

# St. Nicholas Place & W. 155<sup>th</sup> St.

## Intersection Safety Improvements





# Project Area

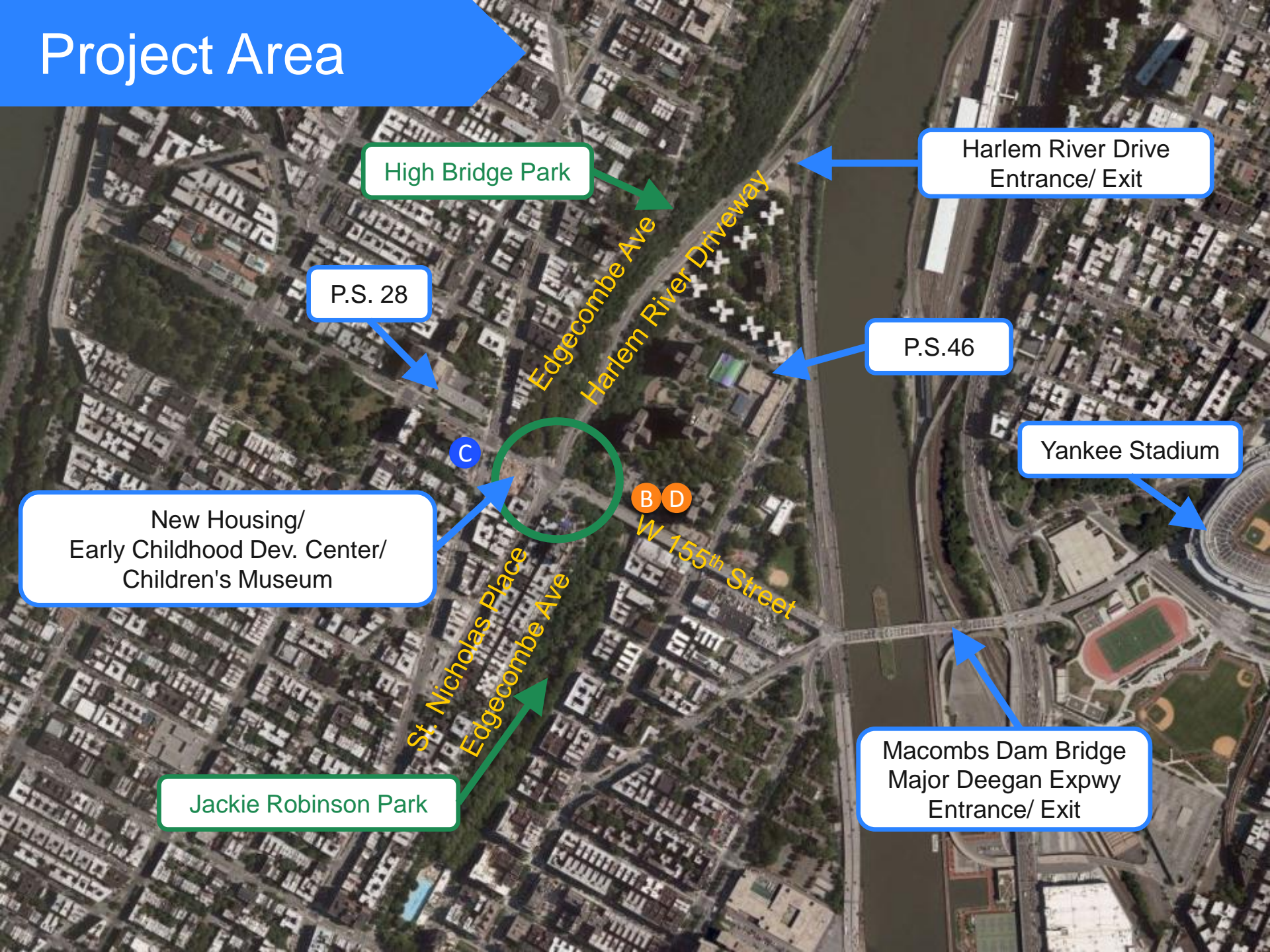
Intersection of:  
Community Boards  
9,10,12

Intersection of:  
W 155<sup>th</sup> Street  
St. Nicholas Place  
Edgecombe Ave  
Harlem River  
Driveway Entrance





# Project Area



High Bridge Park

P.S. 28

Harlem River Drive  
Entrance/ Exit

P.S. 46

Yankee Stadium

New Housing/  
Early Childhood Dev. Center/  
Children's Museum

C

B D

Jackie Robinson Park

Macombs Dam Bridge  
Major Deegan Expwy  
Entrance/ Exit



# Background

## Community Requests

- Former Council Member Jackson requested pedestrian safety improvements
- NYPD 30<sup>th</sup> Precinct requested DOT safety investigation
- Support from NYPD 30<sup>th</sup> and 33<sup>rd</sup> Precincts for proposed DOT improvements

## Safety Issues

- Long crosswalks
- Pedestrian crashes
- Multi-leg intersection with multiple conflicting movements





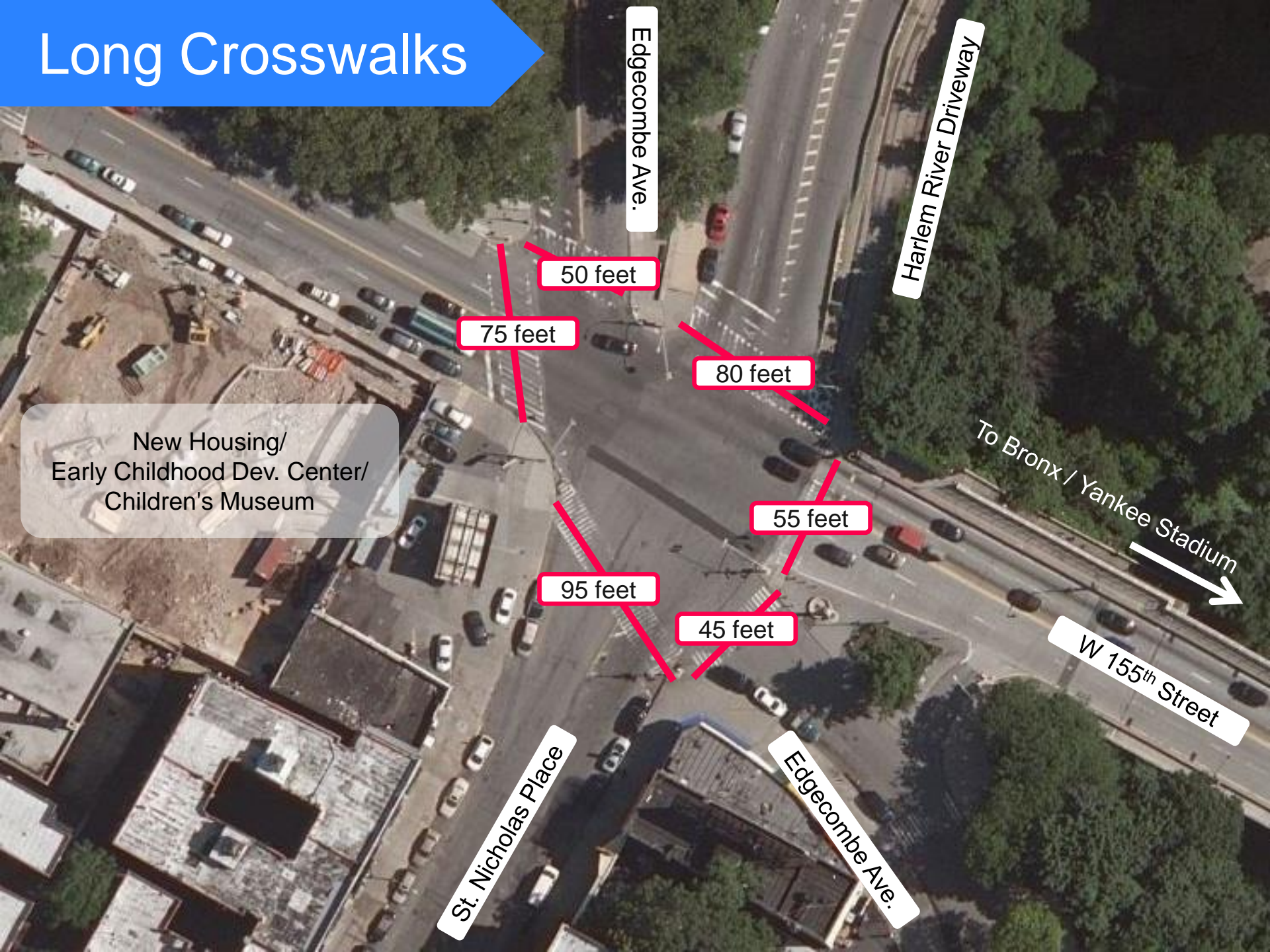
# Background

## Public Meetings

- 1) 12/06/12 – 1<sup>st</sup> site walk through and workshop with community members
- 2) 8/13/13 – 2<sup>nd</sup> site walk through and workshop with community members
- 3) 5/21/14 – Community forum and presentation
- 4) 6/02/14 – Presentation to CB12 committee
- 5) 6/05/14 – Presentation to CB9 committee
- 6) 6/11/14 – Presentation to CB10 committee
- 7) 10/2/14 – Presentation to CB9 committee
- 8) 10/6/14 – Presentation to CB12 committee
- 9) 10/14/14 – Presentation to CB10 committee
- 10) 1/13/15 – Update with CB10 committee



# Long Crosswalks



Edgecombe Ave.

Harlem River Driveway

50 feet

75 feet

80 feet

New Housing/  
Early Childhood Dev. Center/  
Children's Museum

To Bronx / Yankee Stadium

55 feet

95 feet

45 feet

W 155<sup>th</sup> Street

St. Nicholas Place

Edgecombe Ave.



# Vehicle Crashes/Injuries

Ranks in top  
one percent  
of Manhattan  
intersections

43 Motor  
Vehicle  
Crashes  
(non ped)

## St Nicholas Pl at W 155<sup>th</sup> St Injury Summary, 2008-2012 (5 years)

	Total Injuries	Severe Injuries
Pedestrian	12	3
Bicyclist	1	0
Motor Vehicle Occupant	59	5
Total	72	8

Edgecombe Ave.

Harlem River Driveway

To Bronx / Yankee Stadium  
↘

W 155<sup>th</sup> Street

St. Nicholas Pl

Edgecombe Ave.



# Pedestrian Crashes

Ranks in top  
one percent  
of Manhattan  
intersections

38% of pedestrian  
crashes involved  
pedestrians  
crossing with the  
signal

## St Nicholas Pl at W 155<sup>th</sup> St Injury Summary, 2008-2012 (5 years)

	Total Injuries	Severe Injuries
Pedestrian	12	3
Bicyclist	1	0
Motor Vehicle Occupant	59	5
Total	72	8

Edgecombe Ave.

Harlem River Driveway

To Bronx / Yankee Stadium

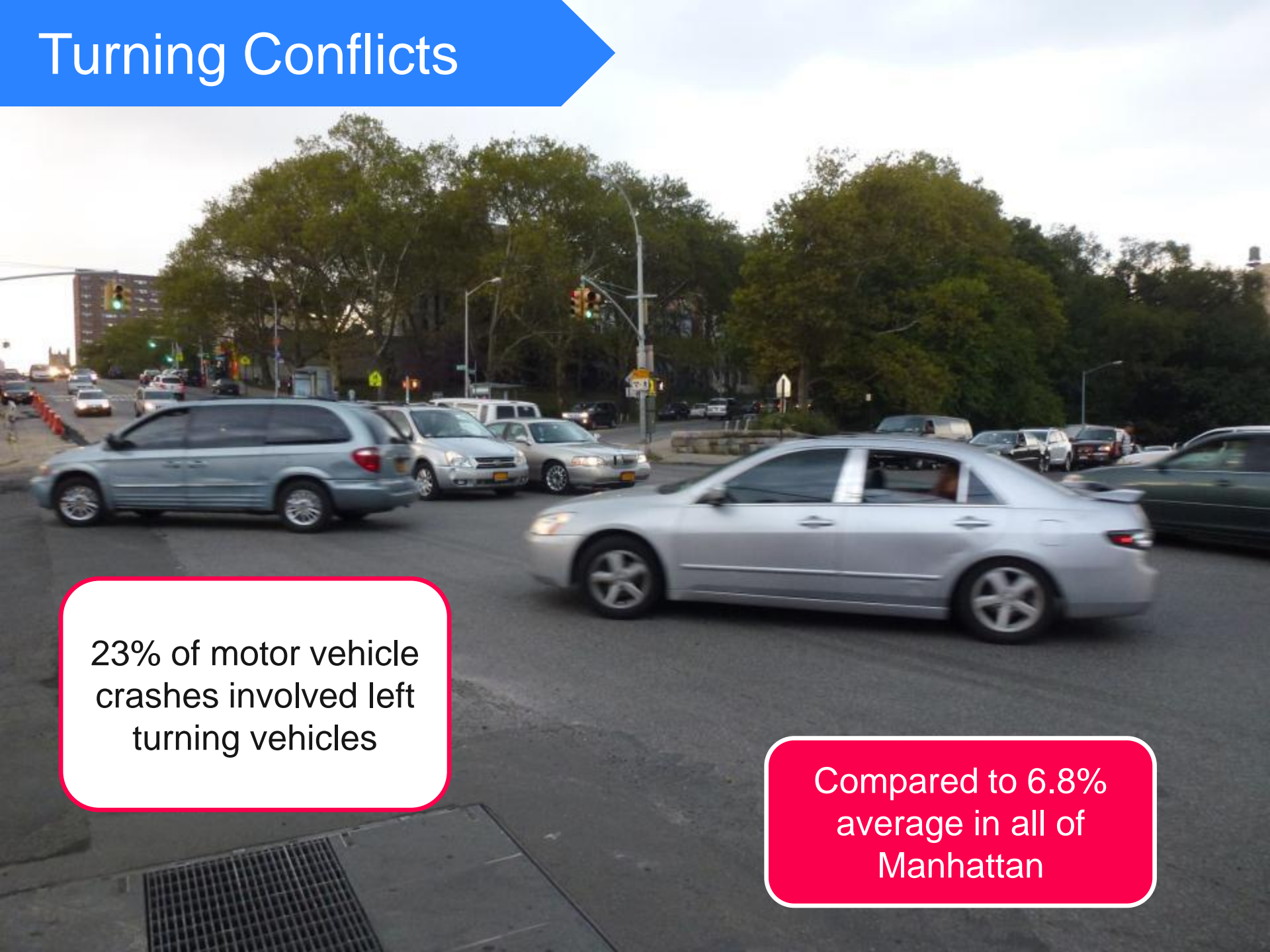
W 155<sup>th</sup> Street

St. Nicholas Pl

Edgecombe Ave.



