



BROADWAY (W 155TH ST TO W 170TH ST)

Proposed Corridor Safety Improvements

Community Board 12

May 1, 2017



PROJECT LOCATION

- Subway stations at W 157th St / W 168th St
- M2, M3, M4, M100, Bx6, Bx7 buses
- Corridor studied as part of the Washington Heights Neighborhood Transportation Study
- Within the Hamilton Heights Senior Pedestrian Focus Area
- 2013 High Pedestrian Crash Location, Broadway/W 162nd St



CRASH DATA: VISION ZERO PRIORITY

Broadway is a Vision Zero Priority Corridor

- Broadway is one of 11 designated Priority Corridors in Manhattan
- Broadway W 155th to W 170th had 20 Pedestrian KSI/mile (killed or severely injured, 2010-14), a higher density than the rest of the corridor
 - Compared with 10.4 Ped KSI for Broadway, north of Columbus Circle (excluding project area)
 - 54 KSI/mile in project area vs. 23.8 KSI/mile for Broadway, north of Columbus Circle (all modes)

5 Vision Zero Priority Intersections

- W 157th St, W 158th St, W 159th St / Ft Washington, W 162nd St, W 164th St
- 15-block (0.8 mile) project area



SAFETY DATA

- **526 total injuries** (2010-14 crash data)
- **40 persons severely injured** along 0.8 mile corridor (2010-2014 crash data)
 - 21 motor vehicle occupant severe injuries
 - 16 pedestrian severe injuries
 - 3 pedestrian fatalities
- Majority of pedestrians (59%) hit at intersections, while crossing with the signal
- Vehicle occupant injuries associated with:
 - Rear-End (24%)
 - Right angle crashes (17%)
 - Left Turn (16%)



Source: Fatalities: NYCDOT
Injuries: NYS DOT

OUTREACH TIMELINE

2014-2017

- DOT works with CB 12 and community stakeholders on Washington Heights Neighborhood Transportation Study

January
2017

- Final Open House for Neighborhood Transportation Study, including recommendations for Broadway

February
2017

- DOT conducts merchant surveys on Broadway, surveying over 70 businesses

April
2017

- DOT Street Ambassadors conduct on-street surveys on Broadway at W 157th St and W 168th St
- DOT Street Teams & NYPD conduct joint Vision Zero Education outreach on Broadway at W 165th St & W 178th St



DOT staff explains recommendations of Neighborhood Transportation Study (Jan '17)



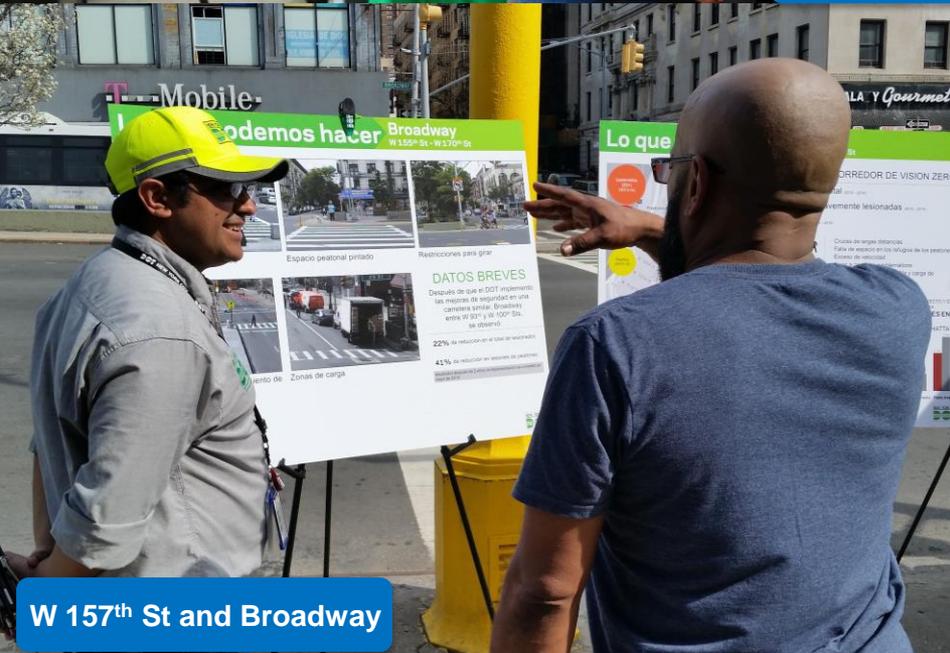
DOT Street Ambassador speaks with Broadway merchant (Feb '17)



DOT Street Ambassador speaks with passerby about safety on Broadway (Apr '17)



W 168th St and Broadway



W 157th St and Broadway

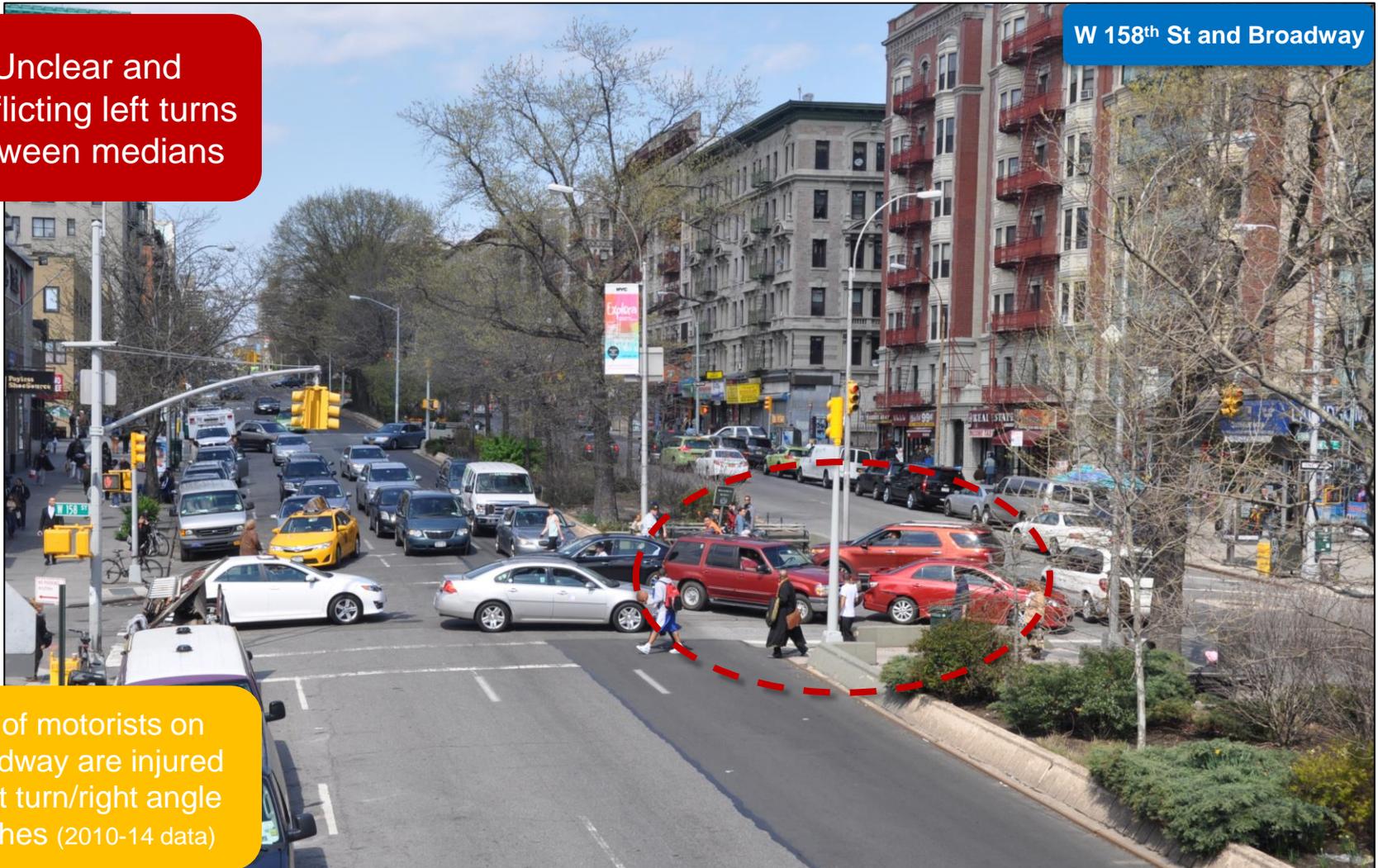
DOT Street Ambassadors conducted bi-lingual outreach on Broadway

