

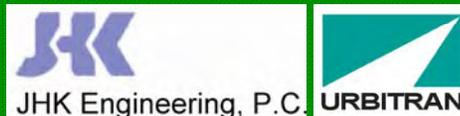
Congested Corridors

Project West 181st Street, Manhattan

Amsterdam Avenue to Riverside Drive

June 29, 2010

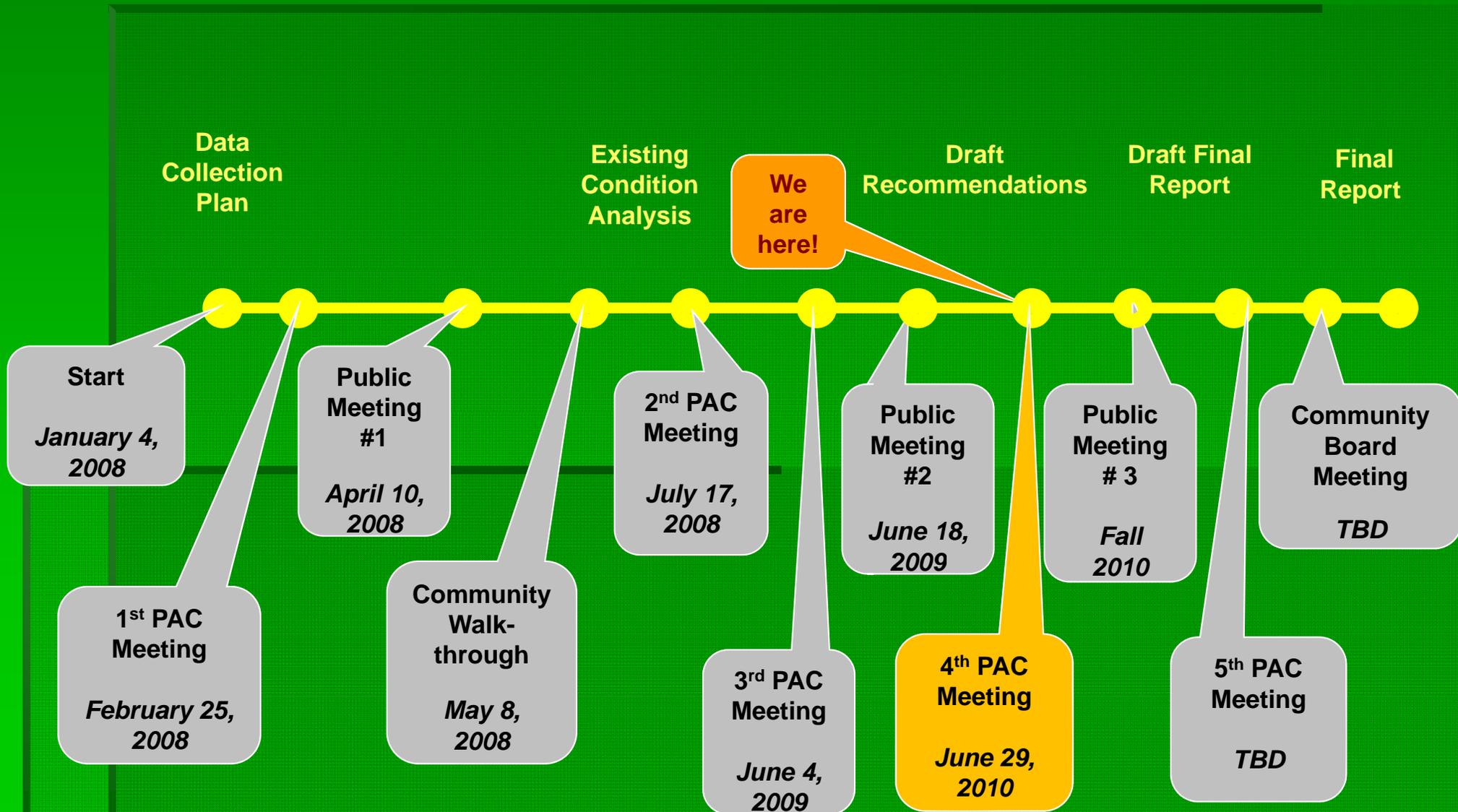
New York City Department of Transportation



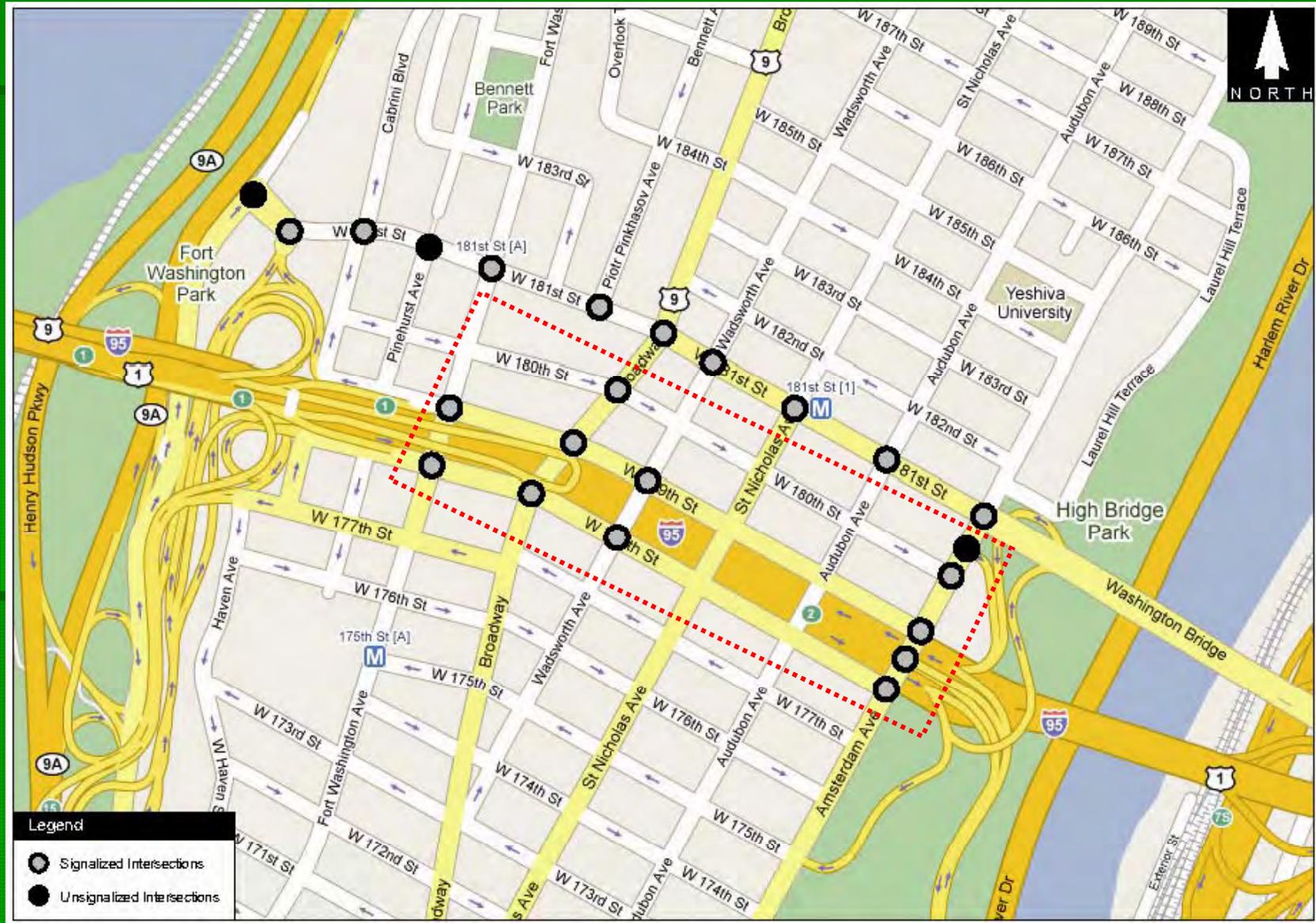
Meeting Overview

- Summary of Existing & Future Conditions and Issues
- Summary of Alternatives
- Next Steps and Discussion

Study Process



Study Area Map



Existing Conditions & Issues

- Traffic Operations
 - Heavy volumes & conflicting movements
 - Large number of buses
 - High volume of pedestrians
 - Lack of left-turn lanes or left-turn signals



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 local truck routes (including 181st Street)
 - No truck loading/unloading zones
 - Double parking by trucks
 - Tight turning radii for trucks



Existing Conditions & Issues

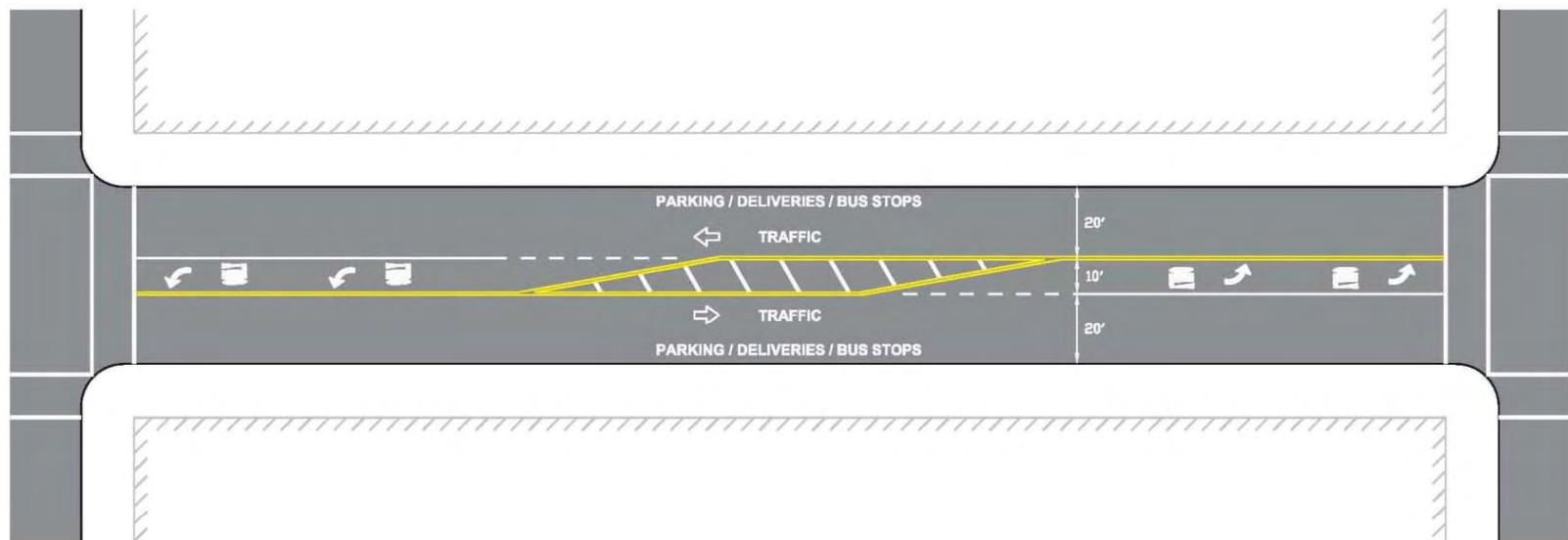
- Transit
 - Location of bus stops
 - Length of bus stops
 - Turning buses conflicting with pedestrians



