

Broadway: W 135th St to W 153rd St

Corridor Safety Improvement Proposals

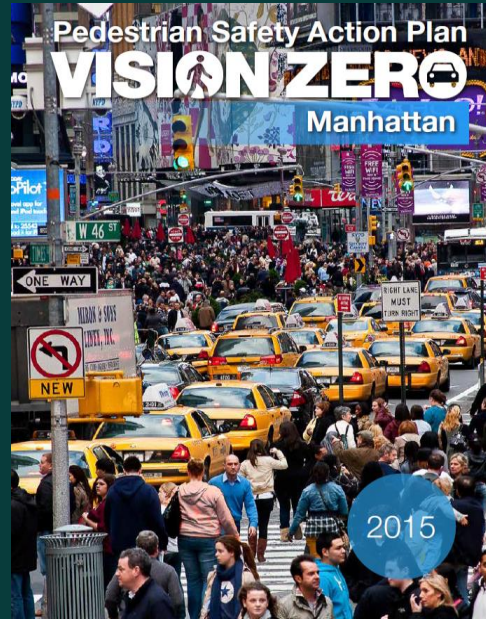
2015



Why Broadway? Vision Zero Priority Corridor

Vision Zero

- Multi-agency effort to reduce traffic fatalities in NYC
- Borough Action Plans released in 2015
- Priority Intersections, Corridors, and Areas identified for each borough
 - Broadway identified as a Priority Corridor for Manhattan
 - Broadway and W 135th St identified as a Priority Intersection

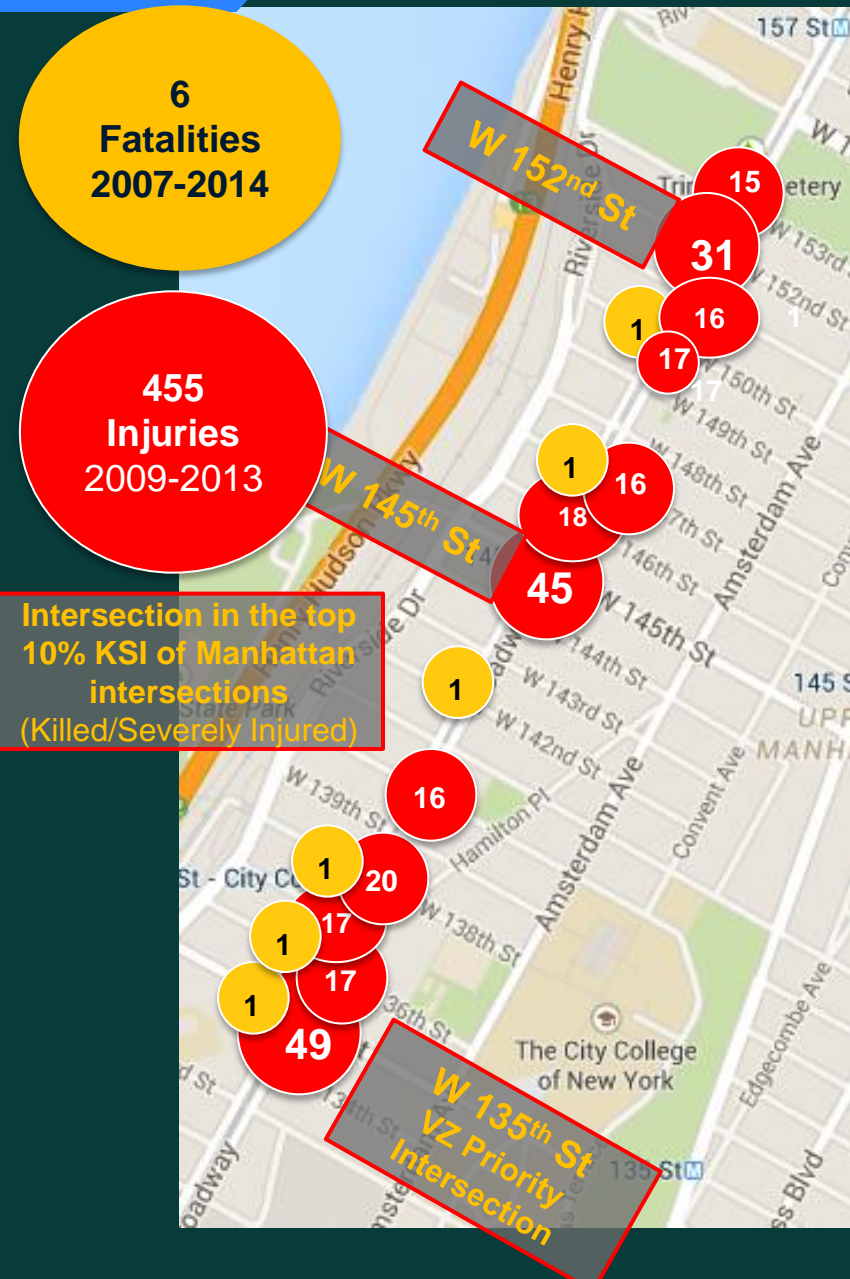


Manhattan Priority Map



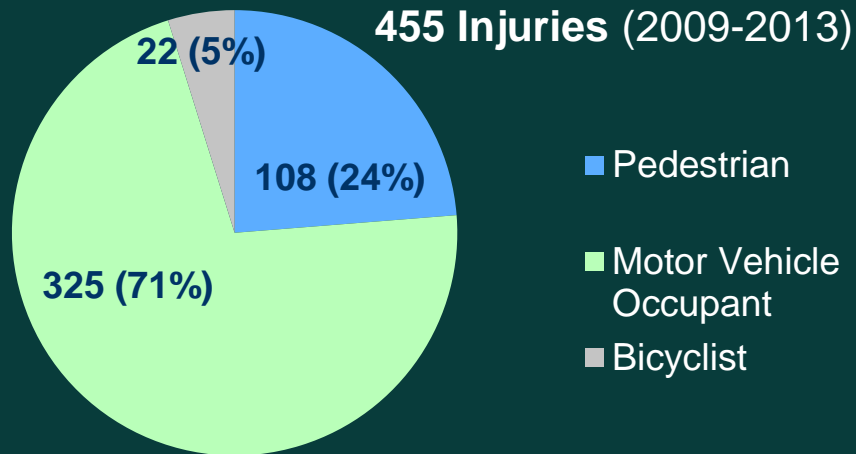
Crash Data: Injuries

- Injuries highest: 135th, 145th, 152nd
 - Among top 10% highest injury Manhattan intersections
- Of 455 injuries 135th and 153rd Sts in 5 years (2009-2013), 24% pedestrians, 71% motor vehicle occupants
- Among the 108 pedestrians injured:
 - 53% crossing with the signal
 - 27% crossing against the signal

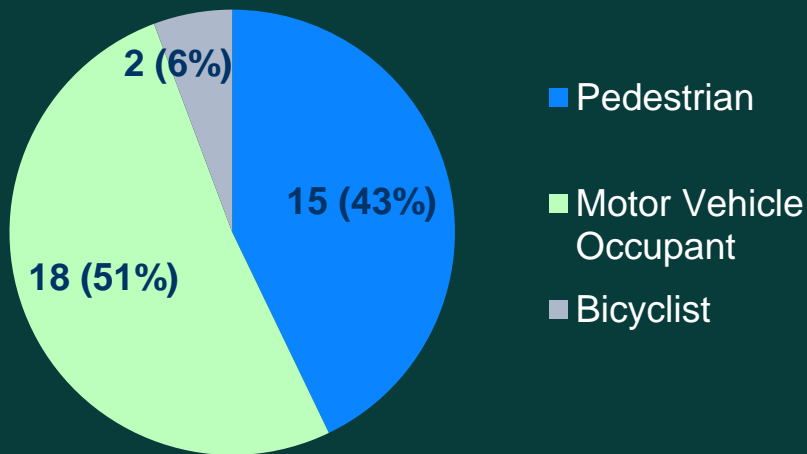


Who is being injured?

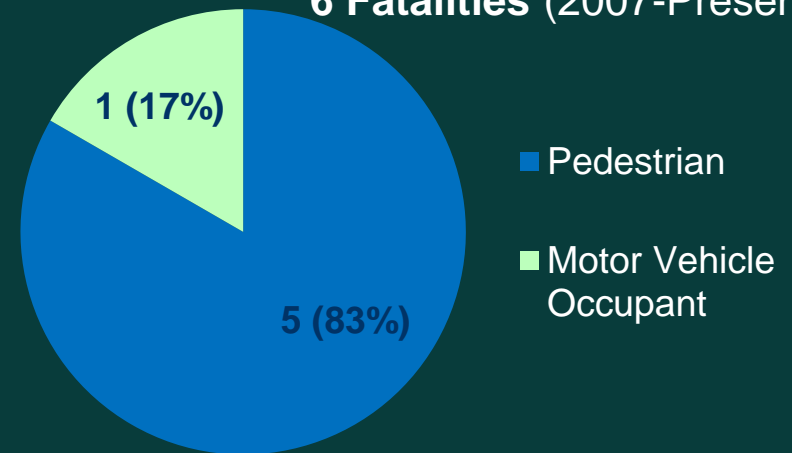
Of 455 injuries 135th and 153rd Sts in 5 years (2009-2013):



35 Severe Injuries (2009-2013)



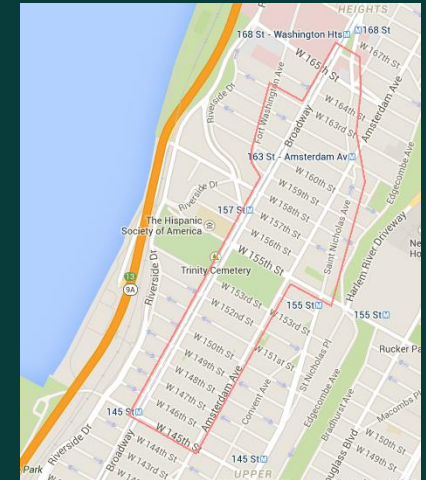
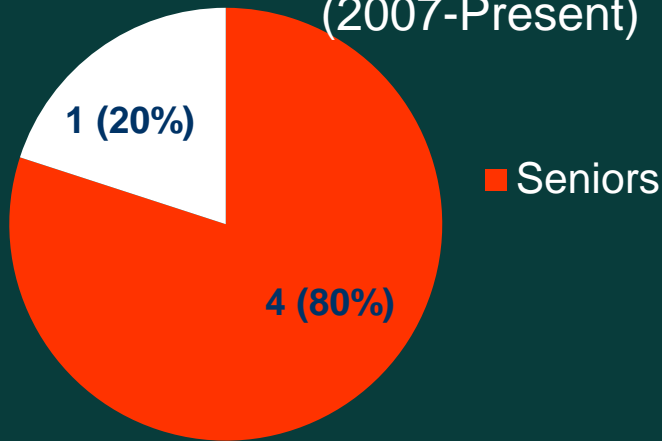
6 Fatalities (2007-Present)



Who is being injured?