# Turning Conflicts



23% of motor vehicle  
crashes involved left  
turning vehicles

Compared to 6.8%  
average in all of  
Manhattan



# Turning Conflicts

W.155<sup>th</sup> green phase

41  
Seconds

Edgecombe Ave.

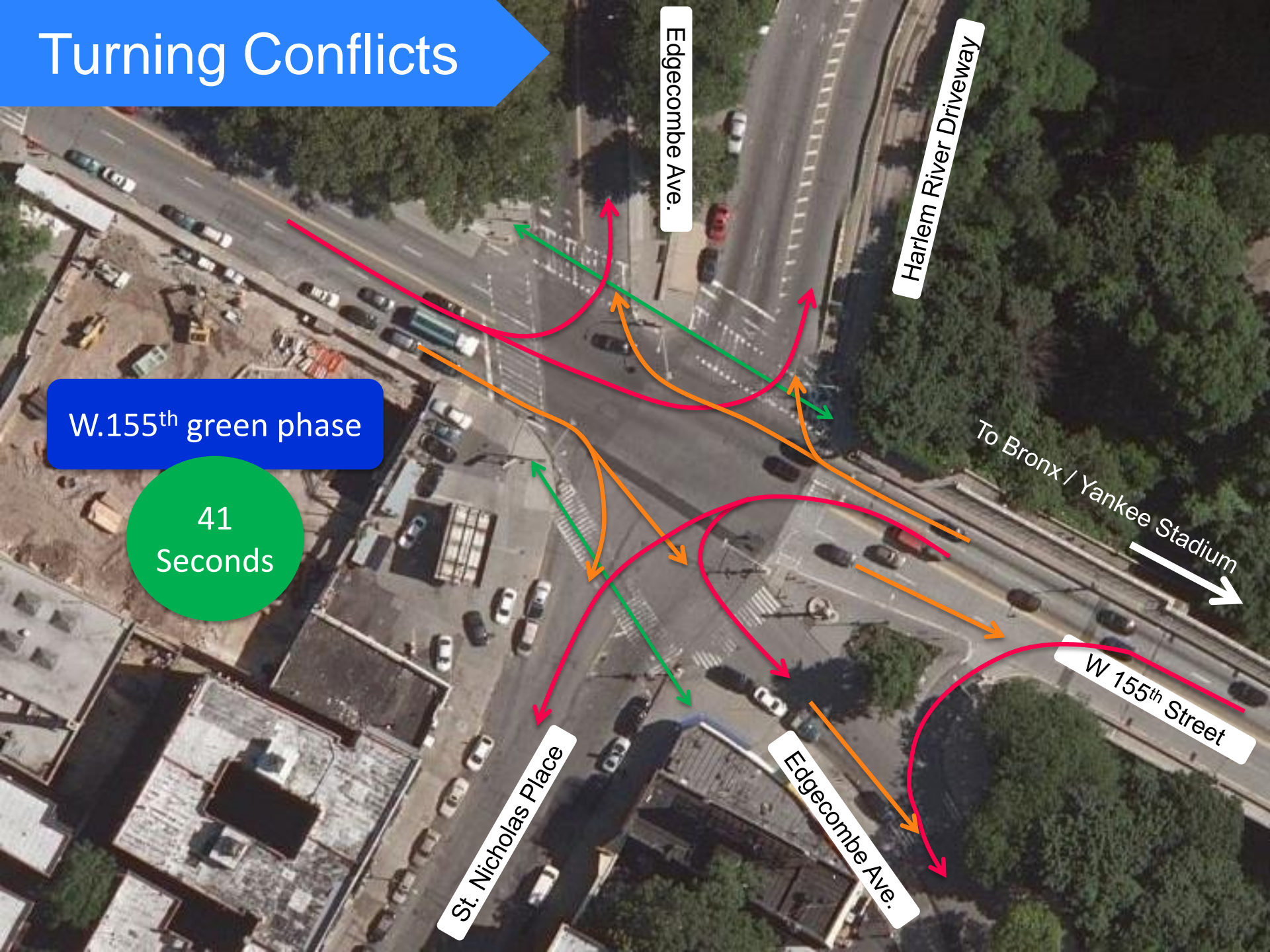
Harlem River Driveway

To Bronx / Yankee Stadium

W 155<sup>th</sup> Street

Edgecombe Ave.

St. Nicholas Place





# Turning Conflicts

St. Nicholas Pl/  
Harlem River Driveway  
green phase

28  
Seconds

Edgecombe Ave.

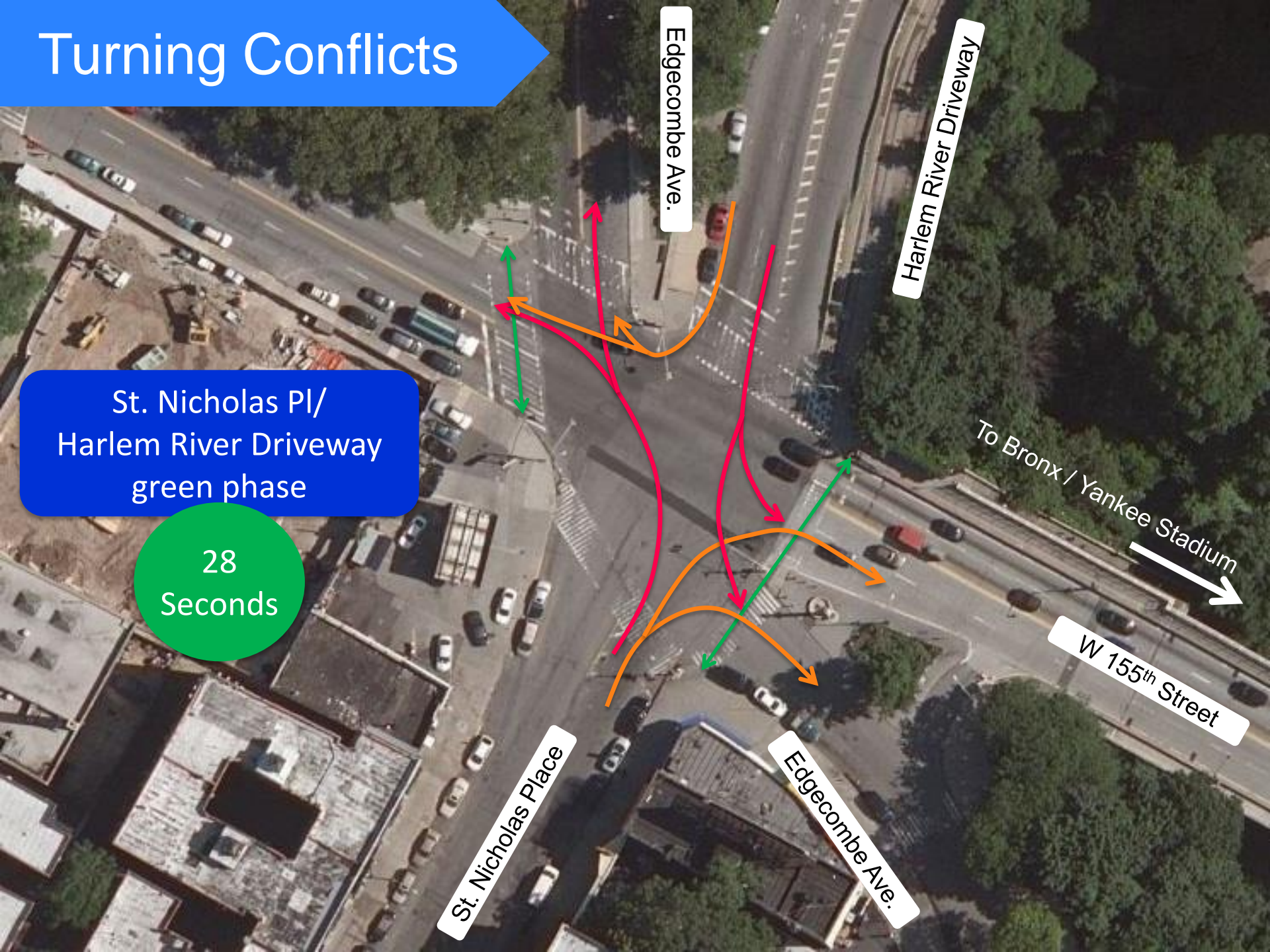
Harlem River Driveway

To Bronx / Yankee Stadium

W 155<sup>th</sup> Street

St. Nicholas Place

Edgecombe Ave.





# Yielding Conflicts





# Rapid Response Toolkit

- Pavement markings
- Turn Restrictions
- Painted surfaces
- Concrete Islands & Island Extensions
- Flexible Delineators





# Existing Conditions

Edgecombe Ave

W 155<sup>th</sup> Street

Harlem River Driveway

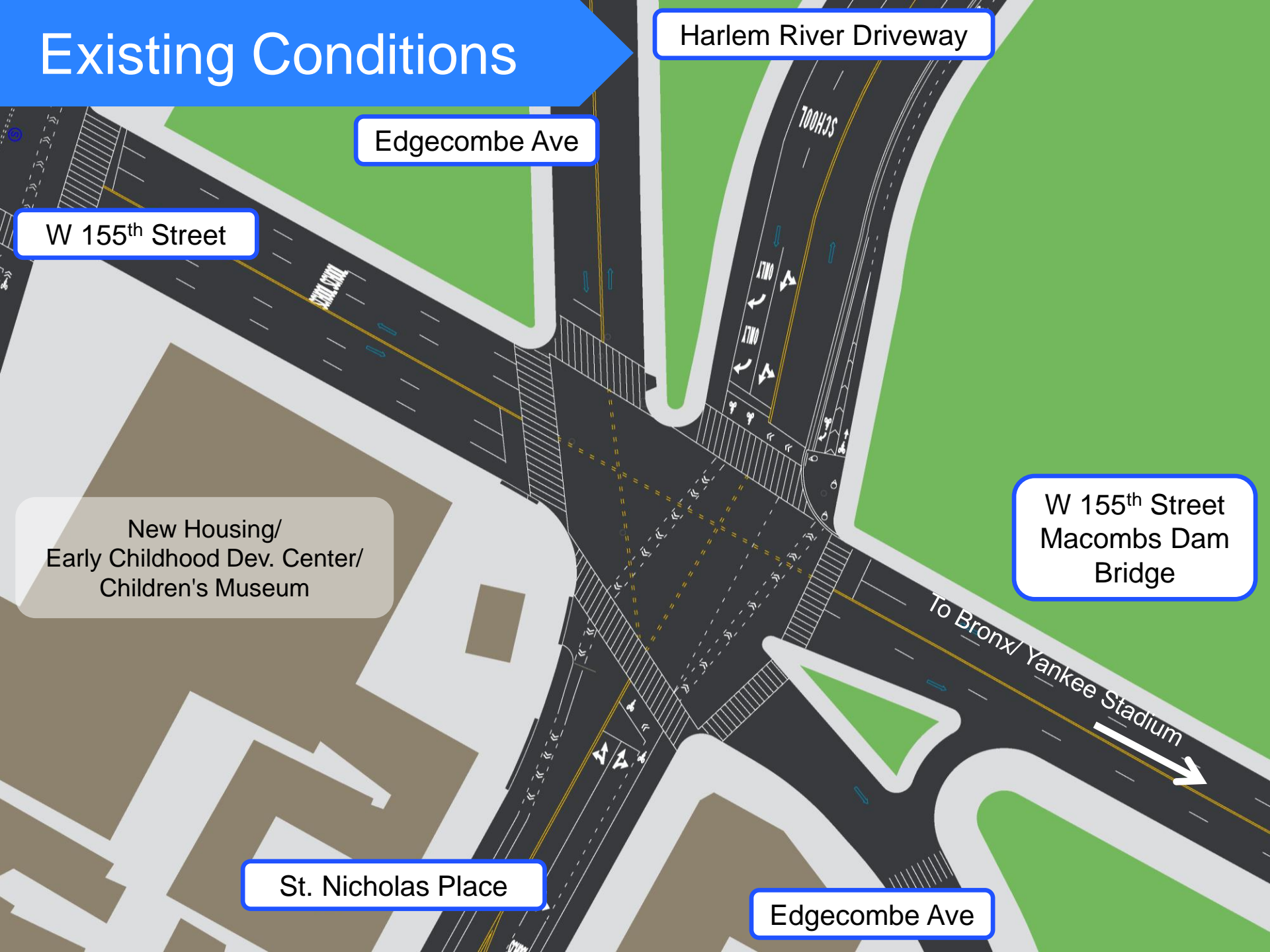
New Housing/  
Early Childhood Dev. Center/  
Children's Museum