- 67% of those surveyed said they often or sometimes feel unsafe as a pedestrian crossing Broadway
- 69% of those surveyed live in neighborhood, 23% were there for work/school

TOP ISSUES FOR DRIVERS

Unclear and conflicting left turns between medians

W 158th St and Broadway



1/3 of motorists on Broadway are injured in left turn/right angle crashes (2010-14 data)

TOP ISSUES FOR DRIVERS

Double parking,
truck loading in
travel lane

Broadway and W 162nd St



DOT's Office of Freight Mobility developing a **comprehensive curb management plan** for the project area

- Use merchant surveys, data and observations to develop plan for loading zones
- Intended to meet diverse needs of business on Broadway

TOP ISSUES FOR PEDESTRIANS

Trucks limit visibility for pedestrians / vehicles

58% of pedestrians surveyed experienced this issue

Broadway and W 165th St



TOP ISSUES FOR PEDESTRIANS

Lack of median refuge space at some locations

W 169th St and Broadway

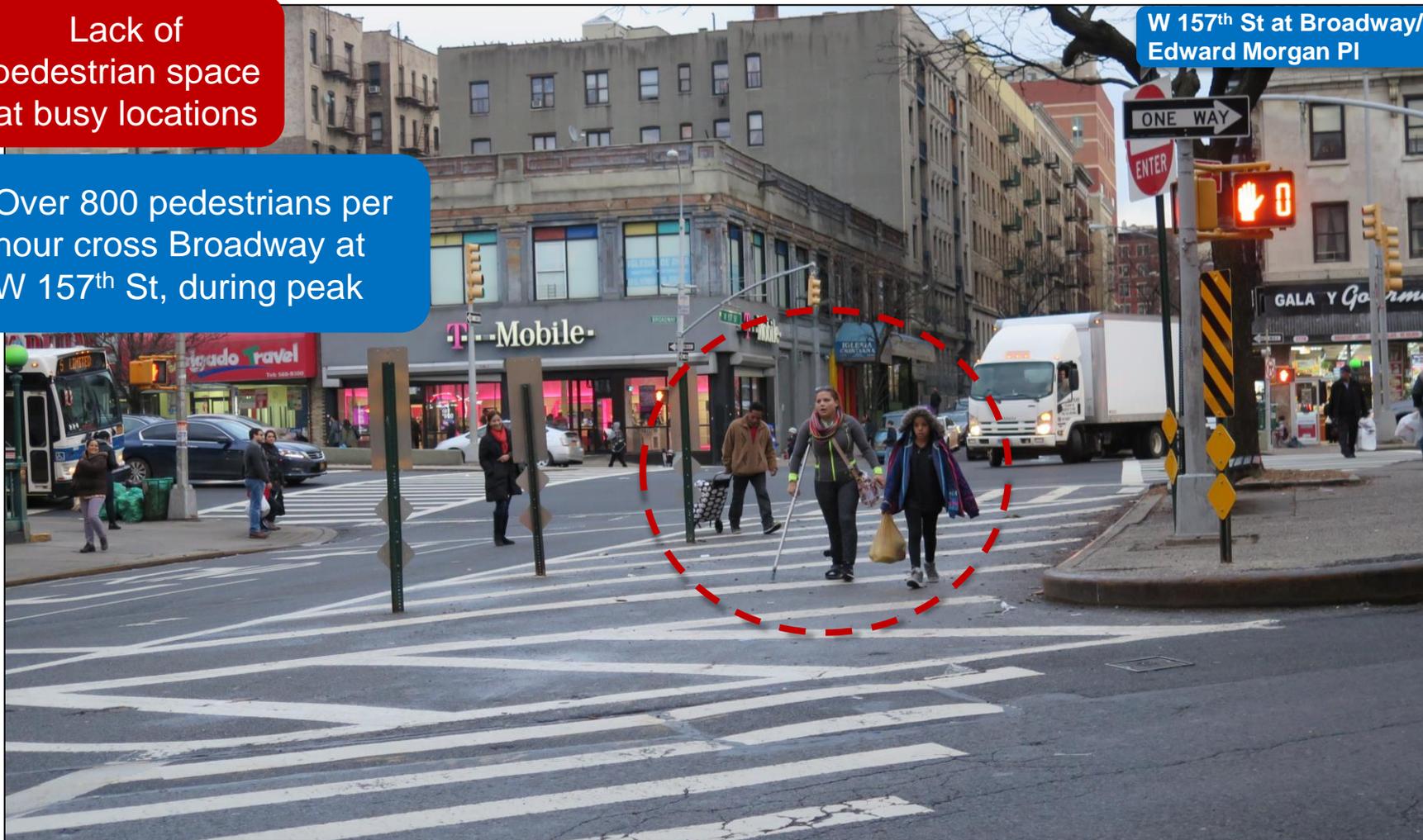


TOP ISSUES FOR PEDESTRIANS

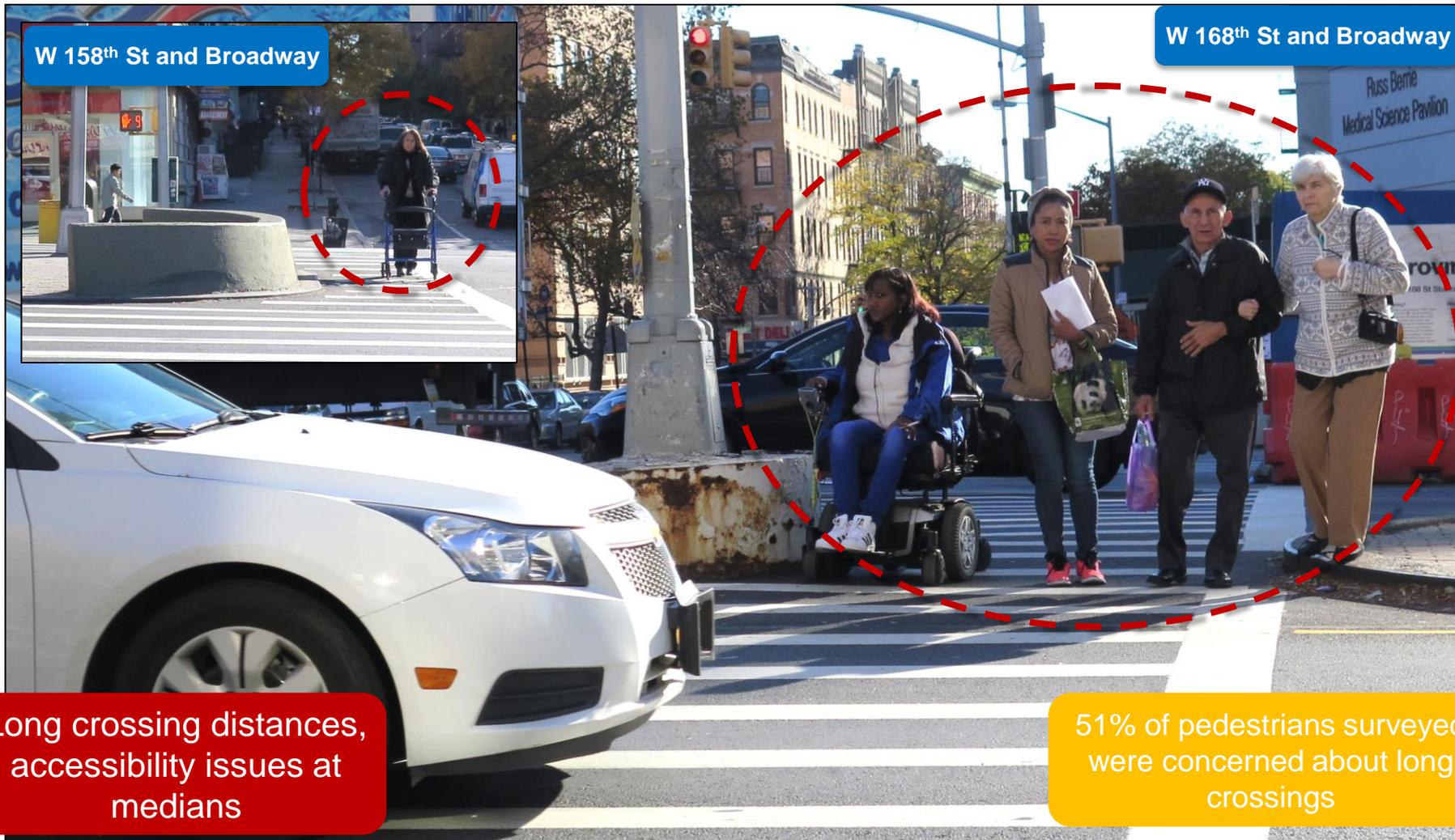
Lack of pedestrian space at busy locations

