



2ND AVENUE E 59TH ST TO E 43RD ST

PROTECTED BICYCLE LANE

New York City Department of Transportation

Presented by the Bicycle and Greenway Program on July 11th, 2016 to Manhattan Community Board 6



(1) Background

- Mobility in Midtown and the Bicycle Network
- Vision Zero

(2) Proposal

- Existing Conditions
- Proposal
 - Standard Protected Bike Lane
 - Off-Hour Protected Bike Lane
 - Pedestrian Enhancements

(3) Summary



PROJECT BACKGROUND

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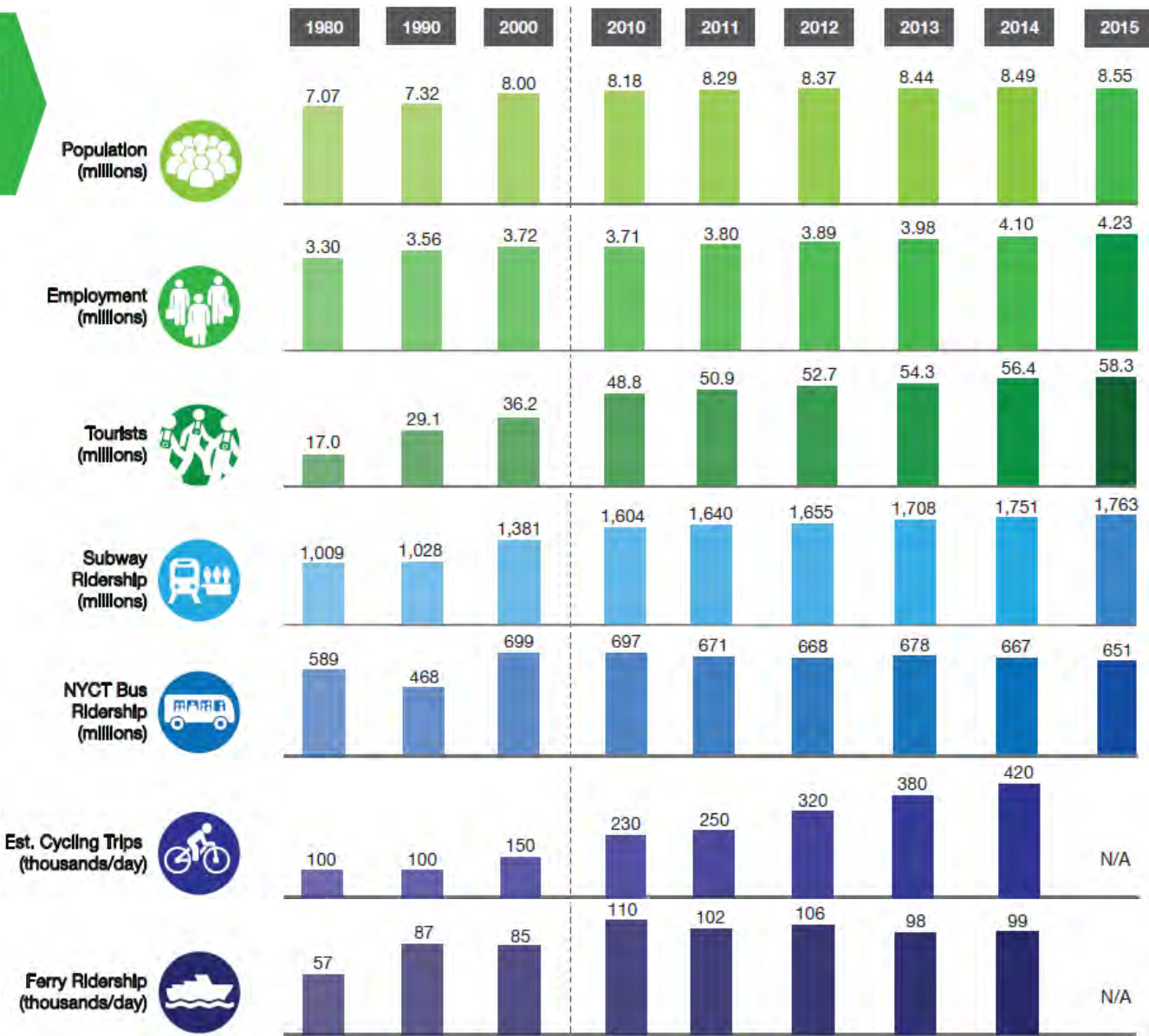
GROWTH IN CYCLING

Recent Travel Trends

2010-2015:

- 500,000 new jobs
- 20% more tourists
- 10% more subway trips
- 6.5% fewer bus trips

2010-2014 **83% more cycling trips**



(1) Background

BIKE NETWORK / RECENT IMPROVEMENTS

Enhanced Shared Lane

E 59th St to E 34th St



Protected Bike Lane

E 34th St to Manhattan Bridge

(following implementation of Chrysie
St protected lane)



On Average, 4,865 cyclists
use the Queensboro Bridge
bike lane daily
(between April and October)

LEGEND



Proposed Bicycle Route

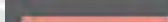
Existing Bicycle Facilities

Protected Bicycle Path

Bicycle Lane



Shared Lane



Signed Route

BIKE VOLUMES

26%
Increase in
ridership
since 2013



2nd Ave Bicycle Volume:

Year	12-hour Bike Volume
2013	1,646
2014	1,954
2015	2,070

**Growing number of
cyclists despite lack of
dedicated facility**

Source: ATI Data, Bicycles btw. E 51 St and E 50 St, in May, August, and September in 2013, 2014, and 2015

SAFETY – Vision Zero



2nd Ave

is a Vision Zero Priority Corridor
Top 10% of borough corridors in KSI/mile

1 cyclist fatality in 2010, and
4 pedestrian fatalities since 2010

2nd Ave (E 43rd St to E 59th St), MN
Injury Summary, 2010-2014 (5 years)

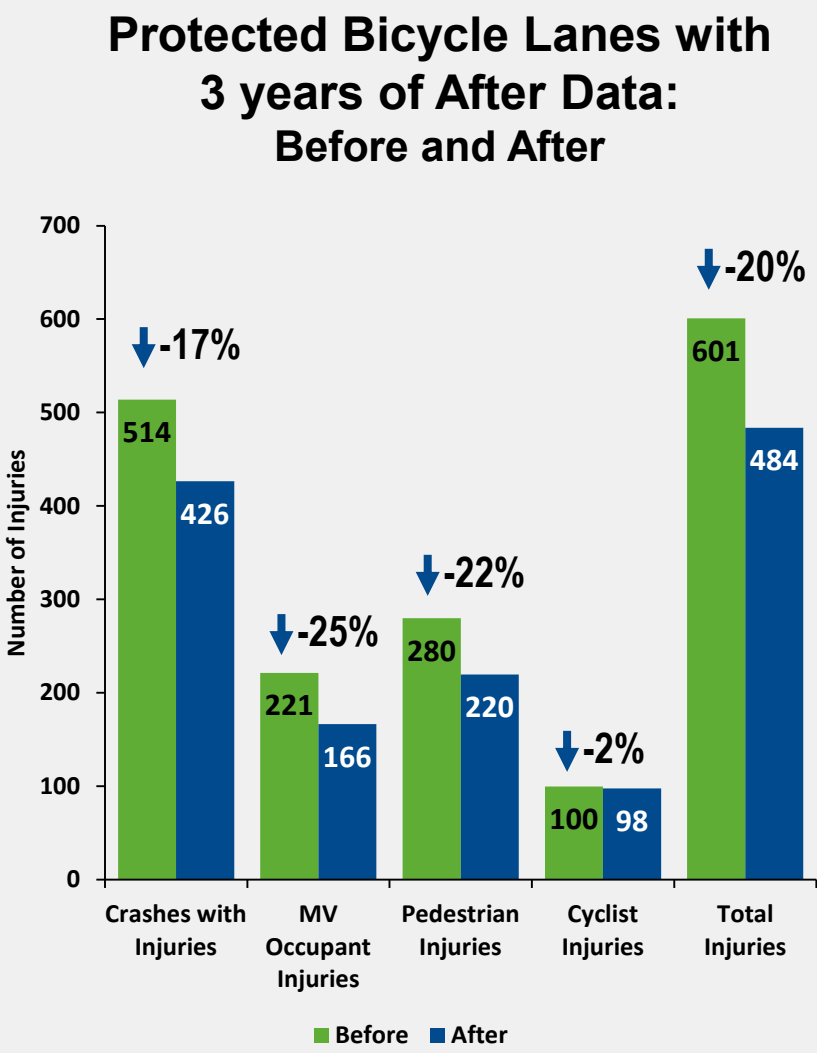
	Total Injuries	Severe Injuries	Fatalities*
Pedestrian	195	15	4
Bicyclist	85	12	1
Motor Vehicle Occupant	357	7	0
Total	637	34	5