Overview of Alternatives

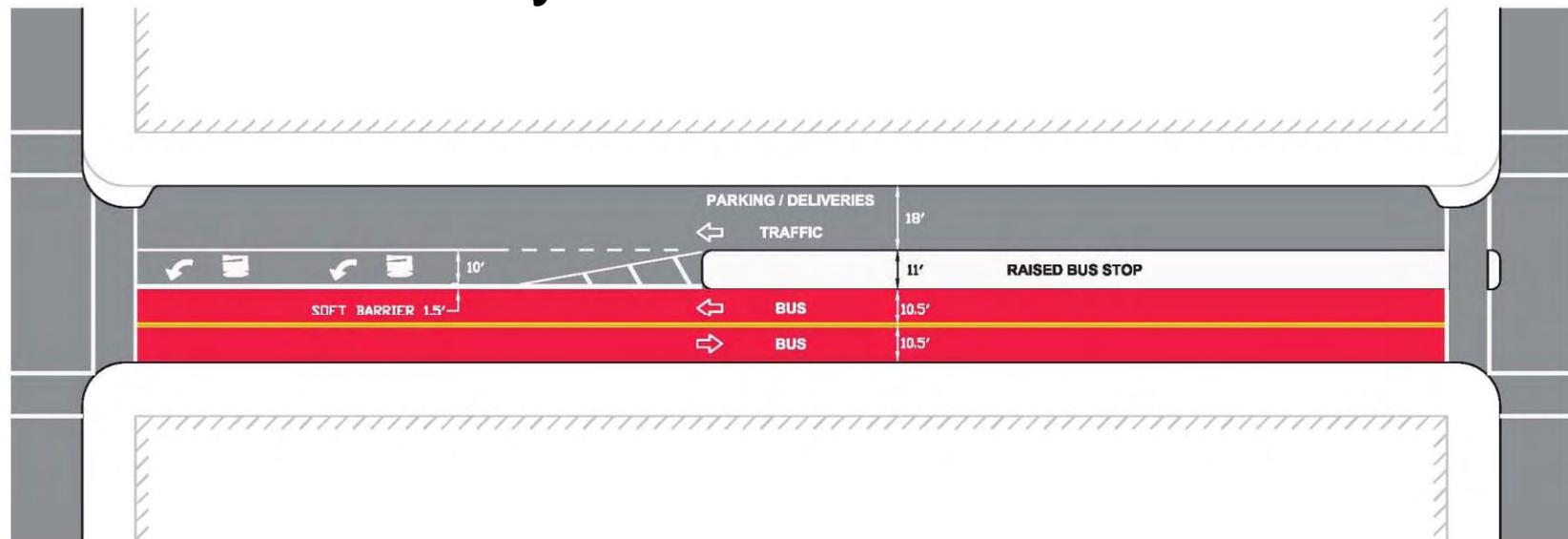
Alternative 1 – Left Turn Lanes

- Two-way traffic
- Exclusive left turn lanes



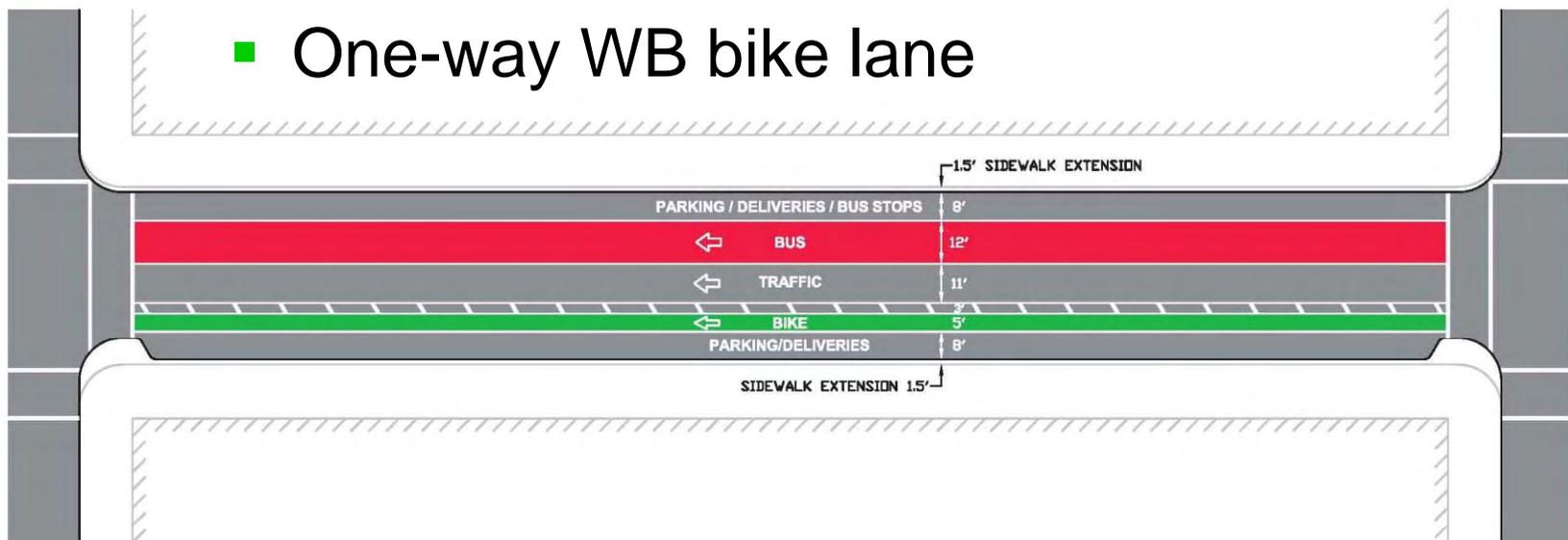
Alternative 2 - Bus Transit Mall

- One-way WB traffic
- Two-way bus transit mall

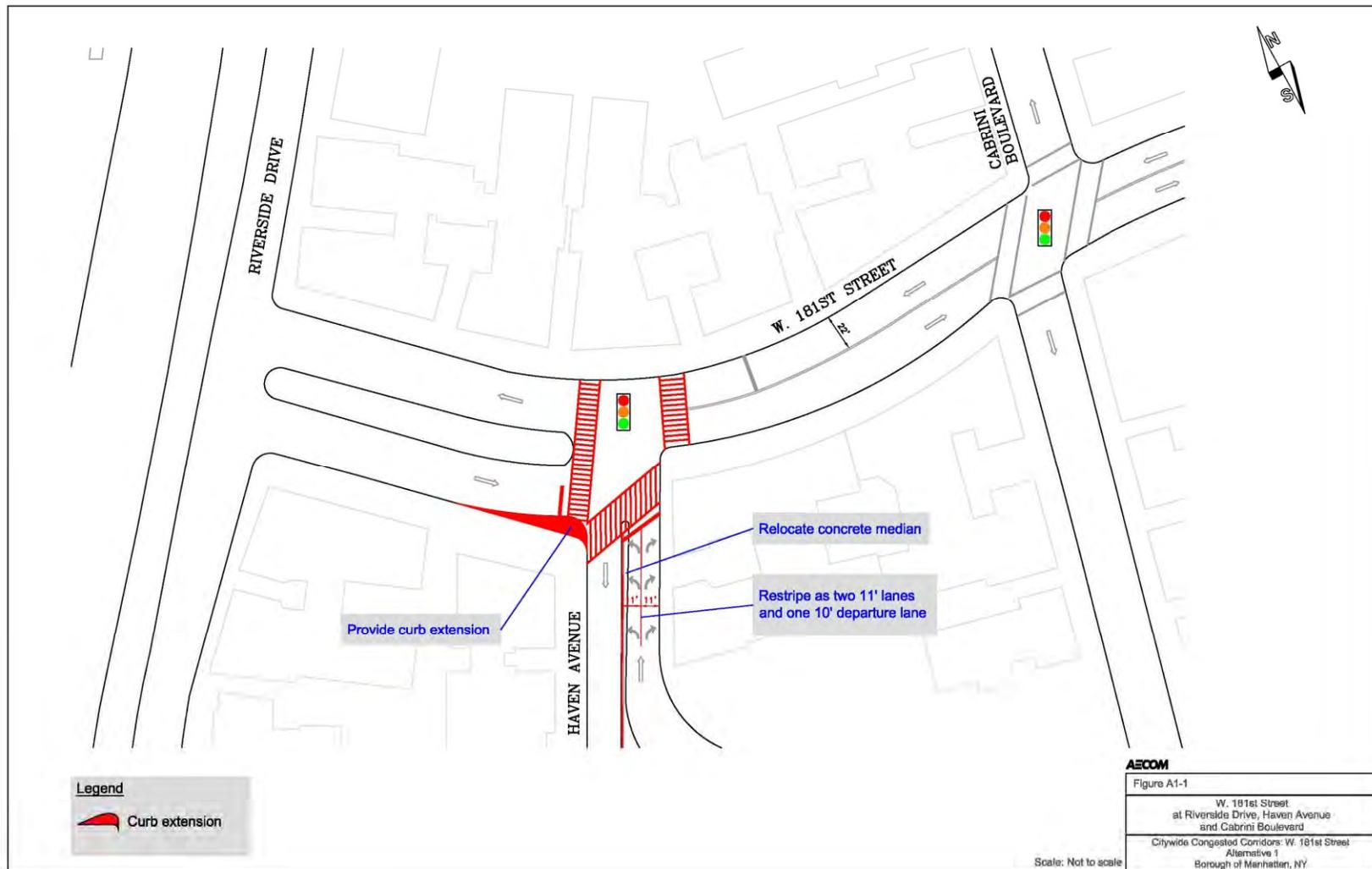


Alternative 3 – One-way WB

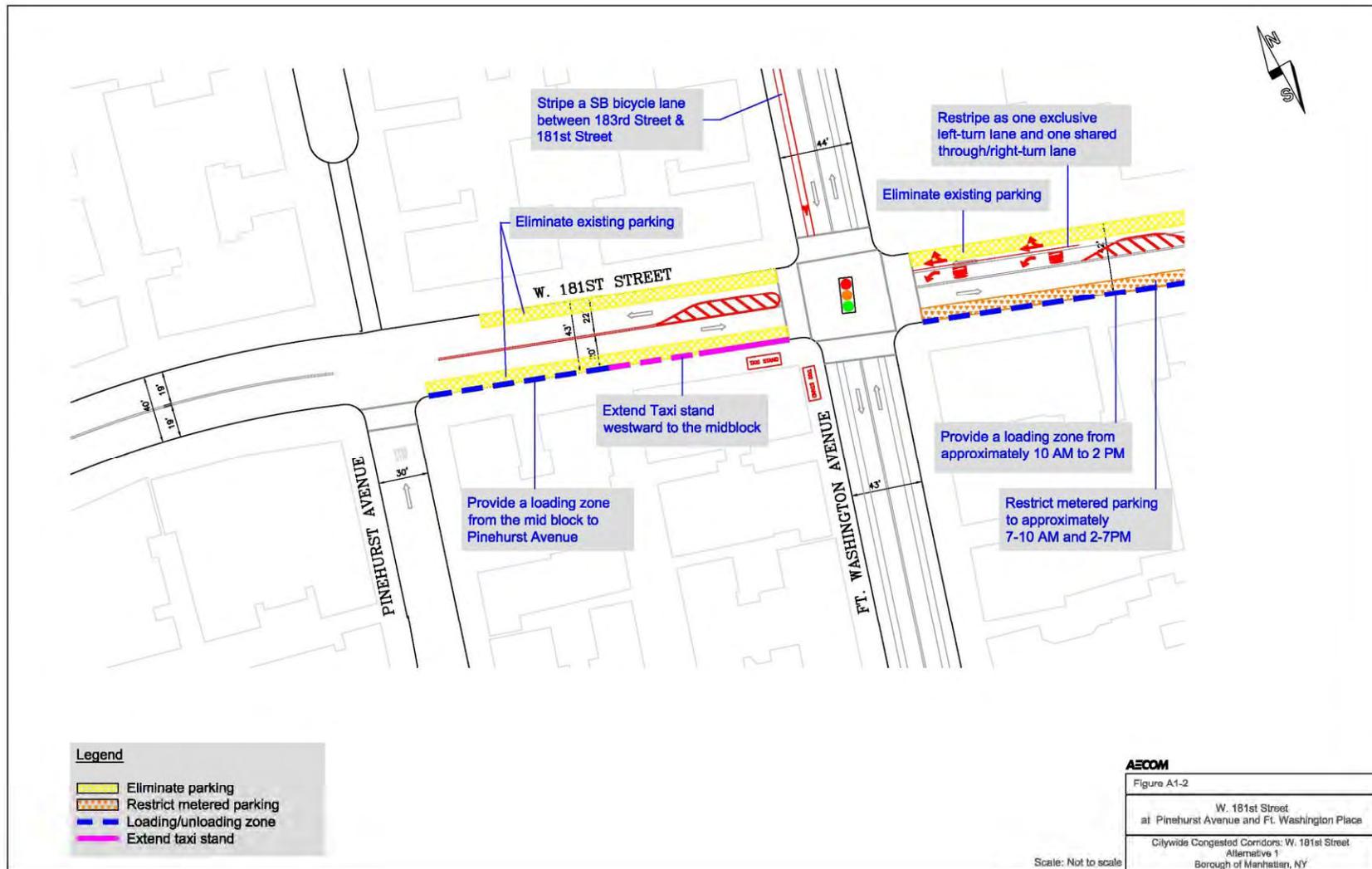
- One-way WB general traffic lane
- One-way WB bus lane
- One-way WB bike lane