Over 800 pedestrians per hour cross Broadway at W 157th St, during peak

W 157th St at Broadway/
Edward Morgan PI



TOP ISSUES FOR PEDESTRIANS

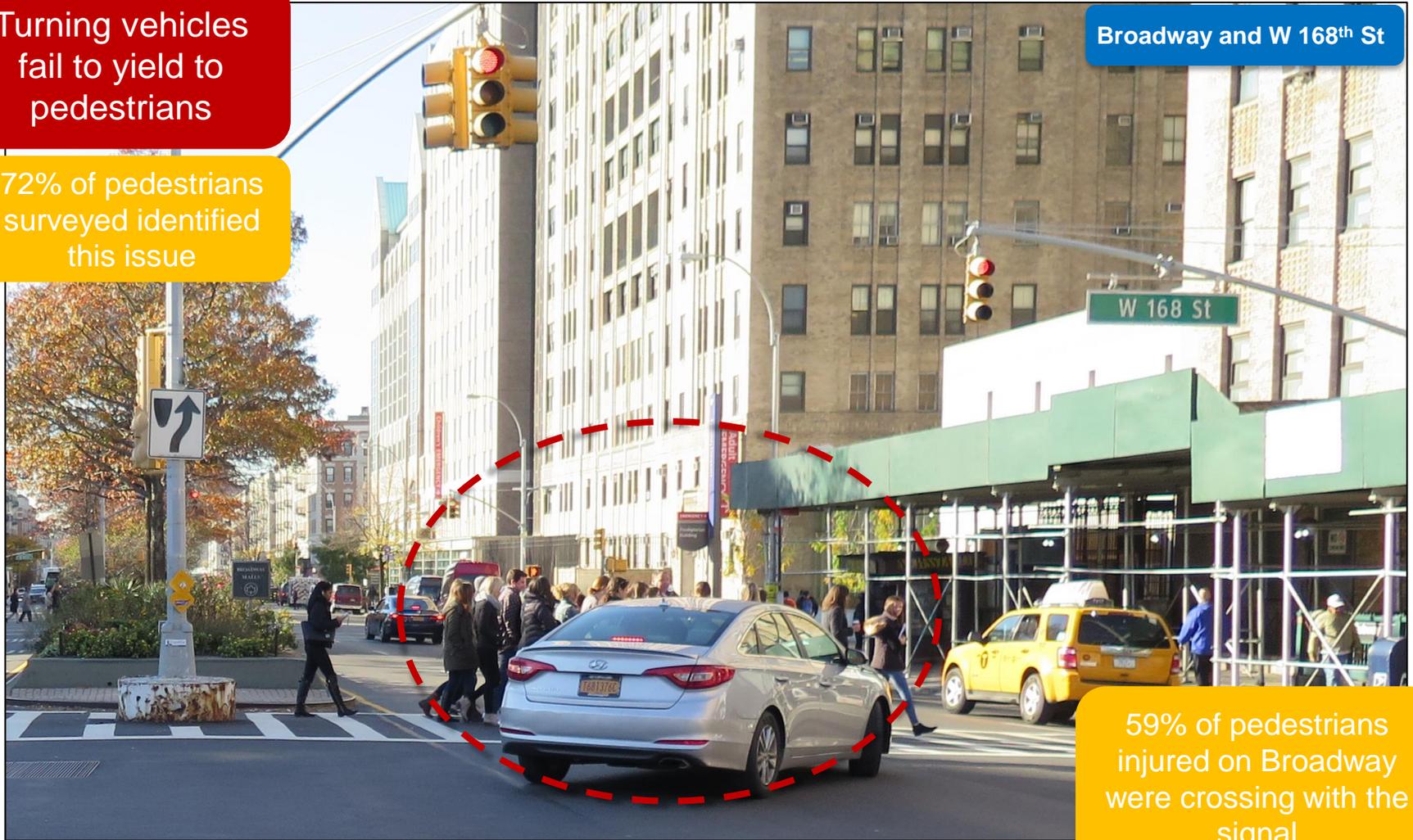


TOP ISSUES FOR PEDESTRIANS

Turning vehicles fail to yield to pedestrians

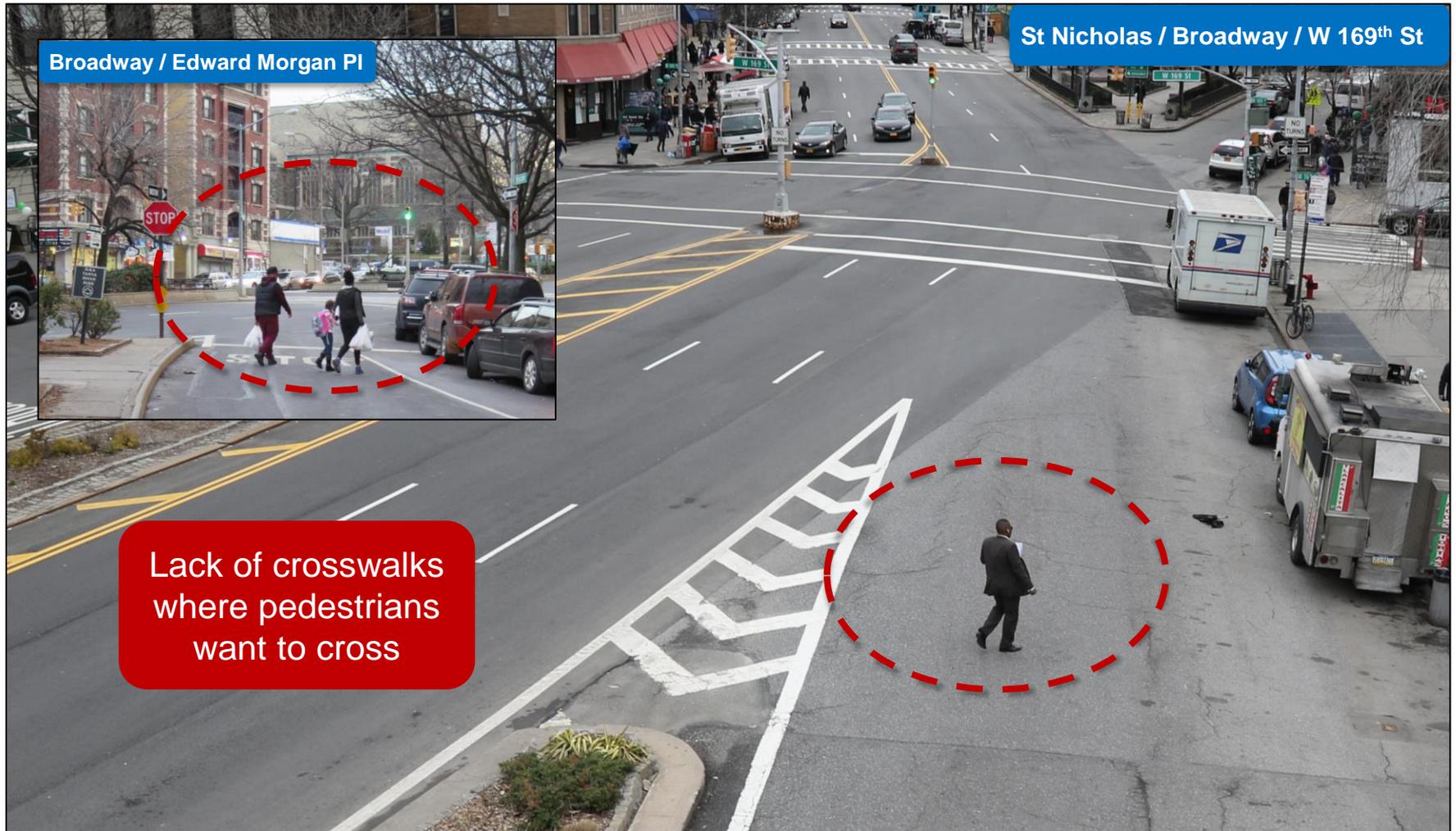
72% of pedestrians surveyed identified this issue