Source: Fatalities: NYCDOT, Injuries: NYSDOT. KSI: Persons Killed or Severely Injured

* Includes fatalities from 2010-2016



SAFETY – Protected Bike Facilities



Protected bicycle lane projects with 3 years of after data include the following: 9th Ave (16th-31st), 8th Ave (Bank-23rd, 23rd-34th), Broadway (59th-47th, 33rd-26th, 23rd-18th), 1st Avenue (Houston to 34th), 2nd Ave (Houston-34th), Columbus Ave (96th-77th) Note: Only sections of projects that included protected bicycle lanes were analyzed
Source: NYPD AIS/TAMS Crash Database



TRAFFIC NETWORK – Vehicle Volume

HIGH VEHICLE VOLUMES:

- ① Queensboro Bridge exit at 59th Street
- ② Queens-Midtown Tunnel entrance at 36th St

Approximately
2,000 - 2,200 vehicles
per hour on
2nd Avenue during
midday (9 locations)



**PROJECT
PROPOSAL**

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CORRIDOR – Overview

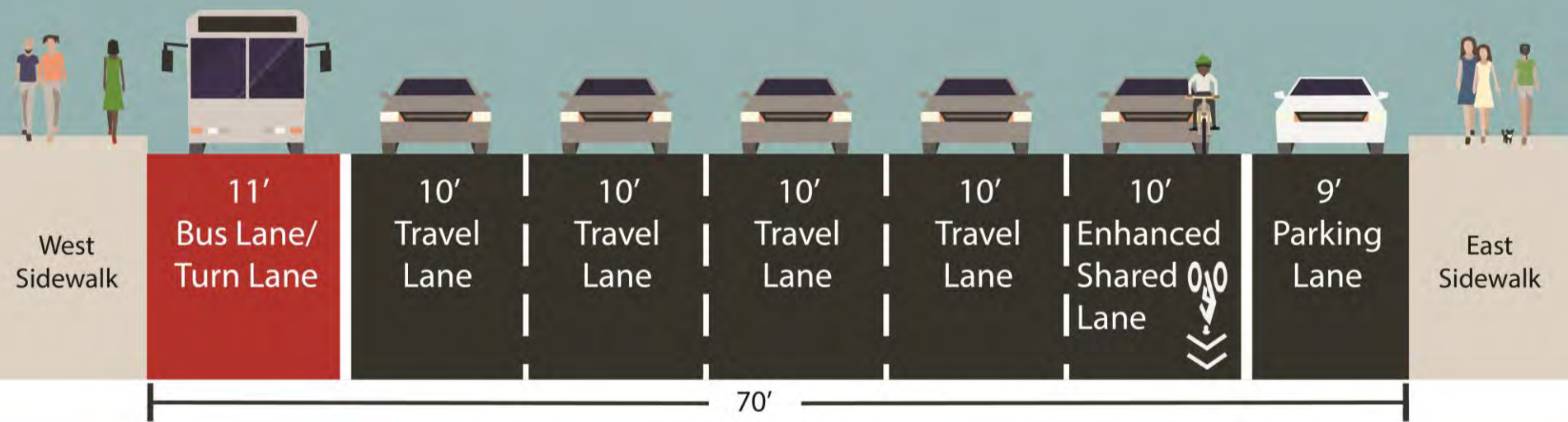


2nd Ave is a gap in the protected network

Enhanced shared lane breaks down during peak travel time

Enhanced shared lane perceived as unsafe by novice cyclists

Existing Conditions



11'
Bus Lane/
Turn Lane

10'
Travel
Lane

10'
Travel
Lane

10'
Travel
Lane

10'
Travel
Lane

10'
Enhanced
Shared
Lane

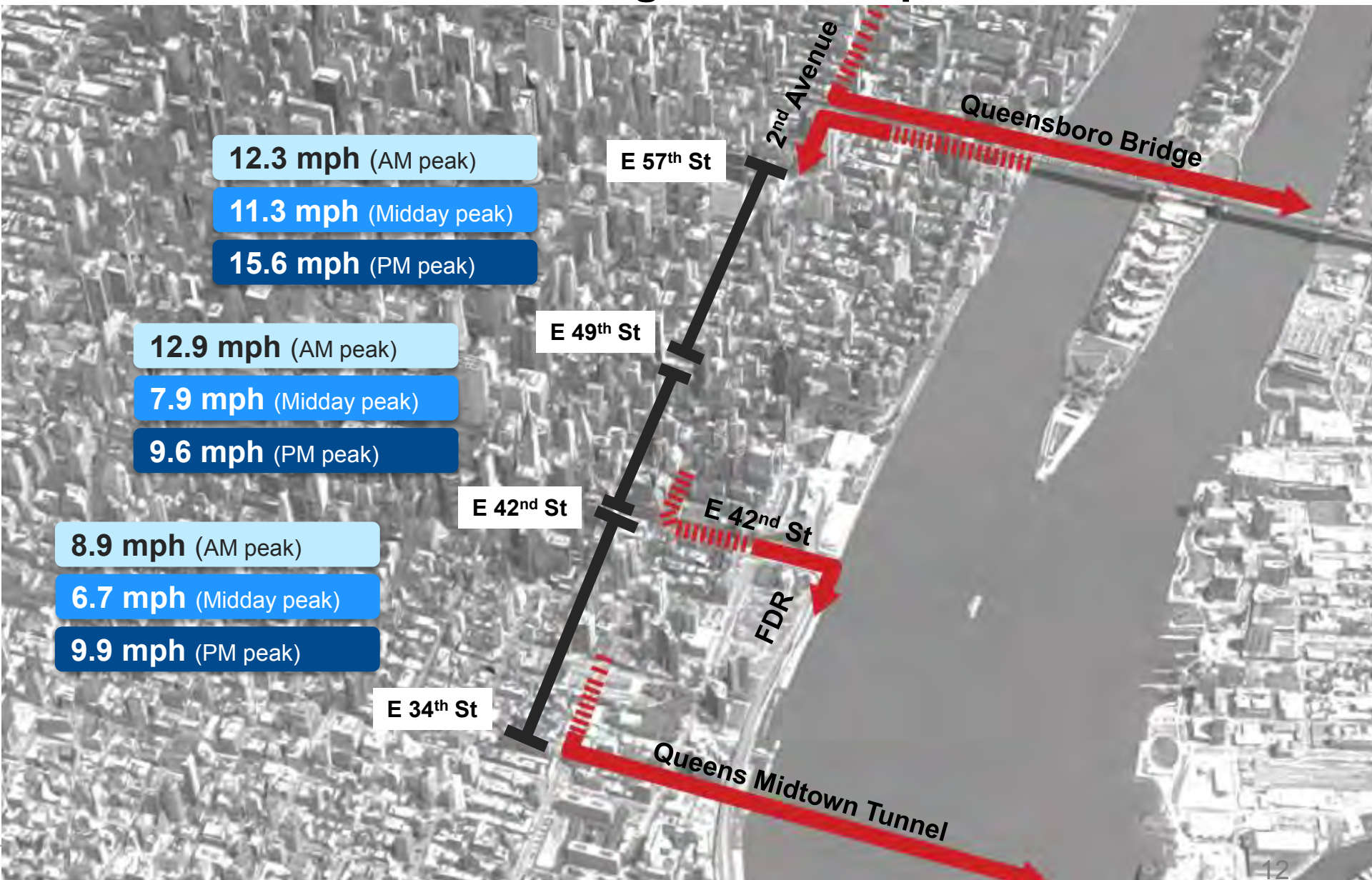
9'
Parking
Lane

West
Sidewalk

East
Sidewalk

70'

TRAFFIC NETWORK – Average Vehicle Speed



Source: Midtown in Motion data on all Tuesdays, Wednesdays and Thursdays in 2015: From E 57th to E 49 St: February 24th - March 12th. From E 49 to E 42nd St: February 3rd - 12th, February 24th - 26th, March 1st - 12th. From E 42nd to E 34th St: February 3rd - 12th, February 24th - 26th, March 1st - 12th. Midtown in Motion sample includes all vehicles equipped with EZPASS.

