



2ND AVE E 68TH ST TO 59TH ST

PEDESTRIAN AND BIKE NETWORK IMPROVEMENTS

New York City Department of Transportation

Presented to Community Board 6 by the Bicycle and Greenway Program on September 4, 2018



OVERVIEW

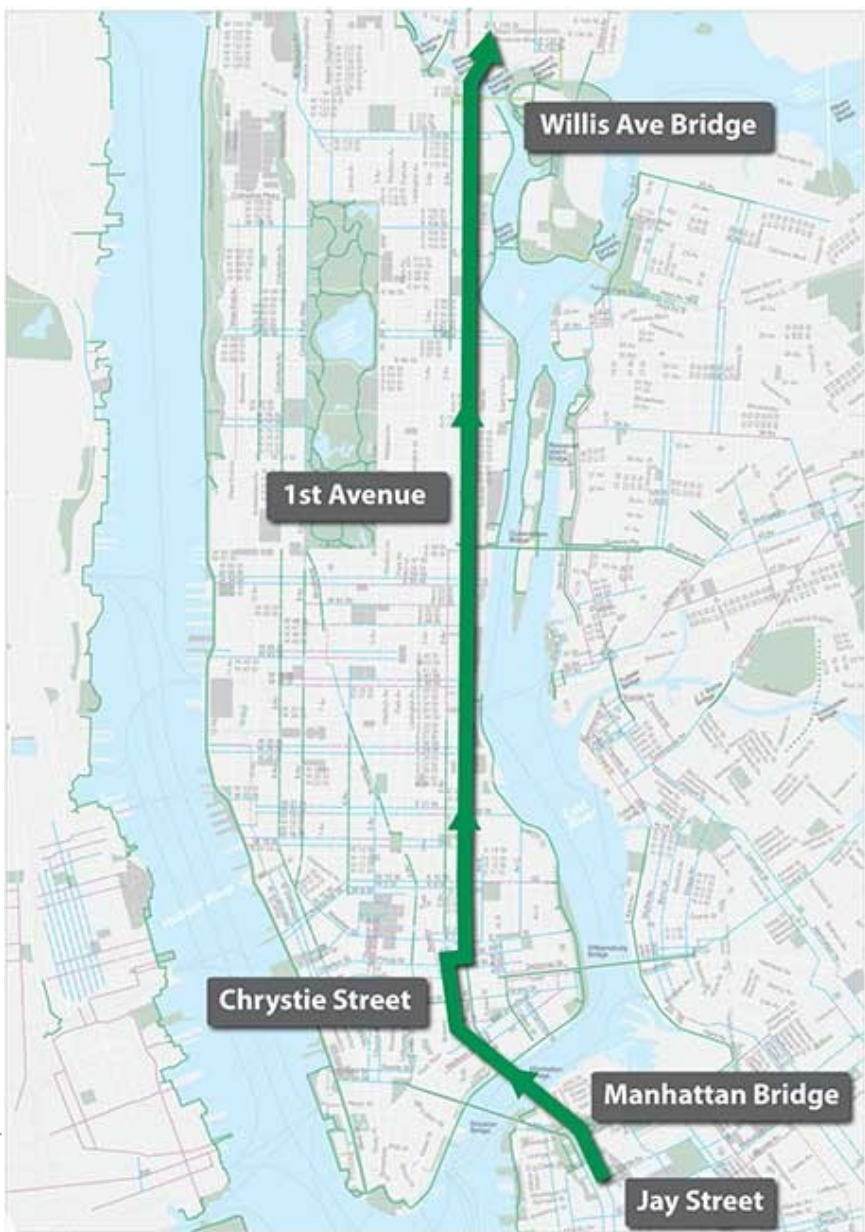
1. **Protected Bike Network Implementation Update**
2. **Evaluation of Off-Peak Protected Bike Lane**
(2nd Ave, 52nd to 43rd Streets)
3. **Filling the Gaps**
4. **Proposal: Bridge**
(2nd Ave, 68th to 59th Streets)
5. **Update: Tunnel**
(2nd Ave, 43rd to 34th Streets)
6. **Next Steps**