Of 455 injuries 135th and 153rd Sts in 5 years (2009-2013):

5 Pedestrian Fatalities (2007-Present)



Hamilton Heights Senior Area

Broadway runs through the NYCDOT Hamilton Heights senior pedestrian focus area from W 145th St to W 166th St

- 6 fatalities since 2007:
 - All were outside rush hour peak directions (7-10AM SB, 5-7pm NB)
 - → Indicates need to redesign roadway for off-peak hours

Fatalities on Broadway

Hit-run driver mows down great-grandfather

By Doug Auer

February 12, 2012 | 4:25pm



Police at the scene investigate the deadly hit-and-run.

Photo: Warzer Jaff

A 75-year-old Harlem great-grandfather walking to Sunday Mass was mowed down by a hit-and-run driver and killed today, authorities said.

Luis Rosado was crossing Broadway at West 158th Street, a block from his apartment, around 7:41 a.m. when he was struck by a car believed to be a livery cab going southbound, police said.

"They ran over him," his son, Henry Rosado, 47, said tearfully as members of the tight-knit family grieved.

The victim, a retired baker, had just become a great-grandfather in July.

"At least he got to see his [great-grandson]," Henry Rosado said.

Crash kills one, injures six on Broadway

Lisette Ventura and two children were in one car, but she died after going into cardiac arrest. Six other victims were taken to nearby hospitals.

BY CHELSIA ROSE MARCIUS, SHANE DIXON KAVANAUGH / NEW YORK DAILY NEWS /

Wednesday, February 6, 2013, 5:46 PM

A A A

17

4

1



ANDREW SAVULICH/NEW YORK DAILY NEWS

A woman in this car died, and two children were injured, in the red car, which collided with another car on Broadway and 135th St. in Manhattan.

Hamilton Heights Senior Area

- Map presented to CB9 on 9/20/12
- 2 implemented projects:
 - Broadway and W 155th intersection safety improvements
 - Pedestrian countdown displays on Broadway
- Broadway corridor project has the potential to improve safety in larger area



Outreach Timeline

May 7 – Upper Broadway issues: CB9 Transportation Committee

2 Community Walkthroughs in May

- May 13 at 4pm – Walked W 135th to W 145th Sts
- May 19 at 10am – Walked W 145th St to W 153rd Sts

June 4 – Upper Broadway proposals: CB9 Transportation Committee

July 9 – Public Meeting/Town Hall at Fortune Society

Tabled on Broadway in August

October 27 – Town Hall

November 5 – CB9 Transportation Cmte



Community Walkthrough

Tabled on Broadway in August



DOT explained the project in English and Spanish and collected input about issues on Broadway and reactions to the proposals

Collected more than 200 surveys

Survey: Broadway 135th to 153rd Sts.

Which of the following issues do you see on Broadway?

Issues for Pedestrians:

- Unsafe crossings
- Not enough space to cross the street
- Vehicles do not yield
- Speeding vehicles
- Double parked vehicles block visibility

Issues for drivers:

- Double parked vehicles block right lane
- Difficult to make left turns
- Turning vehicles block moving lane

Do you have other concerns about transportation on Broadway? Please list issue/location.

Do you have any feedback on the proposal shown on the right?



What brings you to Broadway today?

- Going to/from work/school
- Shopping
- Visiting friends
- Other _____

What is your zip code? _____

We are having more public meetings on Broadway and would like to invite you. Please list your email (or phone/address if no email available).

More questions? Visit nyc.gov/dot or call 212.839.6210.



Top Issues for Pedestrians:

- 61% (118): Unsafe Crossings
- 59% (114): Speeding Vehicles
- 52% (100): Vehicles do not yield
- 38% (74): Double parked vehicles block visibility
- 36% (69): Not enough space to cross the street

Top Issues for Drivers:

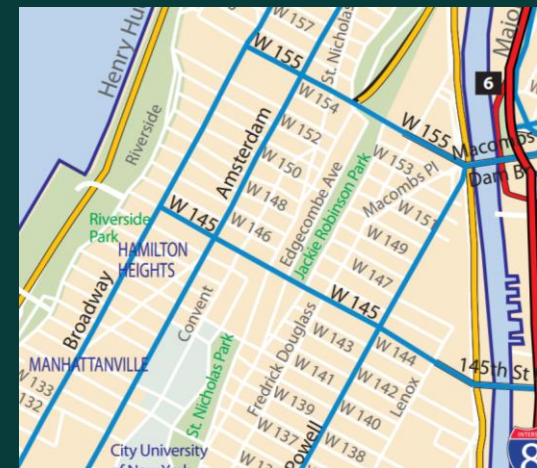
- 35% (68) Double parkers block right lane
- 26% (50) Turning vehicles block moving lane
- 21% (41) Difficult to make left turns

Existing Conditions

- 3 lanes in each direction
- Planted medians (Broadway Malls)
- Residential and retail land uses
- 1-train subway, M4/M5 (Broadway), M11 (W 135th St); Bx19 (W 145th St) buses
- Broadway is a Local Truck Route



Bus Routes



Truck Routes

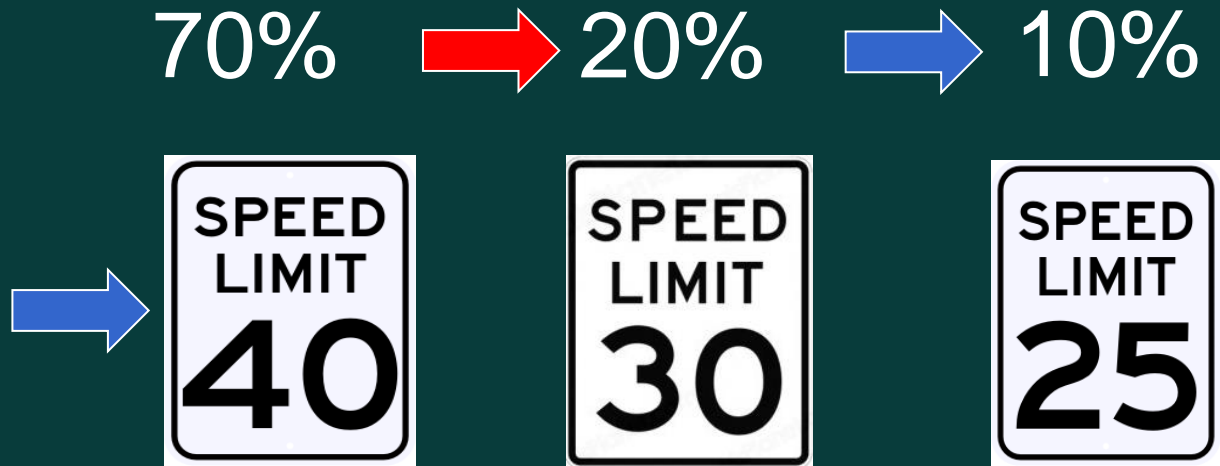
Issue: Speeding

| | W 140 th -141 st Street | | W 150 th -151 st Street | |
|---------|---|------------|---|------------|
| | NB | SB | NB | SB |
| % Above | 17% | 29% | 23% | 30% |
| Max | 41 | 47 | 49 | 43 |

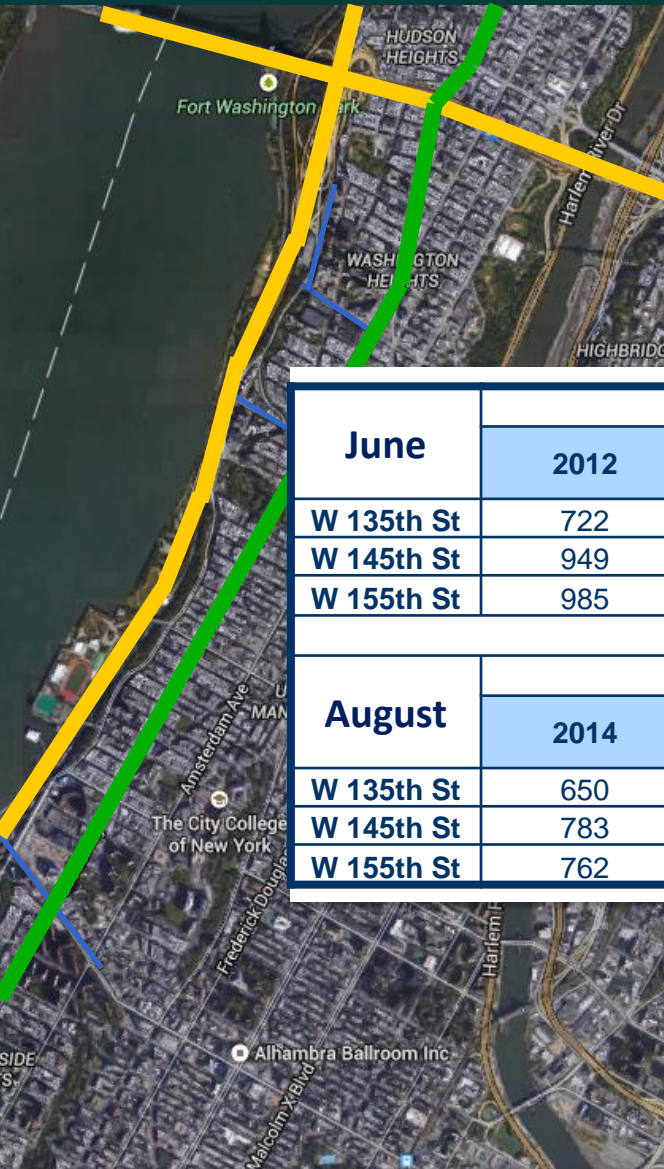


Collected Thurs 11/14/13 and Fri 11/15/13
 Between 11am and 1pm, when the speed limit was 30mph