PROJECT AREA

2nd Ave (59th St to 52nd St)

- Standard Protected Bike Lane

2nd Ave (52nd St to 48th St)

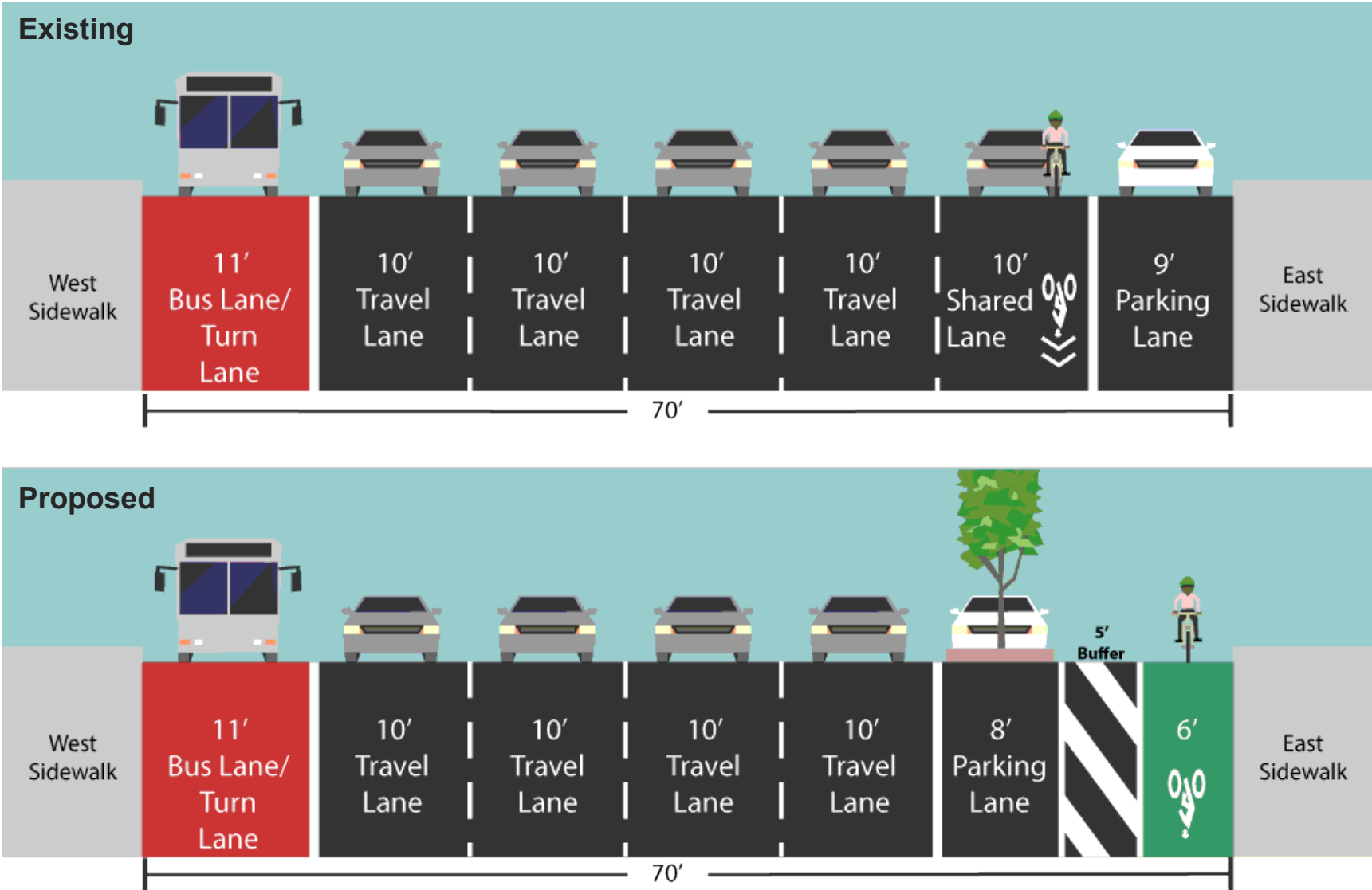
- Curbside Bike Lane
- Protected at Off-Peak Times
- PM Rush Hour Lane

2nd Ave (48th St to 43rd St)