Broadway and W 168th St



59% of pedestrians injured on Broadway were crossing with the signal

TOP ISSUES FOR PEDESTRIANS

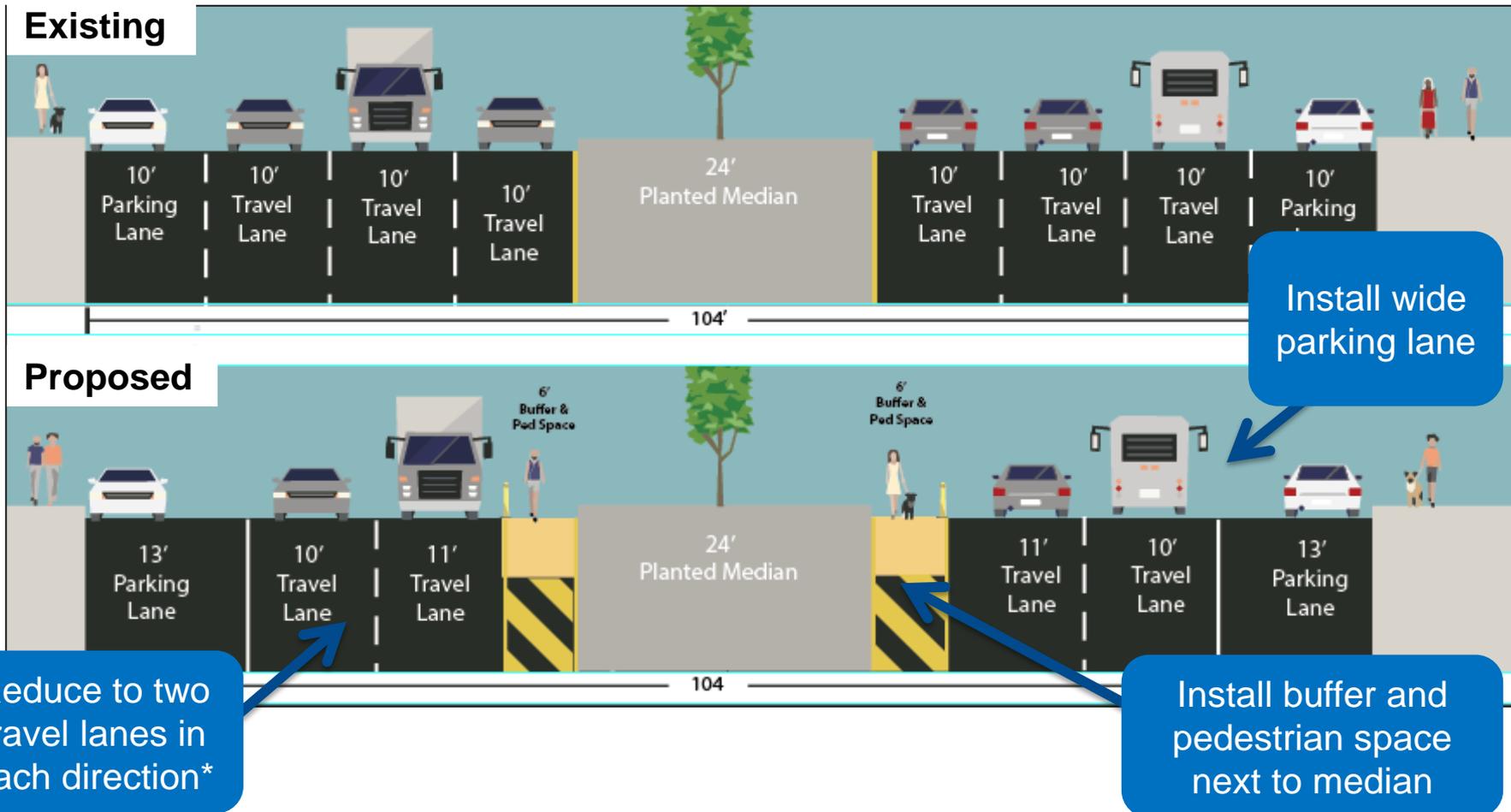


PROPOSAL

W 155th St to W 168th St

*3 travel lanes maintained in select locations:

Northbound: W 155th to W 157th Sts
Southbound: W 159th St to W 155th Sts



KEY DESIGN FEATURES

Median Widening and Markings Improvements



Broadway and W 149th St

Concrete Medians and Pedestrian Islands



Fort George Ave and W 193rd St

Painted Pedestrian Space



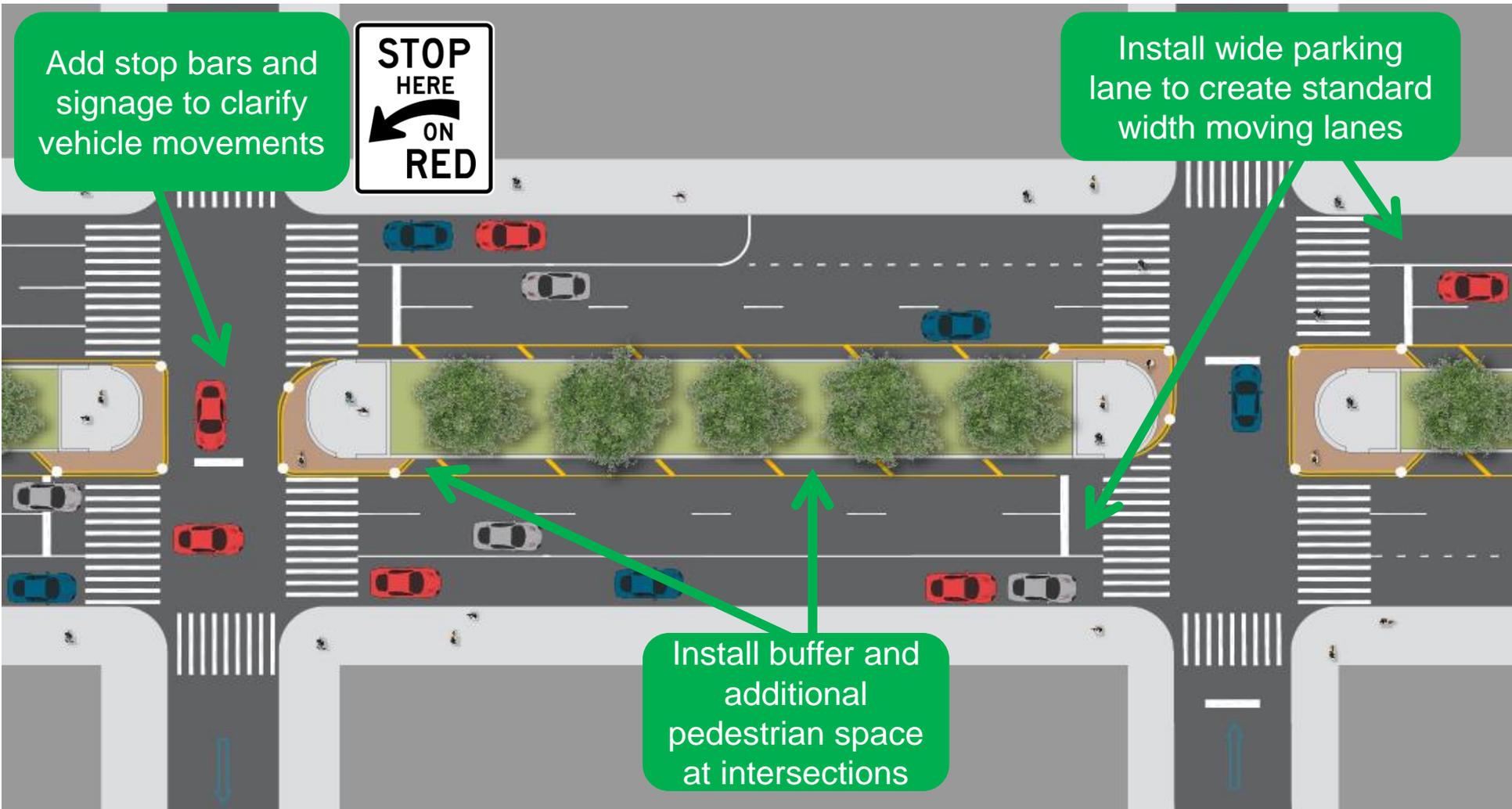
Canal St and E Broadway

Signal Timing Improvements



Broadway and W 155th St

TYPICAL TREATMENT- BROADWAY (W 155TH ST –W 168TH ST)