Odds of Pedestrian Death*



Traffic Volumes: NB peak



- Traffic engineering rule of thumb: one lane can process 700 vehicles per hour (vph)
- Broadway is under capacity. 3 lanes = 2100 vph
- Parallel/Alternate to Henry Hudson Pkwy (9A)

| June | Average Midweek | | | Average Friday | | |
|------------|-----------------|------|-------------------|----------------|------|-------------------|
| | 2012 | 2015 | Percentage Change | 2012 | 2015 | Percentage Change |
| W 135th St | 722 | 623 | -13.71% | 1073 | 913 | -14.91% |
| W 145th St | 949 | 821 | -13.49% | 1474 | 1144 | -22.39% |
| W 155th St | 985 | 814 | -17.36% | 1334 | 1086 | -18.59% |

| August | Average Midweek | | | Average Friday | | |
|------------|-----------------|------|-------------------|----------------|------|-------------------|
| | 2014 | 2015 | Percentage Change | 2014 | 2015 | Percentage Change |
| W 135th St | 650 | 607 | -6.62% | 763 | 792 | 3.80% |
| W 145th St | 783 | 813 | 3.83% | 1093 | 1041 | -4.76% |
| W 155th St | 762 | 792 | 3.94% | 1100 | 1067 | -3.00% |

- Even on summer Fridays, Broadway's volumes can be accommodated in 2 lanes (=1400 vph)

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Issue: Swerving around backups



Vehicles waiting to turn block left lane

Center lane is best or only through lane

Loading activity blocks right lane

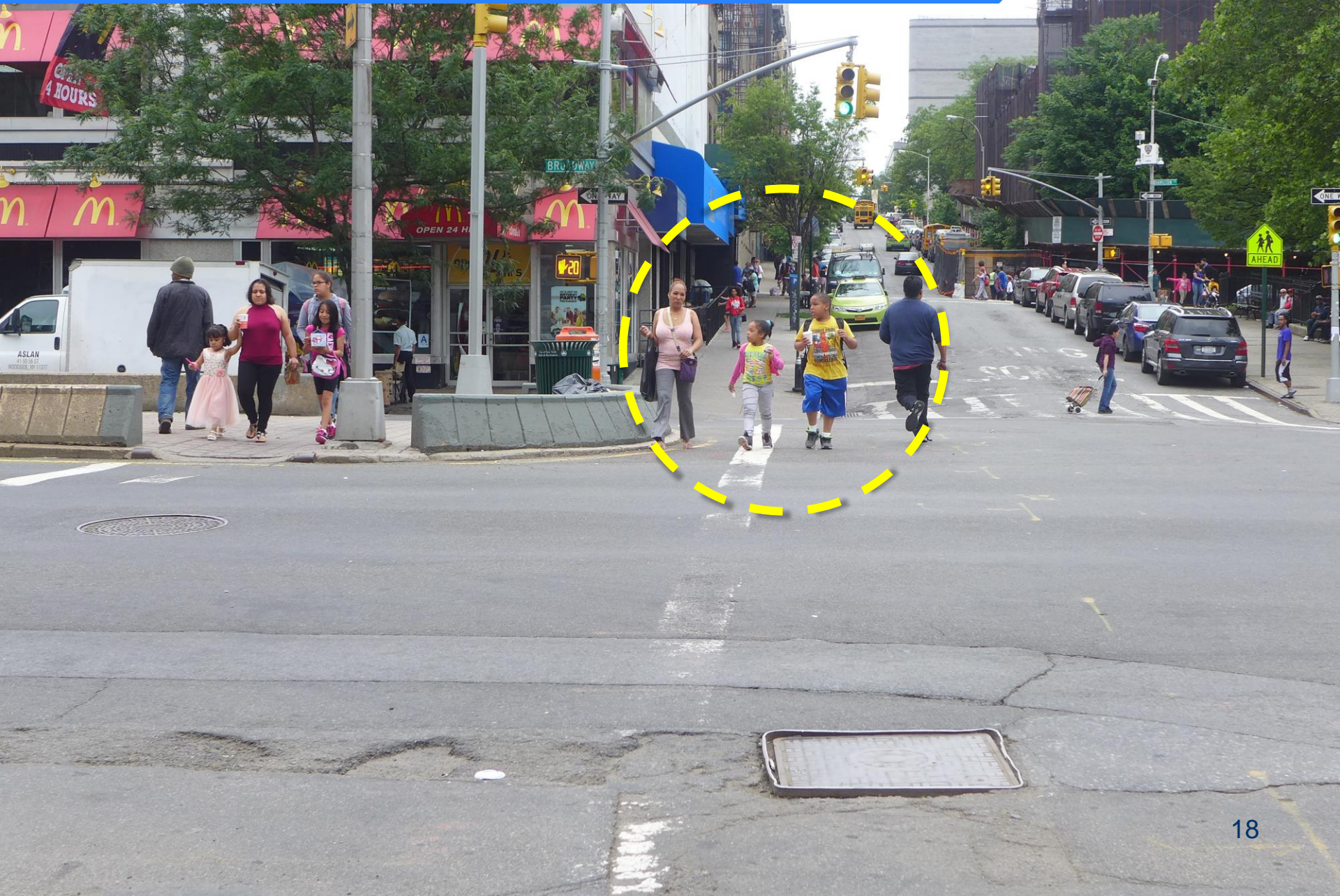
Drivers have to suddenly break and make fast lane changes to get through

Issue: Low pedestrian visibility



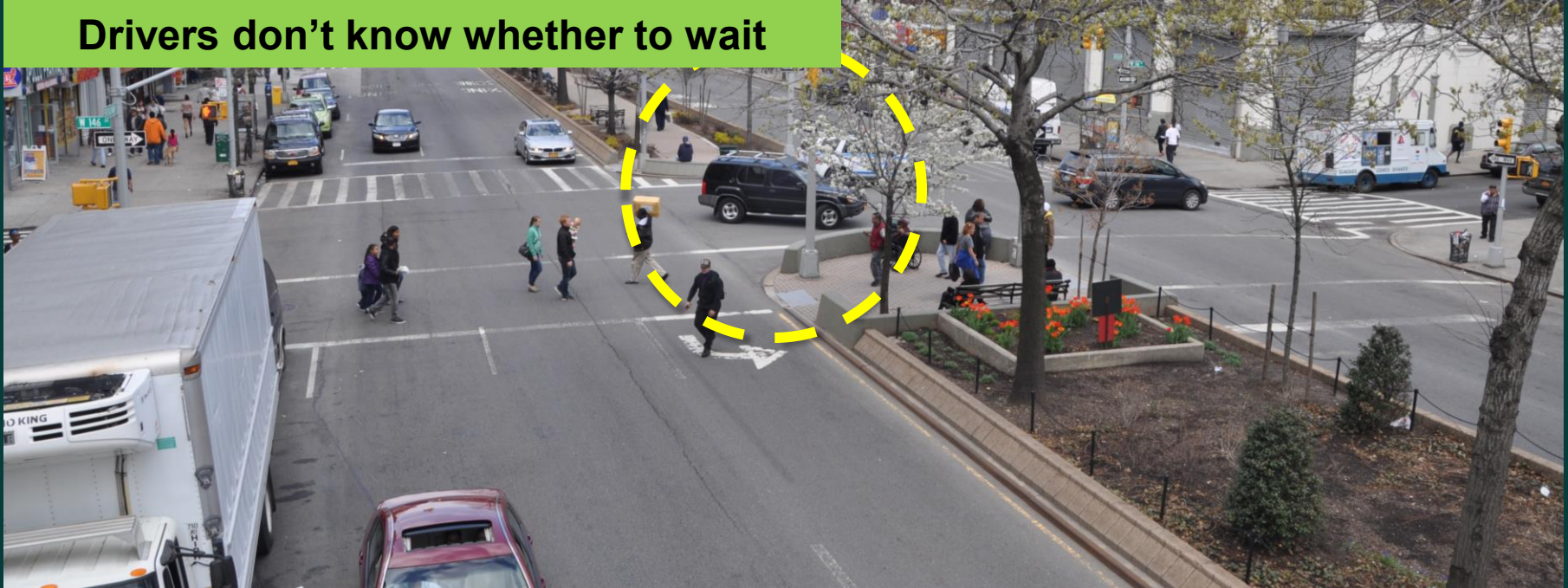
Pedestrians walk far out into the intersection, *even when they have the red*, to see beyond truck loading

Issue: Crossing outside islands



Issue: Unclear Left Turns

Drivers don't know whether to wait



- DOT observes 70% of left turners wait for the green light on the side street to finish their turn
- High percentages of crashes involve turn or right angle crashes
 - 41% (vs 30% average in Manhattan)
 - Left turn pedestrian KSI crashes outnumber right turn crashes 3 to 1