Protected Bike Network Implementation Update

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EAST SIDE PROTECTED BIKE LANE NETWORK



Northbound: 1st Ave

- Continuous 9-mile protected bike lane connecting Brooklyn, Manhattan and the Bronx

Southbound: 2nd Ave

- Challenges to creating continuous protected bike lane:
 - 2nd Ave Subway construction
 - High traffic volumes approaching Queensboro Bridge and Midtown Tunnel

2ND AVENUE EXISTING BIKE FACILITIES



CB 8

PROTECTED BIKE LANE

96 St – 88 St
2016 (MTA)

88 St – 82 St
Functional, not yet completed (MTA)

82 St to 74 St
2016 (DOT)

74 St – 68 St
Functional, not yet completed (MTA)

ENHANCED SHARED LANE

68 St – 59 St Bridge
Fall 2016/17 (MTA/DOT)

CB 6

PROTECTED BIKE LANE

59 St – 43 St:
2017 (DOT)

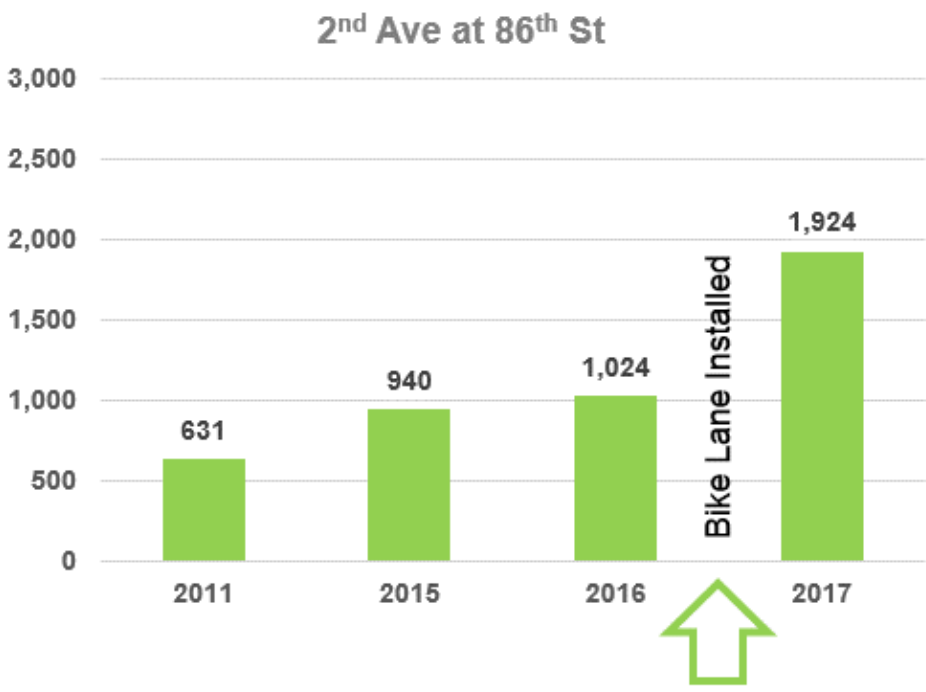
52 St – 43 St: *Off-peak Protected Bike Lane Design*
2017 (DOT)

ENHANCED SHARED LANE

43 St – 34 St Tunnel
2011 (DOT)

BIKE VOLUMES ARE GROWING

Bike Counts on 2nd Ave: **+105%**
(2015-2017)



Bicycle Volume Data: Average of three 12-hr (7AM-7PM) counts conducted on weekdays in May, July, and September for each year reported.