- Curbside Bike Lane
- Protected at Off-Peak Times
- AM / PM Rush Hour Lane

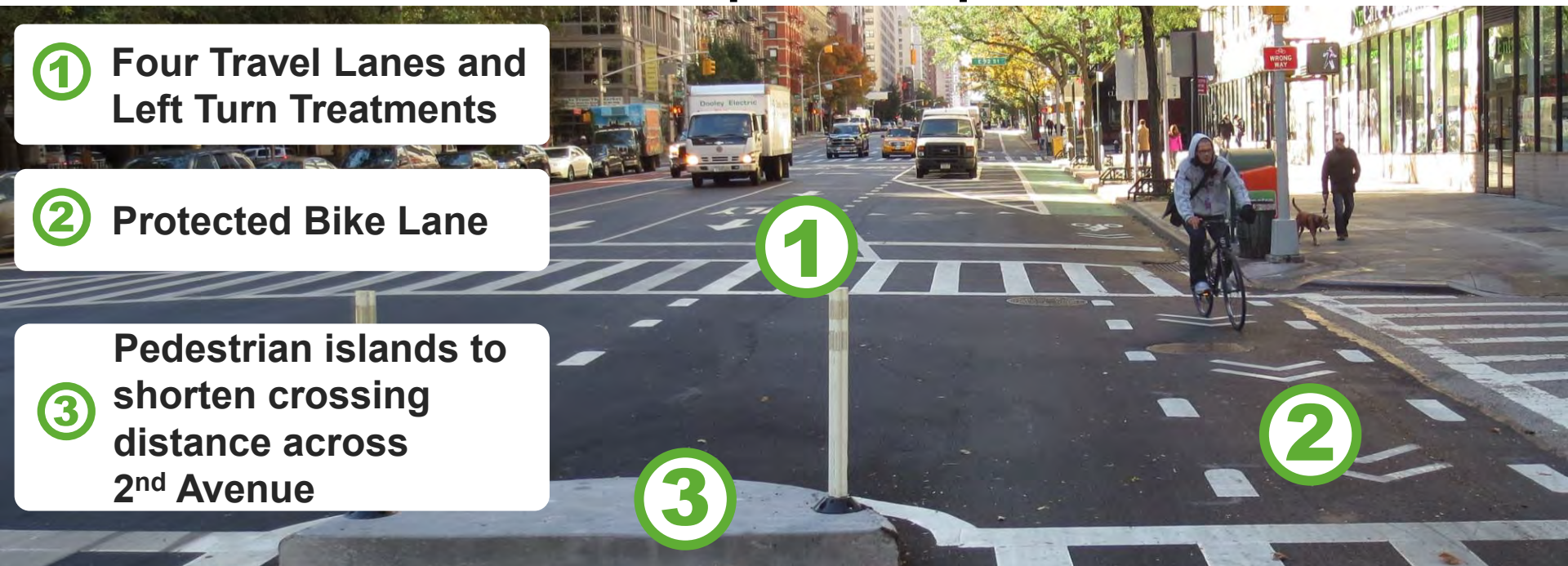


E 59th St to to E 52nd St – Proposed Improvements

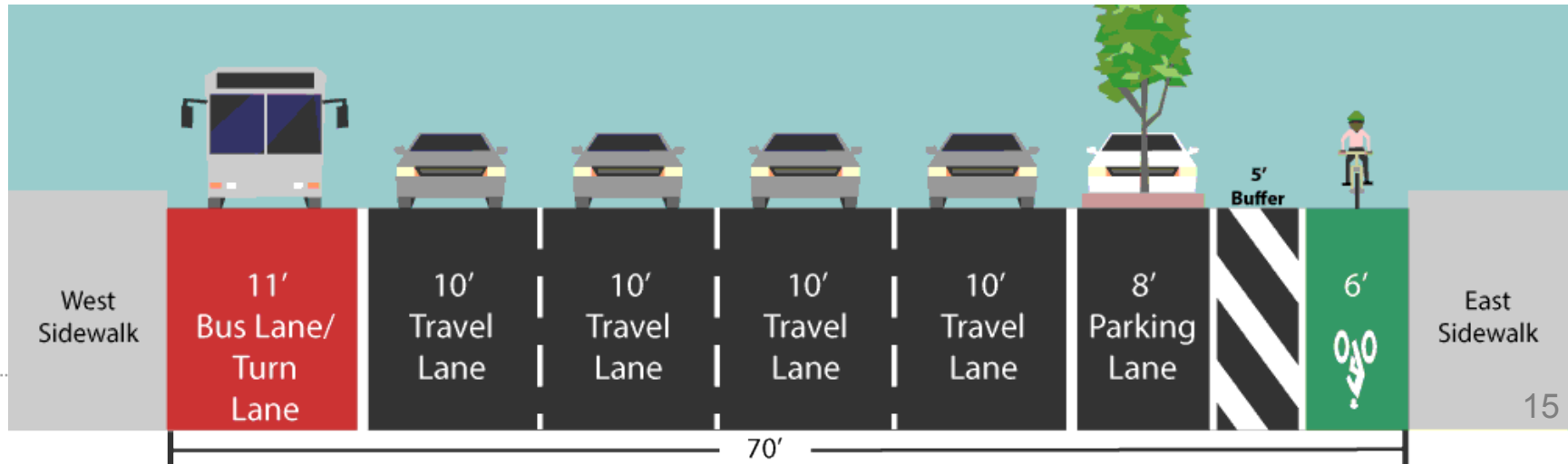


E 59th St to to E 52nd St – Proposed Improvements

- ① Four Travel Lanes and Left Turn Treatments
- ② Protected Bike Lane
- ③ Pedestrian islands to shorten crossing distance across 2nd Avenue



Proposed



E 58th St and E 57th St – Proposed Improvements



**① Left turn lanes at
E 58th St and E 57th St**

**② Pedestrian islands to
shorten crossing
distance across
2nd Avenue**

PROJECT AREA



2nd Ave (52nd St to 48th St)

- Curbside Bike Lane
- Protected at Off-Peak Times
- PM Rush Hour Lane

2nd Ave (48th St to 43rd St)

- Curbside Bike Lane
- Protected at Off-Peak Times
- AM / PM Rush Hour Lane

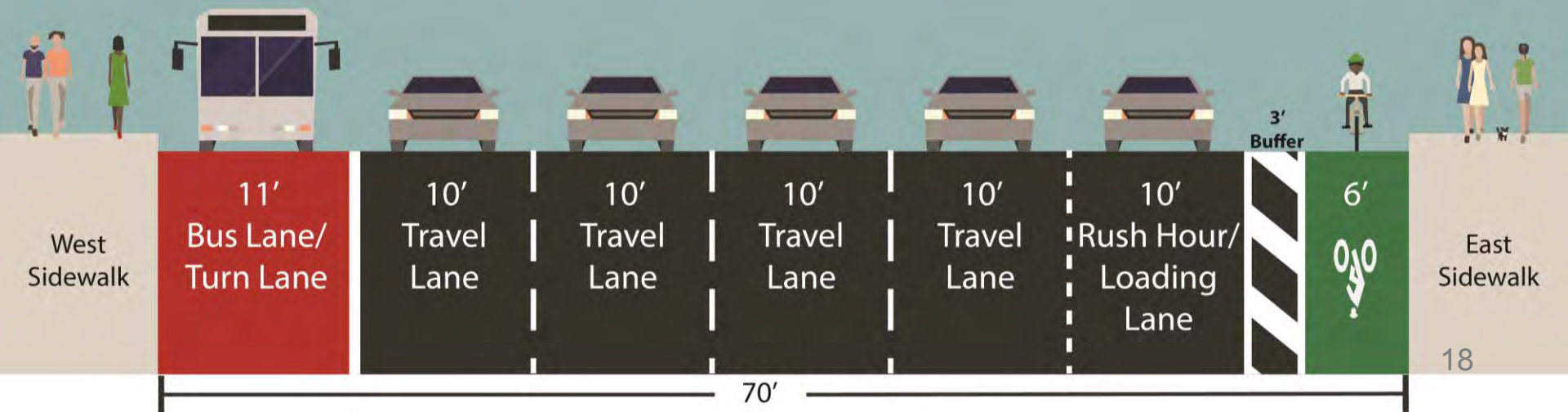
(2) Proposal

E 52nd St to E 43rd St – **Rush Hour** Proposed Improvements

- ① Maintained Vehicular Capacity (5 lanes)
- ② Curbside Buffered Bike Lane

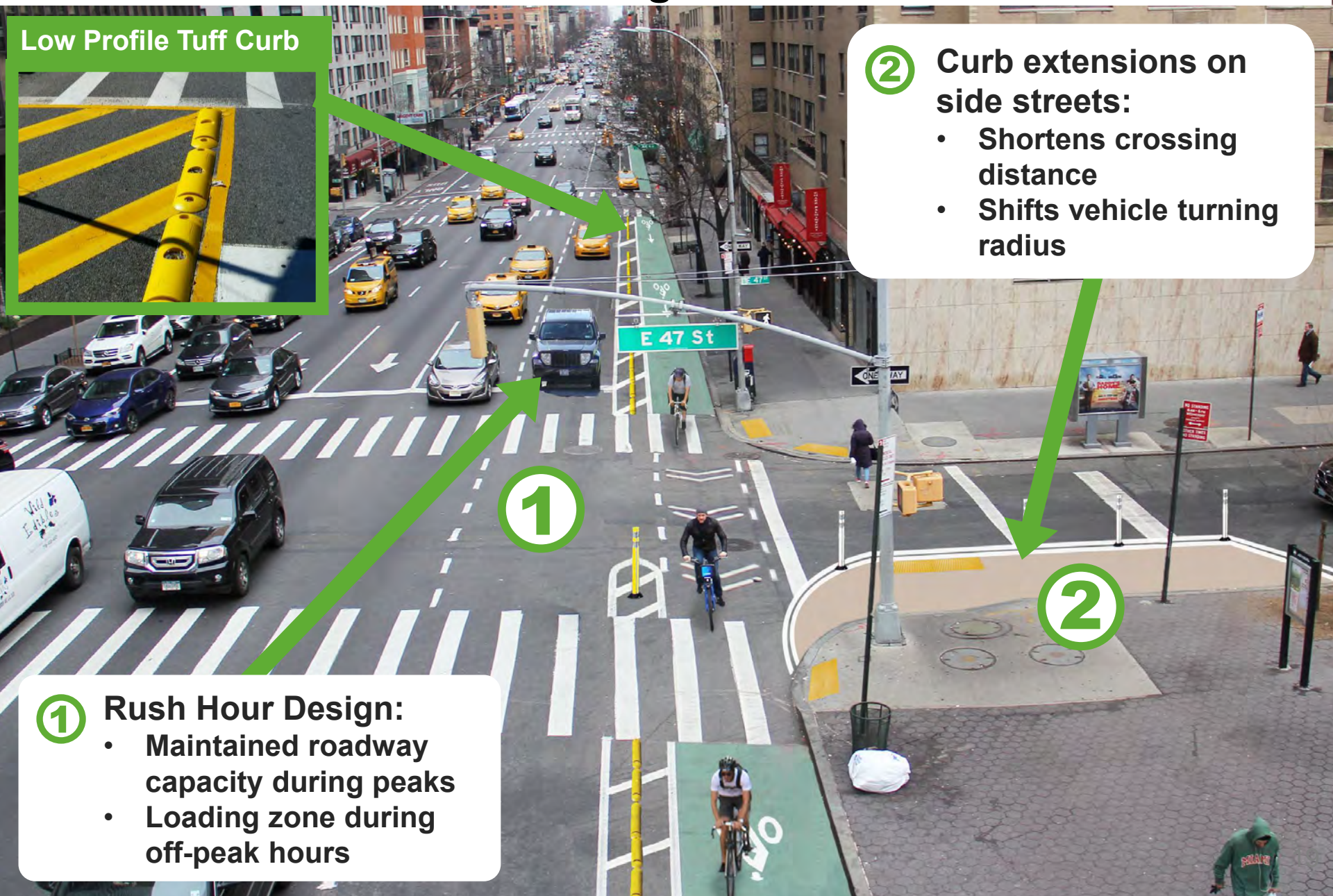
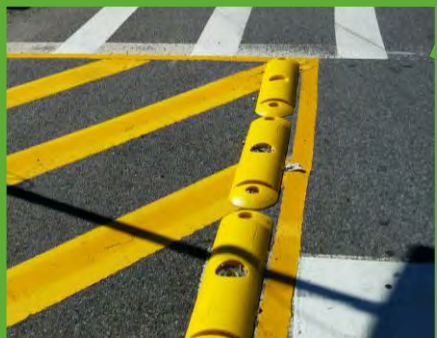