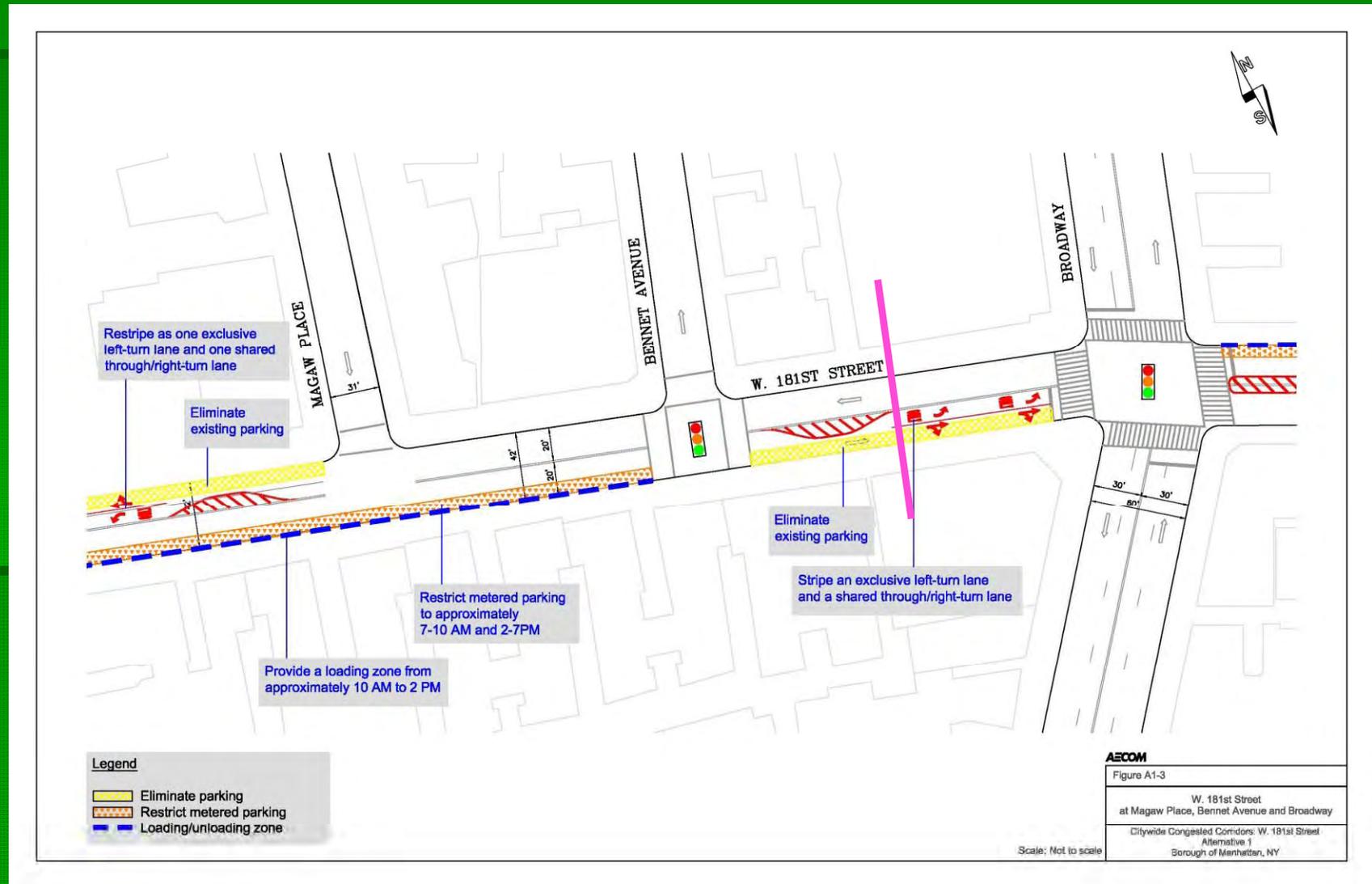
Improvements Common to All Alternatives



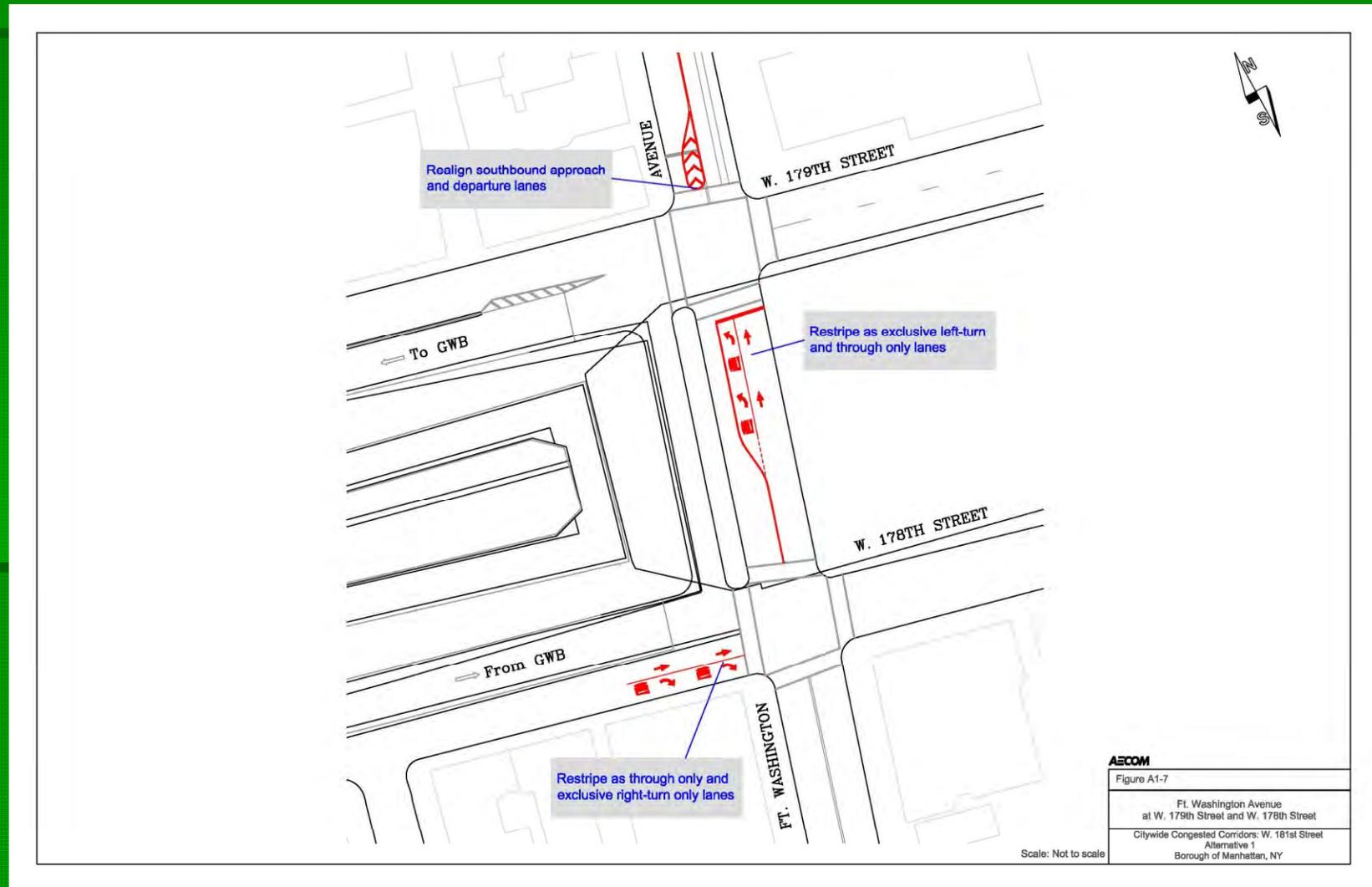
Improvements Common to All Alternatives



Improvements Common to All Alternatives

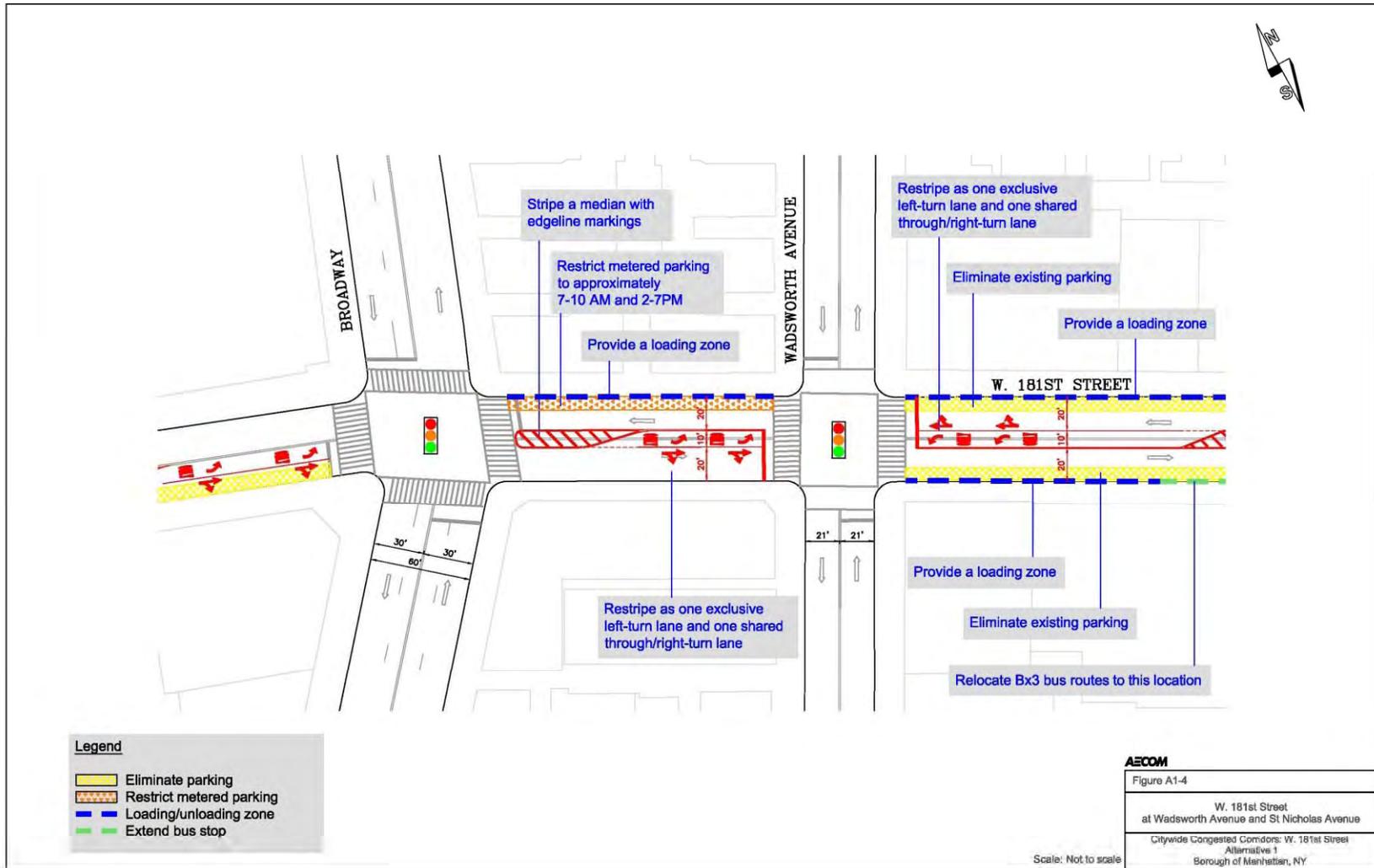


Improvements Common to All Alternatives

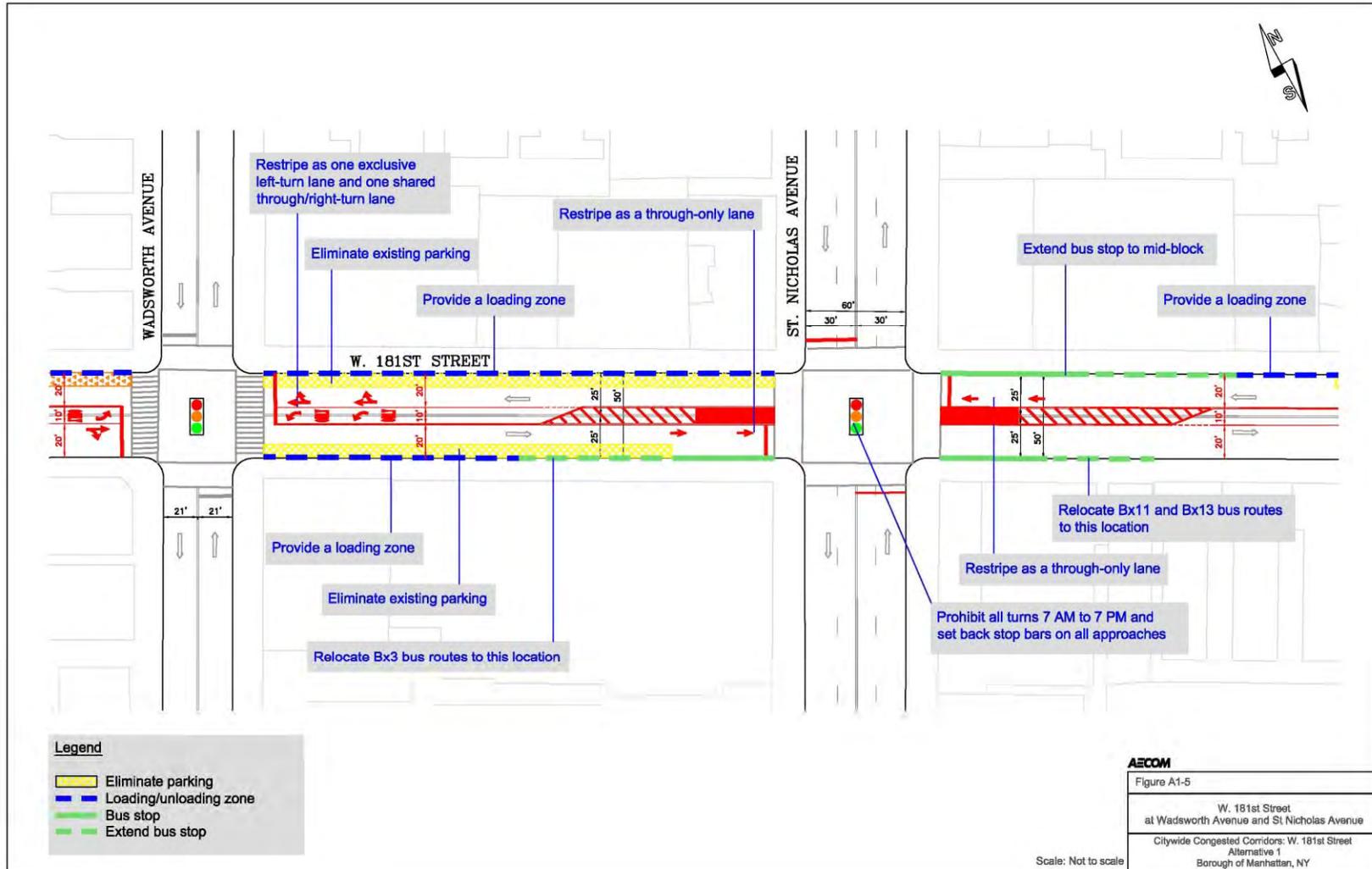


Alternative 1

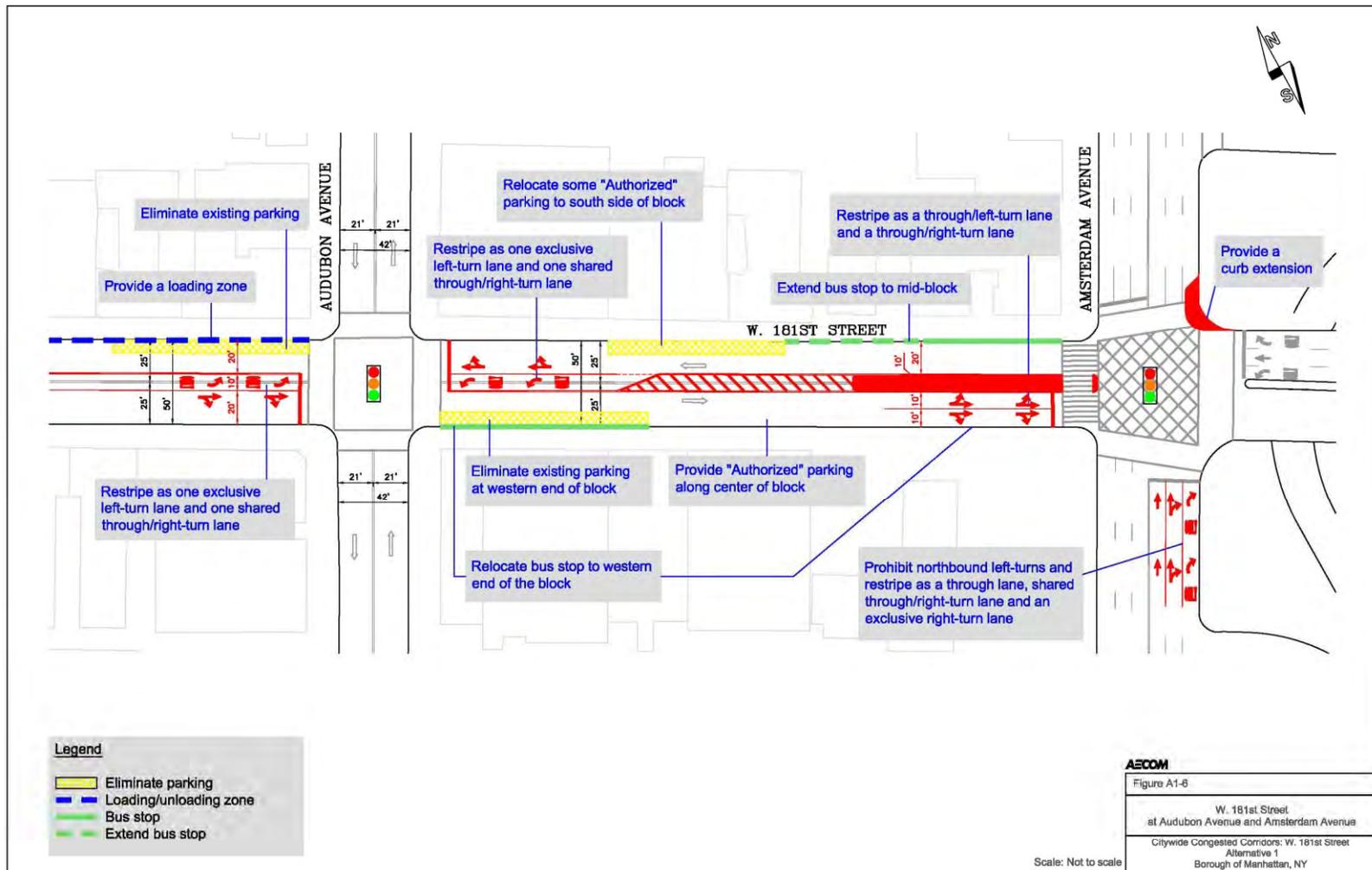
Alternative 1 Improvements



Alternative 1 Improvements