In the third quarter of 2017
699,000
Citi Bike trips
either started or ended in
CB 6 and CB 8



On Average,
5,406 cyclists
use the
Queensboro
Bridge
bike lane daily
(between April and
October)

SAFETY CONCERNS



2nd Ave is a Vision Zero Priority Corridor

2 Ave, 68 St – 59 St

Injury Summary, 2012-2016 (5 years)

| | Total Injuries | Severe Injuries | Fatalities | KSI |
|------------------------|----------------|-----------------|------------|-----|
| Pedestrian | 87 | 9 | 0 | 9 |
| Bicyclists | 32 | 1 | 0 | 1 |
| Motor Vehicle Occupant | 244 | 16 | 0 | 16 |
| Total | 363 | 26 | 0 | 26 |

Fatalities, 01/01/2012 – 03/19/2018: None

2 Ave, 43 St – 34 St

Injury Summary, 2012-2016 (5 years)

| | Total Injuries | Severe Injuries | Fatalities | KSI |
|------------------------|----------------|-----------------|------------|-----|
| Pedestrian | 118 | 11 | 0 | 11 |
| Bicyclists | 64 | 5 | 0 | 5 |
| Motor Vehicle Occupant | 194 | 7 | 0 | 7 |
| Total | 376 | 23 | 0 | 23 |

Fatalities, 01/01/2012 – 03/19/2018: None



Source: Fatalities: NYCDOT. Injuries: NYSDOT. KSI: Persons killed or severely injured

Evaluation of Off-Peak Protected Bike Lane Design

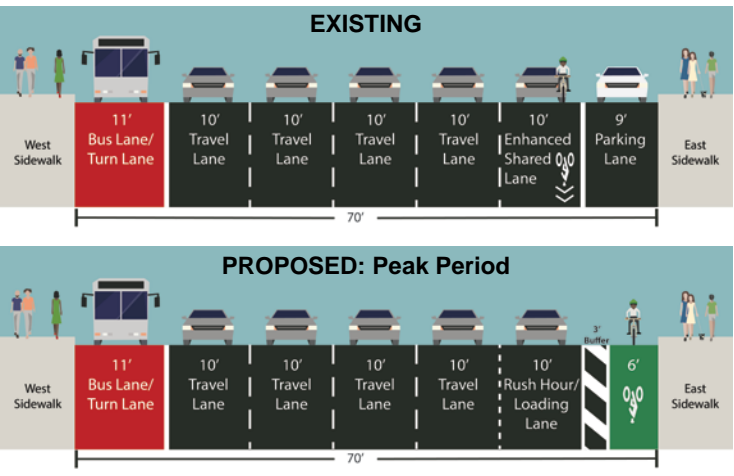
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BEFORE: 2 AVE, 52 ST – 43 ST



- Enhanced Shared Lane
- Gap in the protected bike lane network where facilities were most needed
- High traffic volumes, lack of organization in roadway
- Site specific curb access and parking needs

AFTER: Peak Period Design



Curbside bike lane provides dedicated space for cyclists

Maintains five moving lanes

Loading not permitted



AFTER: Off-Peak Design

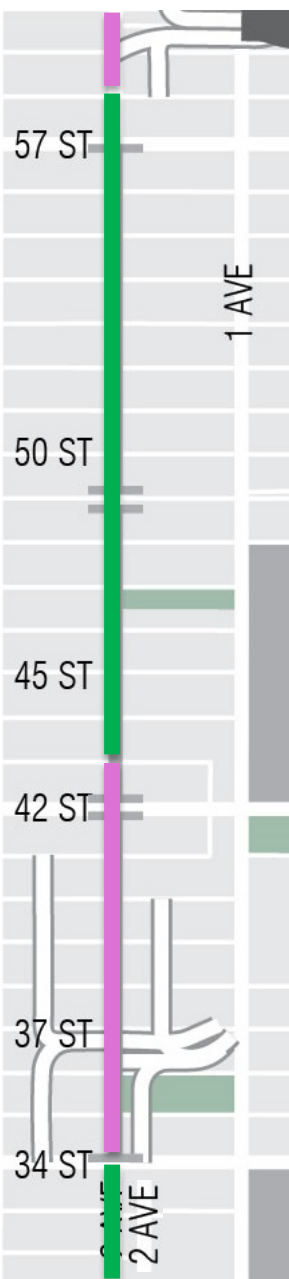
Parking protected bike lane provides dedicated space for cyclists, separated from moving vehicles