Proposed Rush Hour



PROPOSED – Rush Hour Design

Low Profile Tuff Curb



② Curb extensions on side streets:

- Shortens crossing distance
- Shifts vehicle turning radius

- ## ① Rush Hour Design:
- Maintained roadway capacity during peaks
 - Loading zone during off-peak hours

CORRIDOR – Off-Peak Proposed Improvements

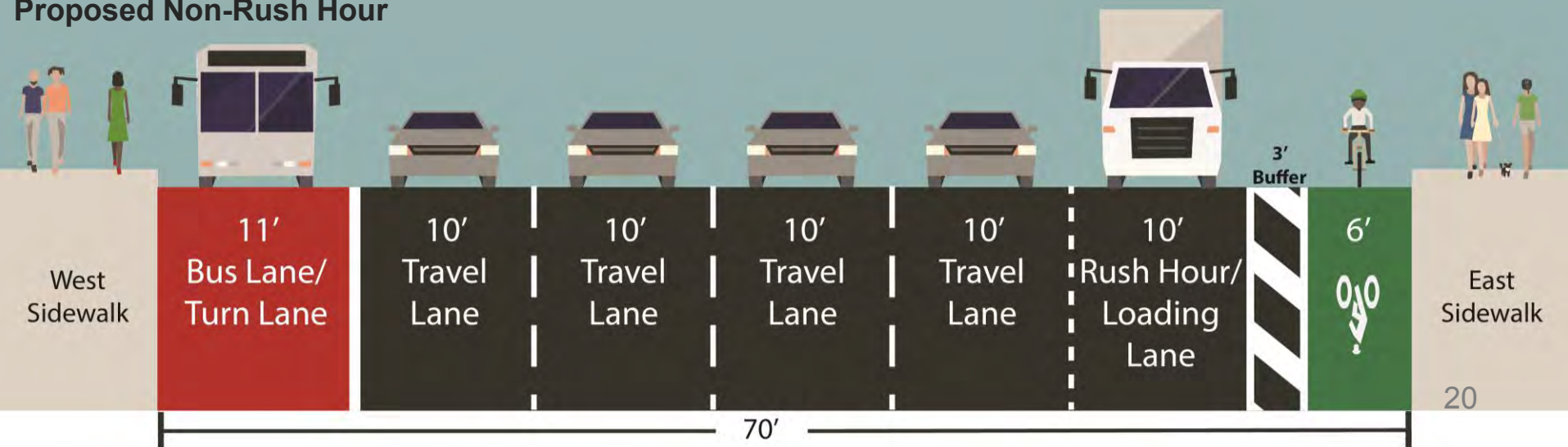
① Traffic Calming (one travel lane removed)

② Loading permitted

③ Protected bike lane



Proposed Non-Rush Hour



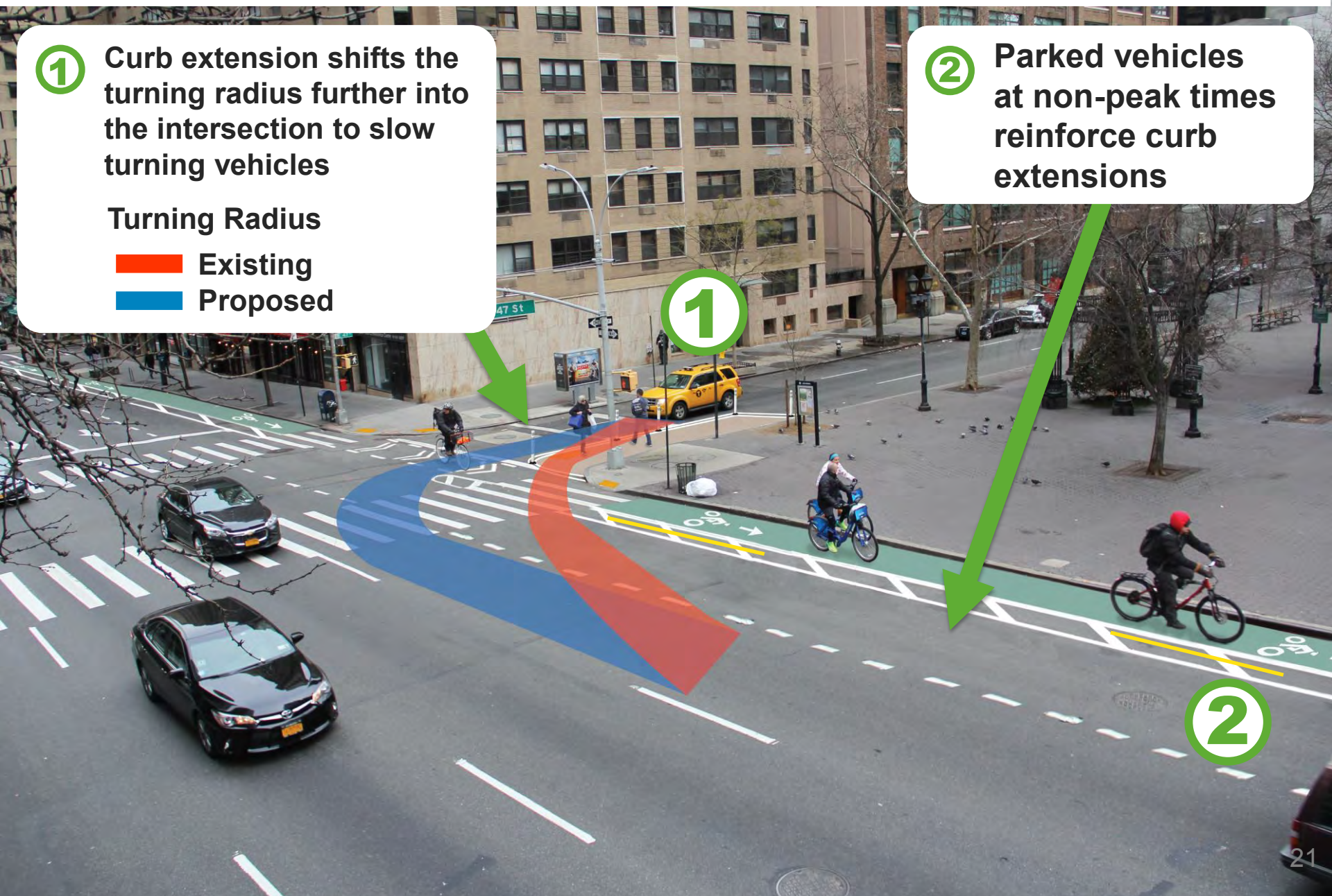
DESIGN: CURB EXTENSION

- ① Curb extension shifts the turning radius further into the intersection to slow turning vehicles