W 155<sup>th</sup> Street  
Macombs Dam  
Bridge

St. Nicholas Place

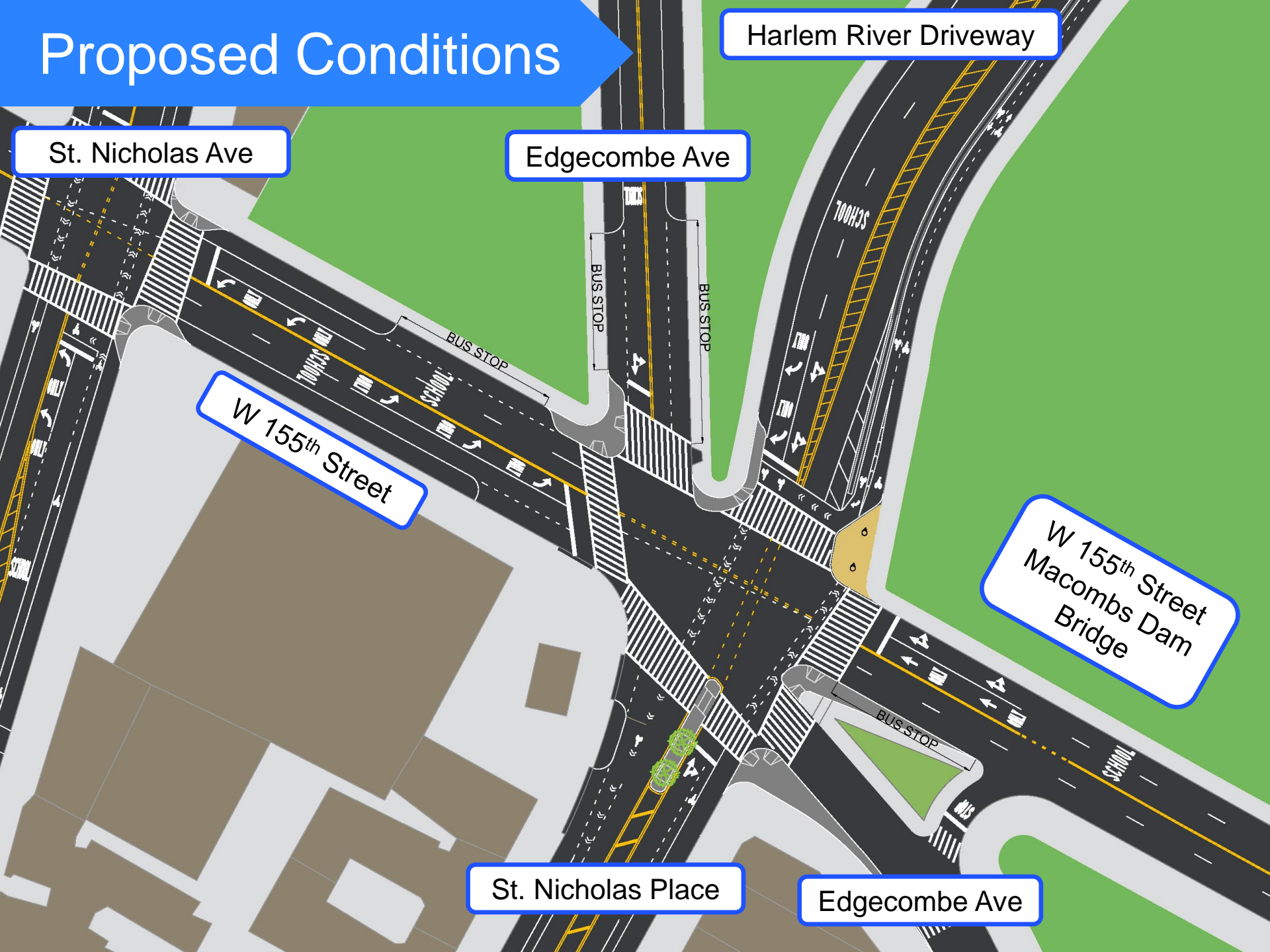
Edgecombe Ave

To Bronx/ Yankee Stadium





# Proposed Conditions



Harlem River Driveway

St. Nicholas Ave

Edgcombe Ave

W 155<sup>th</sup> Street

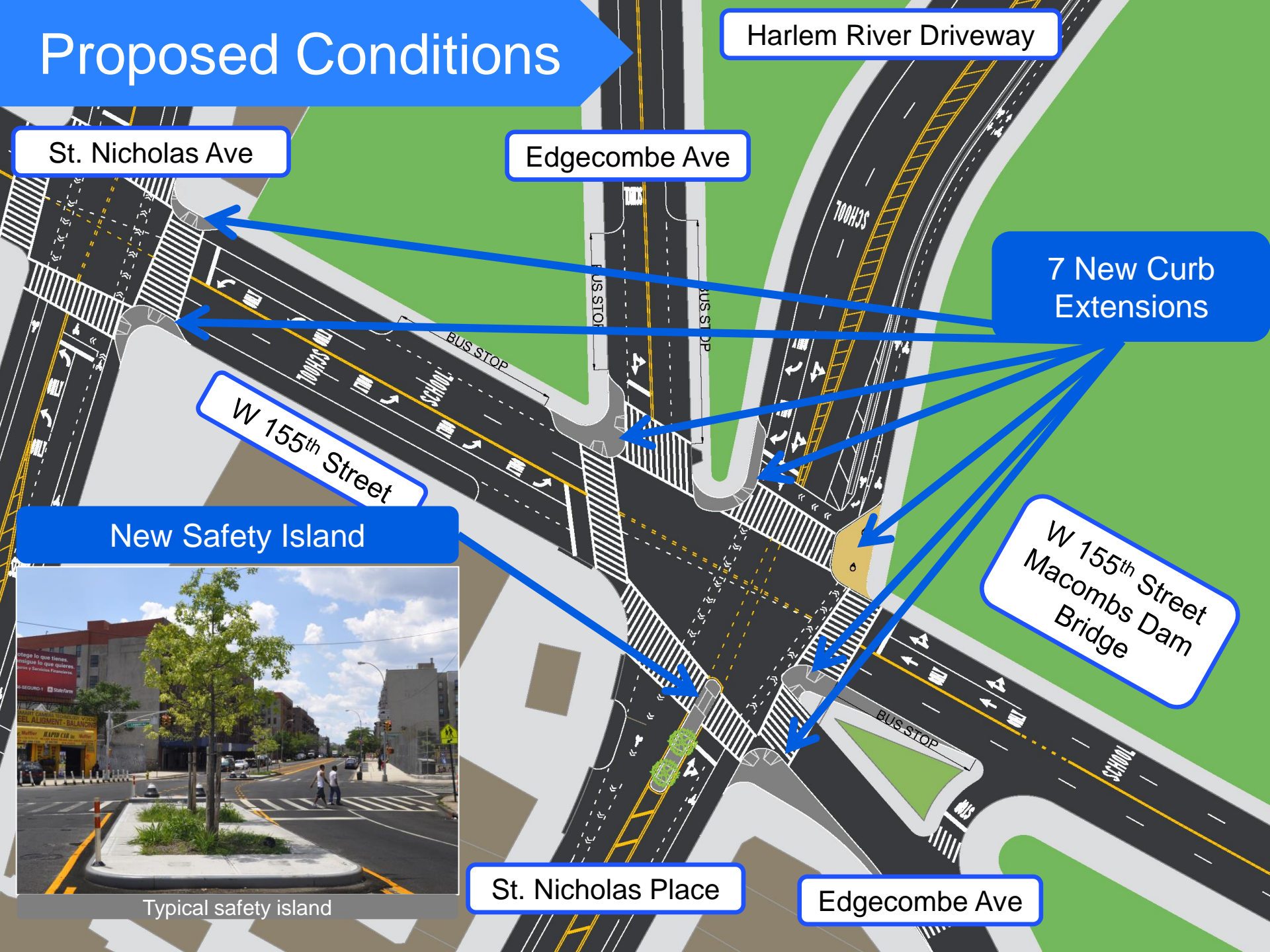
W 155<sup>th</sup> Street  
Macombs Dam  
Bridge