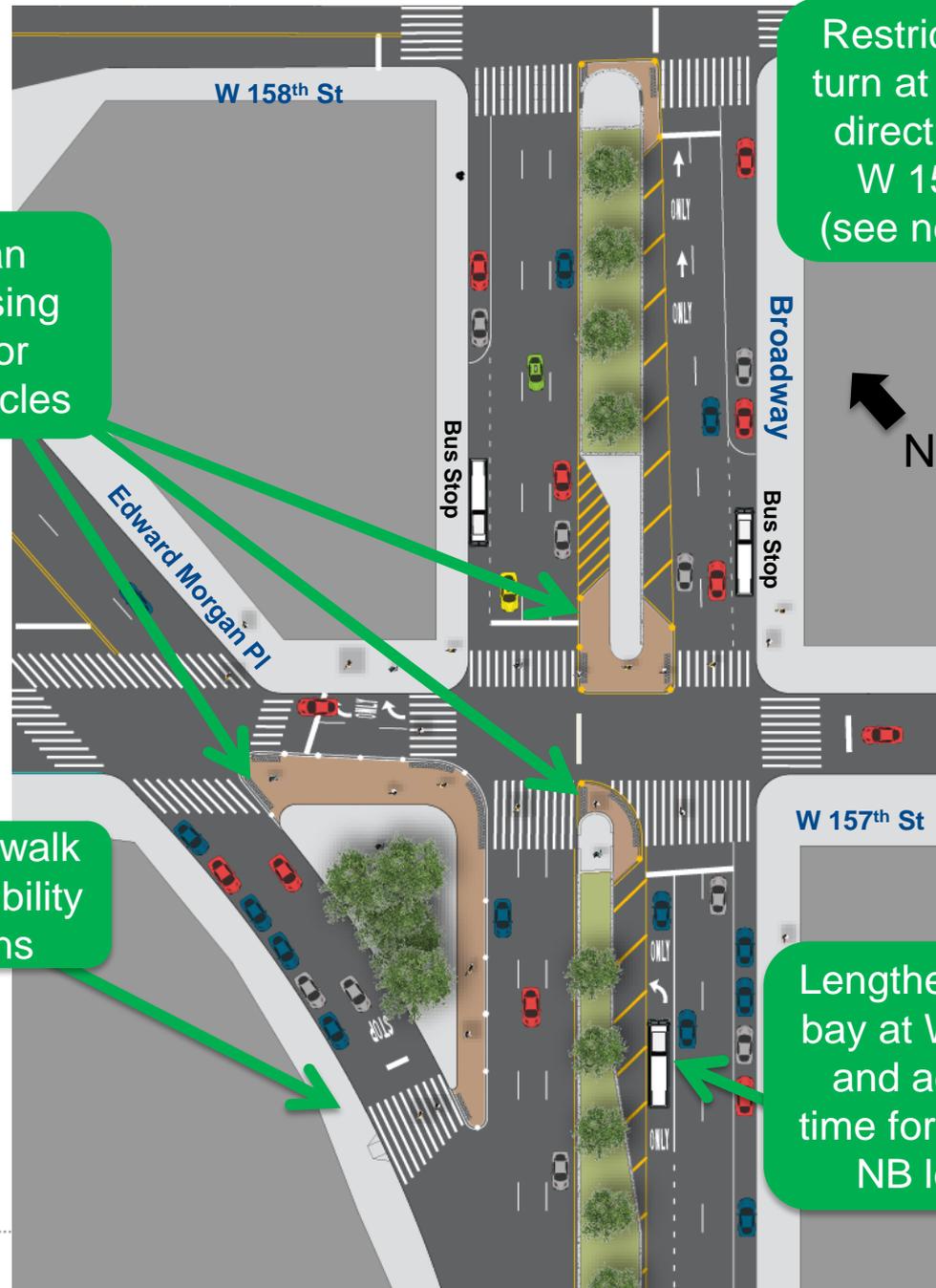
PROPOSAL-

W 157TH / W 158TH STS

Create new pedestrian space, to shorten crossing distances and allow for better markings for vehicles



Add new crosswalk to enhance visibility of pedestrians

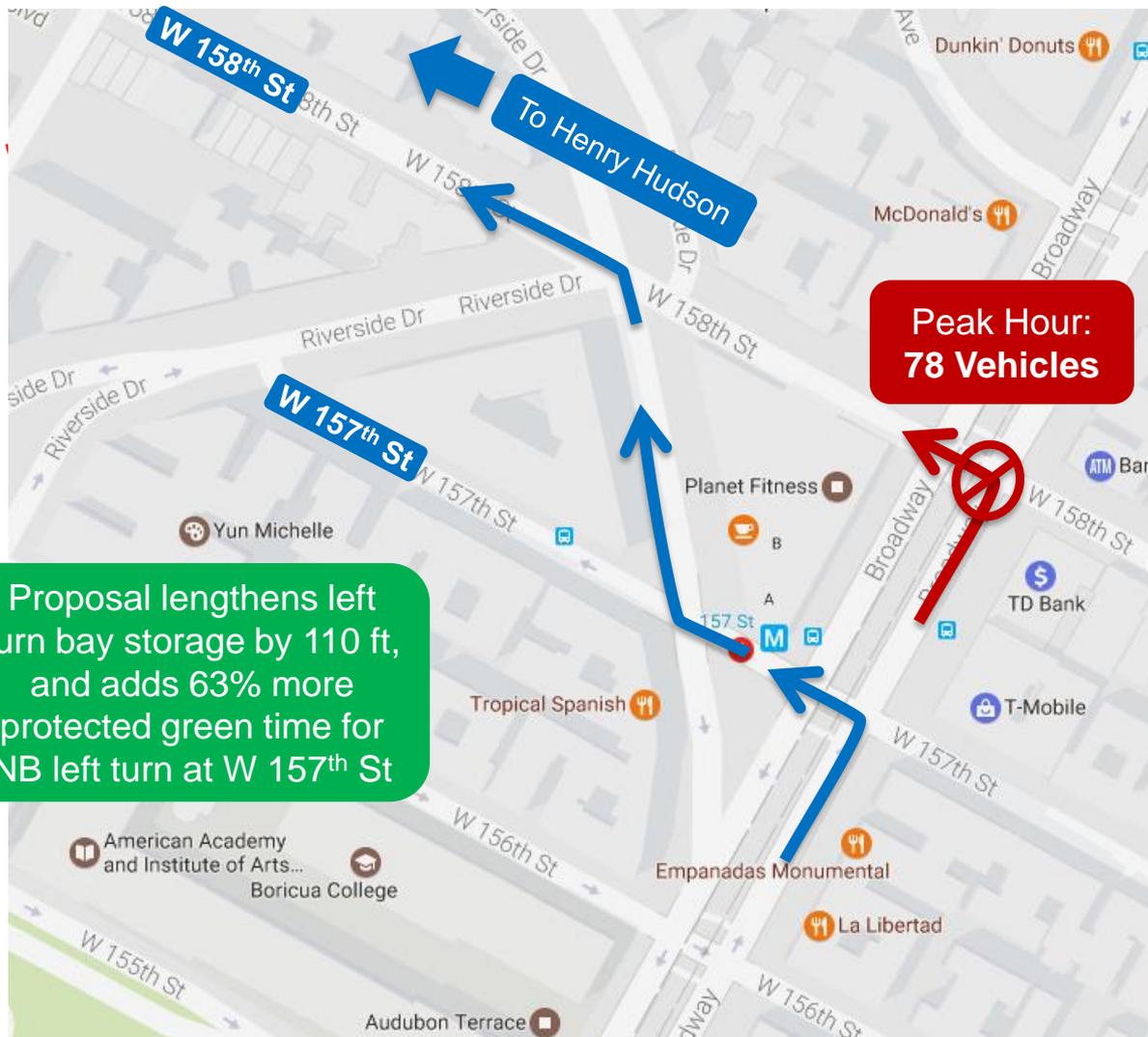


Restrict NB left turn at W 158th, direct turns to W 157th St (see next slide)

