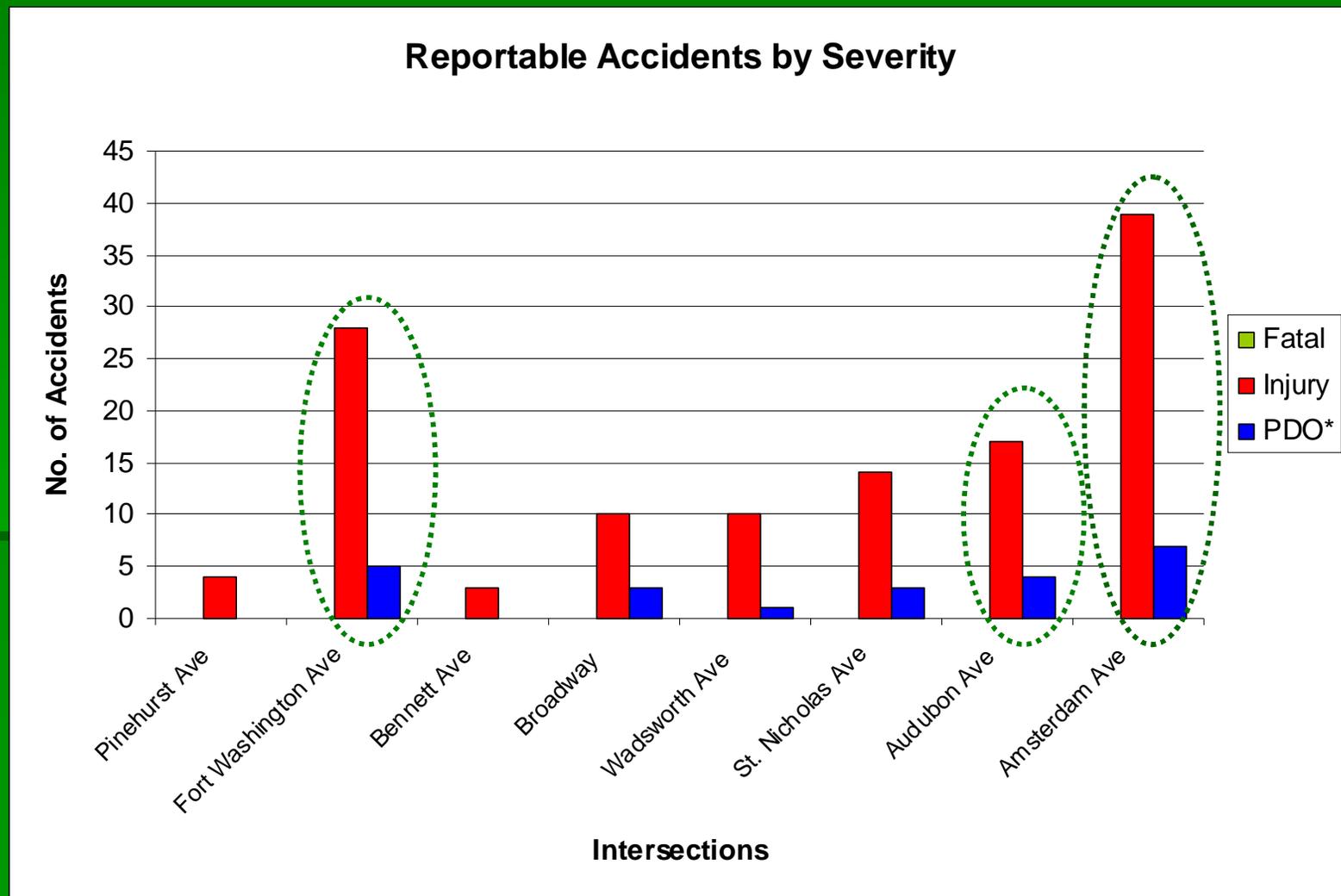
- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
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# Safety