St. Nicholas Place

Edgcombe Ave



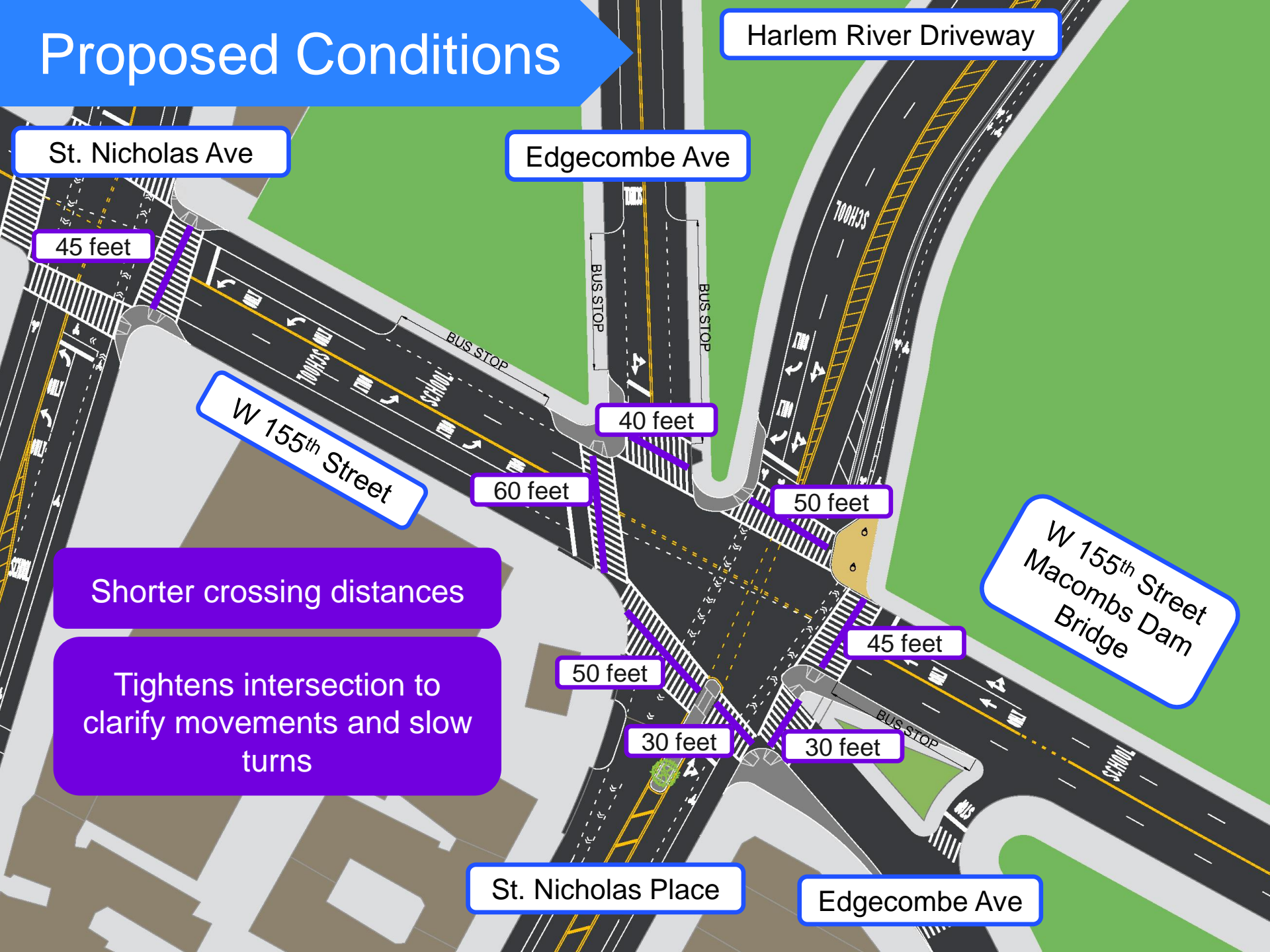
# Proposed Conditions



Typical safety island



# Proposed Conditions



Harlem River Driveway

St. Nicholas Ave

Edgcombe Ave

45 feet

W 155th Street

40 feet

60 feet

50 feet

Shorter crossing distances

Tightens intersection to clarify movements and slow turns

W 155th Street  
Macombs Dam  
Bridge

45 feet

50 feet

30 feet

30 feet

St. Nicholas Place

Edgcombe Ave



# Proposed Turn Restrictions

Harlem River Driveway

St. Nicholas Ave

Edgecombe Ave

W 155<sup>th</sup> Street

W 155<sup>th</sup> Street  
Macombs Dam  
Bridge

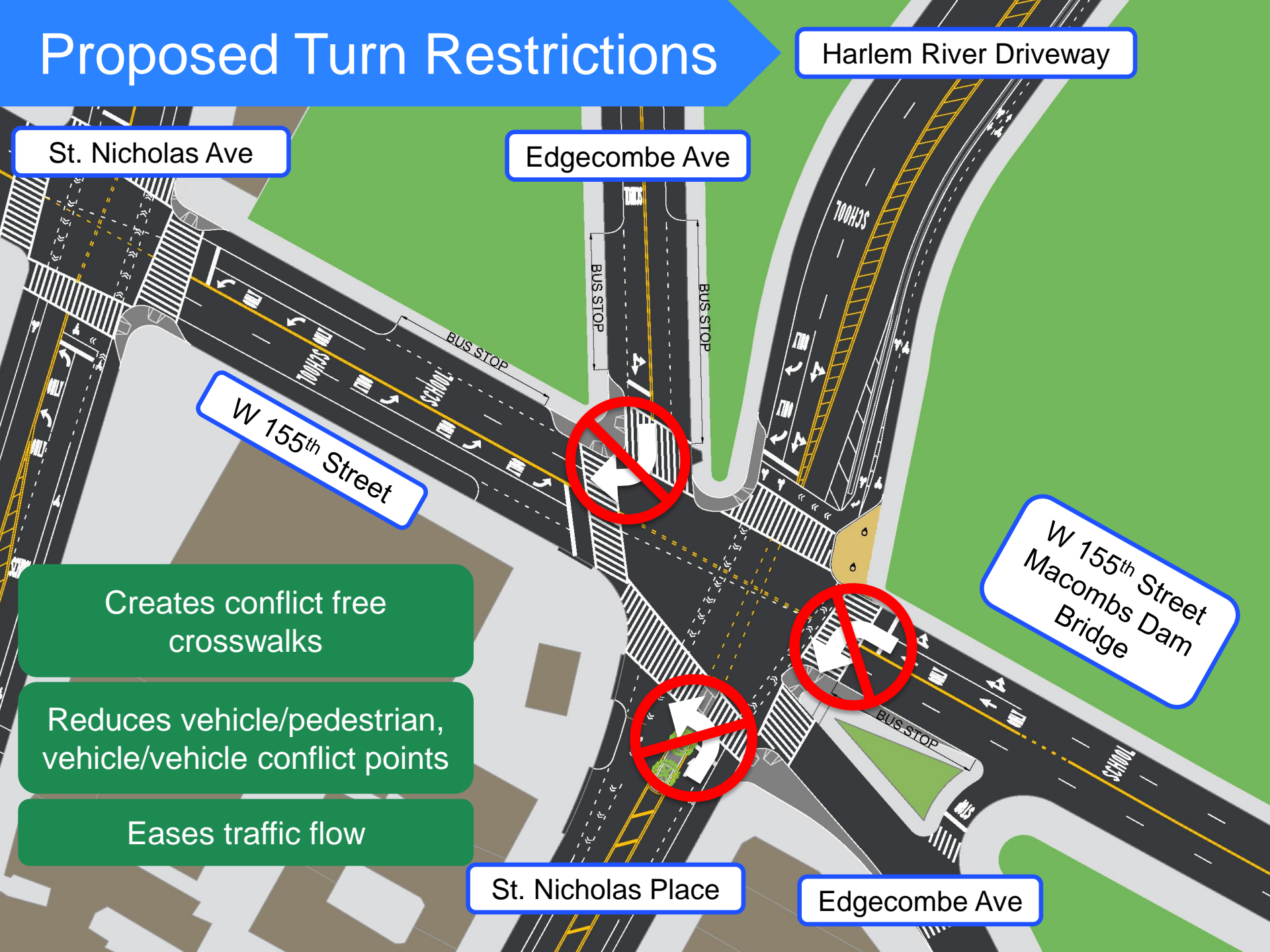
Creates conflict free  
crosswalks

Reduces vehicle/pedestrian,  
vehicle/vehicle conflict points

Eases traffic flow

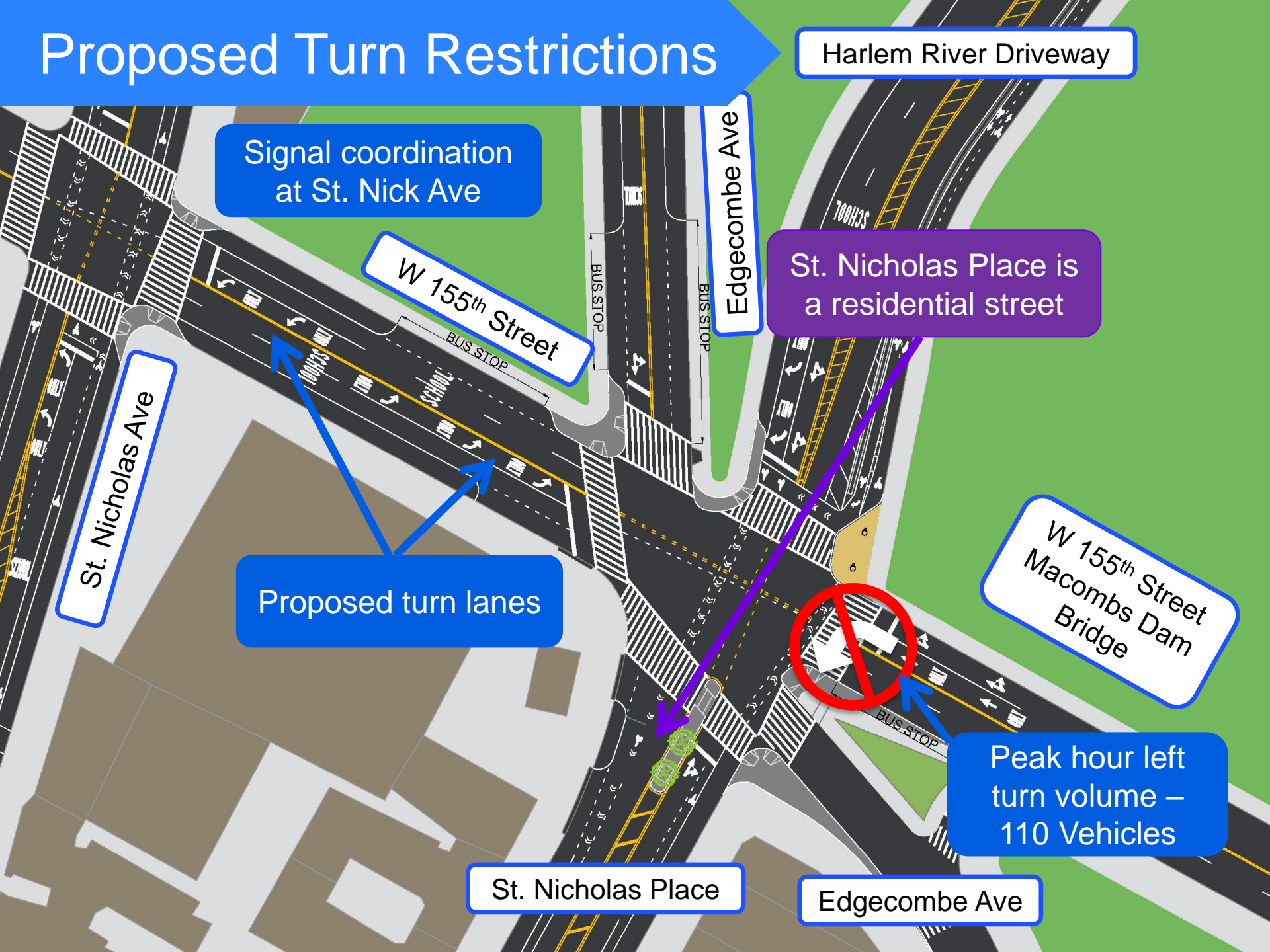
St. Nicholas Place

Edgecombe Ave





# Proposed Turn Restrictions



Harlem River Driveway

Signal coordination  
at St. Nick Ave

W 155th Street

Edgcombe Ave

St. Nicholas Place is  
a residential street

St. Nicholas Ave

Proposed turn lanes

W 155th Street  
Macombs Dam  
Bridge

Peak hour left  
turn volume –  
110 Vehicles

St. Nicholas Place

Edgcombe Ave



# Proposed Turn Restrictions

Harlem River Driveway

St. Nicholas Ave

Edgecombe Ave

W 155<sup>th</sup> Street

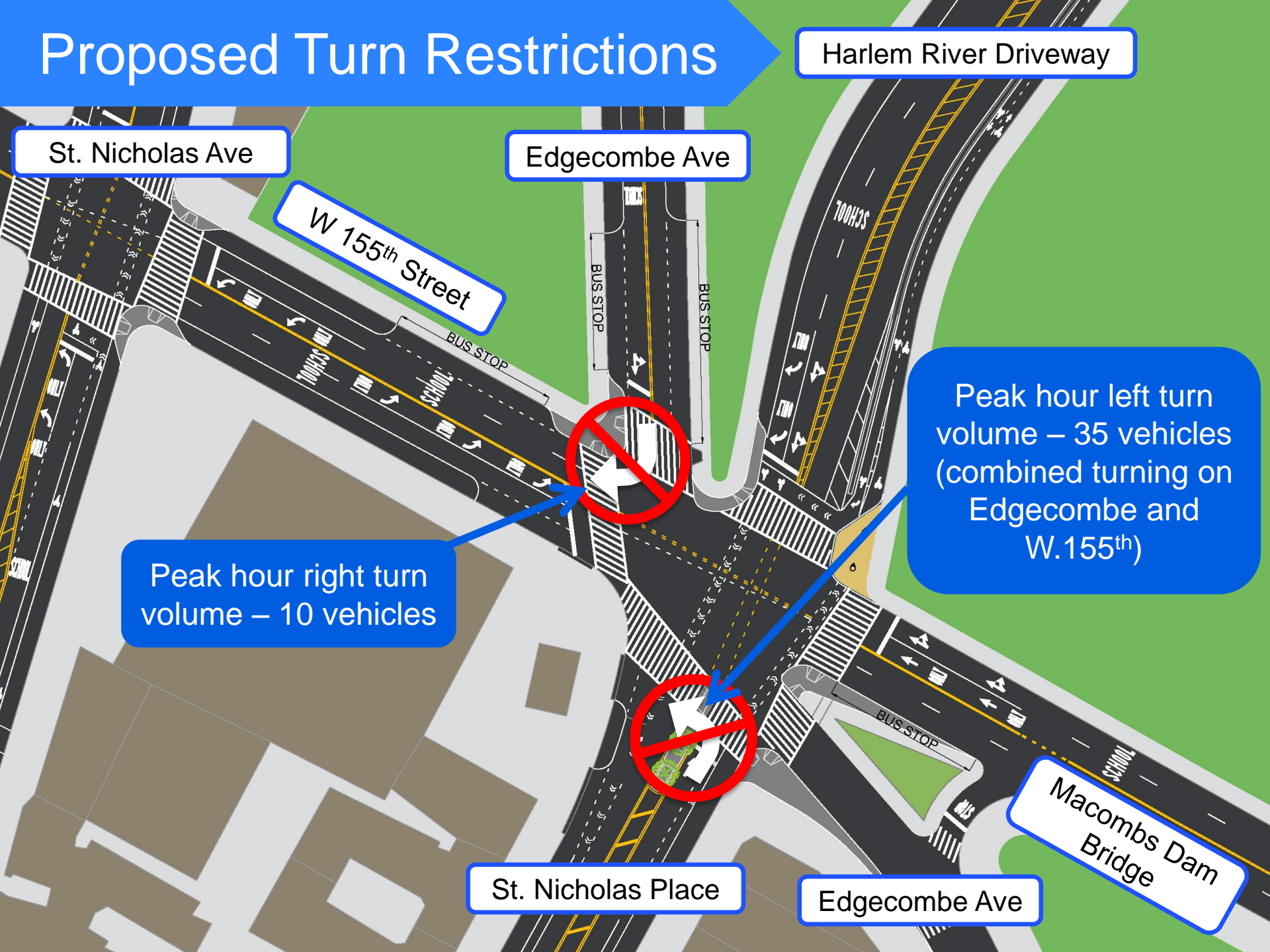
Peak hour right turn  
volume – 10 vehicles