**NYC Pedestrian Safety Study & Action Plan (2010), and Lord/Smiley/Haroun Transportation Research Board (1998)*

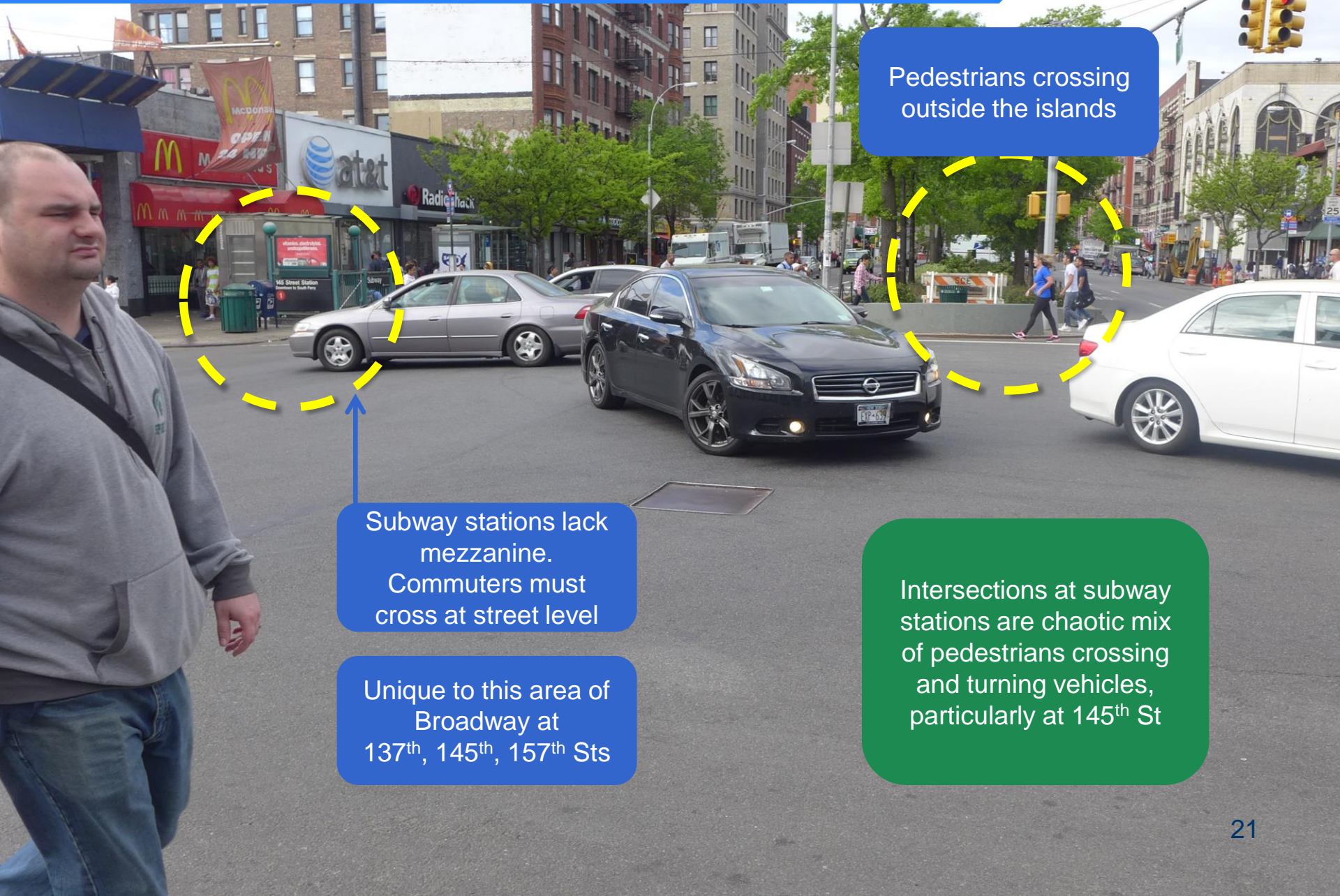
Issue: Loading reduces pedestrian visibility

Hard to see pedestrians, hard to see truck drivers



- Truck loading blocks right lane; Broadway operates as two lanes
- Truck loading lowers visibility
 - Hard for drivers to see pedestrians in the crosswalk
 - Blocks access to and from curbside parking

Issue: Subway riders cross at grade



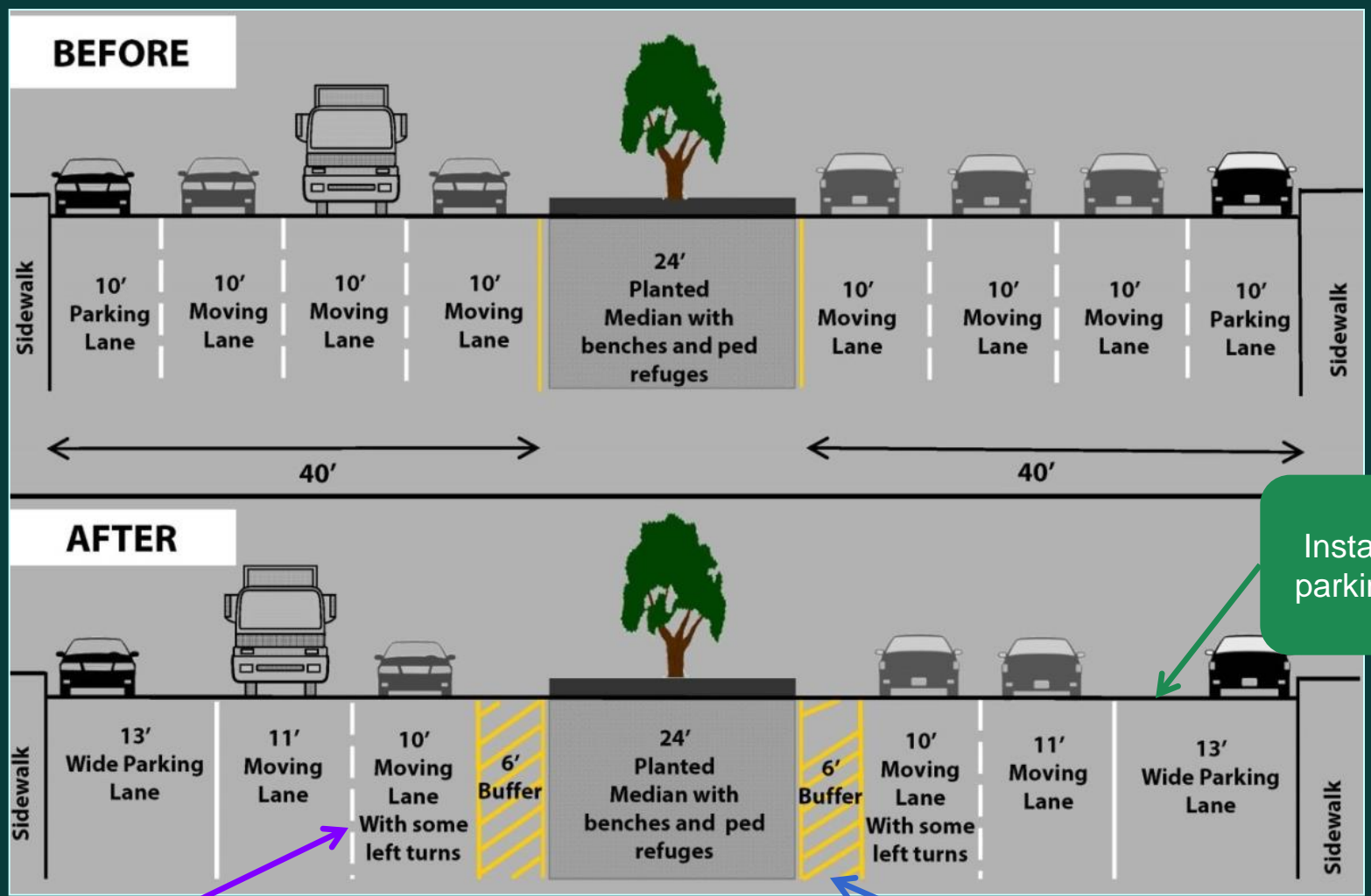
Pedestrians crossing outside the islands

Subway stations lack mezzanine. Commuters must cross at street level

Unique to this area of Broadway at 137th, 145th, 157th Sts

Intersections at subway stations are chaotic mix of pedestrians crossing and turning vehicles, particularly at 145th St