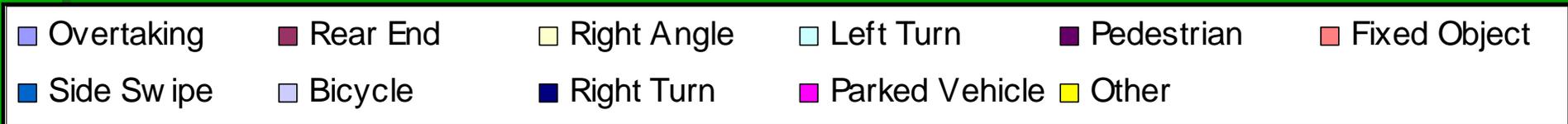
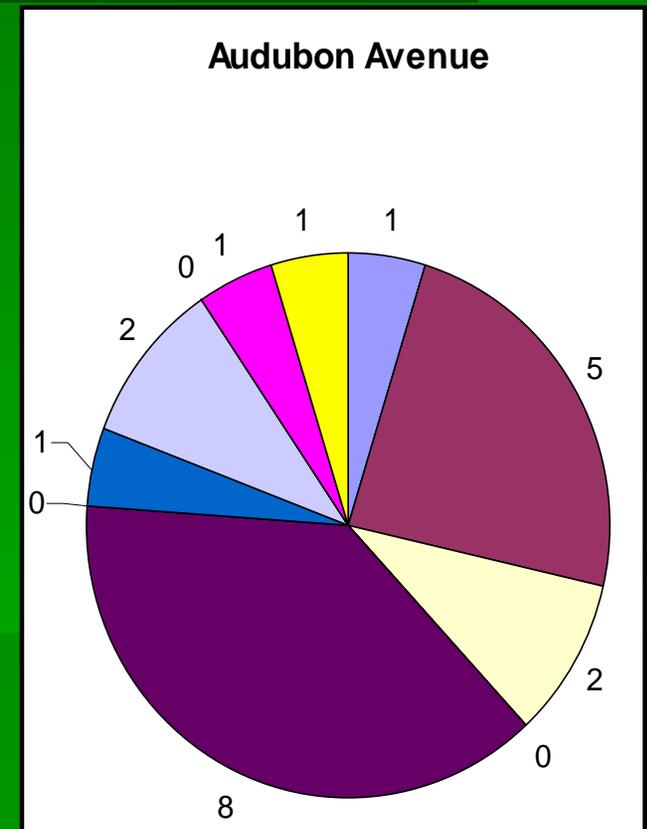
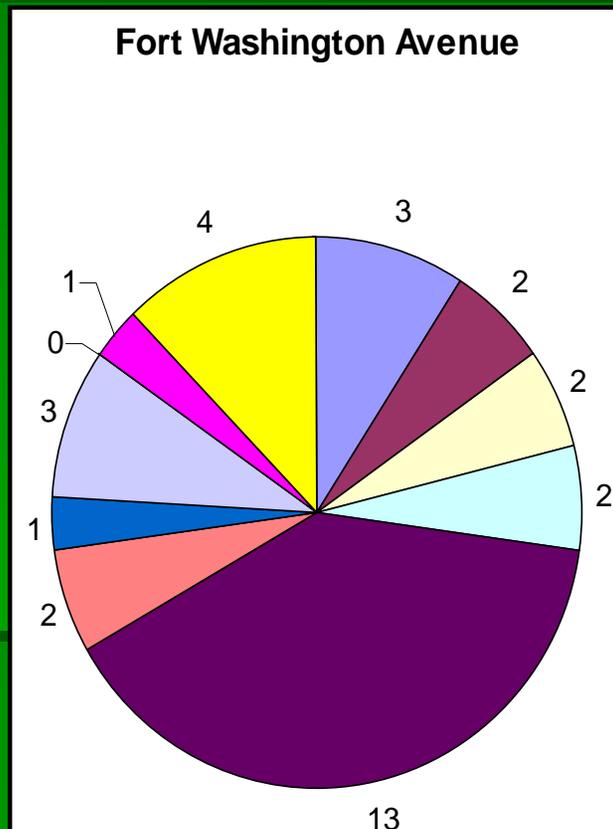
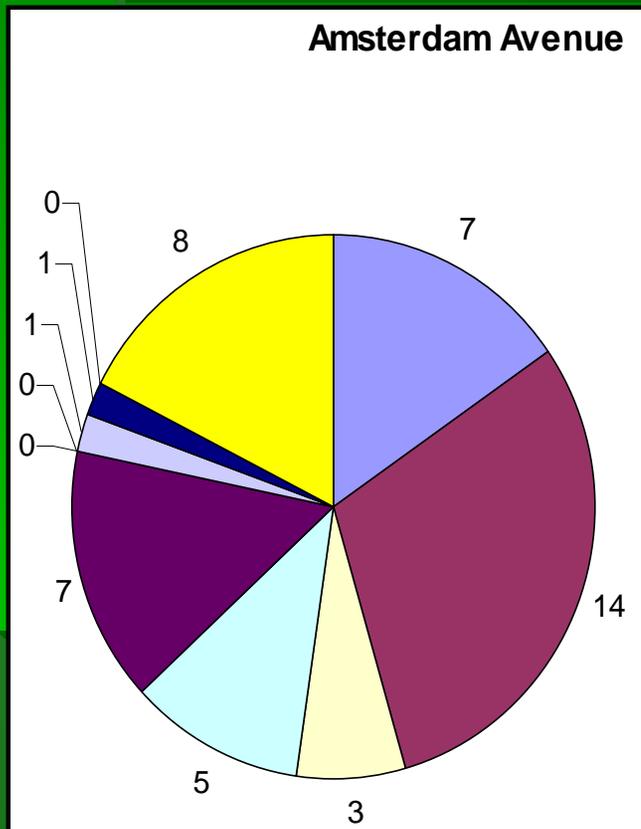
Year	2004	2005	2006	3-Year Total
No. of Reportable Accidents	49	61	60	170