Peak hour left turn  
volume – 35 vehicles  
(combined turning on  
Edgecombe and  
W.155<sup>th</sup>)

St. Nicholas Place

Edgecombe Ave

Macombs Dam  
Bridge





# Proposed Turn Restrictions

Harlem River Driveway

St. Nicholas Ave

Edgecombe Ave

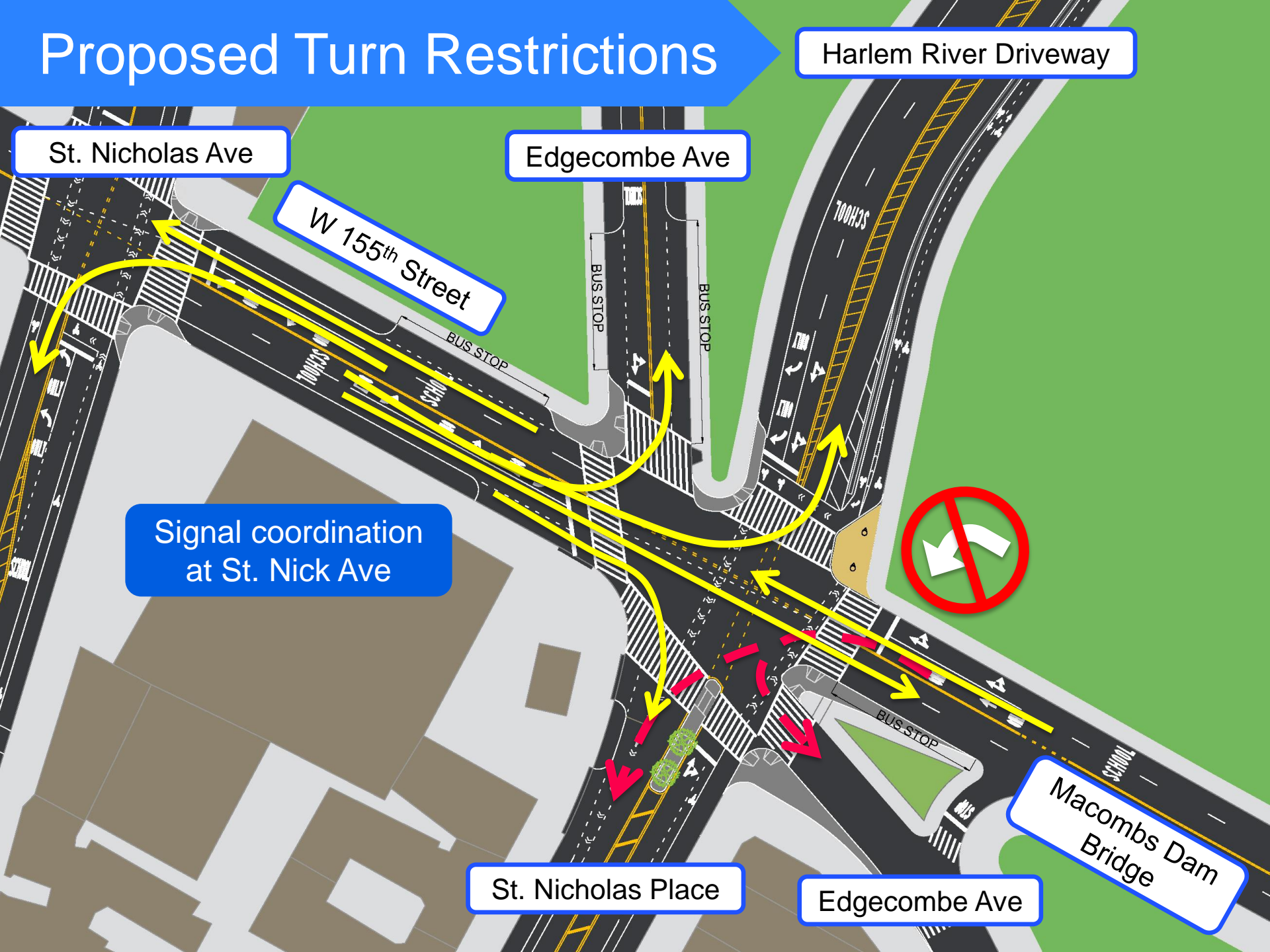
W 155th Street

Signal coordination  
at St. Nick Ave

St. Nicholas Place

Edgecombe Ave

Macombs Dam  
Bridge





# Proposed Turn Restrictions

Harlem River Driveway

St. Nicholas Ave

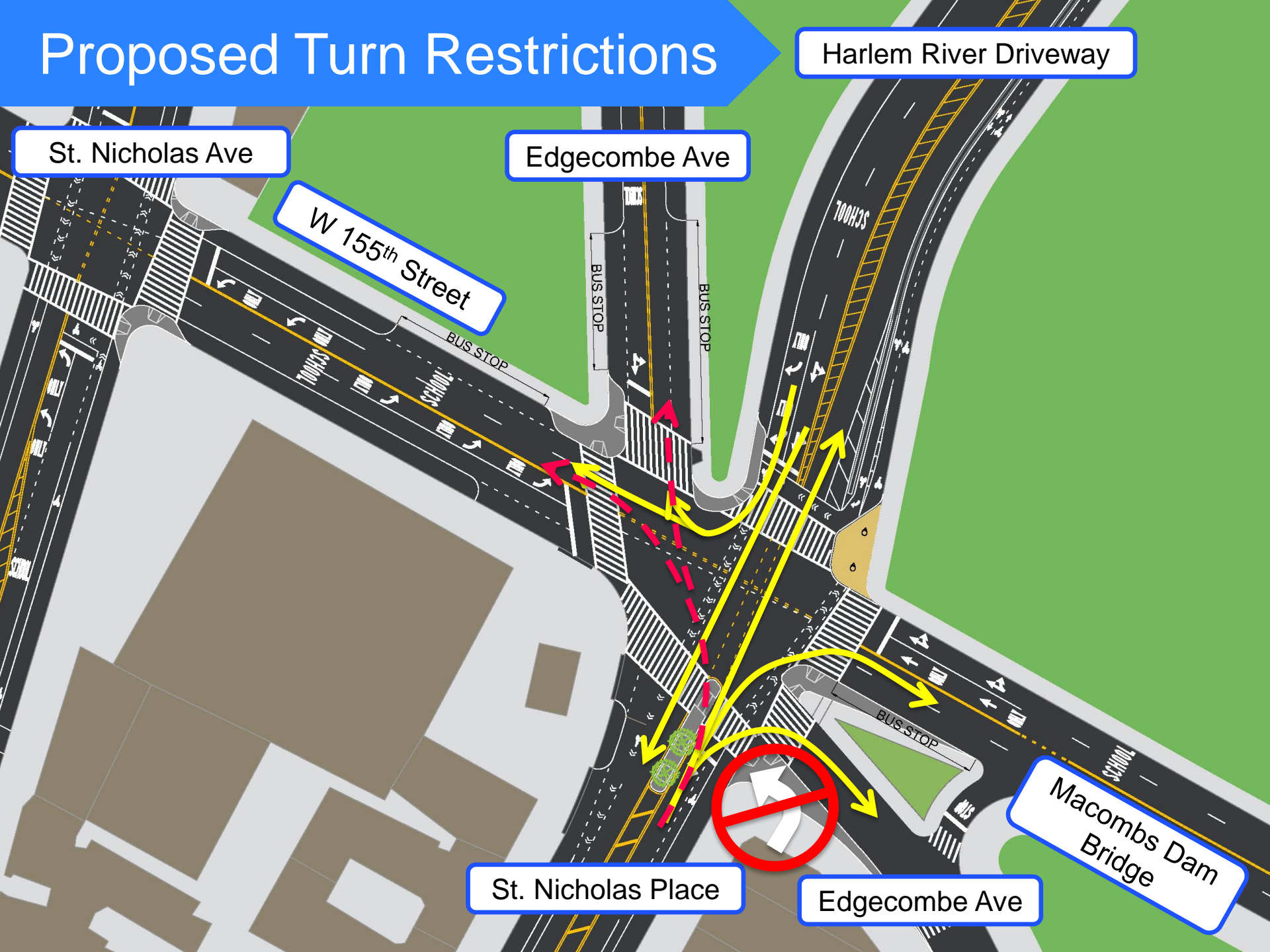
Edgecombe Ave

W 155<sup>th</sup> Street

St. Nicholas Place

Edgecombe Ave

Macombs Dam Bridge



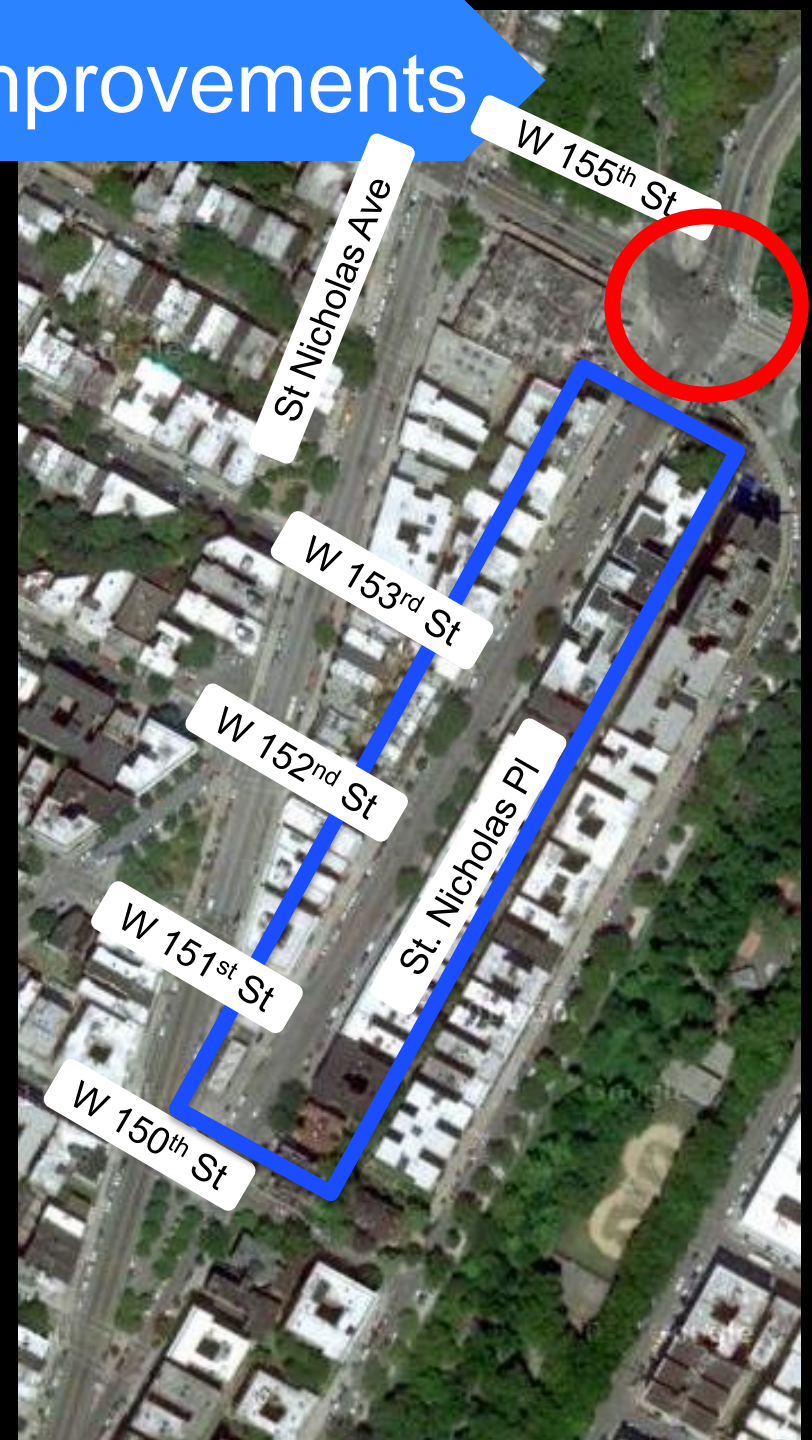


# St Nicholas PI Corridor Improvements

75% of pedestrian crashes involved pedestrians crossing at intersections without stop signs or signals

St Nicholas PI: W 150<sup>th</sup> St to at W 153<sup>rd</sup> St  
Injury Summary, 2008-2012 (5 years)

	Total Injuries	Severe Injuries	Fatalities
Pedestrian	4	0	0
Bicyclist	2	0	0
Motor Vehicle Occupant	29	6	1
Total	35	6	1