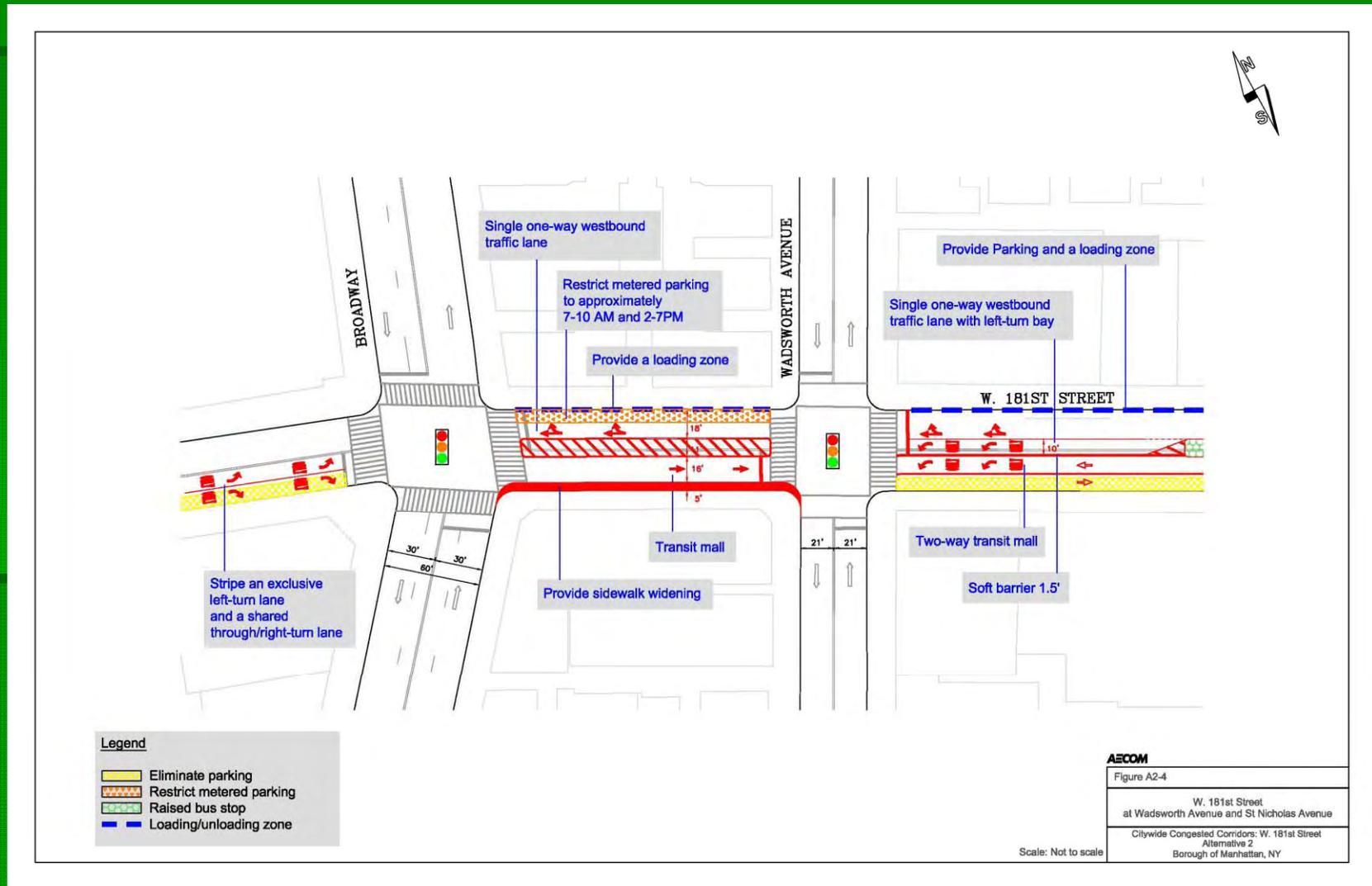


Alternative 1 Improvements

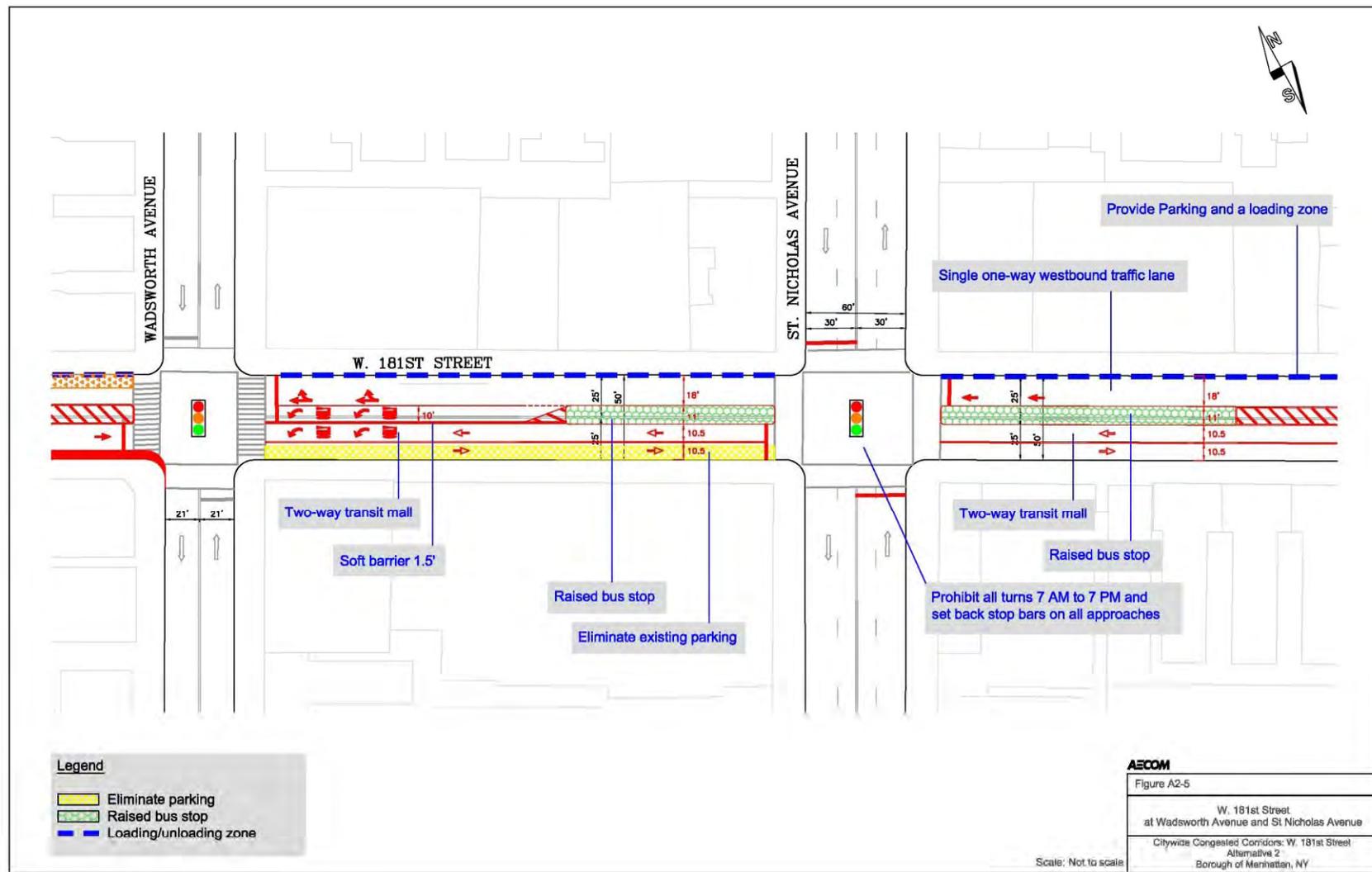


Alternative 2

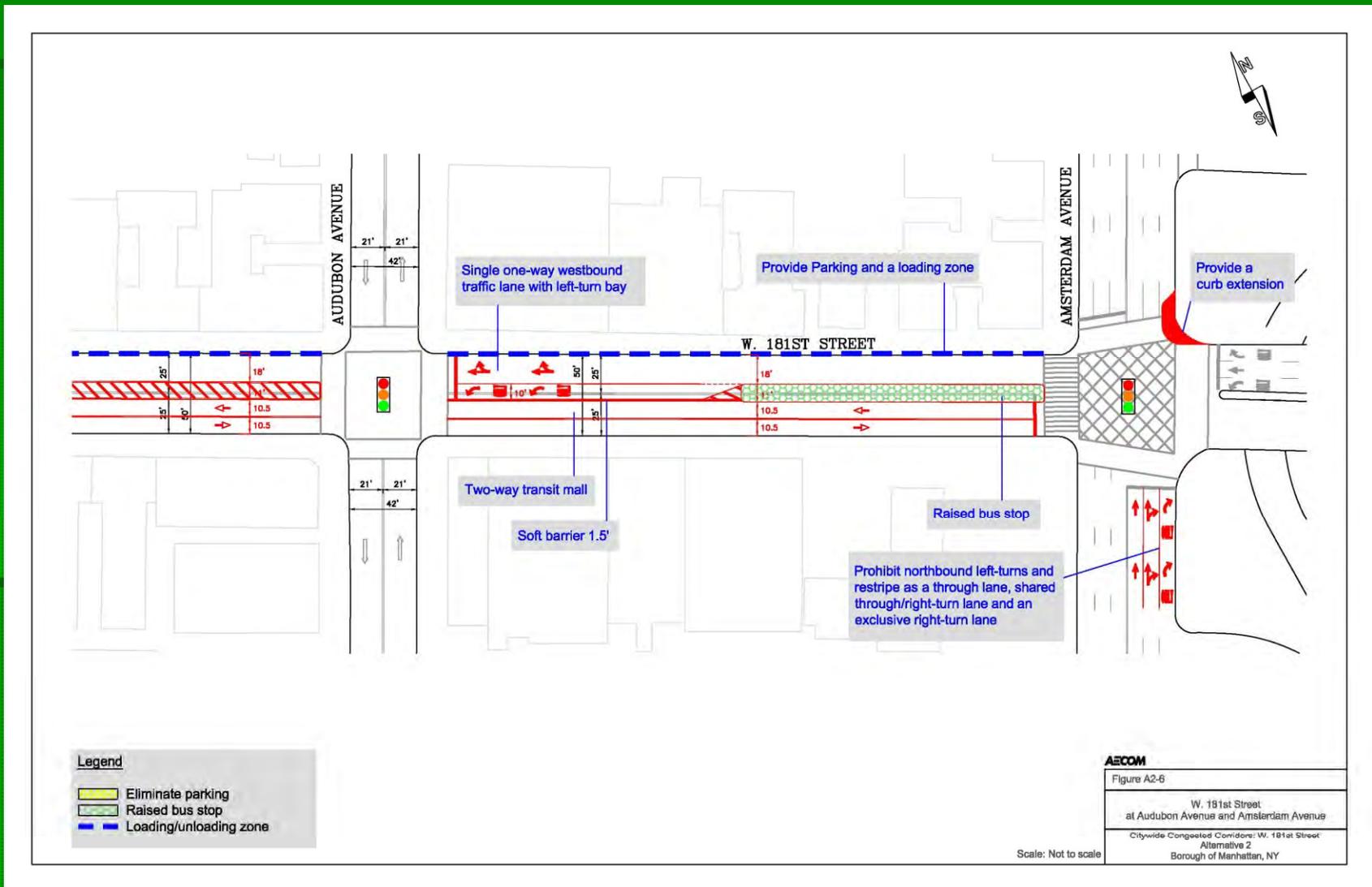
Alternative 2 Improvements



Alternative 2 Improvements

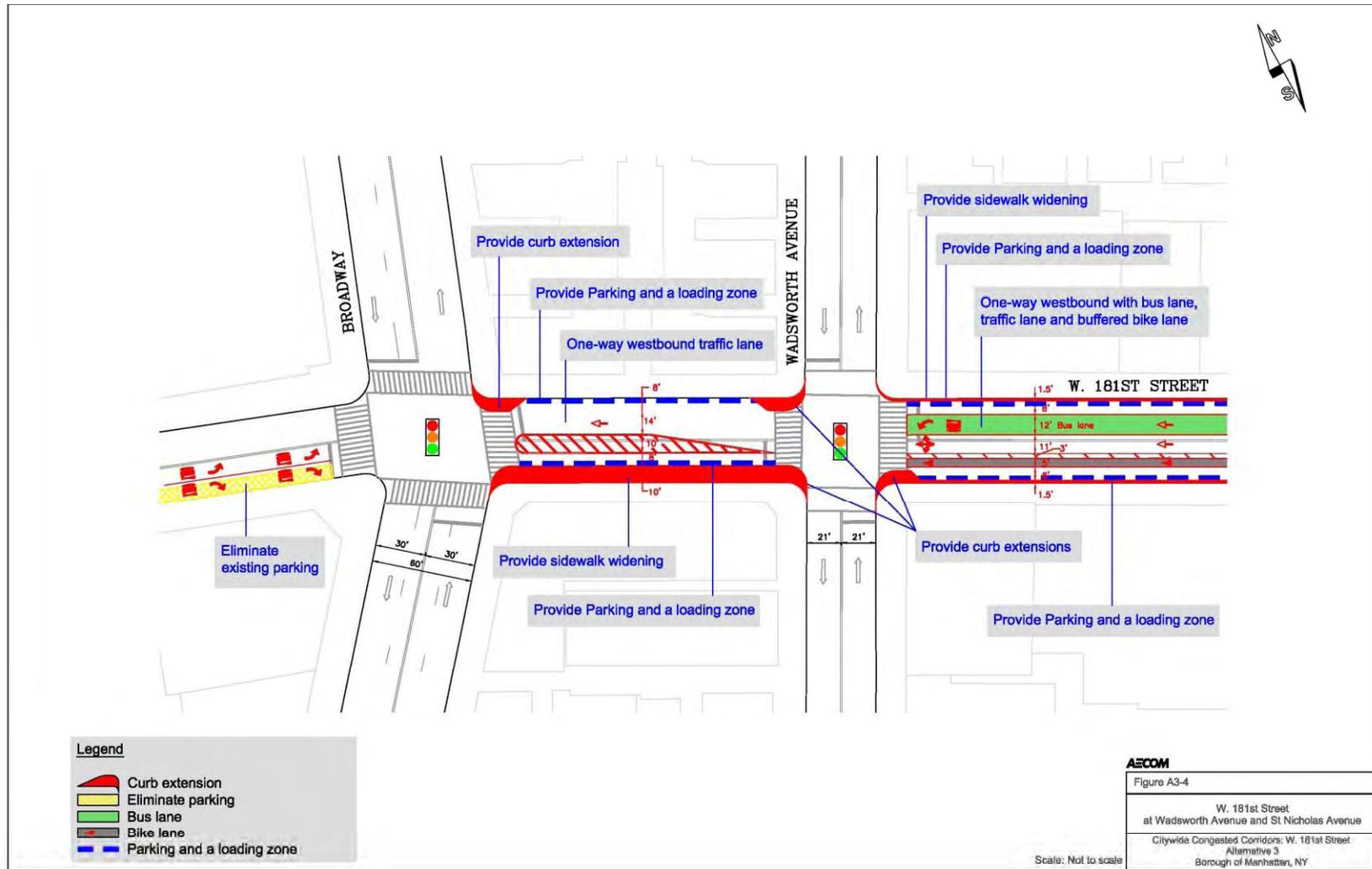


Alternative 2 Improvements

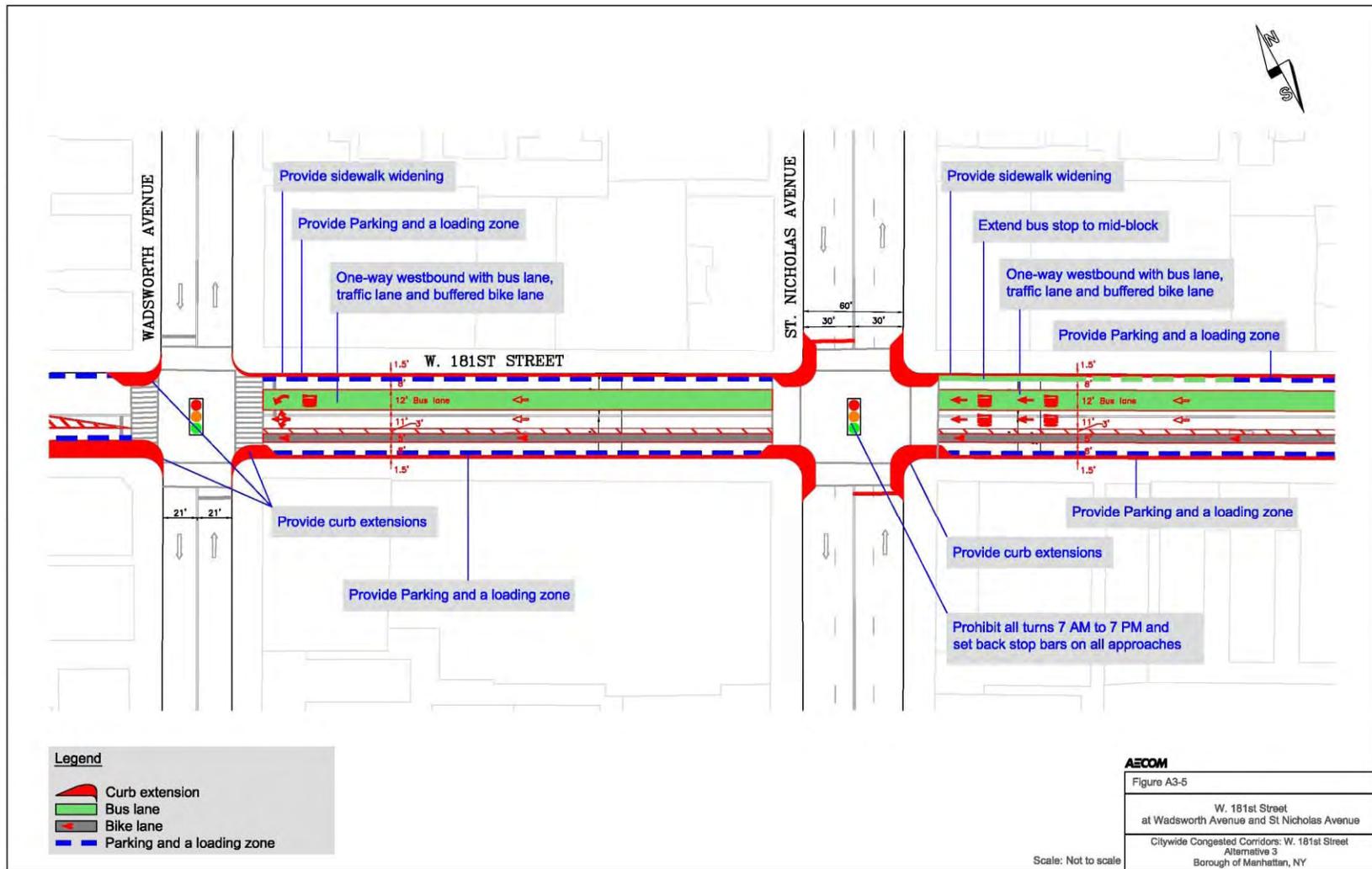


Alternative 3

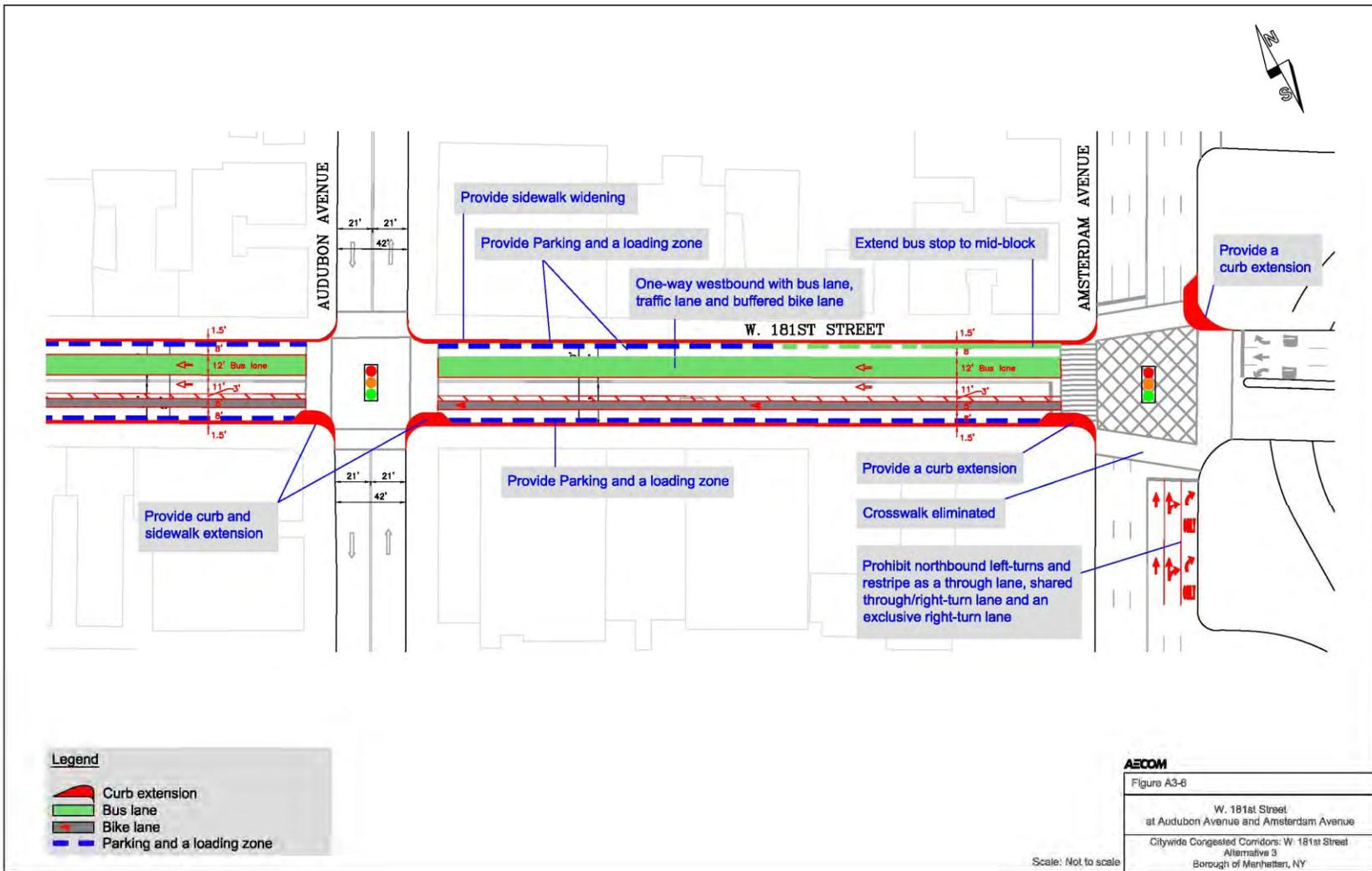
Alternative 3 Improvements



Alternative 3 Improvements