# Reportable Accidents by Severity



# Accident Types (Top 3 Intersections)

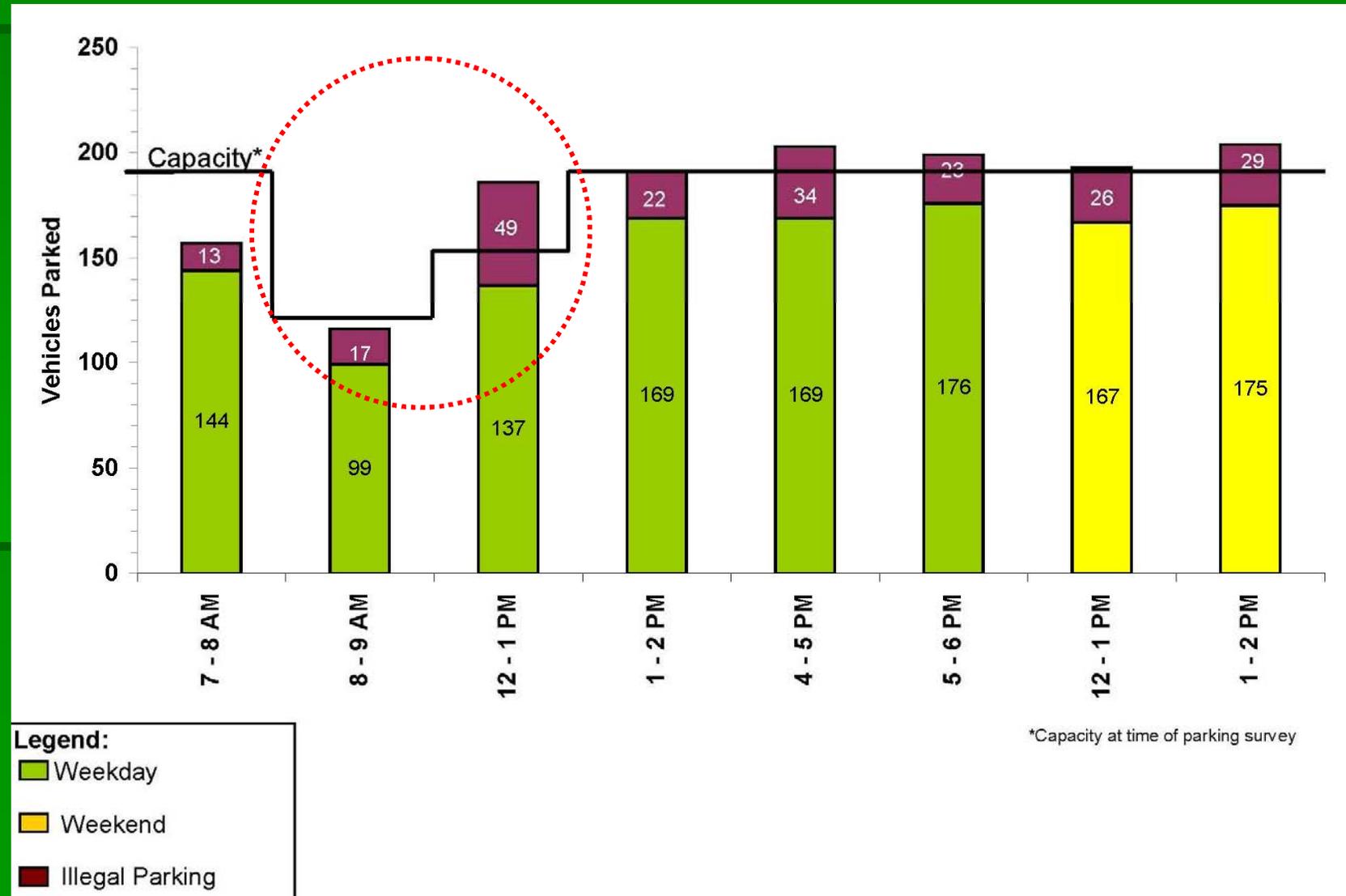


# On-Street Parking Inventory

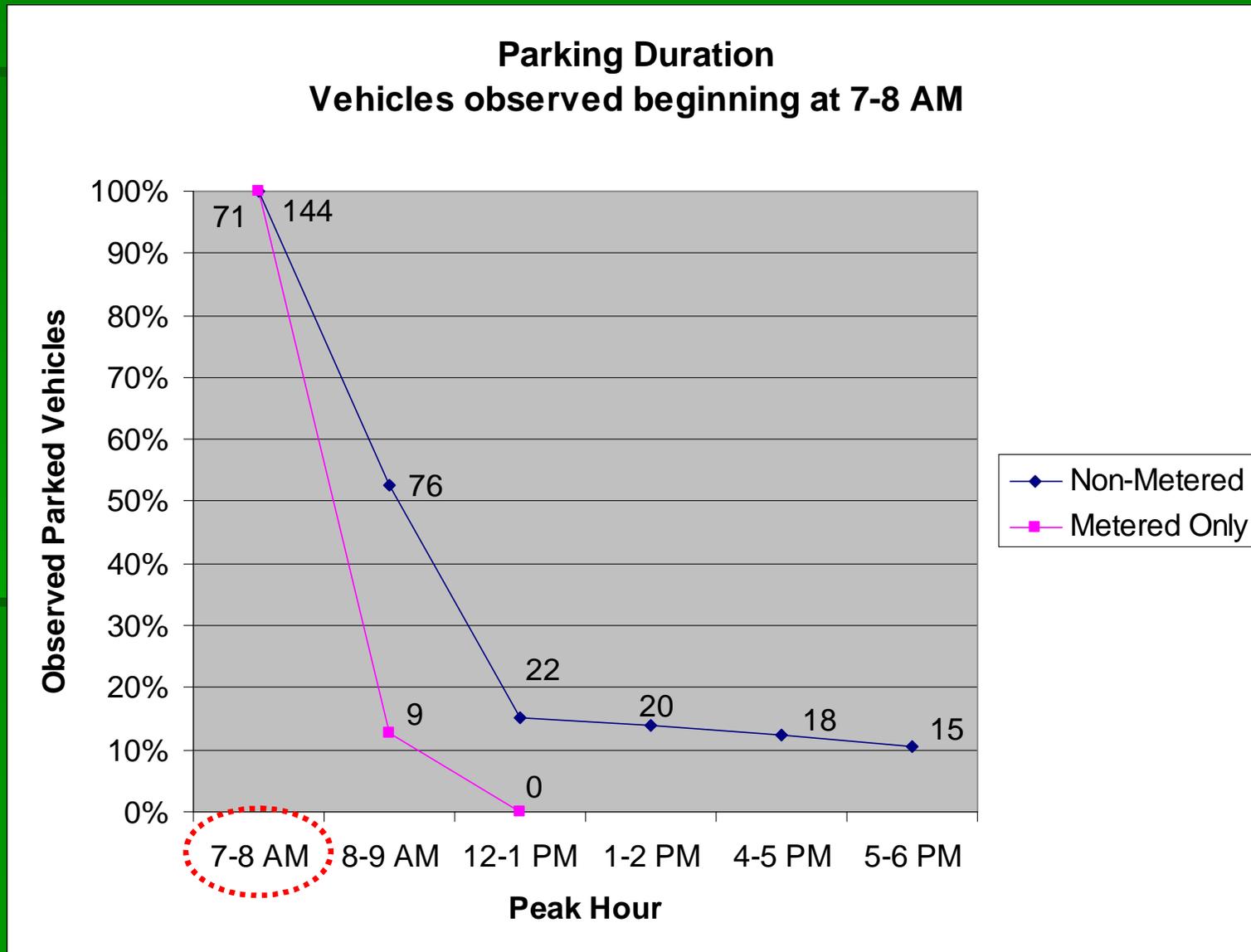
181<sup>st</sup> Street (Riverside Dr - Amsterdam Ave)