# Existing Conditions

Lack of pedestrian crossings

Uninterrupted corridor encourages speeding





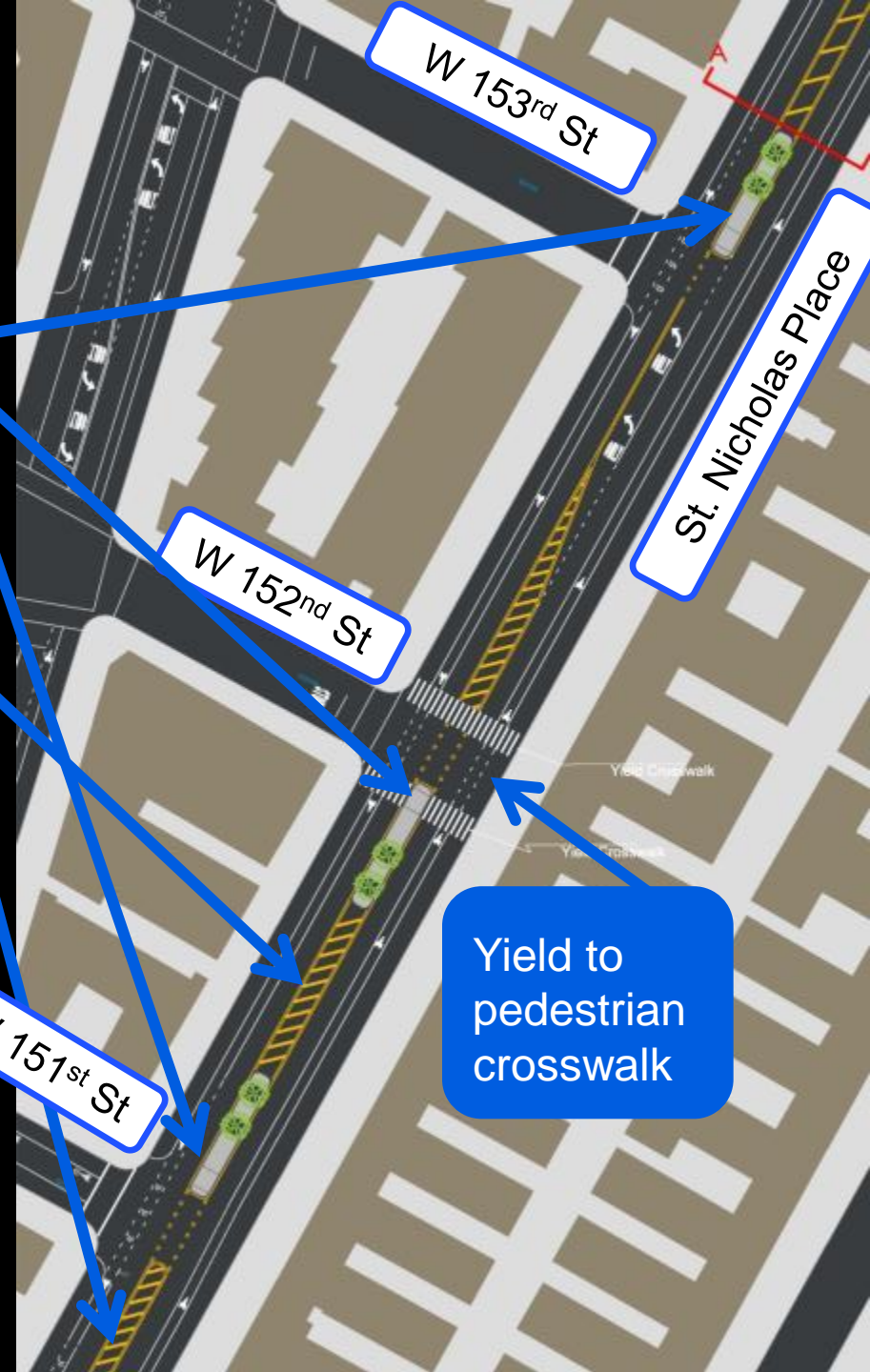
# Proposed Conditions

New pedestrian islands

Speed humps installed Summer 2014



Yield to pedestrian crosswalk in the Bronx



# Plan Summary

## Proposed Changes to the Intersection of St. Nicholas Pl and W 155<sup>th</sup> St

1. Add new pedestrian safety island on St. Nicholas Pl at W.155<sup>th</sup> St
2. Install five neckdowns at W.155<sup>th</sup> & St. Nicholas Pl
3. Install two neckdowns at W.155<sup>th</sup> & St. Nicholas Ave
4. Add left turn lane on W.155<sup>th</sup> St (E/B)
5. Modify signal timing to process W.155<sup>th</sup> vehicles through St. Nicholas Pl and St. Nicholas Ave
6. Ban southbound lefts off of W 155<sup>th</sup> St
7. Ban southbound right from Edgecombe
8. Ban westbound lefts off of W 155<sup>th</sup> St

## Proposed Changes to St. Nicholas Pl

1. Add pedestrian islands at 151<sup>st</sup> St, 152<sup>nd</sup> St and 153<sup>rd</sup> St
2. Add yield crosswalk on St. Nicholas Pl at W 152<sup>nd</sup> St



[nyc.gov/dot](https://nyc.gov/dot)

**Thank  
You**

# Existing Conditions

Edgecombe Ave

W 155<sup>th</sup> Street

Harlem River Driveway

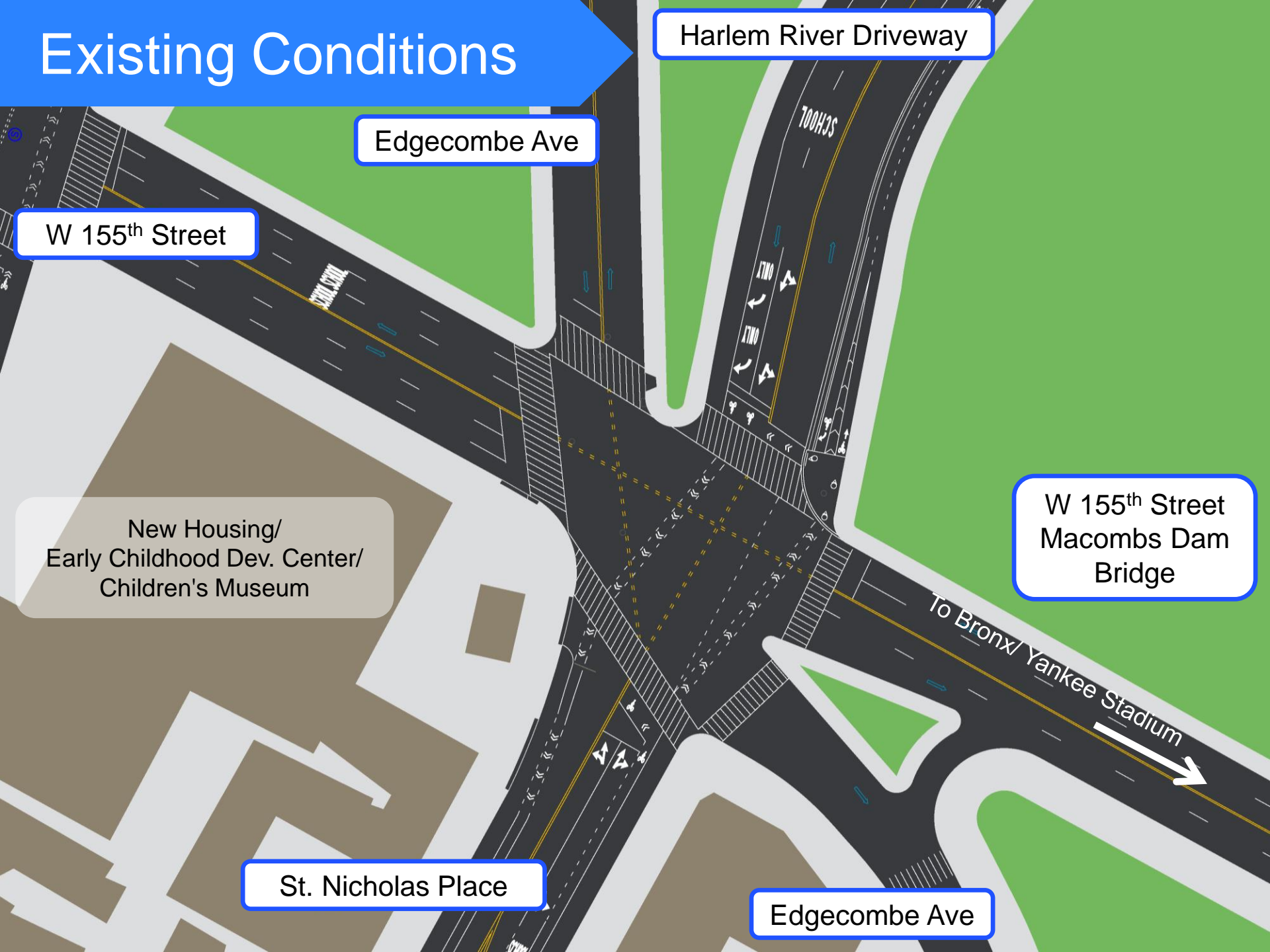
New Housing/  
Early Childhood Dev. Center/  
Children's Museum