Turning Radius

Existing
Proposed

- ② Parked vehicles at non-peak times reinforce curb extensions

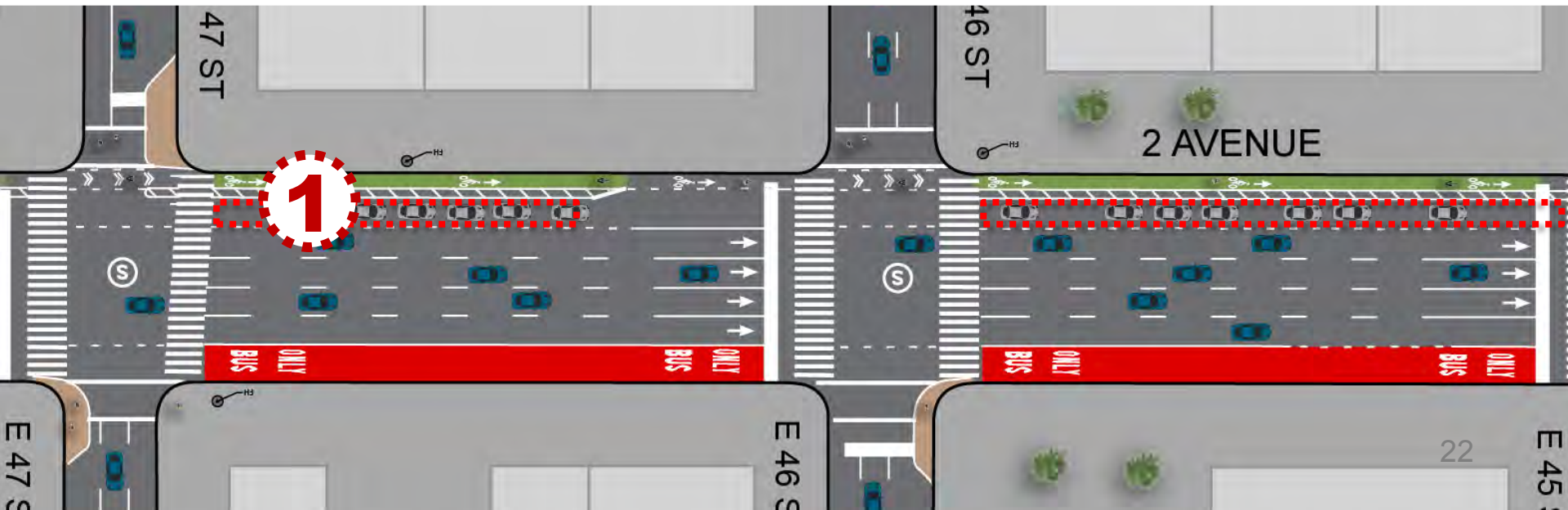


PROPOSED COMMERCIAL LOADING & PARKING



Commercial Loading & Parking Restricted to Off-Peak Hours to maintain traffic flow/capacity:

- 10am – 3pm
- 7pm – 7am



DESIGN: SIGNAGE



DESIGN: COMMERCIAL LOADING & PARKING



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**Commercial Loading & Parking
Restricted to Off-Peak Hours to
maintain traffic flow/capacity:**

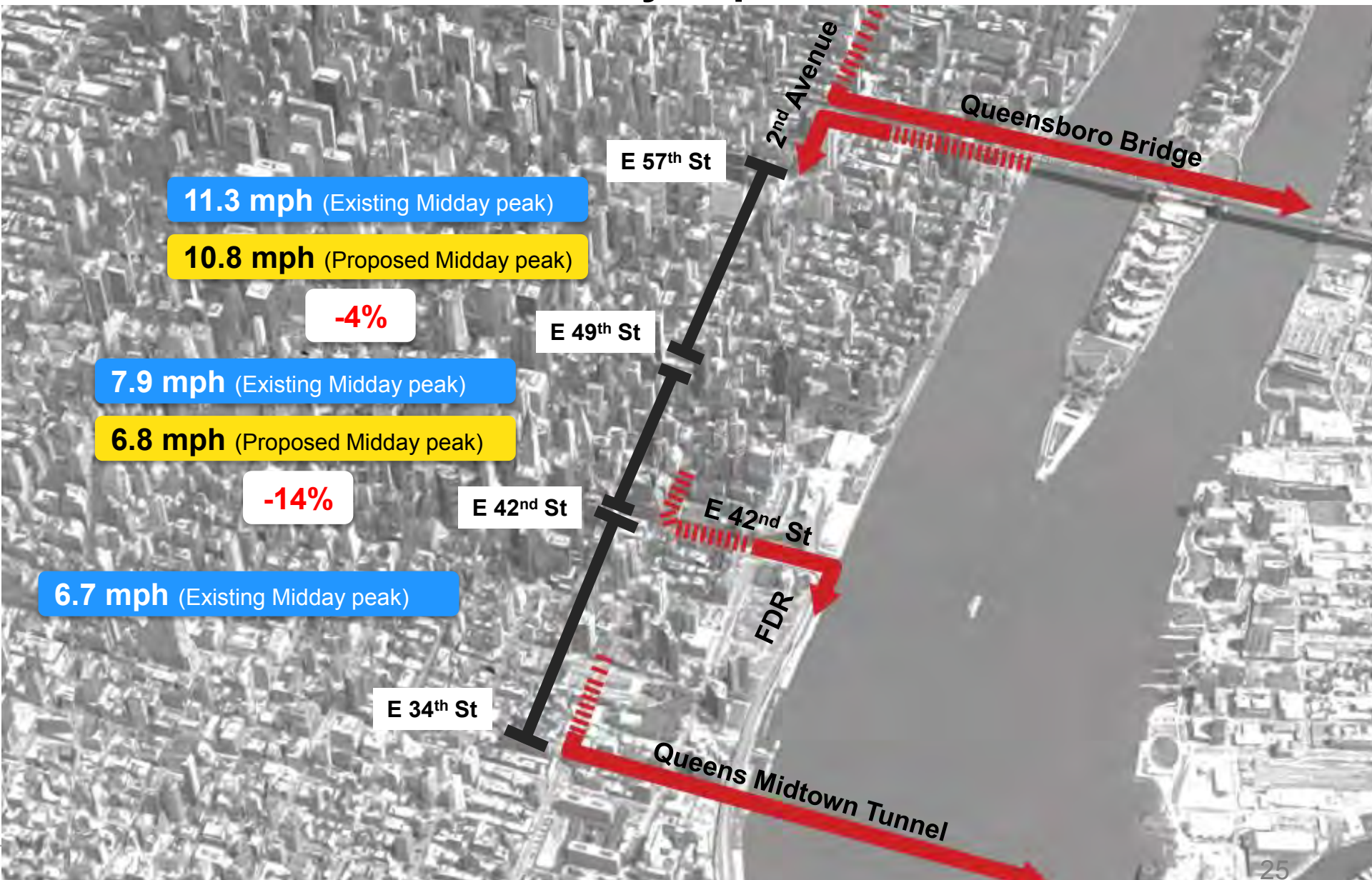
- 10am – 3pm South of 48th St
- 3pm – 7pm South of 52nd St

Loss of approximately 20 parking spaces on the corridor



- Overnight parking will remain
- Saturday will be removed from commercial regulations

TRAFFIC NETWORK – Midday Impacts



Source: Midtown in Motion data on all Tuesdays, Wednesdays and Thursdays in 2015: From E 57th to E 49 St: February 24th - March 12th. From E 49 to E 42nd St: February 3rd - 12th, February 24th - 26th, March 1st - 12th. From E 42nd to E 34th St: February 3rd - 12th, February 24th - 26th, March 1st - 12th. Midtown in Motion sample includes all vehicles equipped with EZPASS.