Proposed: W 135th St to W 153rd Sts

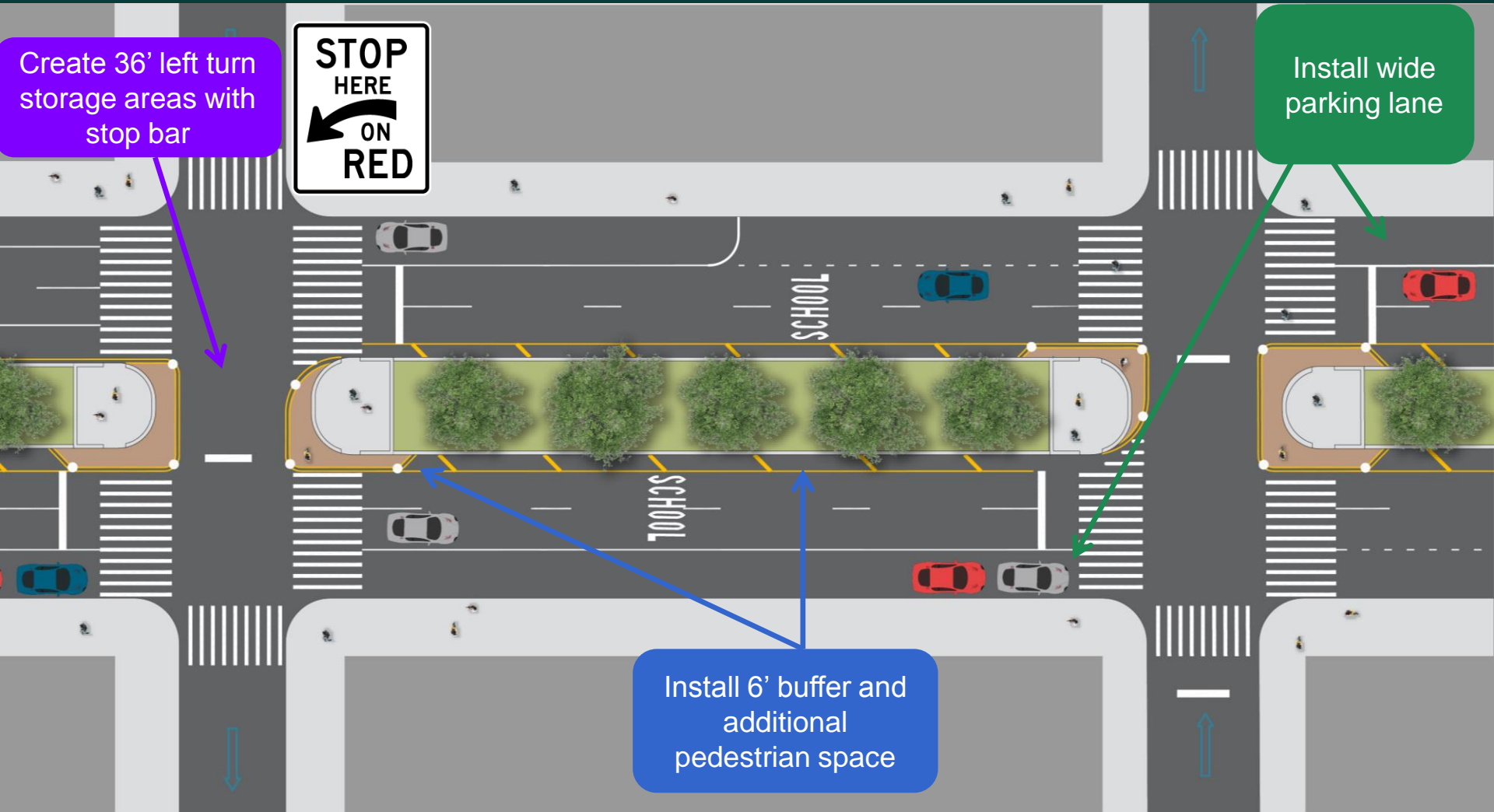


Install wide parking lane

Remove one traffic lane in each direction

Install 6' buffer and additional pedestrian space

Proposed: Stop bars for left turns



Proposed: Better, Safer turns

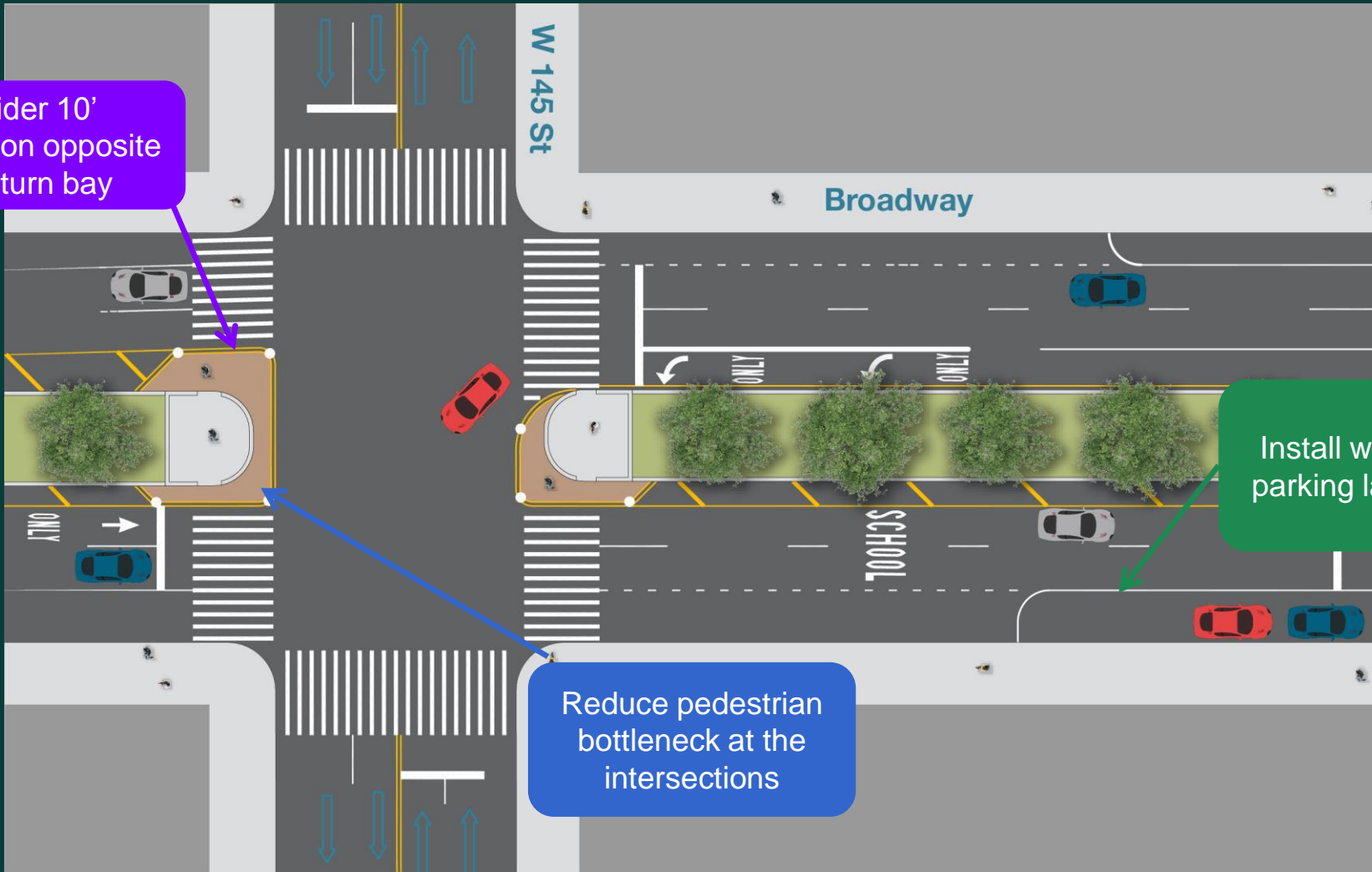
Clearer Left Turns



Stop Here (example): Park Ave & E 87th St

- Clarify left turns waiting areas from Broadway to side streets:
 - Add “Stop Here on Red” signs and stop bars
 - Wider medians will create more space for turning vehicles
- Left only turn bays remain at main intersections (135th, 145th Sts)

Proposed: At 145th St



Proposed: Mobility improvements



Detectable warning strips clarify pedestrian areas for the visibility impaired

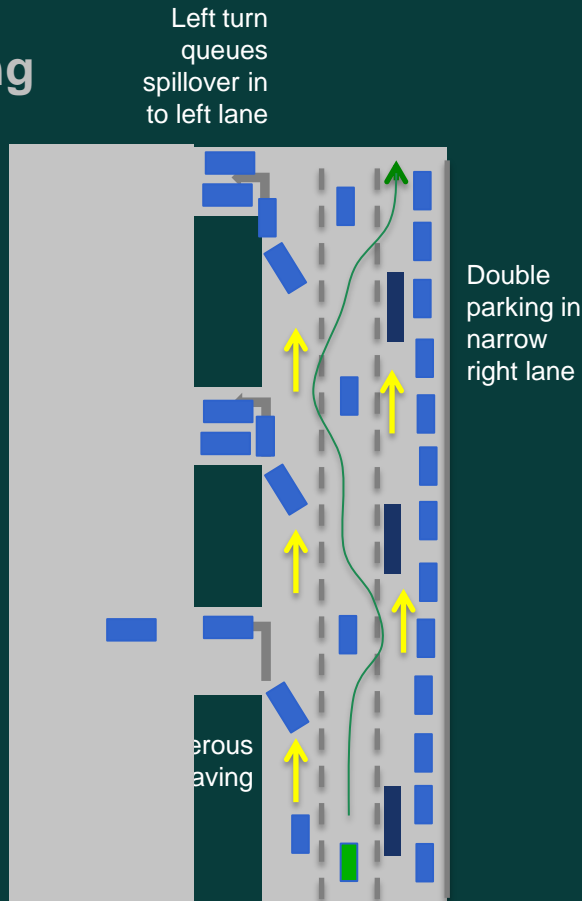
APS signal – audible signal for the visibility impaired – under consideration at 135th, 145th, 155th Sts



Does one less lane = more traffic?

- No: The existing right lane is full of trucks loading, not a usable lane
- Existing: up to 30% speeding, drivers prefer center, avoid right lane

Existing



Does one less lane = more traffic?

- No: Similar projects built since 2012 carry the same volume after
- Proposal creates 2 good lanes, safer left turn bays and parking lane

2 wider lanes that better organize through traffic

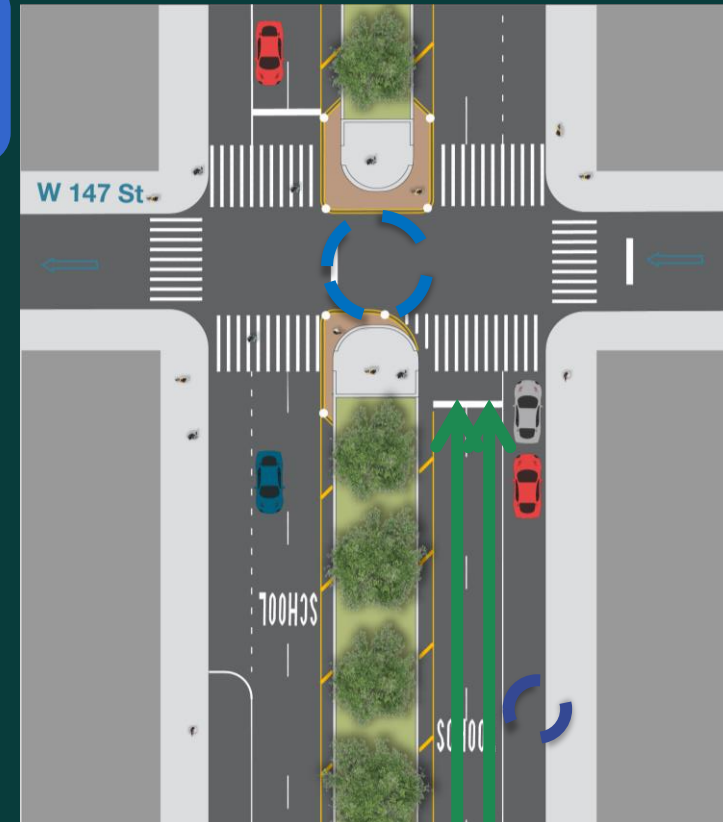
New loading zone next to grocery in wide parking lane



Left turners wait in widened bay

4th Ave, Bklyn at 25th St

Proposed



Similar Projects: Injury Reductions



Broadway and
W 155th St
**Single
Intersection**

Spring 2012



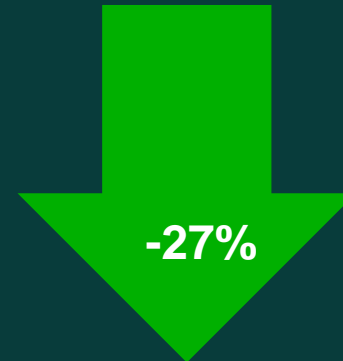
4th Ave, BK
**Two-way
calming with
rush hour
regulations**