W 155<sup>th</sup> Street  
Macombs Dam  
Bridge

St. Nicholas Place

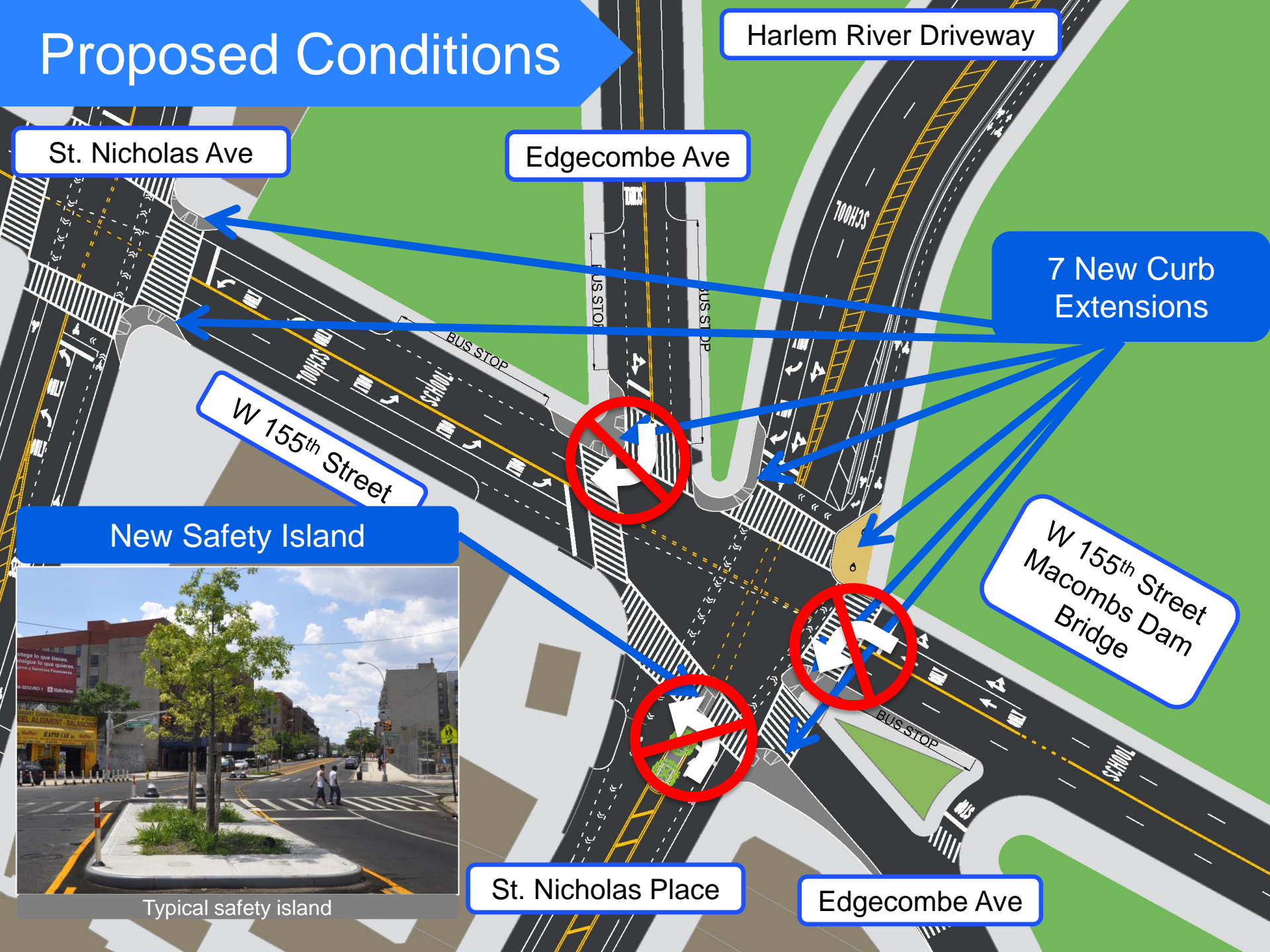
Edgecombe Ave

To Bronx/ Yankee Stadium



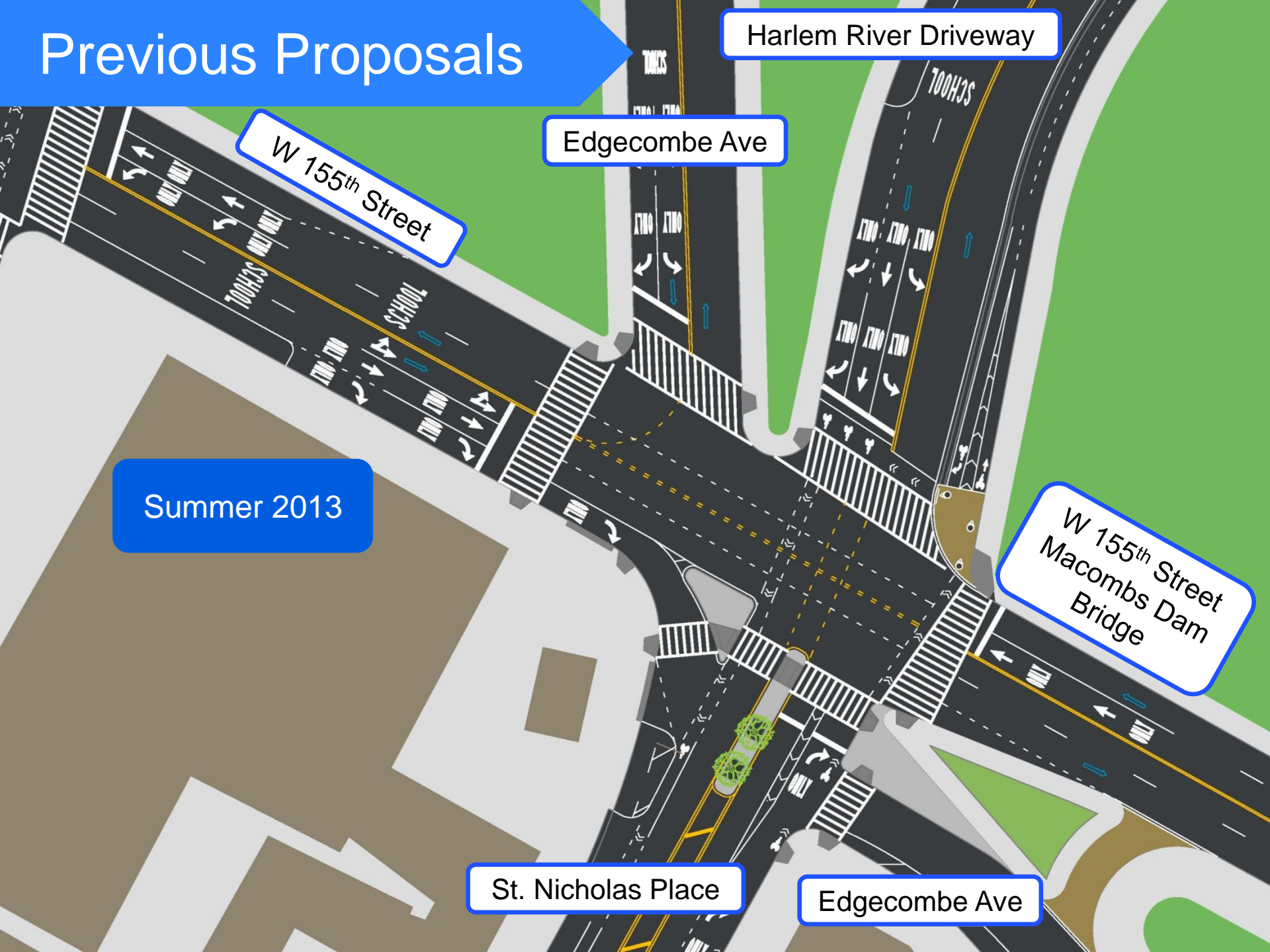


# Proposed Conditions



Typical safety island

# Previous Proposals



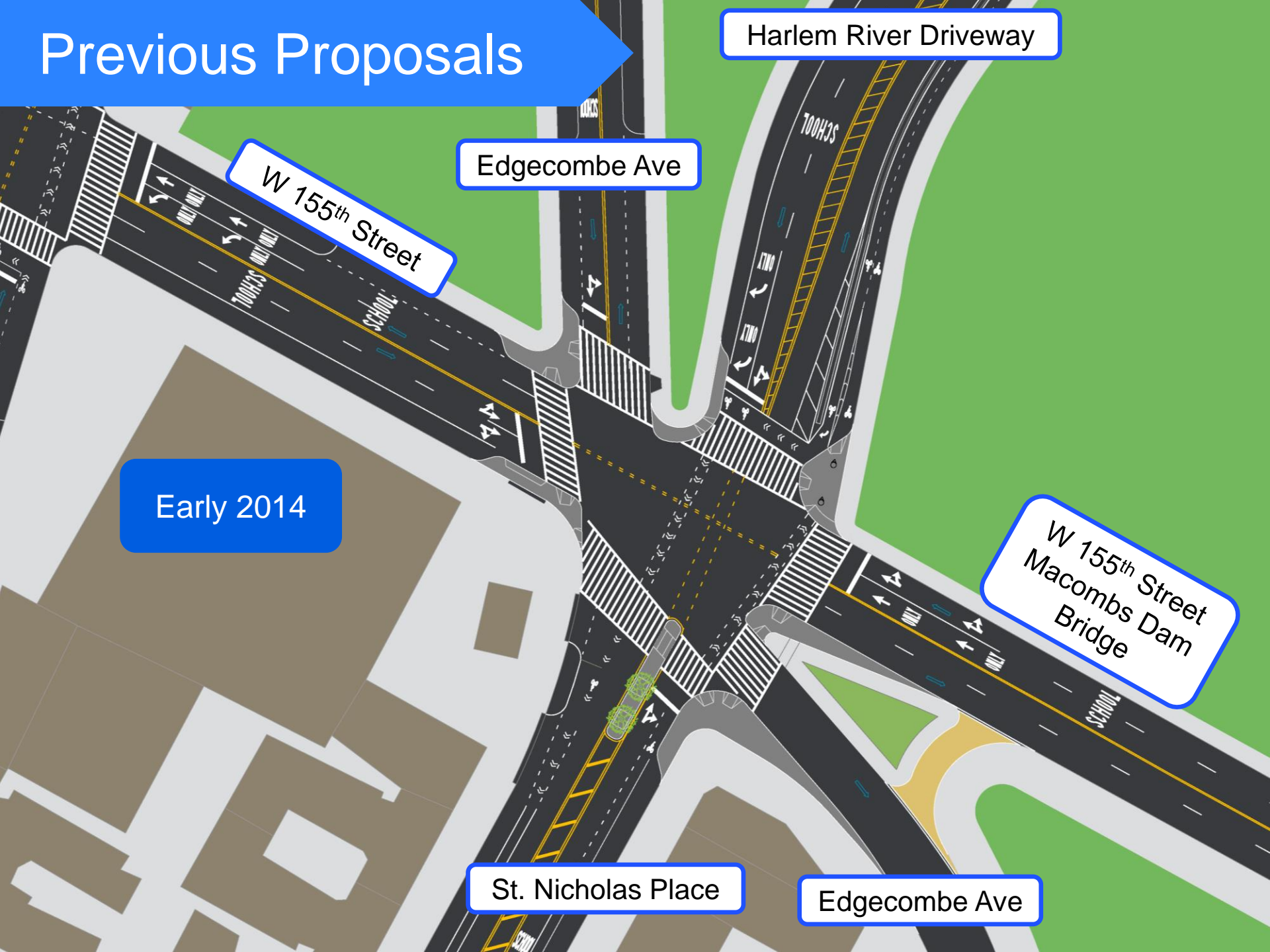
Summer 2013

St. Nicholas Place

Edgecombe Ave



# Previous Proposals



Harlem River Driveway

Edgecombe Ave

W 155<sup>th</sup> Street

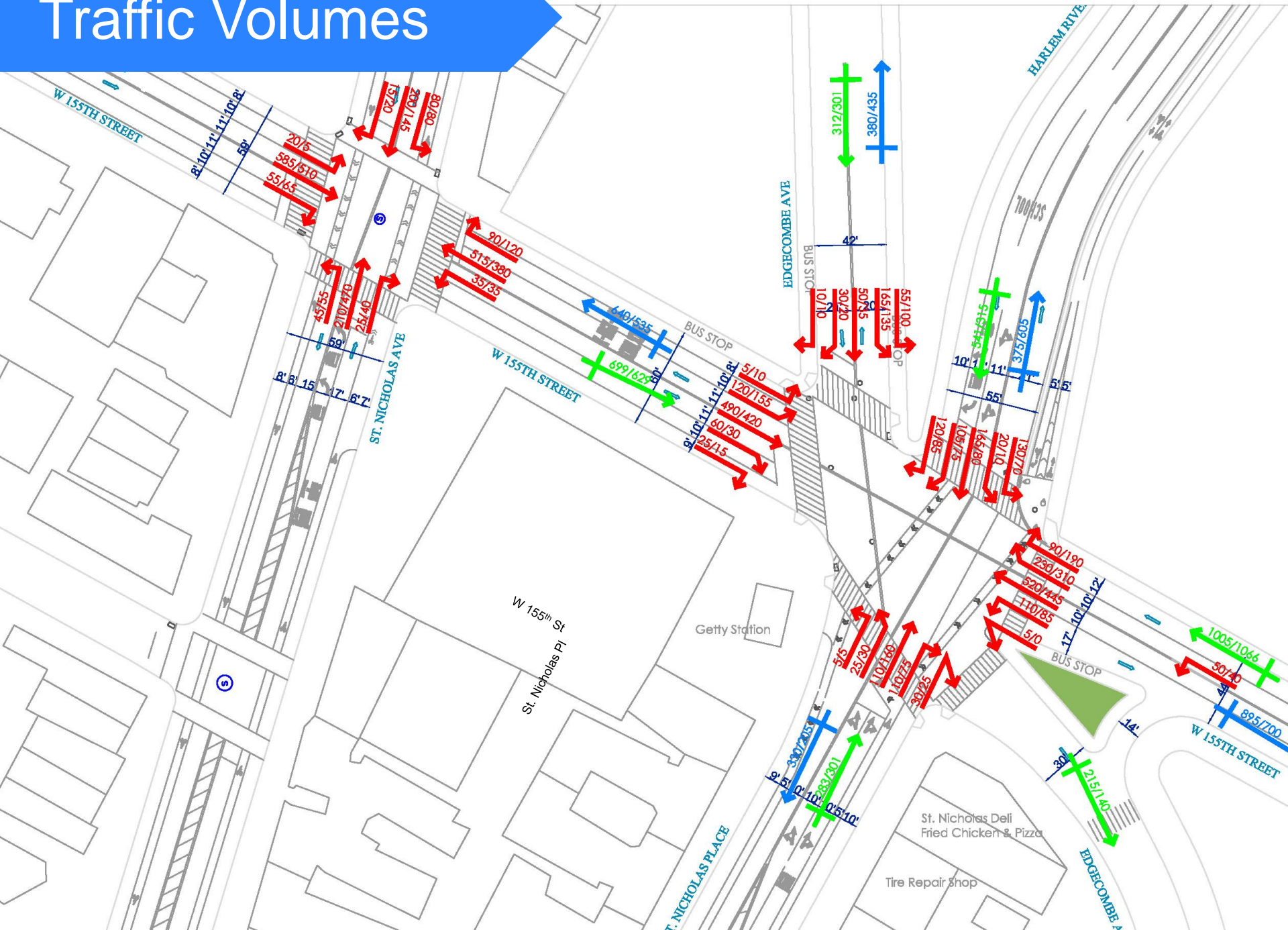
Early 2014

W 155<sup>th</sup> Street  
Macombs Dam  
Bridge

St. Nicholas Place

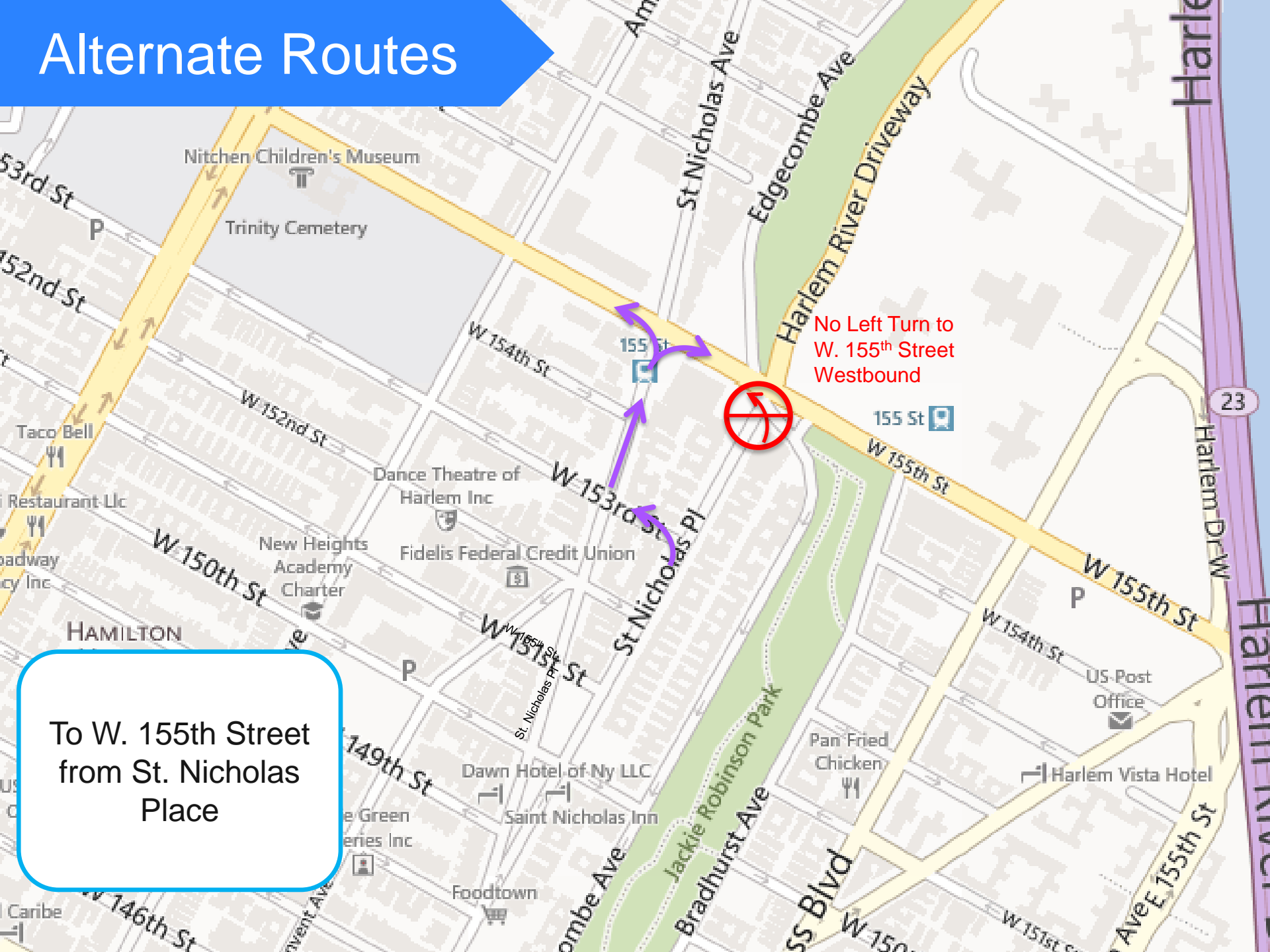
Edgecombe Ave

# Traffic Volumes





# Alternate Routes



No Left Turn to  
W. 155th Street  
Westbound

To W. 155th Street  
from St. Nicholas  
Place

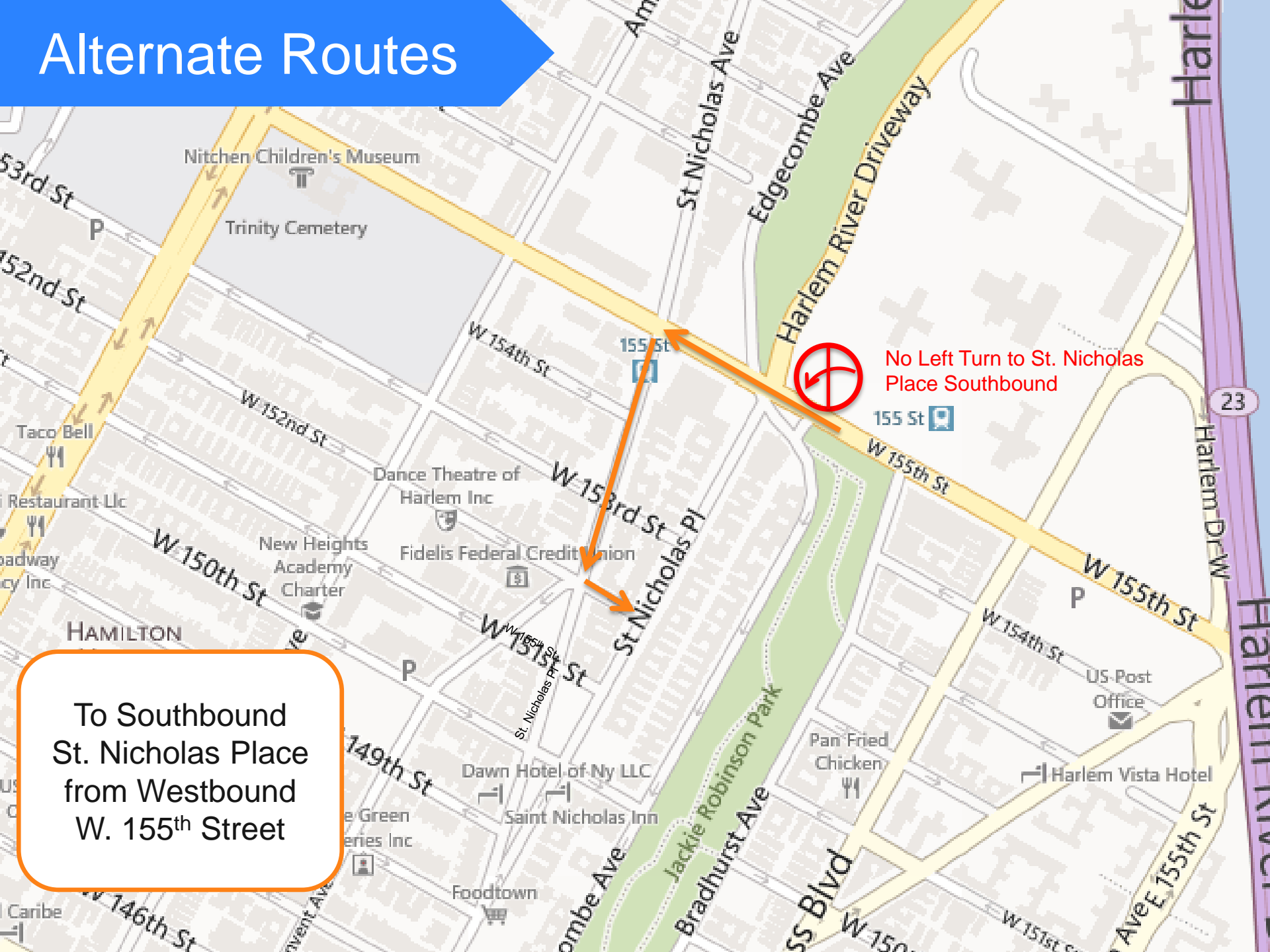
## Alternate Routes





## Alternate Routes

To Southbound  
St. Nicholas Place  
from Westbound  
W. 155<sup>th</sup> Street



# Vehicle Crashes/Injuries

Ranks in top  
one percent  
of Manhattan  
intersections

2 rear end  
2 left turn  
2 right angle

8 rear end  
2 sideswipe  
1 over taking

1 right  
angle

**1 left turn**  
1 head on  
3 rear end  
2 right-angle

**6 left turn**  
1 head on

43 Motor  
Vehicle  
Crashes  
(non ped)

St Nicholas Pl at W 155<sup>th</sup> St  
Injury Summary, 2008-2012 (5 years)

	Total Injuries	Severe Injuries
Pedestrian	12	3
Bicyclist	1	0
Motor Vehicle Occupant	59	5
Total	72	8

\*9 crash types  
unidentified



# Pedestrian Crashes

Ranks in top  
one percent  
of Manhattan  
intersections