Alternative 3 Improvements



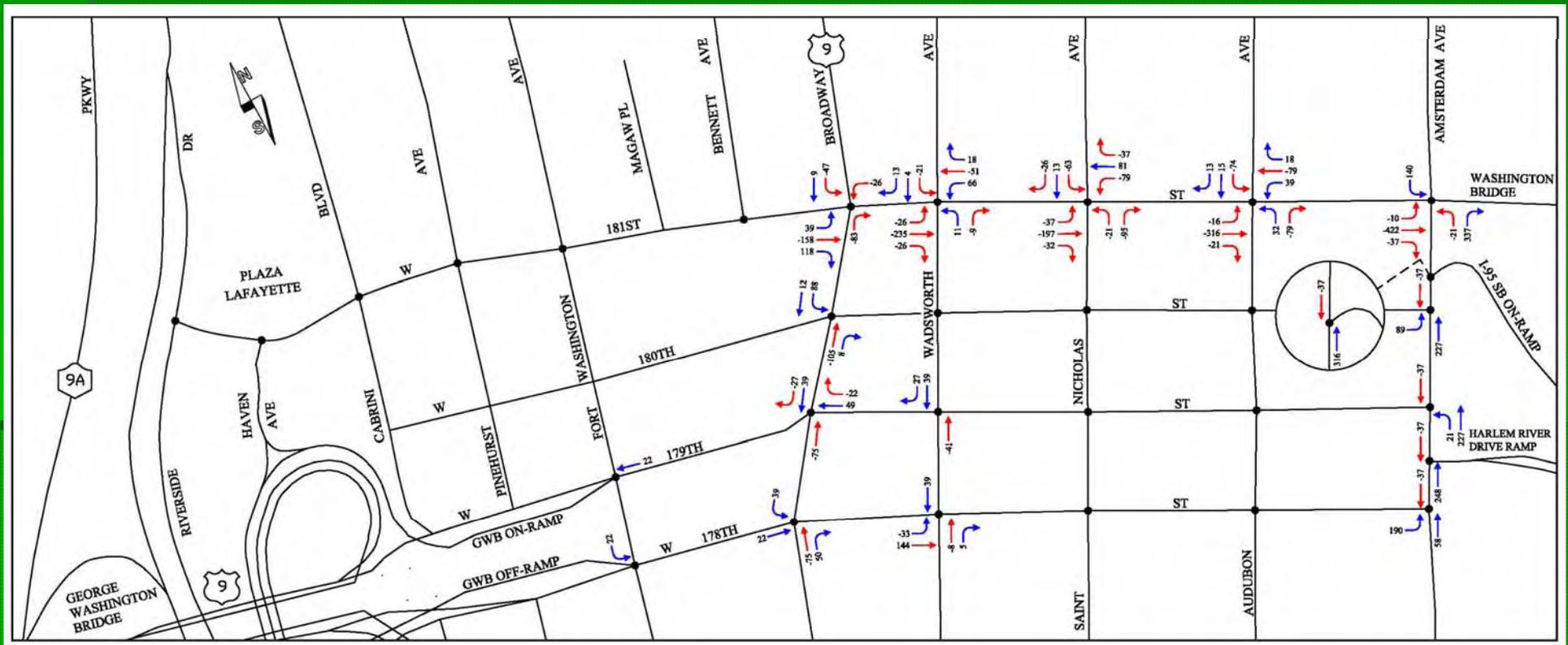
Comparison of Alternatives

Traffic Volumes at Select Locations: Eastbound

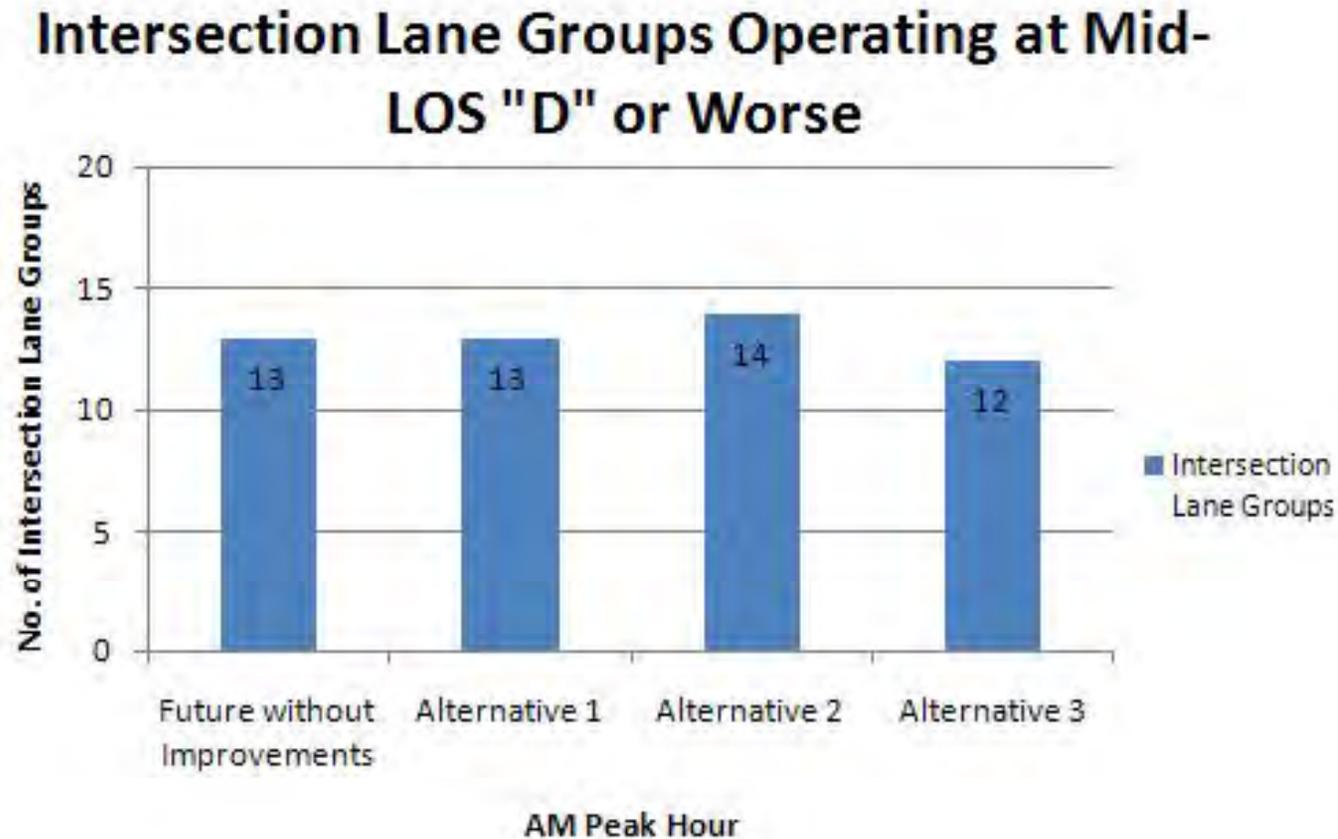
		Eastbound at ...			Eastbound West 178th Street
		Ft. Washington Ave	St. Nicholas Ave	Amsterdam Ave	Amsterdam Ave
AM	Future without Improvements	221	321	526	546
	Alternative 1	221	365	526	546
	Alternative 2	221	55*	55*	680
	Alternative 3	221	0	0	735
MD	Future without Improvements	236	257	452	404
	Alternative 1	236	299	452	404
	Alternative 2	236	37*	37*	493
	Alternative 3	236	0	0	530
PM	Future without Improvements	200	273	505	610
	Alternative 1	200	291	505	610
	Alternative 2	206	48*	48*	761
	Alternative 3	206	0	0	809
SAT	Future without Improvements	222	368	495	583
	Alternative 1	222	381	495	583
	Alternative 2	222	38*	38*	687
	Alternative 3	222	0	0	725

*Bus volumes only

Diverted & Reassigned Volumes (Alternative 3: AM Peak Hour)