Lengthen left turn bay at W 157th St and add more time for protected NB left turn

PROPOSAL:

W 157TH/ W 158TH ST LEFT TURNS



Median gap at W 158th too narrow for NB and SB left turns

Majority of vehicle crashes from left turns/right angle at W 158th St (54.6%)

Peak Hour:
78 Vehicles

Proposal lengthens left turn bay storage by 110 ft, and adds 63% more protected green time for NB left turn at W 157th St



Vehicle queue regularly can't fit into short turn bay at W 157th, blocks thru NB moving lane

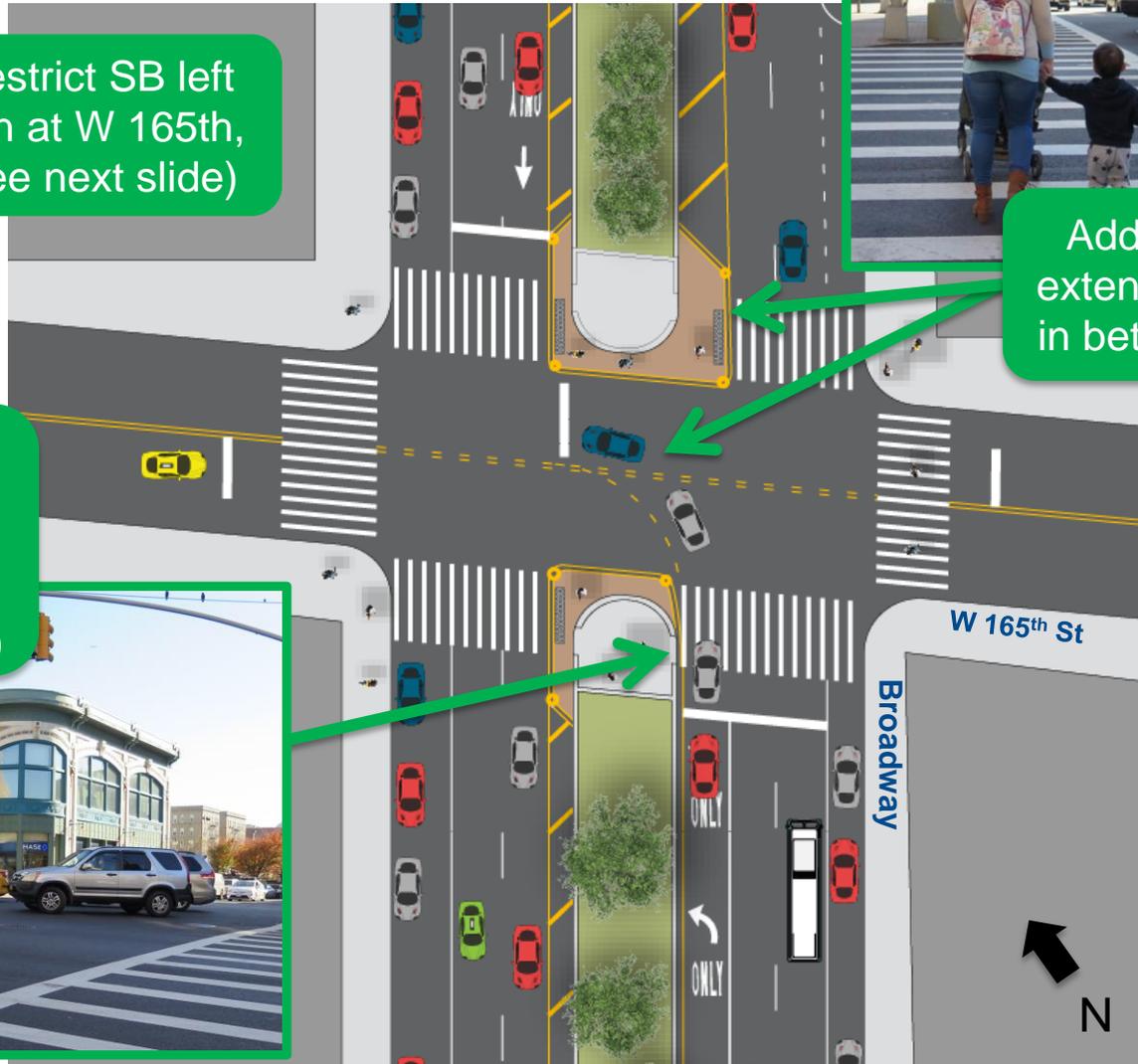
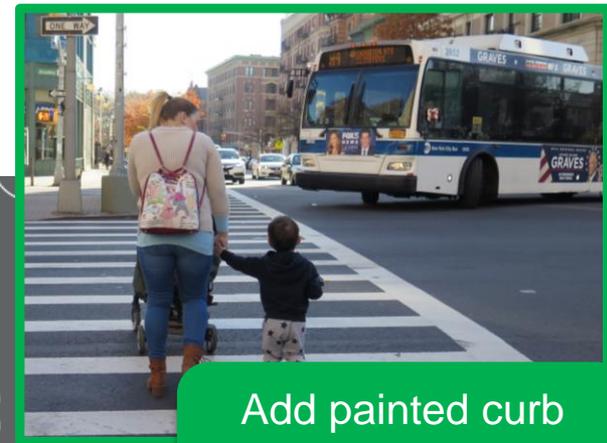
PROPOSAL:

W 165TH ST

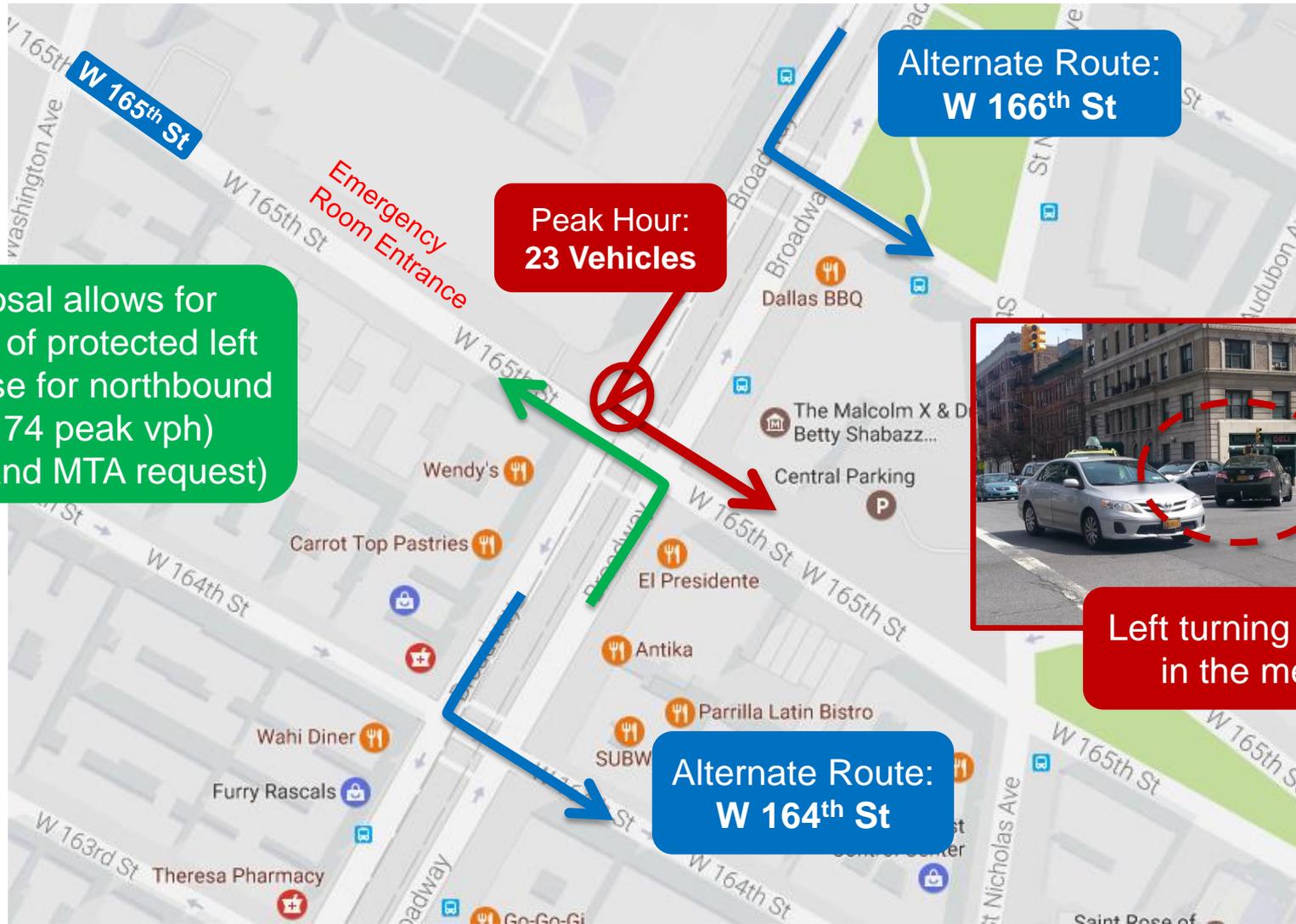
Restrict SB left turn at W 165th, (see next slide)

Add painted curb extensions, stop bar in between medians

Add turn bay and dedicated signal for northbound left turn at W 165th St (NYPD/MTA request)



PROPOSAL: W 165TH ST LEFT TURNS



Alternate Route:
W 166th St

Peak Hour:
23 Vehicles

Proposal allows for
addition of protected left
turn phase for northbound
left (174 peak vph)
(NYPD and MTA request)

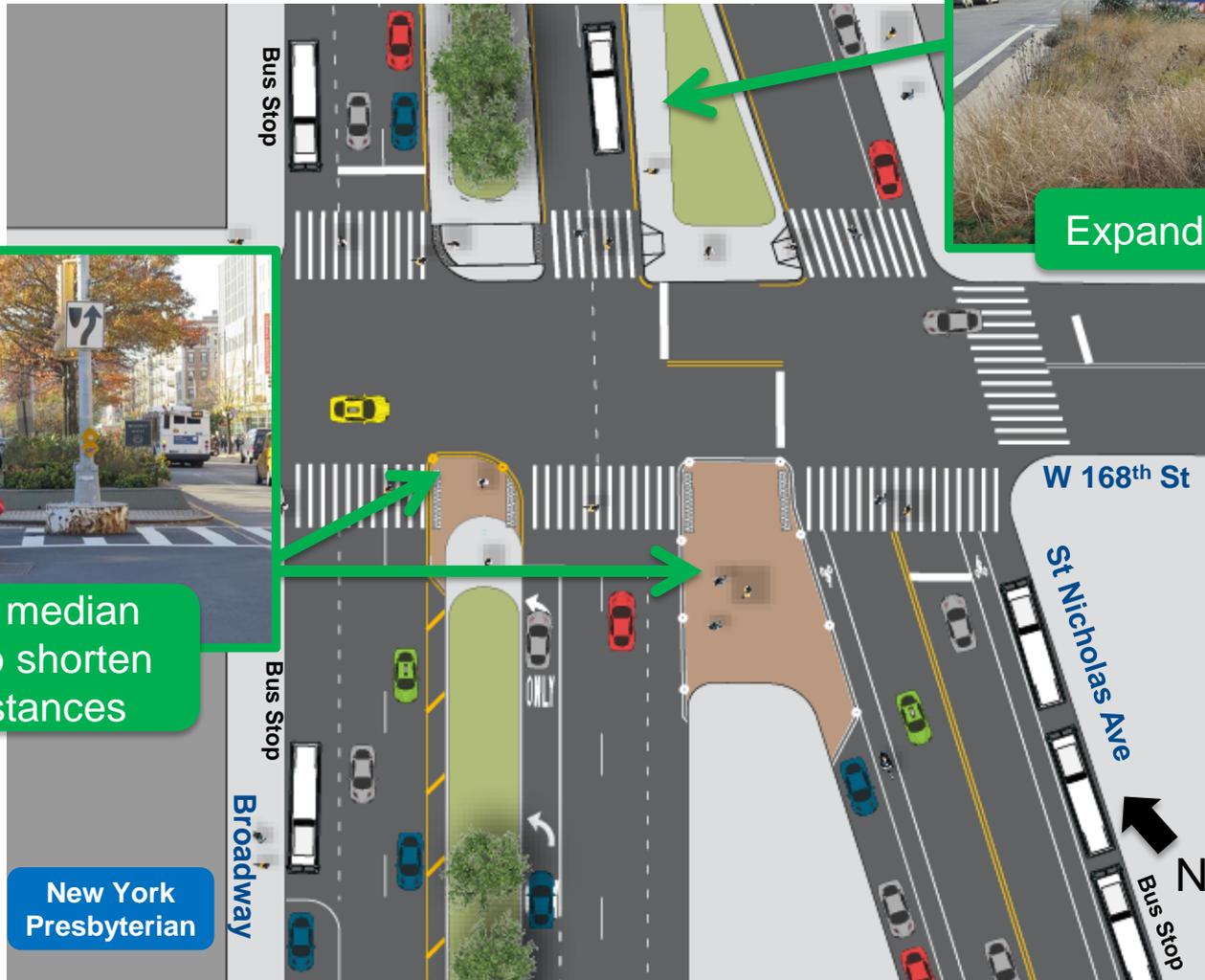


Left turning conflicts
in the median

Alternate Route:
W 164th St

PROPOSAL-

W 168TH ST / ST NICHOLAS



Expand concrete triangle



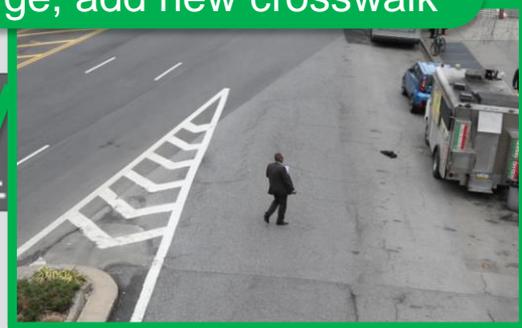
Add painted median extensions to shorten crossing distances