MODE SHIFT

Recent Travel Trends

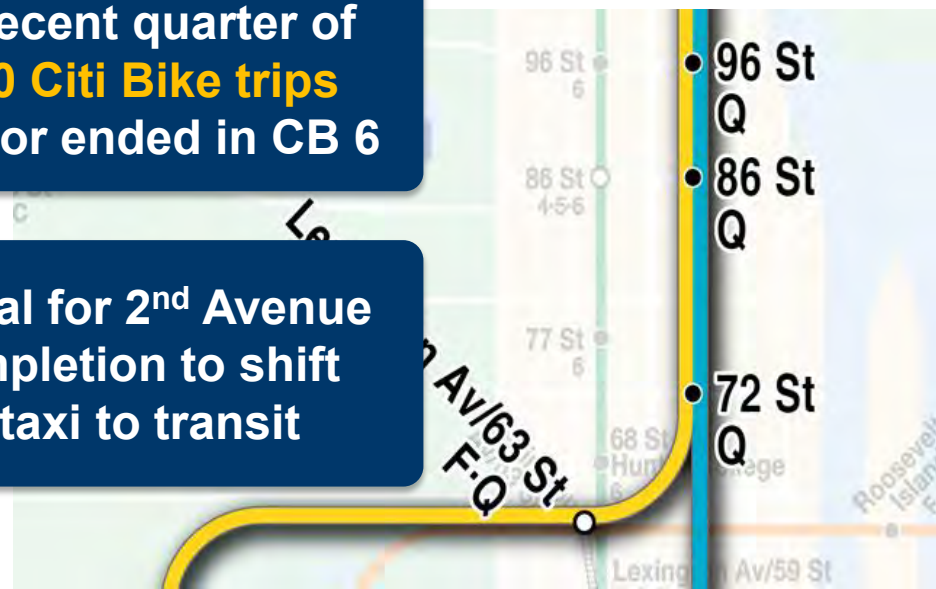
43% of vehicles
on 2nd Avenue in
Midtown are taxis
(700-900 per hour)



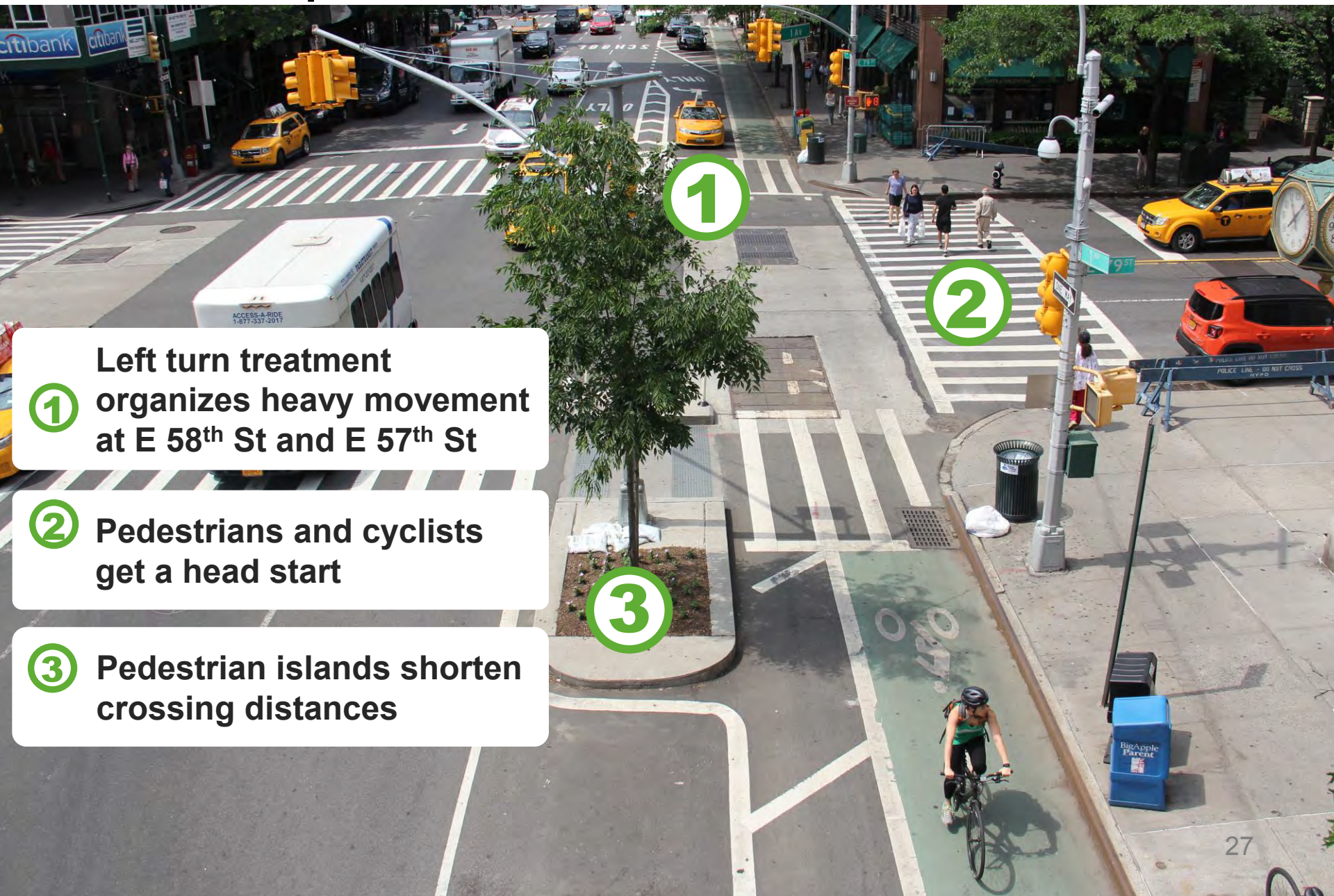
For all trips that begin and end in the Midtown Core, Citi Bikes are at least 2 mph faster and \$6 cheaper than taxis.

In the most recent quarter of 2016 **640,000 Citi Bike trips** either started or ended in CB 6

Large potential for 2nd Avenue subway completion to shift trips from taxi to transit