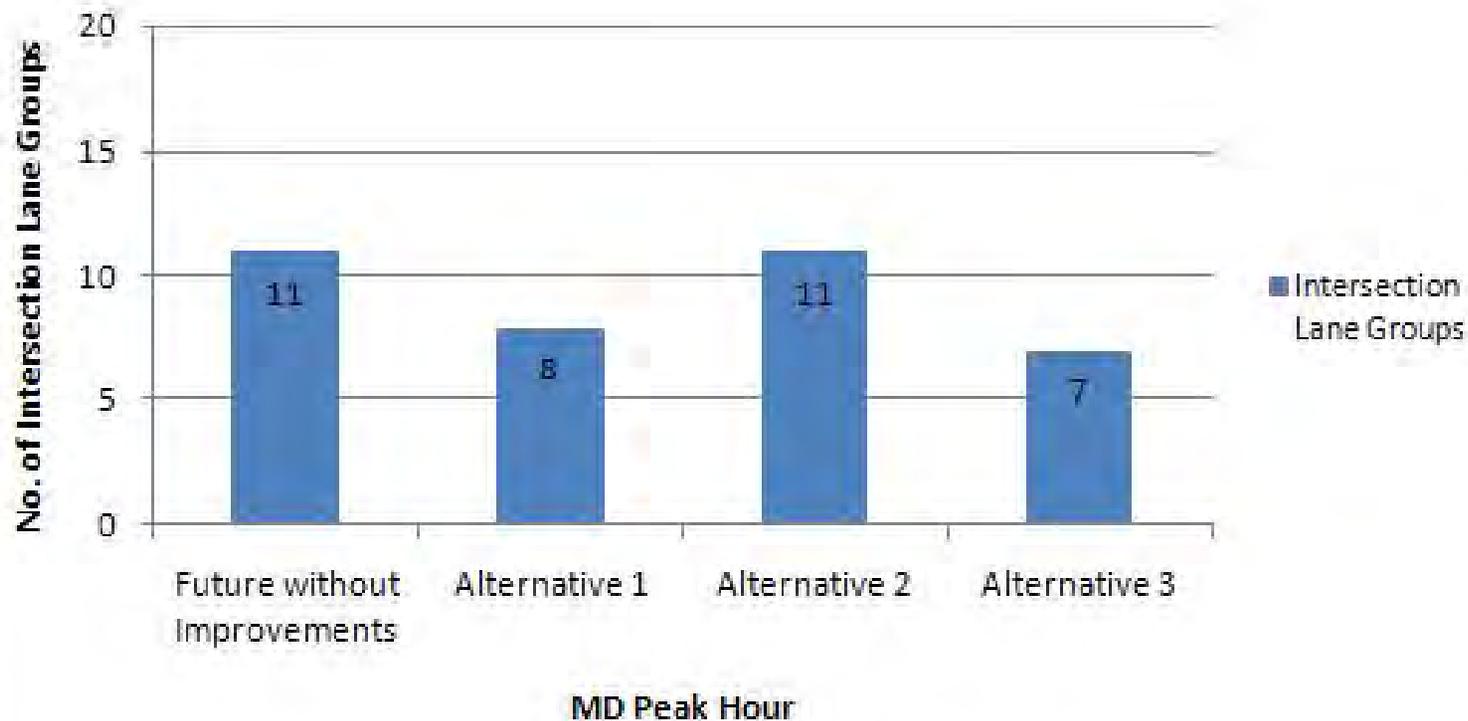
Lane Groups w/ Poor LOS AM Peak Hour



*Mid-LOS "D": Vehicle Delay >45 seconds

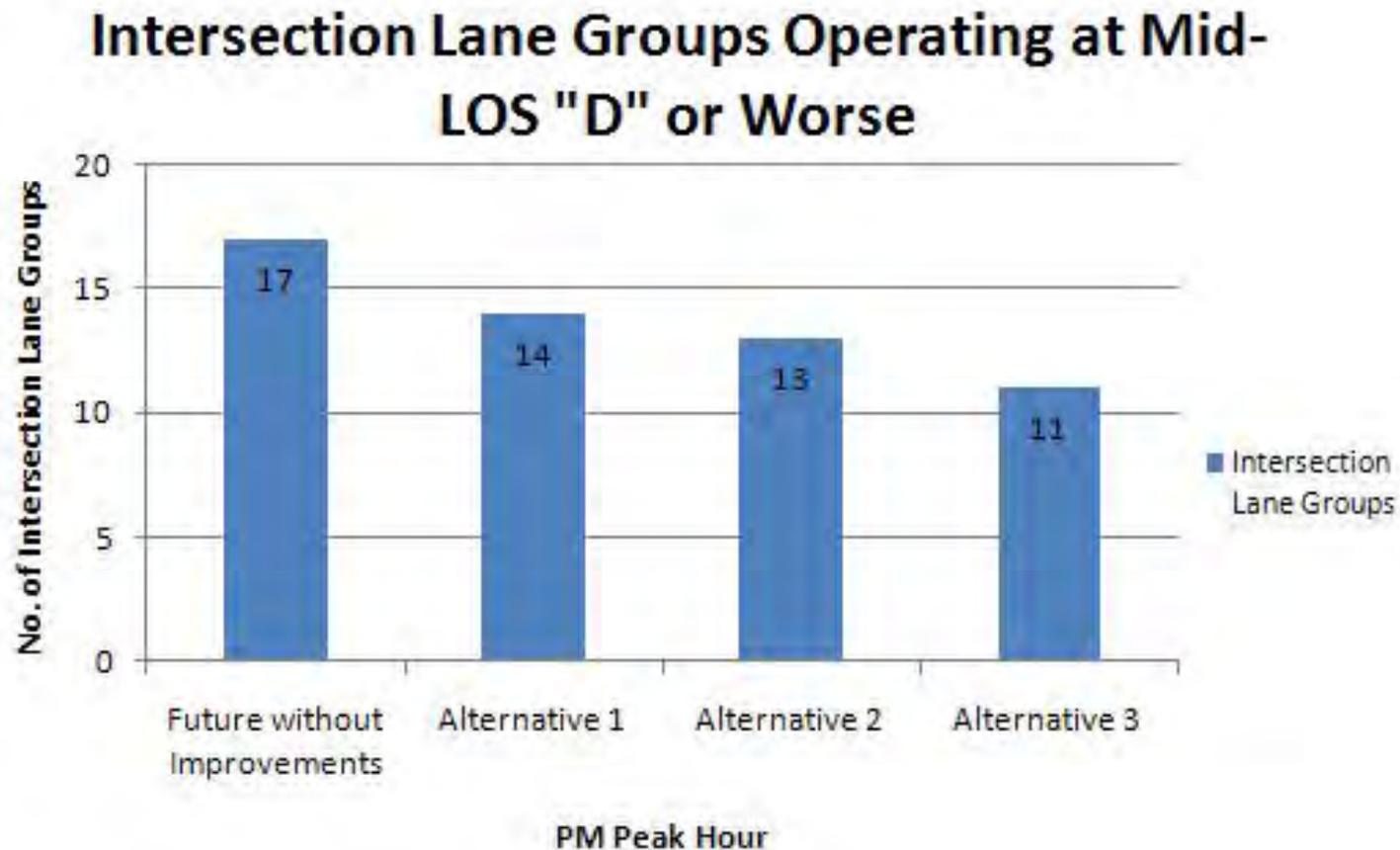
Lane Groups w/ Poor LOS MD Peak Hour

Intersection Lane Groups Operating at Mid-LOS "D" or Worse



* Mid-LOS "D": Vehicle Delay >45 seconds

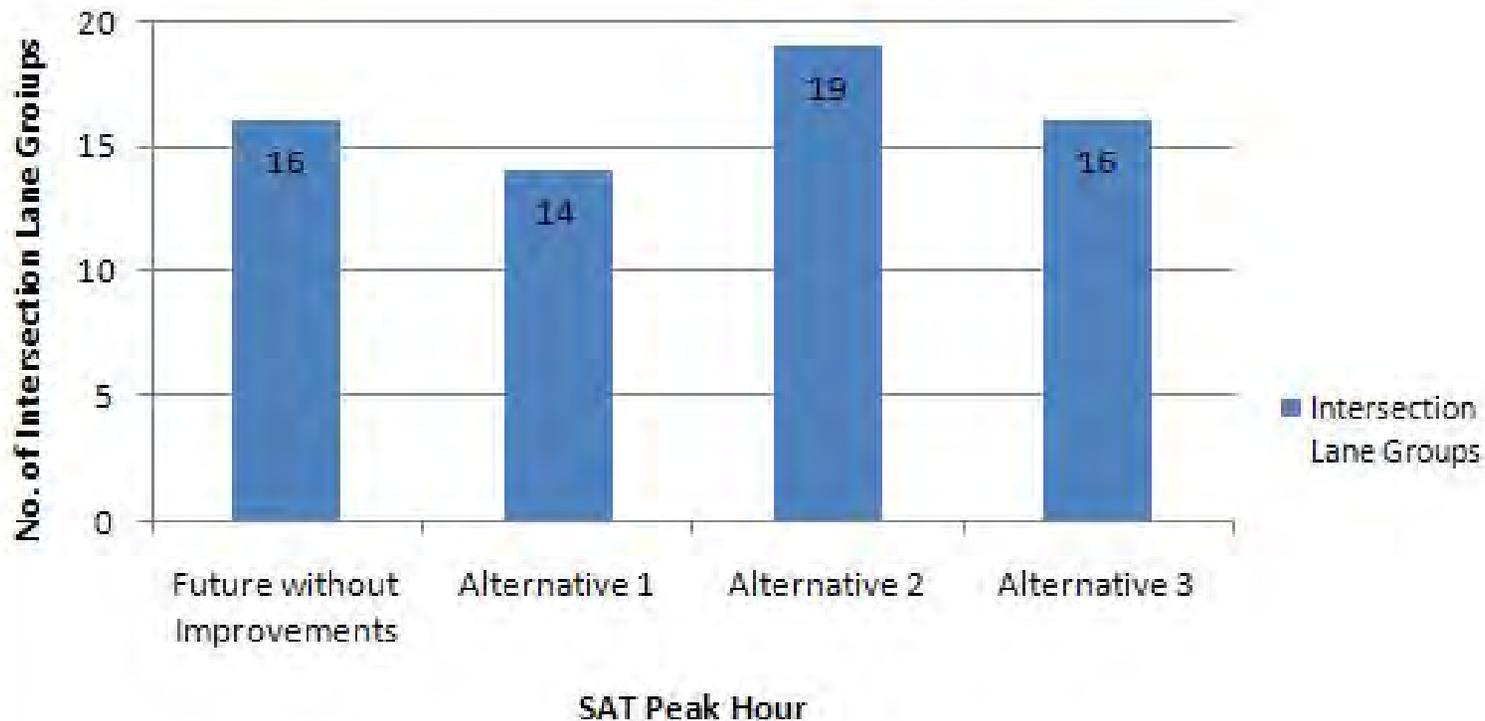
Lane Groups w/ Poor LOS PM Peak Hour



*Mid-LOS "D": Vehicle Delay ≥ 45 seconds

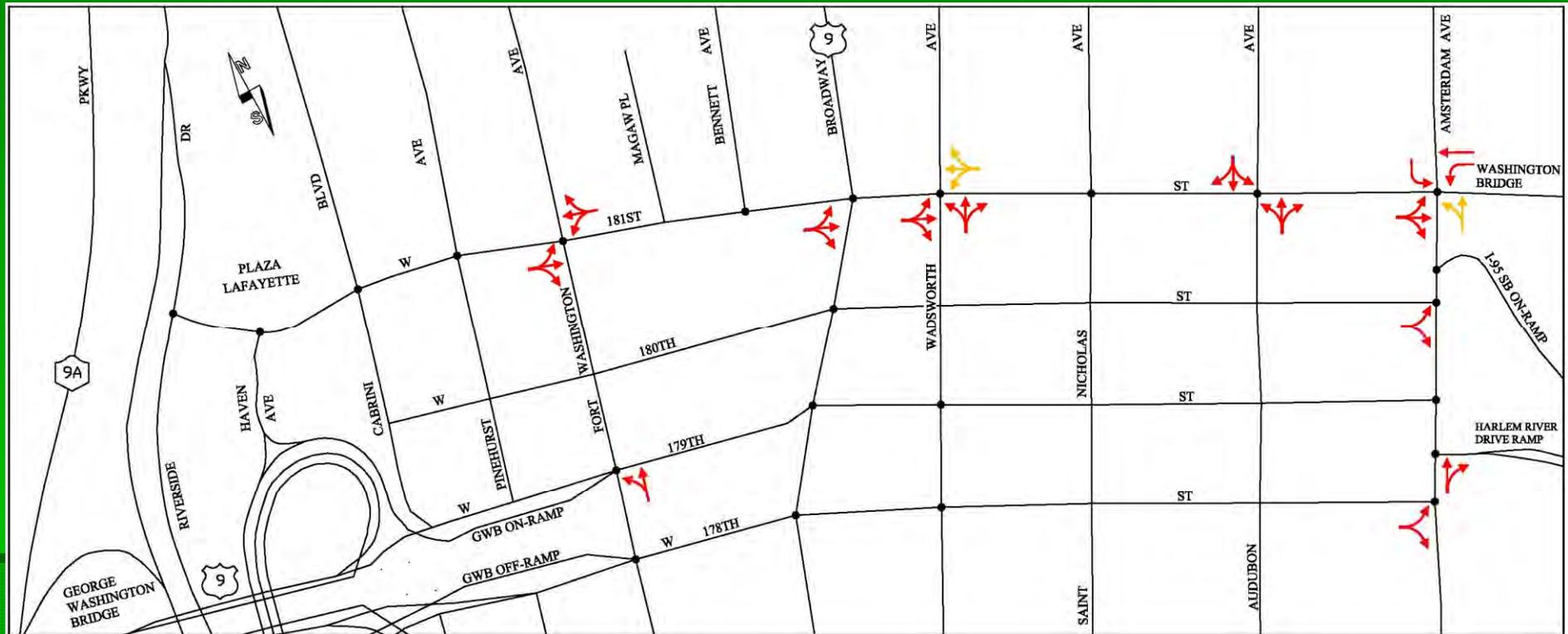
Lane Groups w/ Poor LOS SAT Peak Hour

Intersection Lane Groups Operating at Mid-LOS "D" or Worse



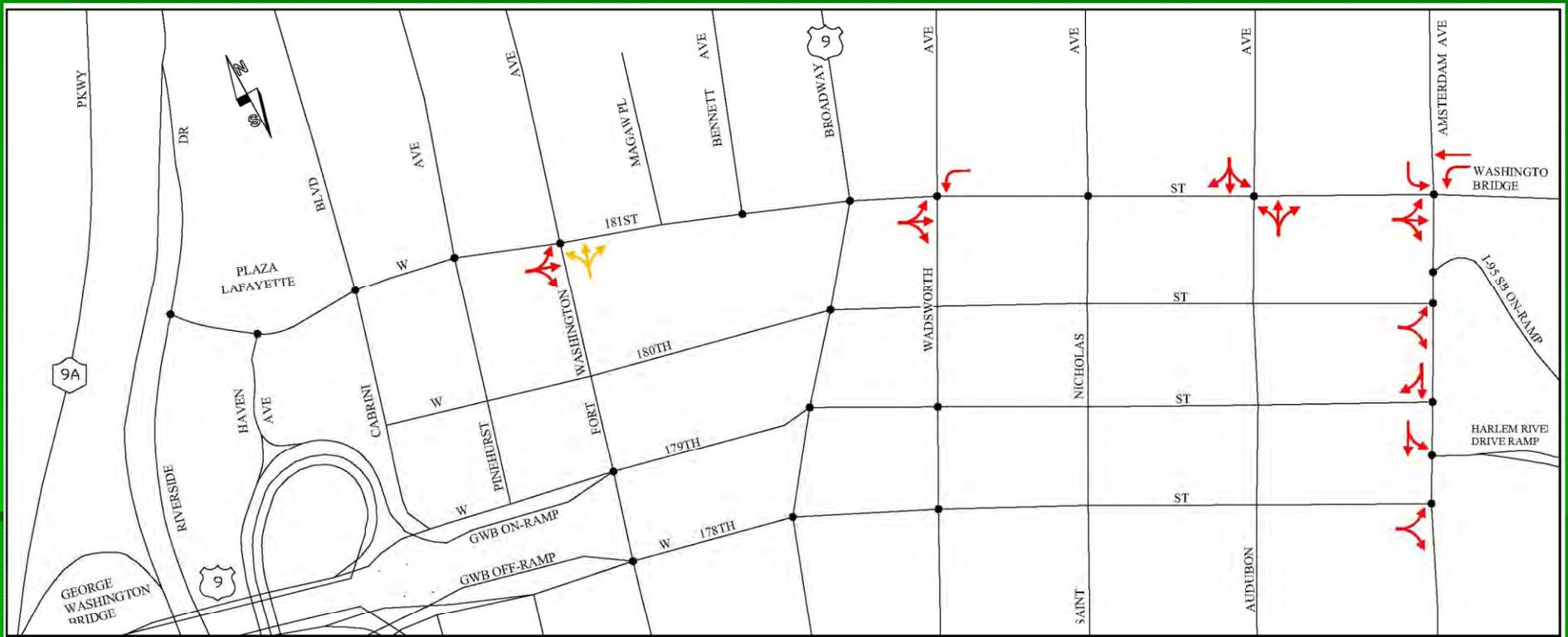
*Mid-LOS "D": Vehicle Delay >45 seconds

Level of Service by Lane Group (Future w/o Improvements: PM)



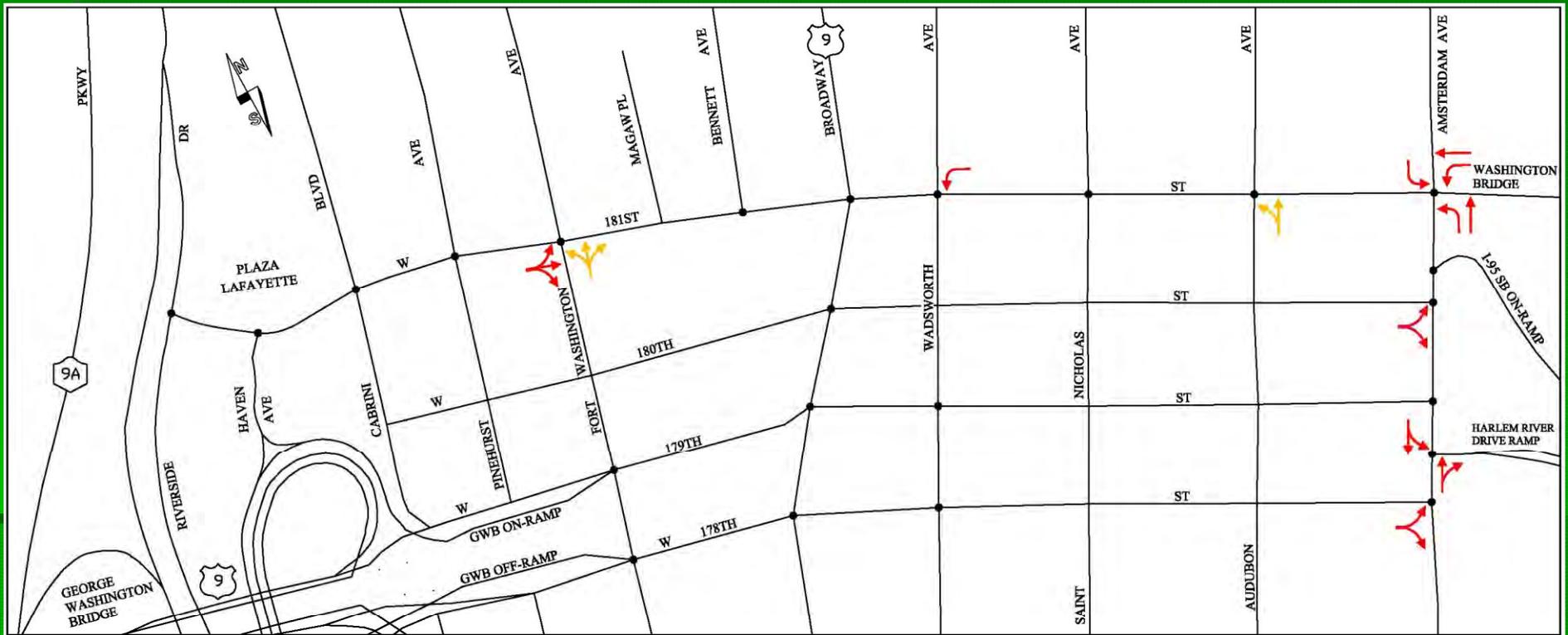
- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

Level of Service by Lane Group (Alternative 1: PM)