PROPOSAL-

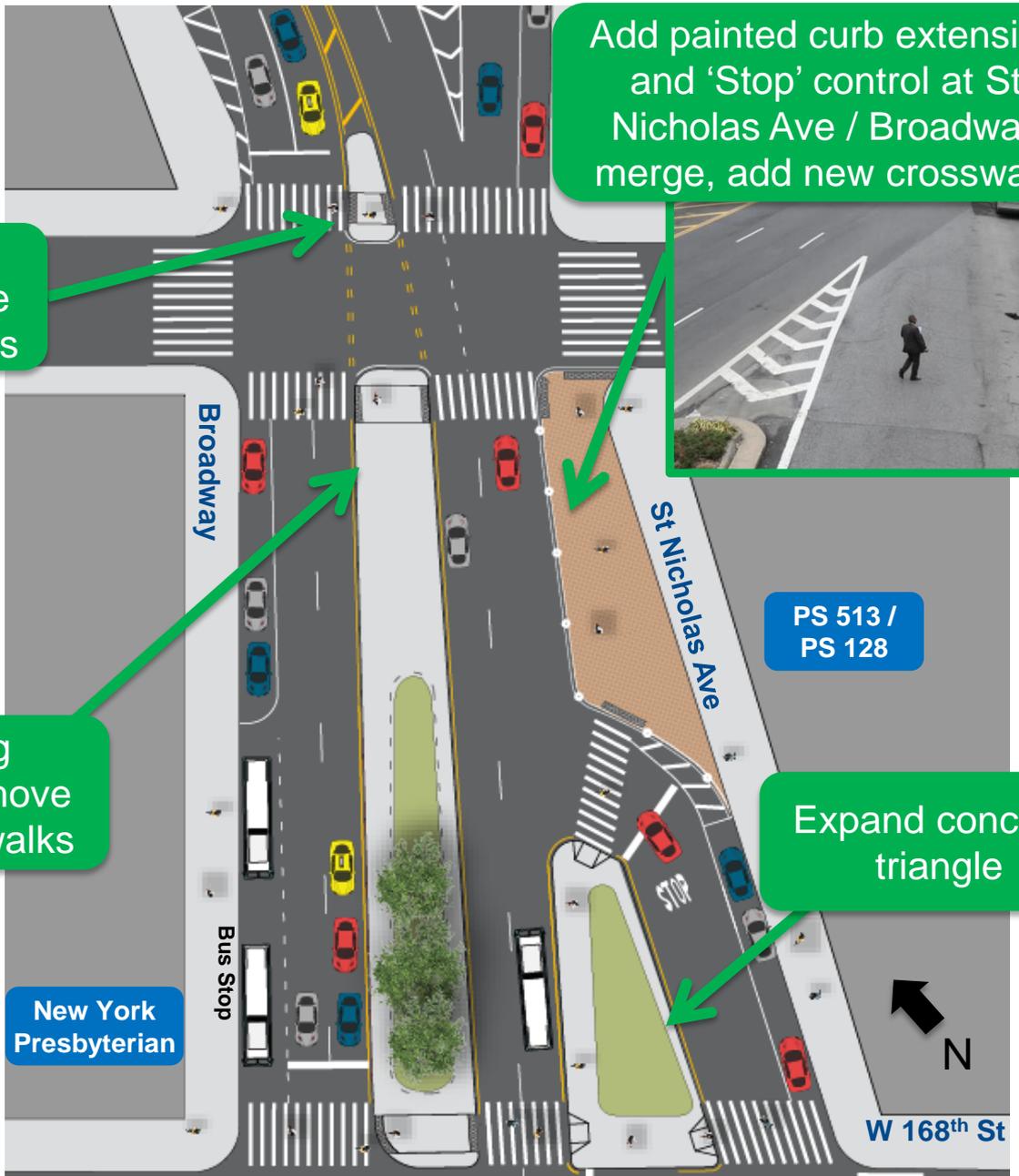
W 169TH ST/ ST NICHOLAS

Add painted curb extension and 'Stop' control at St Nicholas Ave / Broadway merge, add new crosswalk

Construct concrete pedestrian island to provide refuge space for pedestrians



Improve existing concrete median, move signal out of crosswalks



PS 513 / PS 128

Expand concrete triangle

New York Presbyterian



BENEFITS OF SAFETY PROPOSAL

SIMILAR PROJECTS ON BROADWAY

- 2014 Broadway Project (W 93rd to W 100th Sts)*
 - 22% reduction in total injuries
 - 20% reduction in motor vehicle occupant injuries
 - 41% reduction in pedestrian injuries
- 2016 Broadway Project (W 135th-W 155th Sts)
 - No fatalities since implementation (6 fatalities since 2007)



BENEFITS OF SAFETY PROPOSAL

Median Widening and Markings Improvements

- Shortens crossing distances
- Allows for installation of stop bars, clarifying vehicle movements
- Encourages slower, safer turns, yielding to pedestrians



Concrete Medians and Pedestrian Islands

- Shorten crossing distances
- Creates refuge space for pedestrians
- Encourages slower, safer turns, yielding to pedestrians
- Allows for upgrades of outdated signal infrastructure



BENEFITS OF SAFETY PROPOSAL

Painted Pedestrian Space

- Allows for installation of new crosswalks
- Shortens crossing distances
- Potential for beautification



Signal Timing Changes

- Allows for safer, more organized distribution of left turns
- Reduces turning conflicts between vehicles and pedestrians



THANK YOU!

Questions?



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APPENDIX-

MERCHANT SURVEYS

- DOT surveyed 73 businesses
- 27 additional businesses were contacted but did not want to be surveyed
- Surveys conducted Feb 14, 2017

Business Name	#	Street
Number 1 Chinese Restaurant	3853	Broadway
MetroPCS	3851	Broadway
Buffet	3938	Broadway
Brothers Fish Market	3845	Broadway
BBQ Dallas	3956	Broadway
VIM Drugs	3835	Broadway
Famous Famiglia	4020	Broadway
Dunkin Donuts	3833	Broadway
Tasty Deli	4020	Broadway
Guadalupana deli	3823	Broadway
Dunkin Donuts	4030	Broadway
MetroPCS	4036	Broadway
Columbia Wine Co	4038	Broadway
TS Grocery	3868	Broadway
Nancy Fashion	3872	Broadway
St. Anthony Pharmacy	3860	Broadway
Bladi's Deli	3856	Broadway
El Pitallito	3854	Broadway
Payless	3805	Broadway
Heights Smoke and Vape	3834	Broadway
162 Gourmet Deli	601 W 162nd St	
J & G Wines Liquors	3803	Broadway
Modern Gift Shop	3832	Broadway
Rite Health Pharmacy	3885	Broadway
Ana Fashion	3891	Broadway
Lil Caesars	3830	Broadway
Las Palinas Restaurant	3891A	Broadway
Boost Mobile	3897	Broadway
Coral Deli	3801	Broadway
24/7 DISCOUNT	3810	Broadway
Azeez Smoke Shop	3895	Broadway
Theresa Pharmacy	3901	Broadway
UP NYC	3806	Broadway
Columbia Gourmet Deli	3905	Broadway
Furry Rascal	3915	Broadway
Ricky Fruit Vegetable	3804	Broadway

Business Name	#	Street
GNC Nutrition Center	3799	Broadway
Columbia Pharmacy	3921	Broadway
T-Mobile	3780	Broadway
Carrot Top Pastries	3931	Broadway
Optica Express	3929	Broadway
AT&T Wireless	3925	Broadway
Subway	3795	Broadway
USA scrubs	3929A	Broadway
Planet Fitness	3799	Broadway
Galaxy Deli	3778	Broadway
A & H Photo	3933	Broadway
Empanadas Monumental	3772	Broadway
Wendy's	3939	Broadway
La Fiesta	3789	Broadway
Kennedy's Chicken Pizza & Grill	3789	Broadway
AH Broadway Grocery	3770	Broadway
Marina Dental Center	3768	Broadway
iFix4U	3783A	Broadway
La Libertad	3764	Broadway
Starbucks	4001	Broadway
Boston Market	3781	Broadway
Sbarro	4007	Broadway
Coogan's	4015	Broadway
Chipotle	4009	Broadway
Broadway gourmet deli	3750	Broadway
Riverside Gourmet Markets	3779	Broadway
Reme Restaurant	4021	Broadway
Andy pharmacy	3750	Broadway
Uptown Chemists	4027	Broadway
Tropical Spanish	3771	Broadway
Como Pizza	4035	Broadway
Tommy's Grill and Pizza	3750	Broadway
Gristedes	4037	Broadway
Santo's & Sons	3759	Broadway
Mobile Gas	3740	Broadway
Santo's & Sons	3759	Broadway
Boricua College	3155	Broadway

APPENDIX-

TRAFFIC VOLUMES

Existing Peak Traffic Volumes				
	Northbound		Southbound	
	AM	PM	AM	PM
W 155 th St	404	703	912	618
W 157 th St	623	988	828	538
W 158 th St	483	722	923	639
W 165 th St	378	705	1,120	770
W 170 th St	333	515	837	504

* Vehicle counts based on automatic traffic recorder machines, data from 1/23/17 to 2/13/17