Parking Space	Metered	Non-Metered	Taxi Stand	Authorized	Total
# Legal Spaces (North side)	56	36	0	6	98
# Legal Spaces (South side)	44	37	6	0	87
# Legal Spaces (TOTAL)	100	73	6	6	185

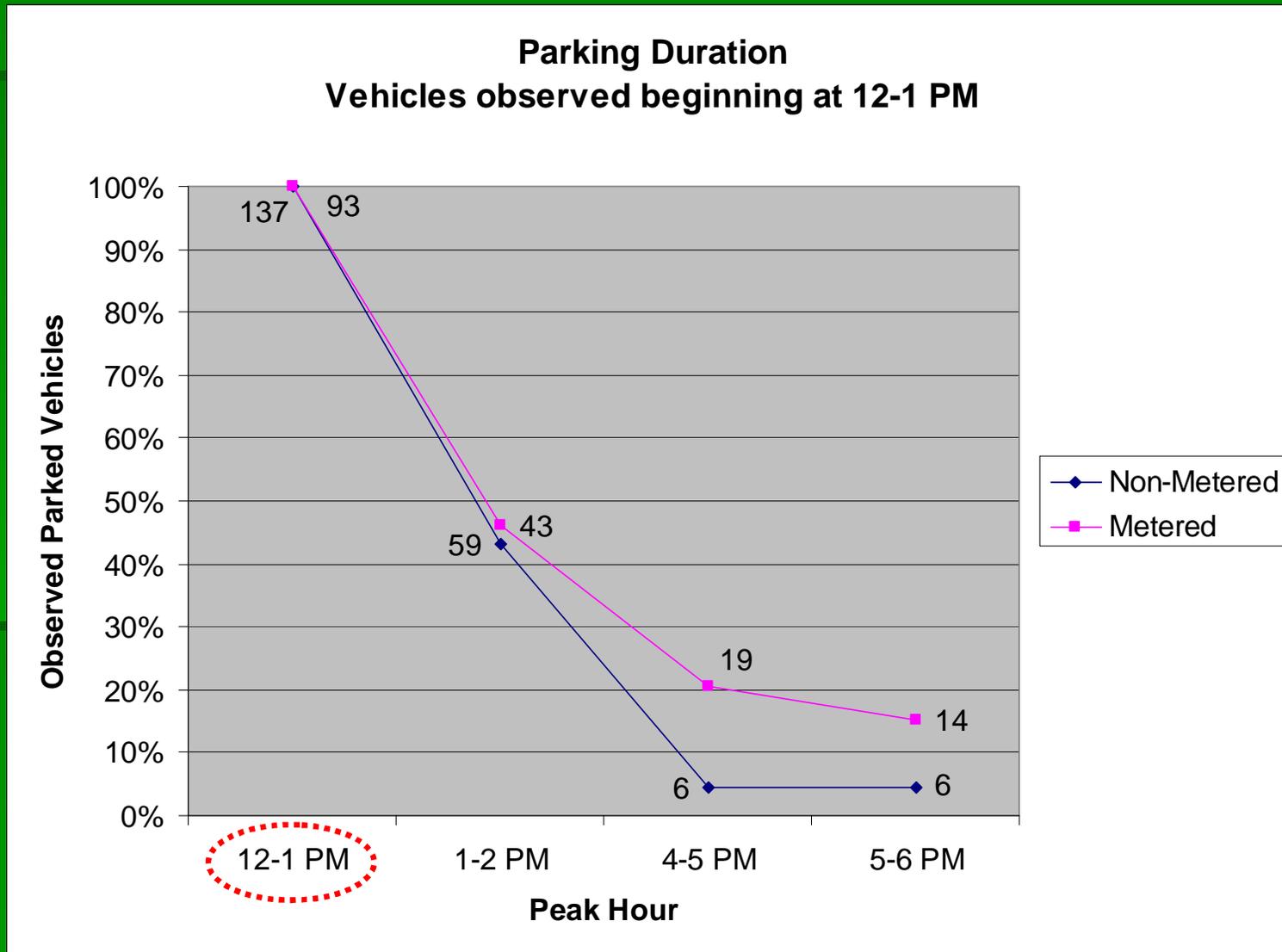
# On-Street Parking Utilization 181<sup>st</sup> Street