Fall 2012



Broadway
W 93rd-100th St
**Southbound
calming**

Spring 2014



Adam Clayton
Powell Blvd
W 133-153rd St
**Two-Way
calming**

Fall 2012

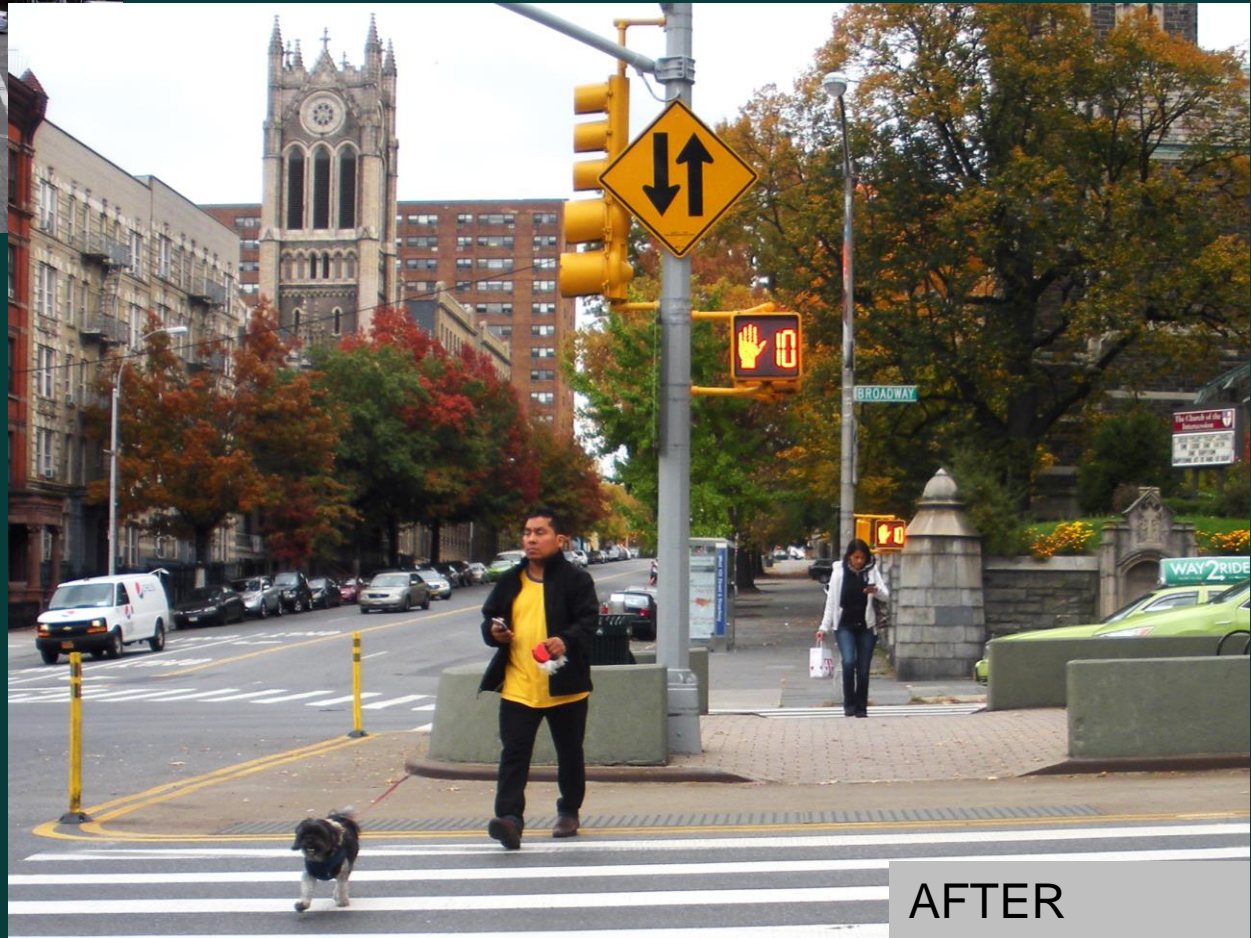
Similar Project: Broadway and W 155th

BEFORE



Slight injury reduction at single intersection

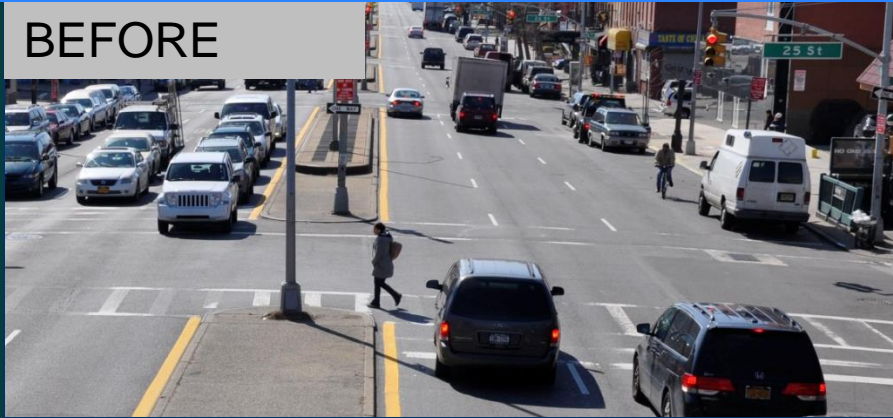
Better results in a corridor project



AFTER

Similar to Fourth Ave, Brooklyn

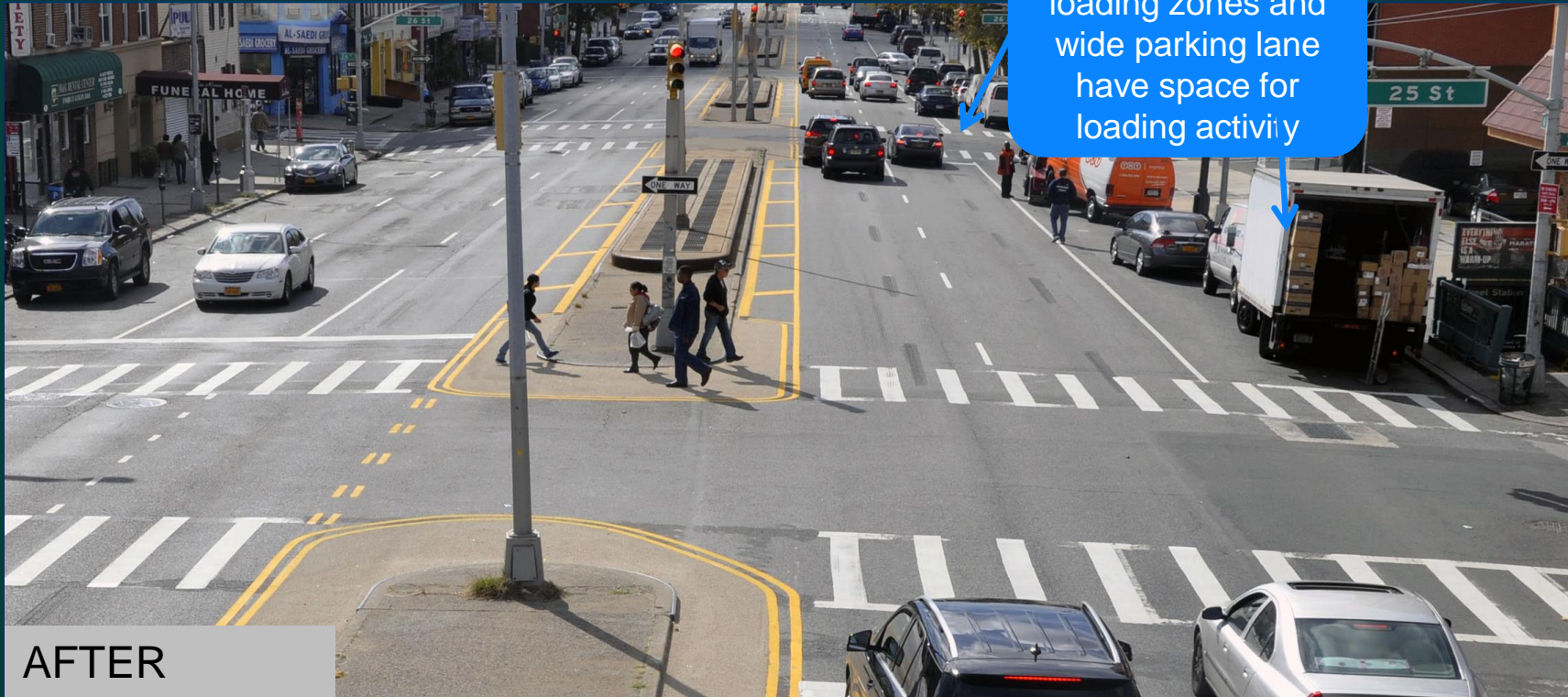
BEFORE



15th to 65th Sts (built 2012):

- 16% fewer injuries
- 30% fewer pedestrian injuries
- NB AM Rush hour regulations =
 - Peak vehicle volumes increased
 - Peak Travel Times improved

New curbside loading zones and wide parking lane have space for loading activity



AFTER

Similar Project: Broadway W 93rd-100th St

W 93rd to 100th Sts (built 2014):

- 18% fewer injuries
- 37% fewer pedestrian injuries



BEFORE



Broadway at W 97th St
Looking north at
southbound

AFTER

Similar to Adam Clayton Powell Blvd

BEFORE



W 133rd-153rd Sts (built 2012):