Removal of travel lane calms traffic when speeding is more likely to occur

Loading permitted



VEHICLE SPEEDS: MIDTOWN IN MOTION EZPASS DATA



| | | 2016 | 2017 |
|---------------|----|----------|----------|
| 49 ST - 57 ST | AM | 10.3 mph | 11.2 mph |
| | MD | 9.3 mph | 10.3 mph |
| | PM | 13.8 mph | 13.2 mph |
| 42 ST - 49 ST | AM | 10.5 mph | 10.4 mph |
| | MD | 6.9 mph | 7.5 mph |
| | PM | 8.3 mph | 8.5 mph |

Data show
no significant change
to average vehicle speeds
in the project area
(2nd Ave 59th St to 43rd St)

Note: No operational changes made south of 43 St

| | | | |
|---------------|----|-----------|---------|
| 34 ST - 42 ST | AM | 8.1 mph* | 7.2 mph |
| | MD | 10.6 mph* | 9.2 mph |
| | PM | 8.6 mph* | 5.3 mph |

Overall, average motor
vehicle speeds on streets in
Midtown Manhattan
decreased during this same
time period**

Source: EZPASS 2017 October Mid-week Vs. 2016 October Mid-Week.

Note *: 2nd Avenue - Southbound - 42nd St to 34th St, 15 min Average Travel Time using 2017 October midweek vs. 2016 October midweek (The 2016 data for this link is approximate using the historical travel time as EZPASS reader at 34 St was down during this month).

Note **:Taxi GPS is used as a proxy for travel speeds.)

BLOCKING OF BIKE LANE: TIME LAPSE CAMERA OBSERVATIONS



Video data collected on

2nd Ave at 43rd, 44th, 45th, 46th, 48th, and 50th Streets

Data collected in August, September 2017.

Mid-week days from 7AM-10AM

TLC200 2017/09/12 08:02:24

Bike Lane Blockages

| Locations | 43 St | 44 St | 45 St | 46 St | 48 St | 50 St |
|---|-------|-------|-------|-------|-------|-------|
| Video Analyzed (Days) | 5 | 5 | 6 | 9 | 12 | 9 |
| Video Analyzed (Minutes) | 1,200 | 1,200 | 1,440 | 2,160 | 2,880 | 2,160 |
| Number of Times Bike Lane was Blocked | 26 | 13 | 20 | 3 | 9 | 6 |
| Total Time Bike Lane was Blocked in Minutes | 81 | 48 | 86 | 21 | 46 | 36 |
| Percentage of Time Bike Lane was Blocked | 6.8% | 4.0% | 6.0% | 1.0% | 1.6% | 1.7% |