# Parking Duration - 181<sup>st</sup> Street



# Parking Duration - 181<sup>st</sup> Street





# Truck Observations

## 181<sup>st</sup> Street & Selected Cross-Streets

Time Period	# Trucks Parked
AM	7
MD	36
PM	16
SAT (MD)	15



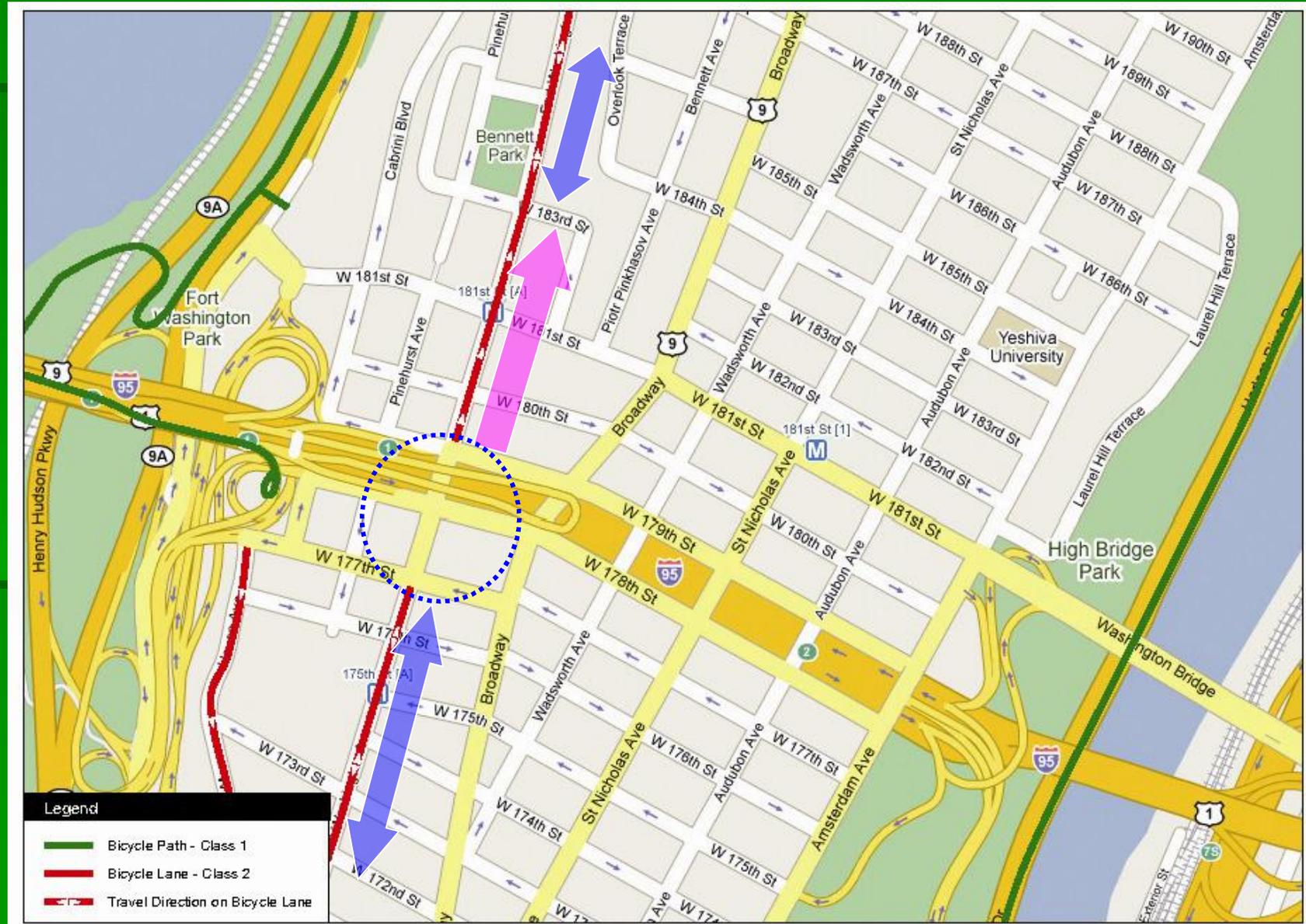


# Heaviest Pedestrian Volumes 181<sup>st</sup> Street (Peak Hour)

- Crosswalks:
  - St. Nicholas Ave (SAT): 5,600 total pedestrians
  - Broadway (SAT): 3,375 total pedestrians
- Sidewalks:
  - South sidewalk between Wadsworth & St. Nicholas Aves (SAT): 1,925 total pedestrians



# Bicycle Routes



# Heaviest Bicycle Volumes

## 181<sup>st</sup> Street (Peak Hour)

- Bicycles:
  - Ft. Washington Ave Southbound at 181<sup>st</sup> St (PM):  
21 total bicycles