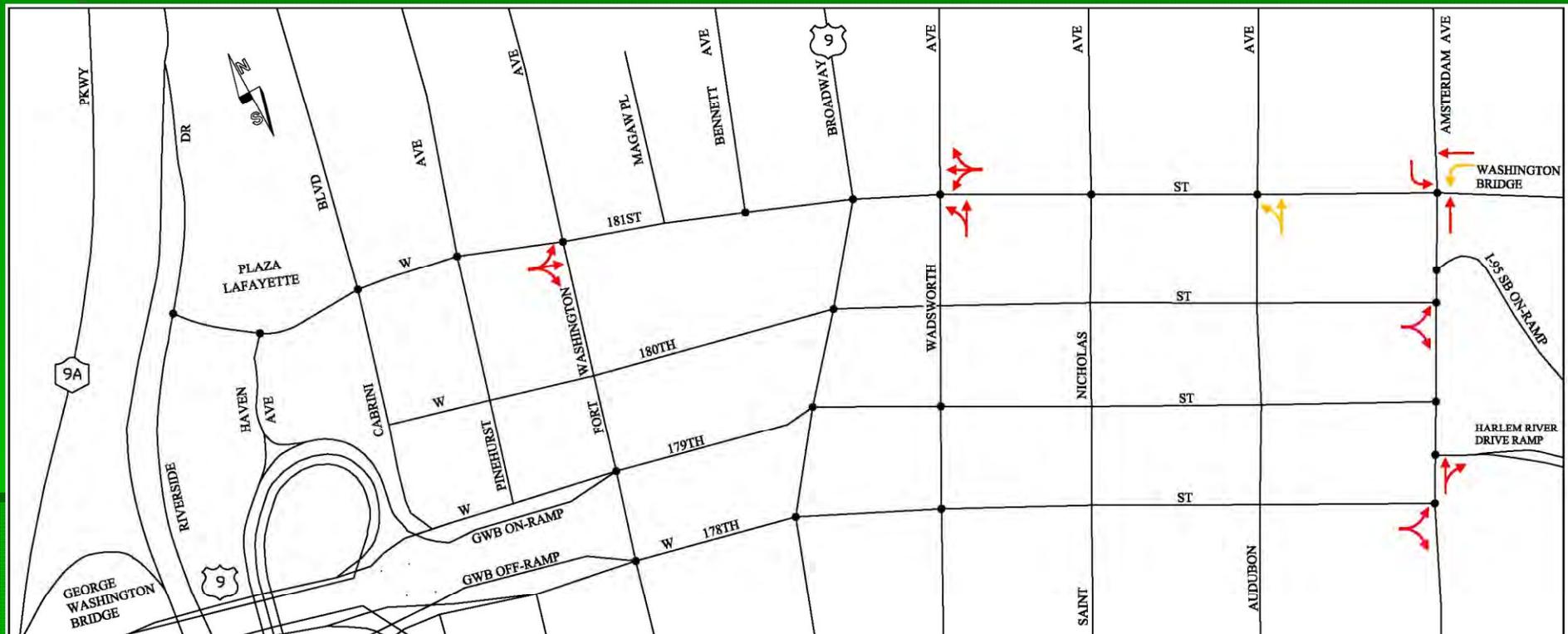
- Mid-LOS D and worse (Delay 45-55 seconds/vehicle)
- LOS E or F (Delay >55 seconds/vehicle)

Level of Service by Lane Group (Alternative 2: PM)



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

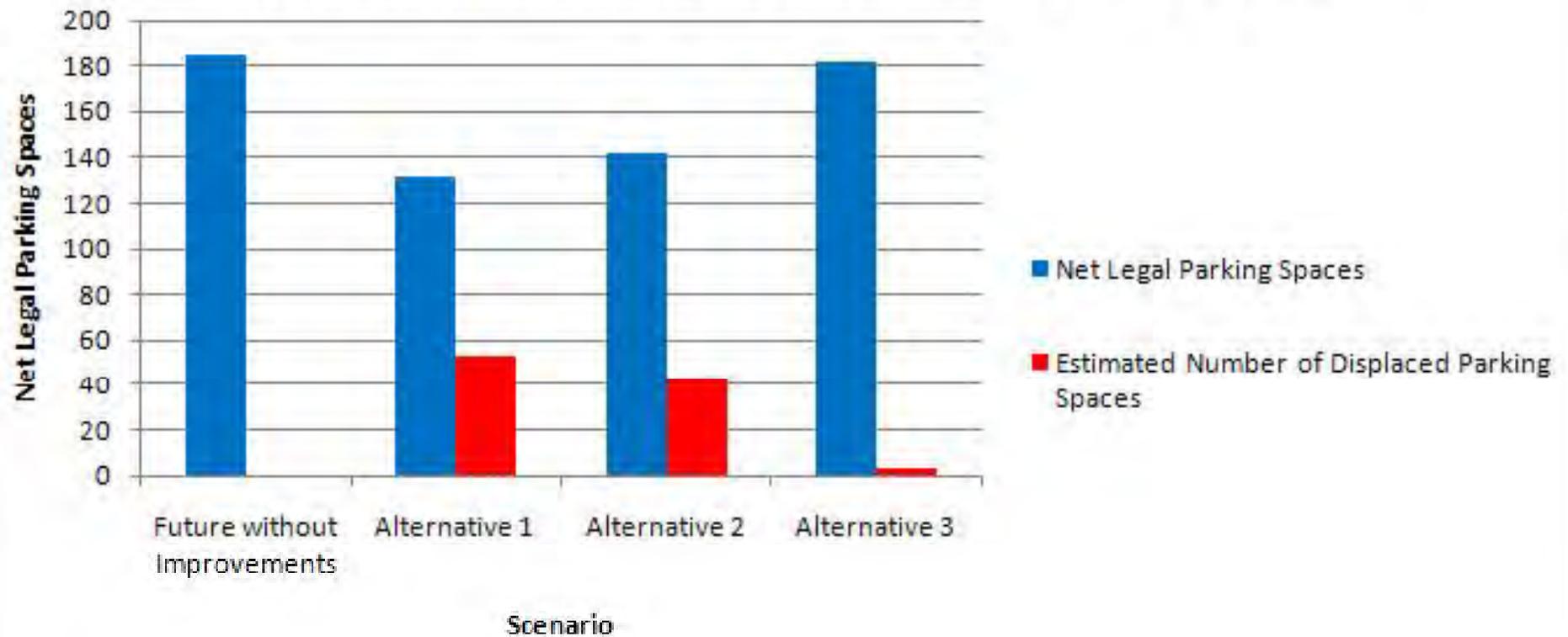
Level of Service by Lane Group (Alternative 3: PM)



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

Available & Displaced Parking

Availability of On-Street Parking on 181st Street



Multi-modal Transportation Elements

- Traffic
- Pedestrians/Bicycles
- Transit
- Parking
- Safety
- Goods Movement

Traffic

- Alternative 1:
 - Exclusive left turn lanes
 - Turn prohibitions: St. Nicholas Ave & Amsterdam
- Alternative 2:
 - One-way westbound traffic w/ left-turn lanes
 - Two-way bus transit mall
 - Turn prohibitions : St. Nicholas Ave & Amsterdam
- Alternative 3:
 - One-way westbound traffic
 - Turn prohibitions : St. Nicholas & Amsterdam

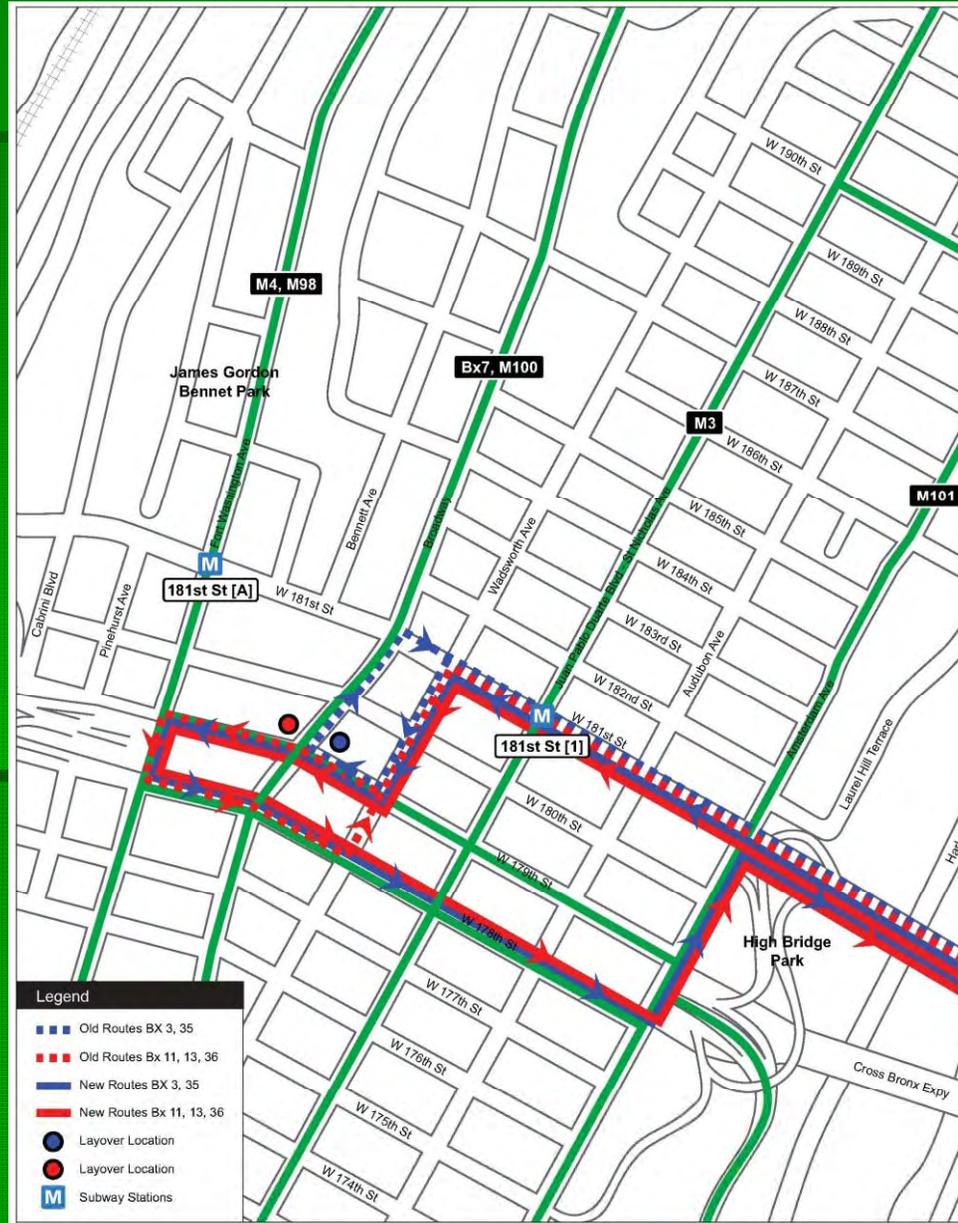
Pedestrians & Bicycles

- Alternative 1: minimal improvements
 - Curb extensions
 - Haven Ave, Amsterdam Ave
 - Leading Pedestrian Interval (LPI) at Broadway
- Alternative 2: modest improvements
 - Curb and Sidewalk extensions:
 - Haven Ave, Broadway-Wadsworth Ave & Amsterdam Ave
- Alternative 3: extensive improvements
 - Curb and Sidewalk extensions:
 - Haven Ave, Broadway to Amsterdam Ave
 - Exclusive WB bicycle lane:
 - Amsterdam to Wadsworth

Transit

- Alternative 1:
 - Maintain two-way transit
 - Left-turn w/ separate phasing at Wadsworth Ave
 - Extended bus stops
- Alternative 2:
 - Two-way transit mall w/ separate phase for buses
 - Raised median bus stops for WB buses
 - NB right turn issue for buses at Wadsworth Ave
- Alternative 3:
 - WB exclusive bus lane w/ separate phase for buses
 - EB buses rerouted to 178th St
 - Extended bus stops

Rerouted Transit for Alternative 3



Parking

- All Alternatives:
 - Restricted metered parking
 - Reduction in available spaces
- Alternative 2:
 - No parking along south curb (Broadway-Amsterdam)
- Alternative 3:
 - Minimal reduction in available spaces

Safety

- All Alternatives:
 - Turn prohibitions
 - Curb (and sidewalk) extensions
 - Exclusive phasing at Wadsworth (and bus lanes)
 - LPI at Broadway
 - Pedestrian refuge islands
 - Reduced vehicle-pedestrian conflicts

Goods Movement

- Alternative 1:
 - Loading zones provided along both curbs
 - Ft. Washington Ave to Audubon Ave
- Alternative 2:
 - Loading zones provided along north curb
 - Amsterdam Ave to Broadway
 - Loading zones provided along south curb
 - Ft. Washington Ave to Broadway
- Alternative 3:
 - Loading zones provided along both curbs
 - Ft. Washington Ave to Amsterdam Ave

Enforcement

- Bus lanes
- Loading zones
- Parking
- Turn prohibitions

Summary

- Alternative 1:
 - Maintains two-way traffic
 - Exclusive left-turn lanes
 - Minor traffic diversions
 - Turn prohibitions
 - Extended bus stops
 - Minor curb extensions
 - Most displaced parking
 - Loading zones (both curbs)

Summary

- Alternative 2:
 - Bus transit mall w/ separate phasing
 - Major traffic diversions: EB traffic
 - Exclusive WB left-turn lanes
 - Raised median bus stops for WB buses
 - Turn prohibitions
 - Modest curb & sidewalk extensions
 - Fewer displaced parking
 - Loading zones (north curb)

Summary

- Alternative 3:
 - One-way WB traffic lane, bus lane w/ separate phasing
 - One-way WB bicycle lane
 - Major traffic diversions: EB traffic & buses
 - Turn prohibitions
 - Extended bus stops
 - Extensive curb & sidewalk extensions
 - Minimal displaced parking
 - Loading zones (both curbs)

Study Process: Next Steps