Pedestrian Improvements – 58th and 57th



①

**Left turn treatment
organizes heavy movement
at E 58th St and E 57th St**

②

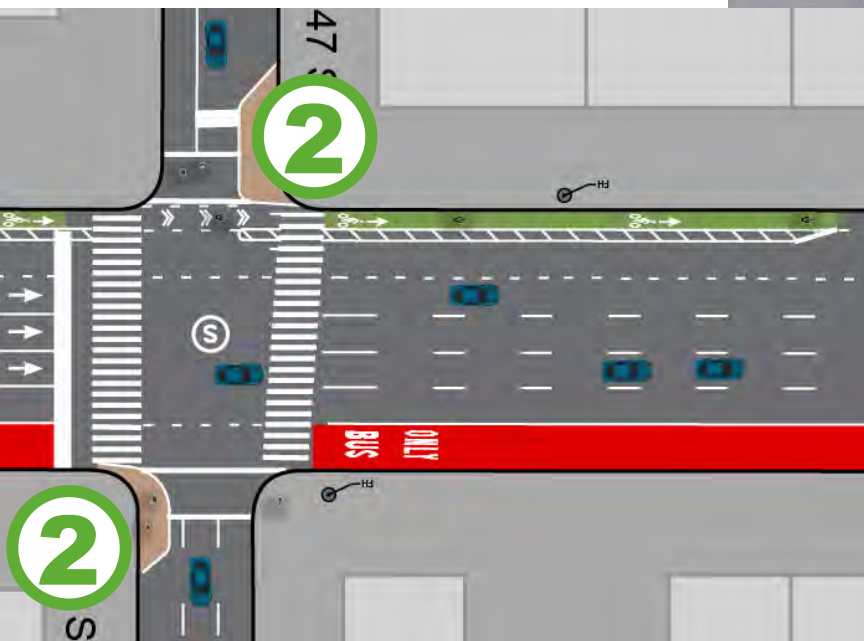
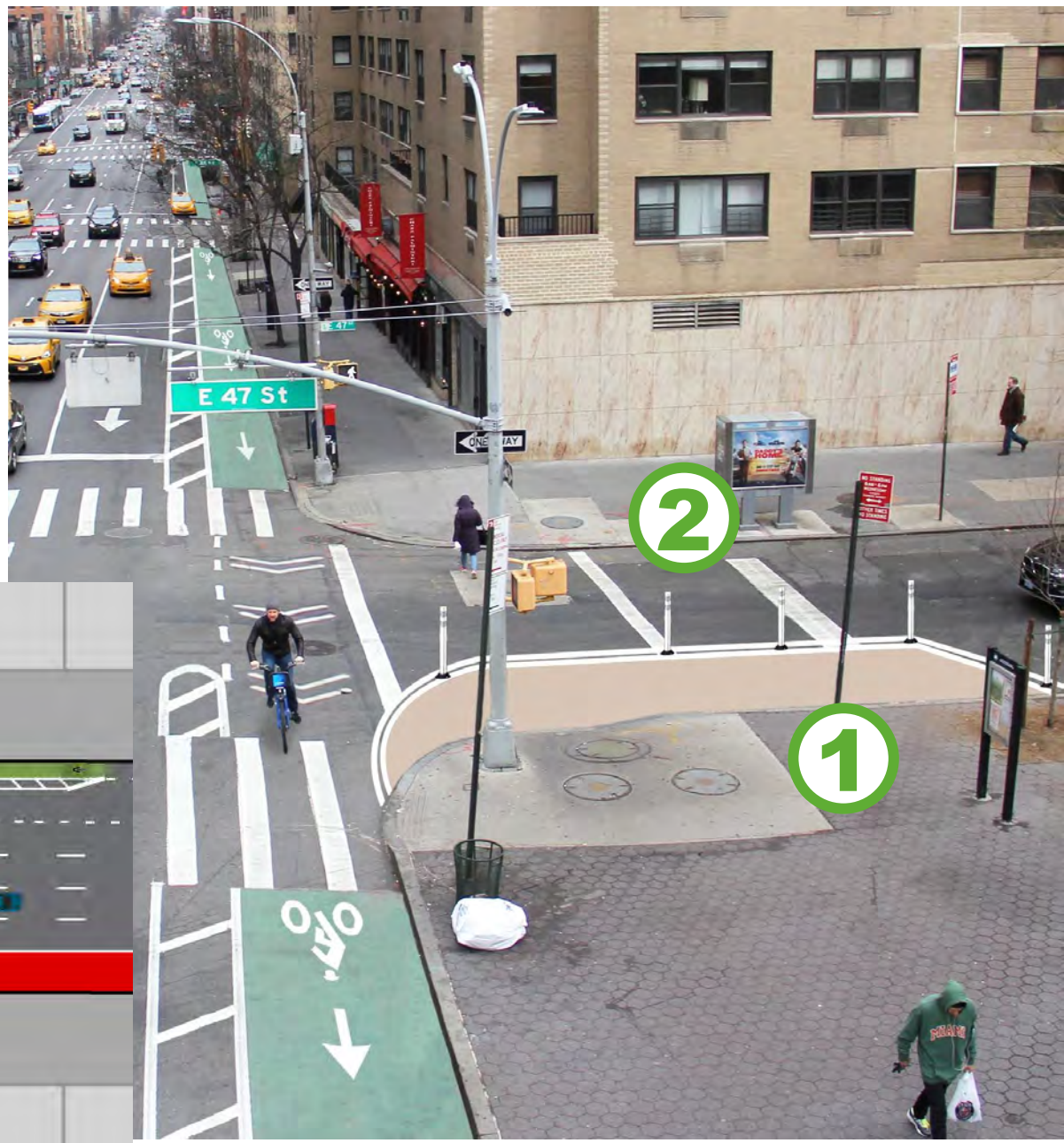
**Pedestrians and cyclists
get a head start**

③

**Pedestrian islands shorten
crossing distances**

Pedestrian Improvements – 53rd to 43rd

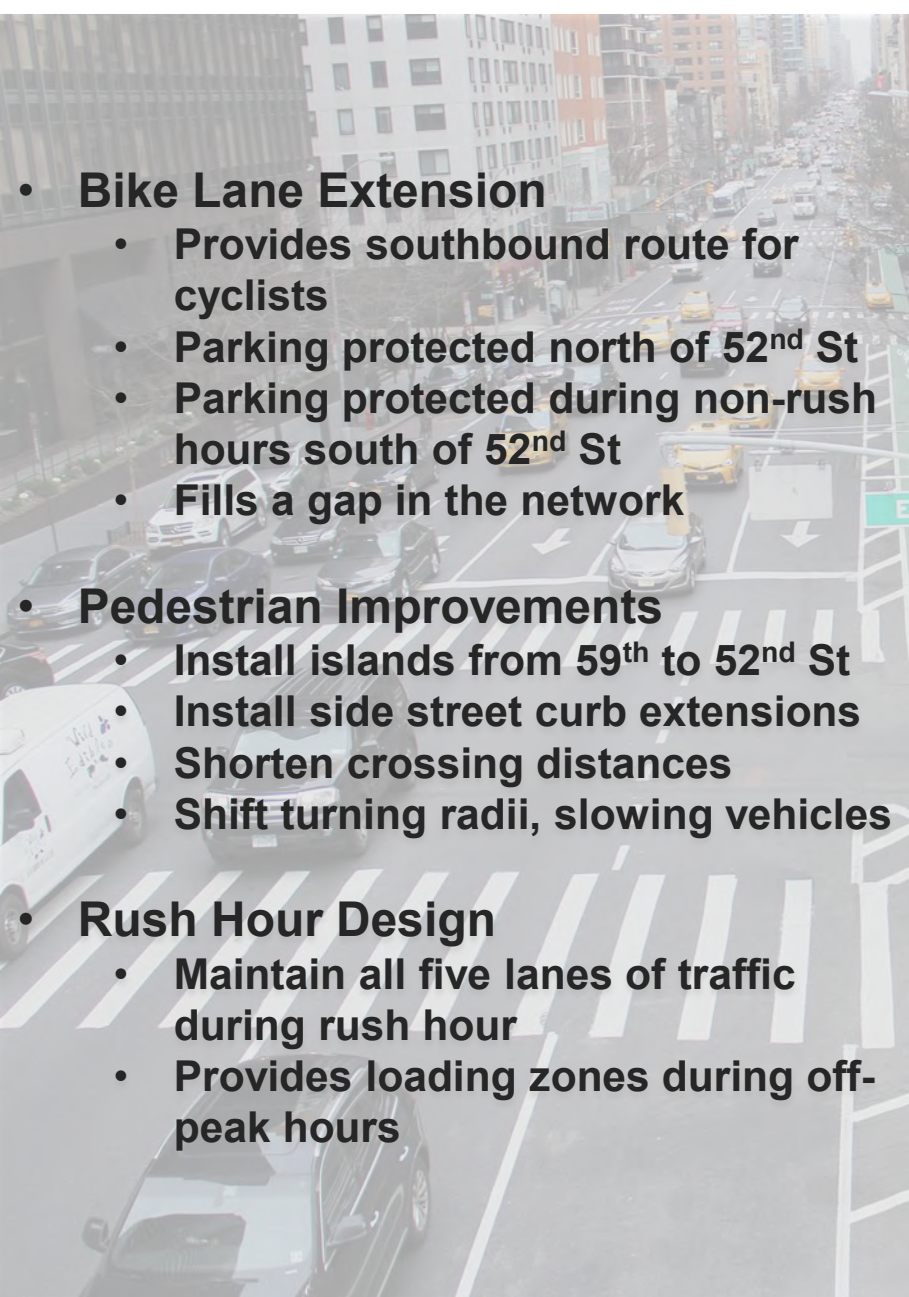
- ① Curb Extensions on side streets slow turning vehicles
- ② Curb Extensions shorten north-south crossing distances



SUMMARY

3

SUMMARY OF BENEFITS

- 
- An aerial, high-angle photograph of a multi-lane city street, likely in New York City, showing heavy traffic including cars, taxis, and buses. Tall buildings line the street, and a crosswalk is visible in the foreground. The image is semi-transparent, serving as a background for the text overlay.
- **Bike Lane Extension**
 - Provides southbound route for cyclists
 - Parking protected north of 52nd St
 - Parking protected during non-rush hours south of 52nd St
 - Fills a gap in the network
 - **Pedestrian Improvements**
 - Install islands from 59th to 52nd St
 - Install side street curb extensions
 - Shorten crossing distances
 - Shift turning radii, slowing vehicles
 - **Rush Hour Design**
 - Maintain all five lanes of traffic during rush hour
 - Provides loading zones during off-peak hours



THANK YOU!

Questions?



NYC DOT



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