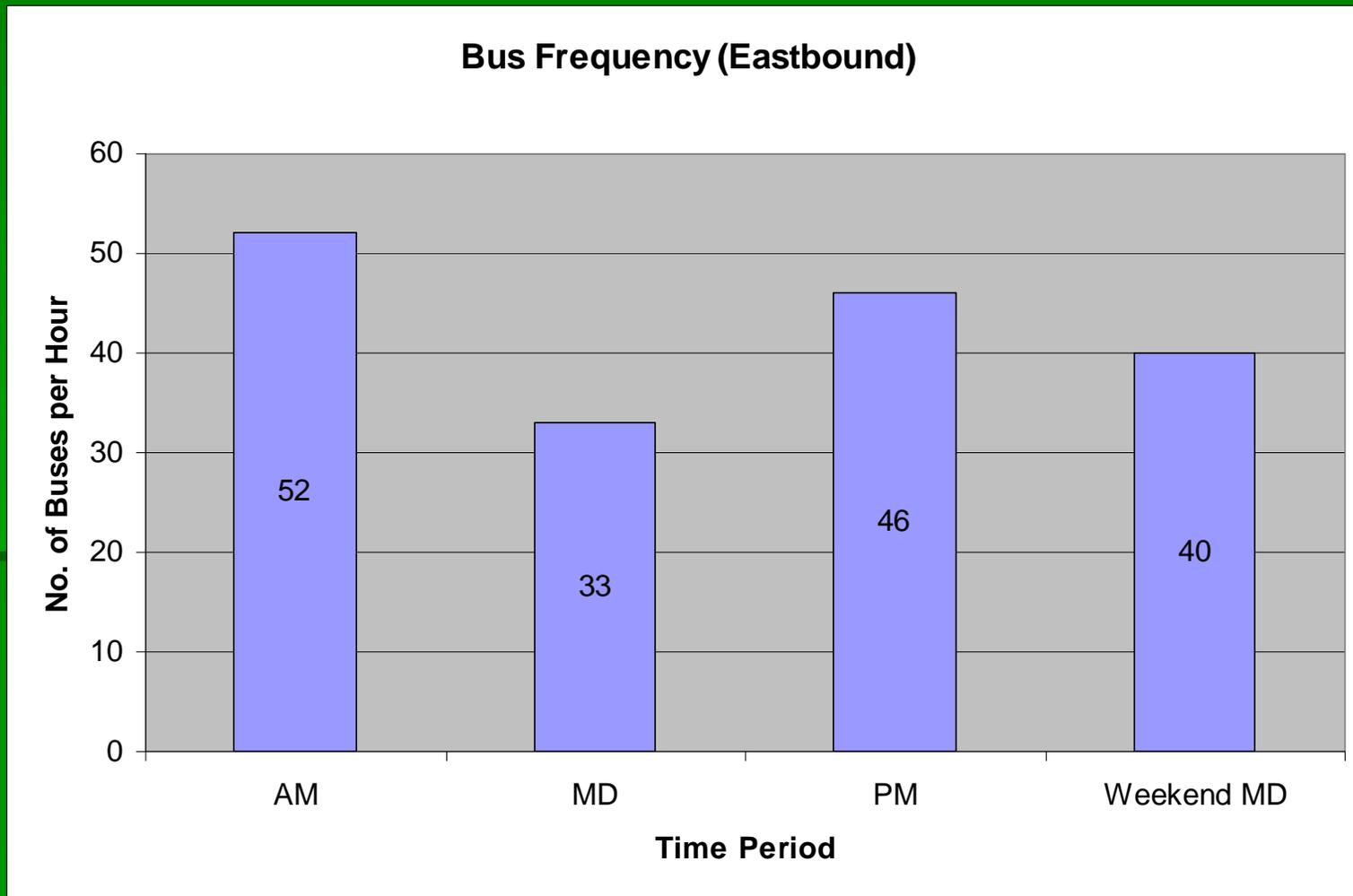


# Transit



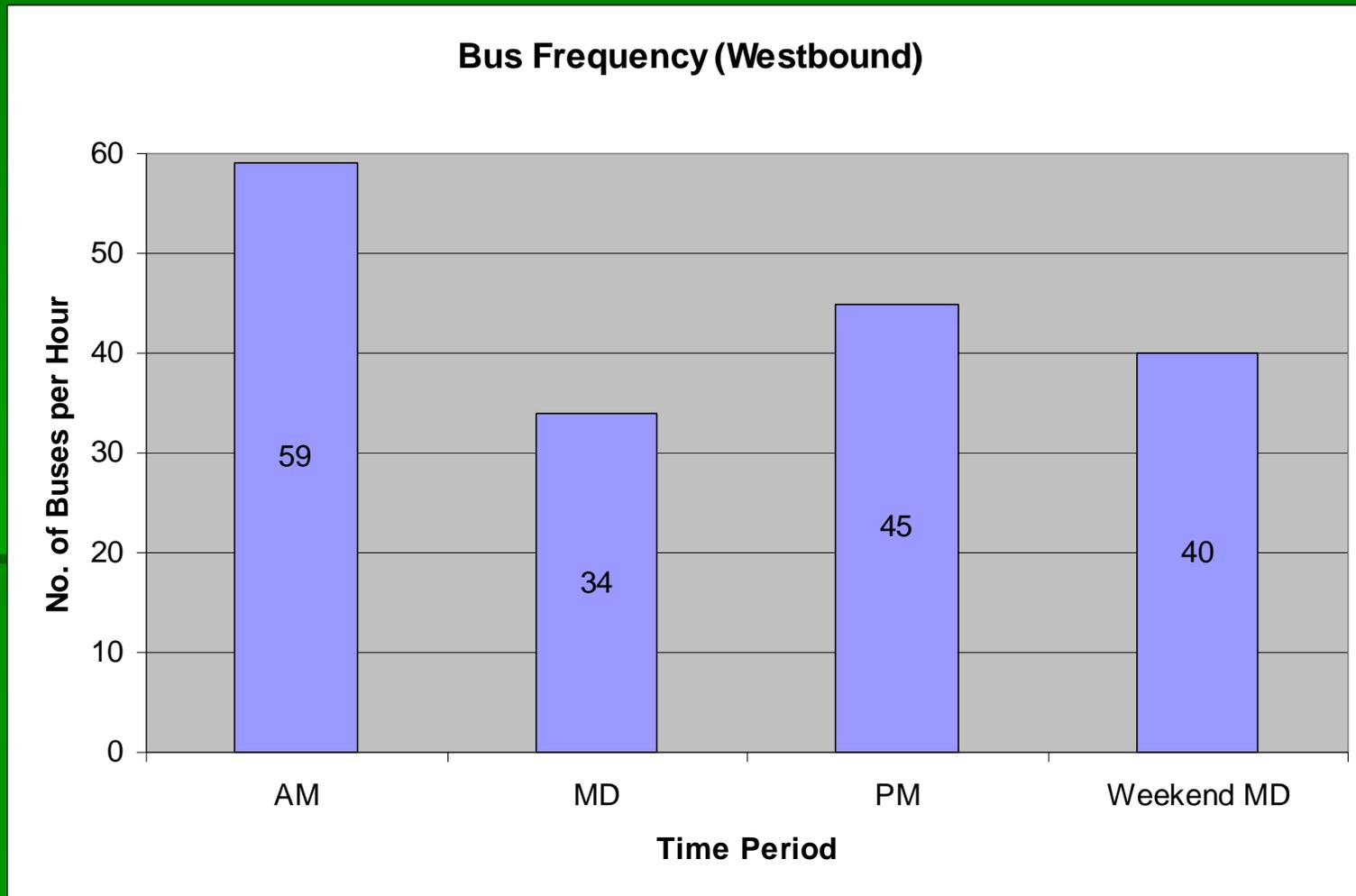
# Bus Frequency on 181<sup>st</sup> Street