## St Nicholas Pl at W 155<sup>th</sup> St Injury Summary, 2008-2012 (5 years)

	Total Injuries	Severe Injuries
Pedestrian	12	3
Bicyclist	1	0
Motor Vehicle Occupant	59	5
Total	72	8

Edgecombe Ave.

Harlem River Driveway

38% of pedestrian  
crashes involved  
pedestrians  
crossing with the  
signal

To Bronx / Yankee Stadium

W 155<sup>th</sup> Street

St. Nicholas Pl

Edgecombe Ave.

# Existing Level of Service (AM)

Harlem River Driveway

Edgecombe Ave

W 155<sup>th</sup> Street

## Level of Service

- A. Most vehicles do not stop at all
- B. Increased delay but most vehicles do not stop at intersection
- C. Moderate delay, many still pass through intersection with minimal delay
- D. Many vehicles experience delay
- E. Very heavy delay
- F. Queues form, all vehicles do not get through in one cycle

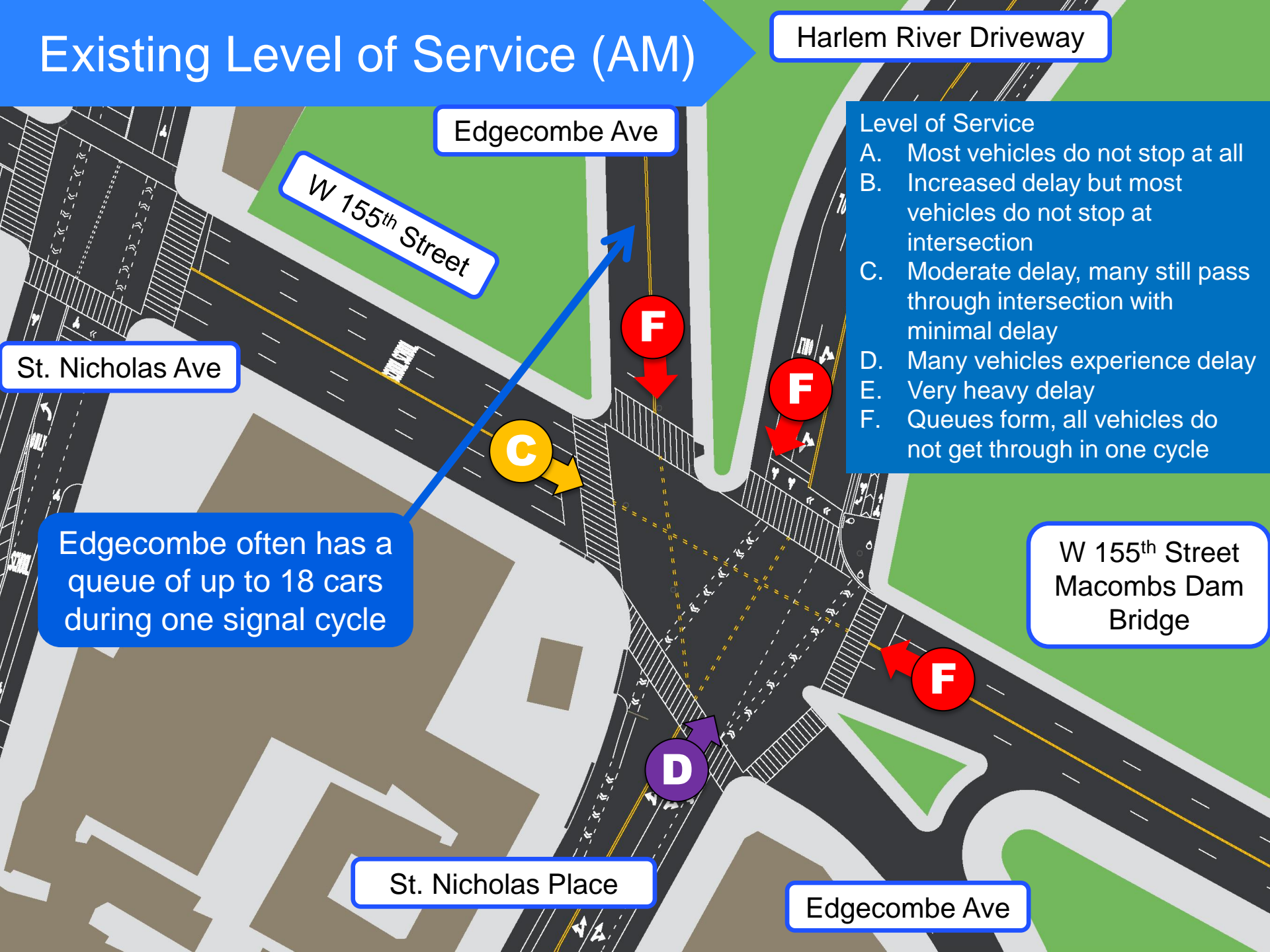
St. Nicholas Ave

Edgecombe often has a queue of up to 18 cars during one signal cycle

W 155<sup>th</sup> Street  
Macombs Dam  
Bridge

St. Nicholas Place

Edgecombe Ave





# Proposed Level of Service (AM)

Harlem River Driveway

St. Nicholas Ave

Edgecombe Ave

W 155th Street

## Level of Service

- A. Most vehicles do not stop at all
- B. Increased delay but most vehicles do not stop at intersection
- C. Moderate delay, many still pass through intersection with minimal delay
- D. Many vehicles experience delay
- E. Very heavy delay
- F. Queues form, all vehicles do not get through in one cycle

Optimized signal timing and turn lane to process diverted traffic

90 second cycle with turn restrictions

St. Nicholas Place

Edgecombe Ave

Macombs Dam Bridge