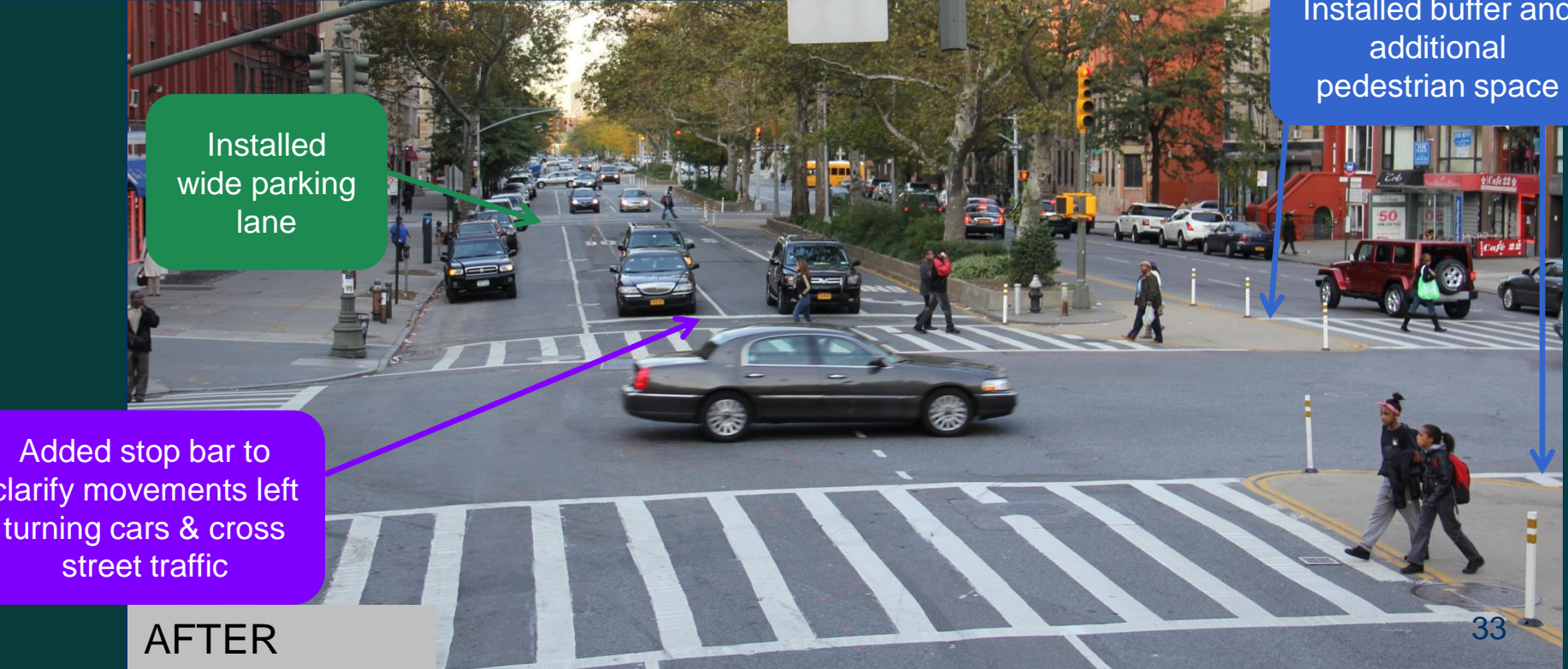
- 27% fewer injuries
- 48% fewer pedestrian injuries
- Peak vehicle volumes unchanged
- Travel Times maintained

Installed wide parking lane

Installed buffer and additional pedestrian space

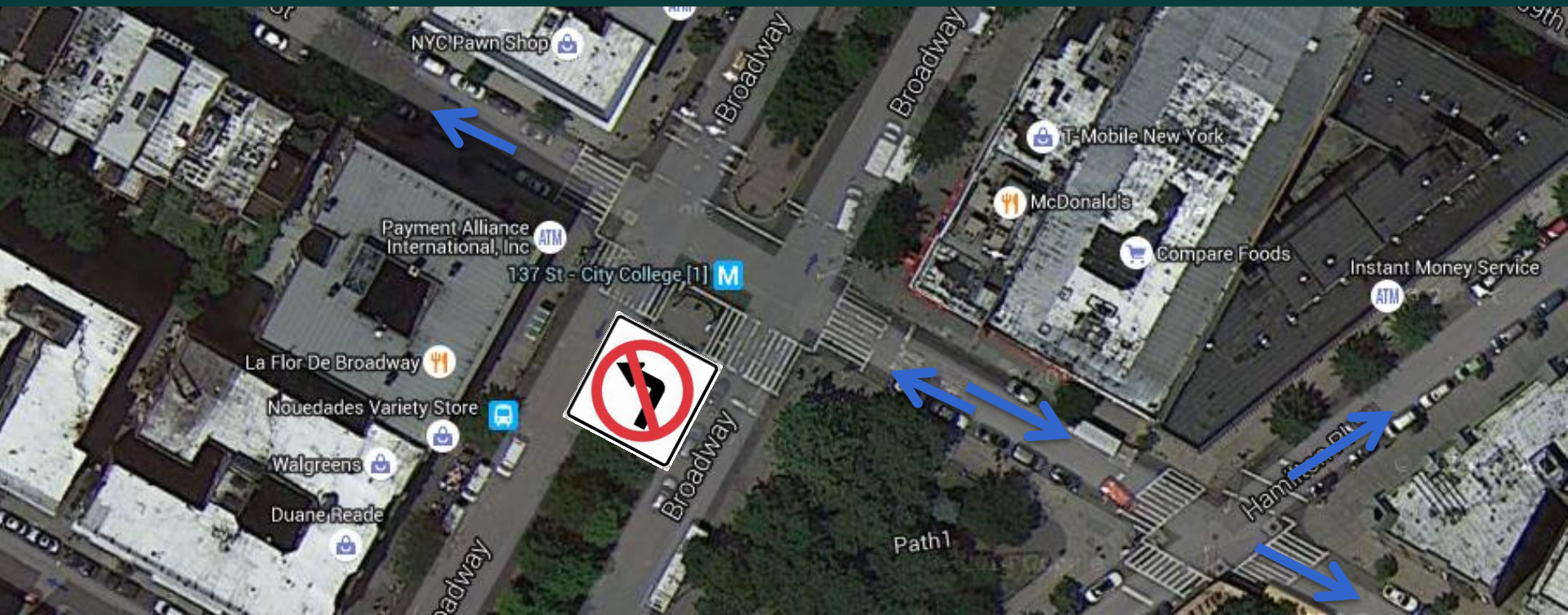
Added stop bar to clarify movements left turning cars & cross street traffic

AFTER

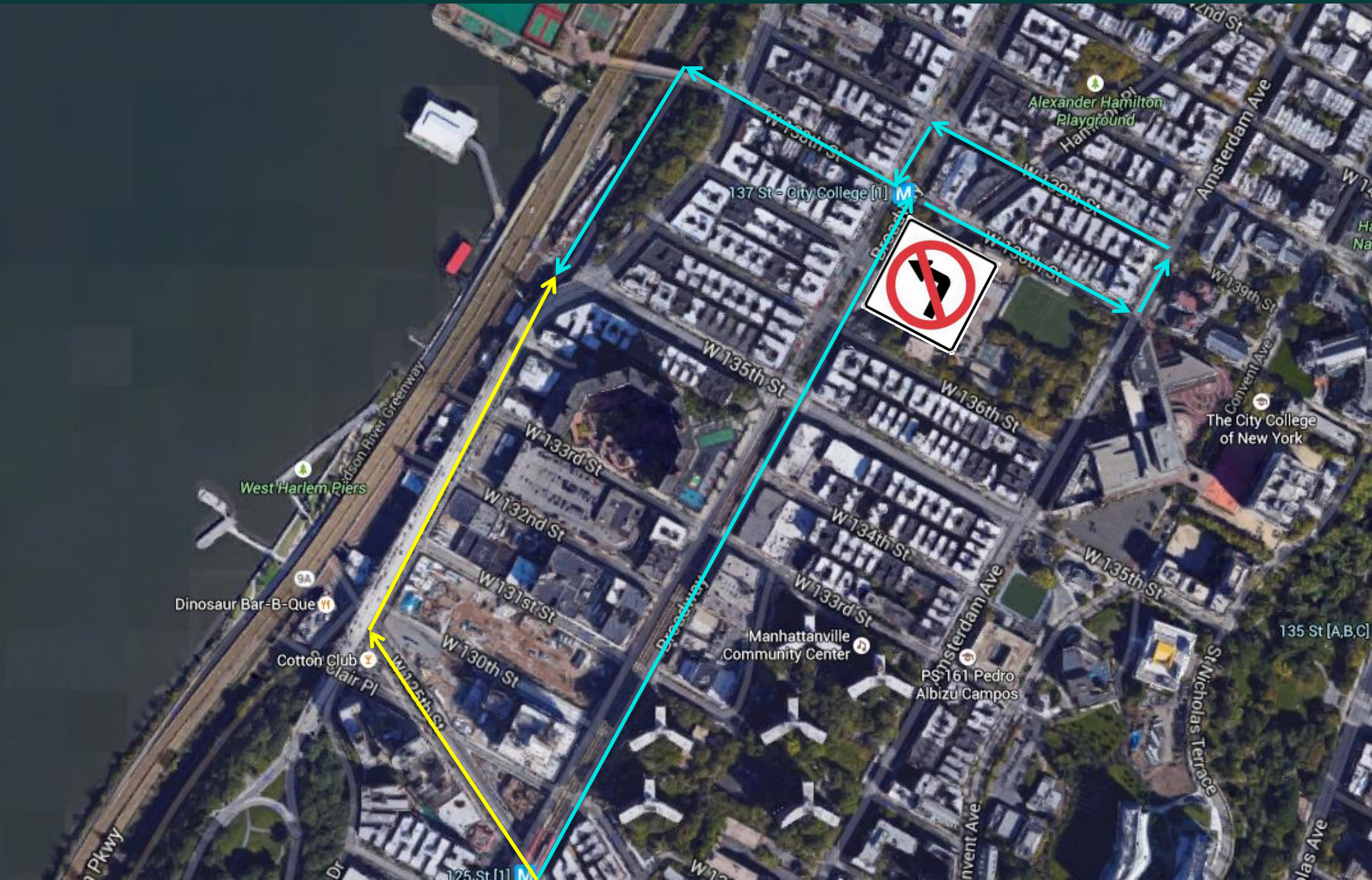


Proposed: NB Left turn ban at W 138th St

- Not enough space to make opposing lefts in narrow intersection
- Southbound left is heavier, provides access to PS192 and City College
- Chaotic area with pedestrian fatalities (at 135th, 136th and at 138th St)
- Affects 40 left turners in PM summer Friday peak hr (busiest time of year)