Eastbound (Wadsworth Ave to Amsterdam Ave)



# Bus Frequency on 181<sup>st</sup> Street

Westbound (Amsterdam Ave to Wadsworth Ave)

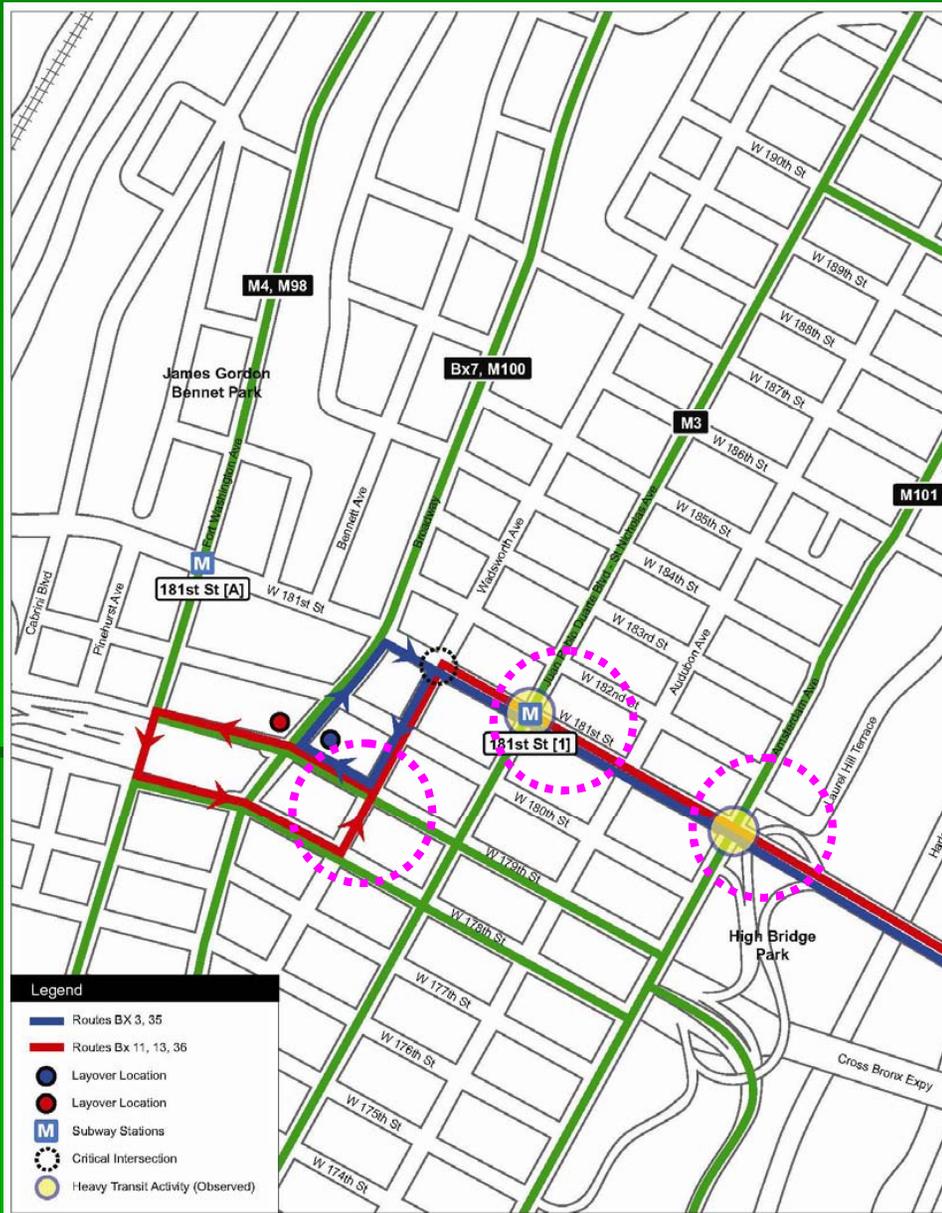


# Average Daily Ridership for Bus Routes Serving 181<sup>st</sup> Street

Route	Weekday	Saturday	Sunday
Bx3	16,439	11,030	8,504
Bx11	13,709	9,457	7,303
Bx13	10,086	5,947	4,473
Bx35	14,591	10,026	7,748
Bx36	31,489	21,360	16,803
<i>Total</i>	<i>86,314</i>	<i>57,820</i>	<i>44,831</i>

Source: MTA-NYCT 2008

# Locations of Heavy Transit Activity



- Heaviest Daily Total Boardings
  - St. Nicholas Ave EB = 5,980
  - Amsterdam Ave EB = 3,950
  - 178 St @ Broadway EB = 680
- Heaviest Daily Total Alightings
  - St. Nicholas Ave WB = 5,760
  - Amsterdam Ave WB = 3,300
  - 179 St @ Broadway WB = 2,935