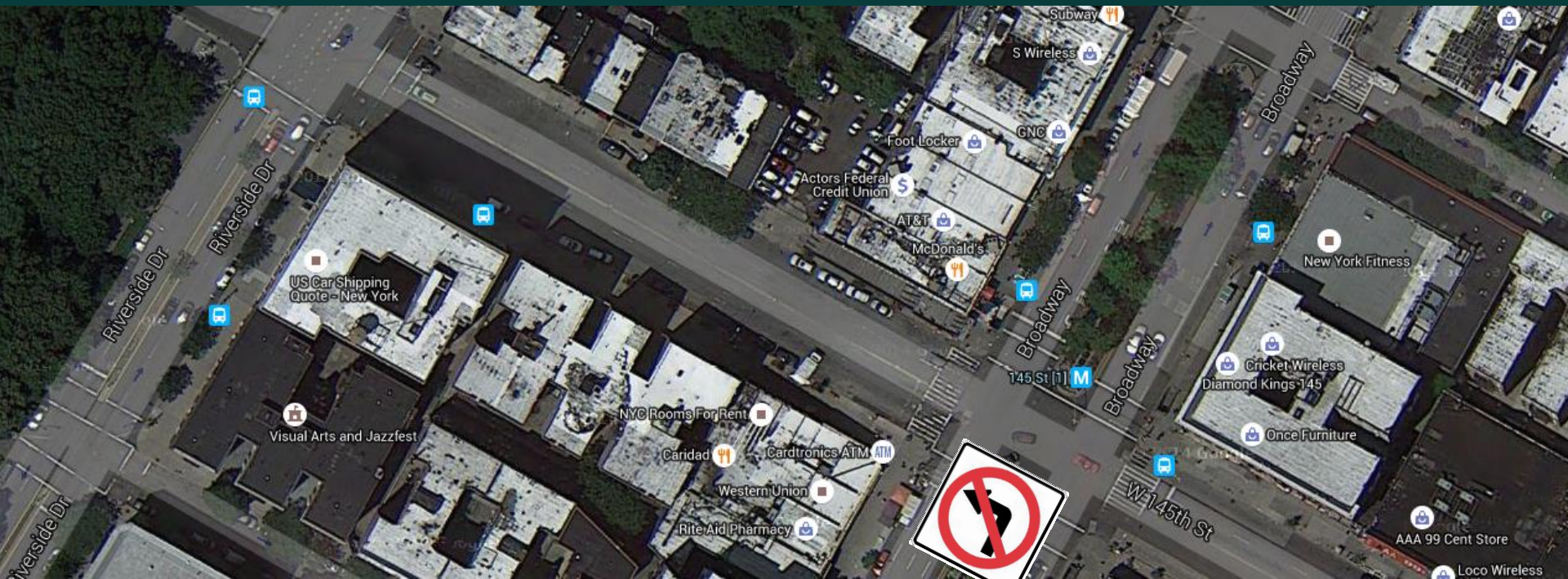


Alt Routes for NBL ban at W 138th St

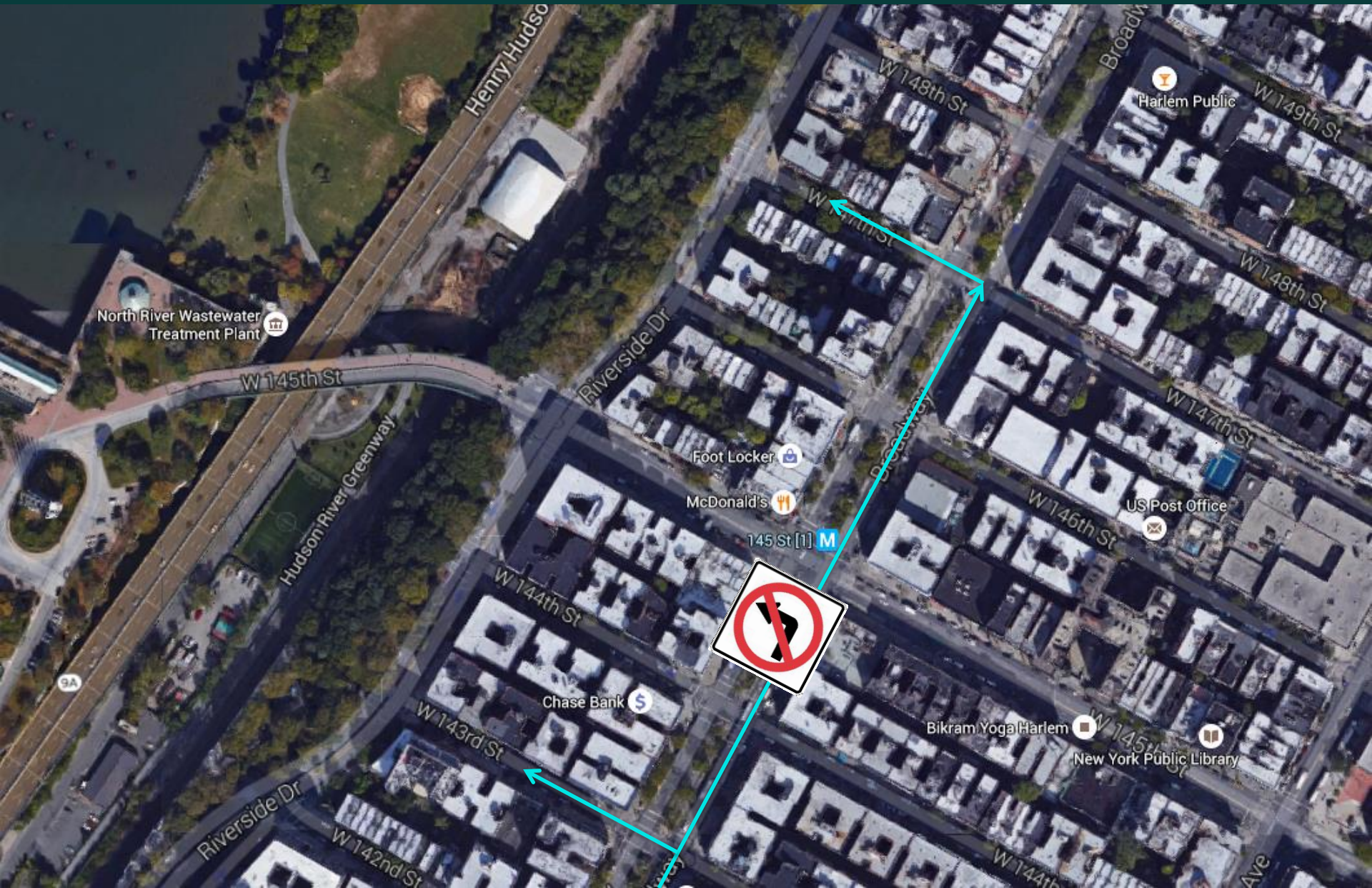


Proposed: NB Left turn ban at W 145th St

- Existing 7s LPI crossing Broadway, near 1-train subway station
- Existing SBL protected phase
- Banning northbound left would allow for a longer southbound left signal, which would allow more vehicles to safely make the southbound left turn
- Affects 51 turners in the PM peak hour



Alt Routes for NBL ban at W 145th St



Proposed: Loading Zones

DOT would like to work with CB, community and local businesses to identify good hours and locations for truck loading zones

Frequent loading observed near:

- Meat Market (E/S Hamilton Pl)
- Compare Foods (E/S 138th-139th Sts and block north)
- 1-train subways (Both sides 137th, 145th Sts and adjacent blocks)
- C-Town (E/S 149th-150th Sts and adjacent blocks)
- Haldon Court (W/S 152nd-153rd Sts)



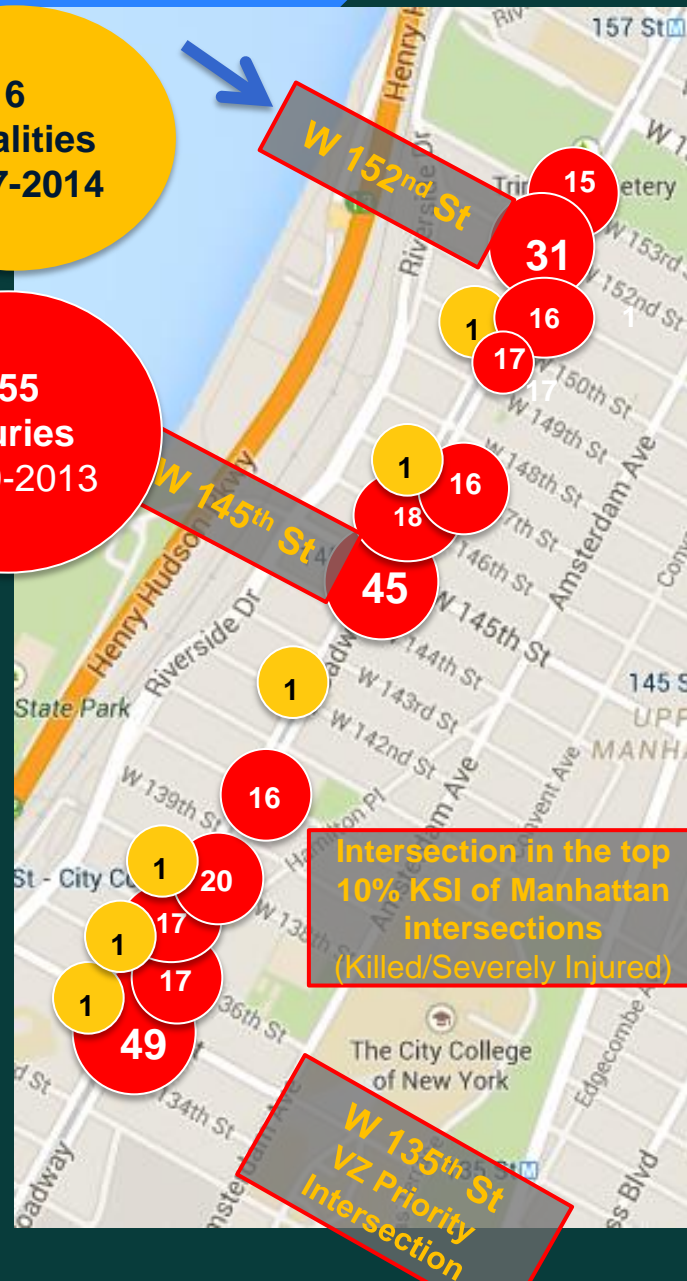
Proposed: Ban SB U-turn at W 152nd St



6
Fatalities
2007-2014

455
Injuries
2009-2013

- 3 severe injuries (2 are seniors)
- Low visibility of uphill W 152nd St traffic from intersection
- Alternate routes: W 150th St, W 148th St



Benefits of Proposal

- Reduces speeding/calms traffic
- Clarifies left turns and movements through medians
- Shortens pedestrian crossings

Existing:
Broadway at W 135th St



Proposed (example):
Broadway at W 97th St



Benefits of Proposal

- Better for Pedestrians
 - More pedestrian space near retail, seniors, and subways
 - Wide parking lane = safer place to wait for walk signal
 - Curbside loading zones increase visibility at intersections
- Better for Drivers
 - More comfortable driving experience; improves lane widths
 - Removes need for dangerous last minute swerving
 - Bigger left turn bays with clearer instructions to wait for green
- Better for Businesses
 - Adds loading zones for truck loading

Questions?

Thank
You