# Existing Conditions & Issues

- Traffic Operations
  - Heavy volumes & conflicting movements
  - Large number of buses
  - High volume of pedestrians
  - Signage to GWB & HHP
  - Lack of left-turn lanes or left-turn signals
  - Closely spaced driveways



# Existing Conditions & Issues

- Safety Concerns
  - Vehicle-vehicle conflicts
  - Vehicle- pedestrian conflicts
  - Recurring traffic congestion



# Existing Conditions & Issues

- Parking
  - Double parking by cars & trucks
  - Other illegal parking
  - “Feeding the meters”



# Existing Conditions & Issues

- Pedestrians & Bicycles
  - Congested sidewalks
  - Lack of pedestrian amenities (e.g. bus shelters)
  - Discontinuous bicycle network
  - Faded pavement markings



# Existing Conditions & Issues

- Goods movement
  - Multiple truck routes (including 181<sup>st</sup> Street)
  - No truck loading/unloading zones
  - Double parking by trucks
  - Tight turning radii for trucks



# Existing Conditions & Issues

- Transit
  - Location of bus stops
  - Length of bus stops
  - Turning buses conflicting with pedestrians



# Other Projects in the Area

- School Safety Engineering Project – PS 132 – Juan Pablo Duarte School, NYCDOT, 2006
- School Safety Engineering Project – St. Spyridon Parochial School, NYCDOT, 2006
- Truck Route Management Study, NYCDOT
- Safe Streets for Seniors Draft Report, Washington Heights Manhattan, RBA Group, 2008
- Upper Manhattan Pedestrian Project, NYCDOP, 2008
- Improving Pedestrian Safety & Mobility Study, Konheim and Ketcham, 2003

# Preliminary Improvement Ideas (Early Action)

- Traffic Operations
  - Restrict left turns
  - Set back stop bars
  - Modify signal timings
  - Add Left turn lanes/phasing
  - Implement channelization
  - Revise pavement markings
  - High-visibility crosswalks



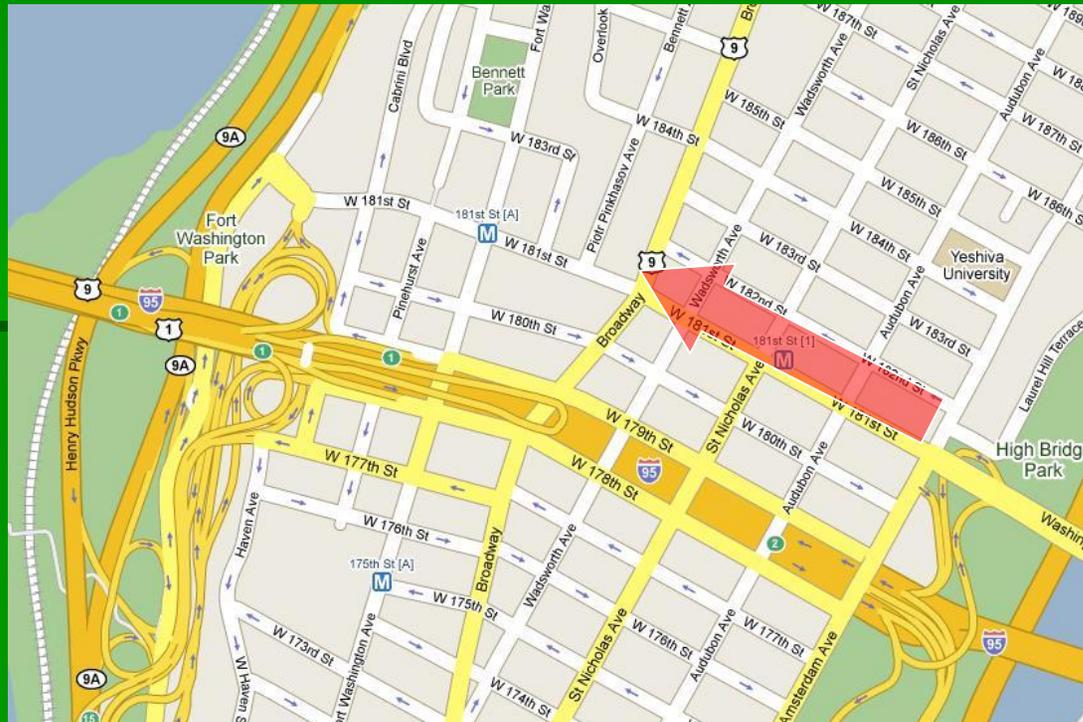
# Preliminary Improvement Ideas (Early Action)

- Signage along the Corridor
  - Redirect GWB-bound traffic from 181 St to 179 St
  - Install “Don’t Block the Box” signage and pavement markings
- Modify Parking Regulations to:
  - Provide additional through/turning lanes, or
  - Provide Truck Loading/unloading zones, or
  - Lengthen existing bus stops, or
  - Install muni-meters for cars and trucks
- Enforcement
  - Enforce parking regulations
  - Reduce red light running
  - Regulate street vendors



# Preliminary Improvement Ideas (Bold Ideas)

- Consider one way operation on 181 St WB
- Eliminate parking on 181 Street and provide curb lane for buses
- Explore ways to discourage truck travel on 181<sup>st</sup> Street



# Preliminary Improvement Ideas (Bold Ideas)

- Provide wider sidewalks
- Provide curb extension
- Coordinate with NYCT on bus routes and schedules
- Enhance gateway to 181<sup>st</sup> Street corridor



# Study Process: Next Steps