Bike lane is clear 97% of the time

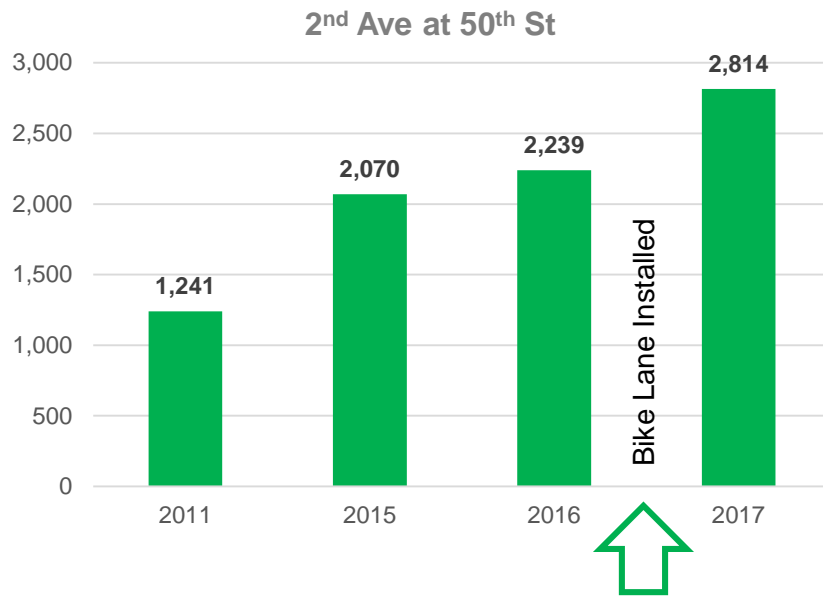
No Stopping Left Turn Area Blockages

| Locations | 43 St | 44 St | 45 St | 46 St | 48 St | 50 St |
|--|-------|-------|-------|-------|-------|-------|
| Video Analyzed (Days) | | 5 | | 9 | 12 | 9 |
| Video Analyzed (Minutes) | | 1,200 | | 2,160 | 2,880 | 2,160 |
| Number of Times No Stopping LT was Blocked | | 29 | | 15 | 61 | 14 |
| Total Time No Stopping LT was Blocked in Minutes | | 454 | | 72 | 1,380 | 201 |
| Percentage of Time No Stopping LT was Blocked | | 37.8% | | 3.3% | 47.9% | 9.3% |

Left Turn Area is clear 75% of the time

BIKE VOLUMES: BEFORE/AFTER COUNTS

Off-Peak Protected Bike Lane
installed on
2nd Ave, 59 St to 43 St in
Spring/Summer 2017



+36% increase in cycling
(2015-2017)

Bicycle Volume Data: Average of three 12-hr (7AM-7PM) counts conducted on weekdays in May, July, and September for each year reported.



Proposal

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CORRIDOR: EXISTING CONDITIONS



High Traffic Volume

High volume especially approaching bridge and tunnel



Curb Access/ Parking

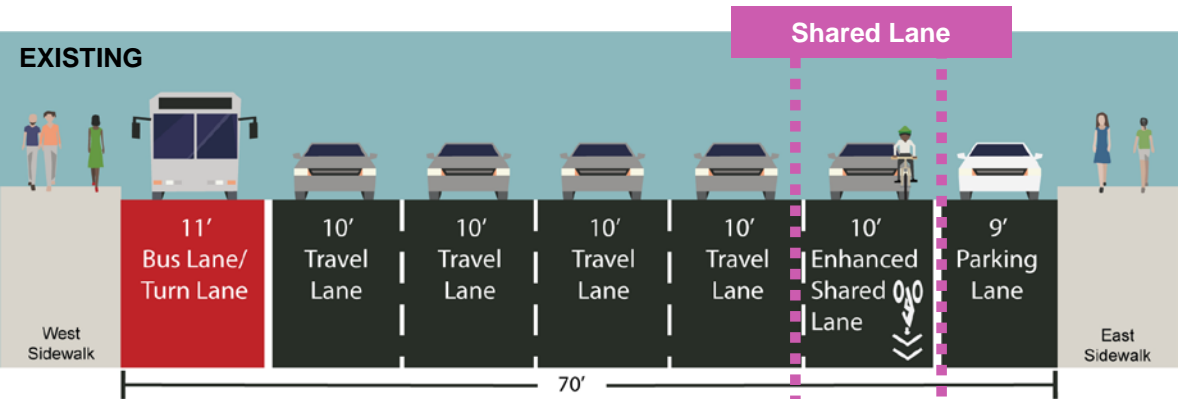
Commercial un/loading, drop-off/pick-up of passengers



Heavily Used Cycling Route

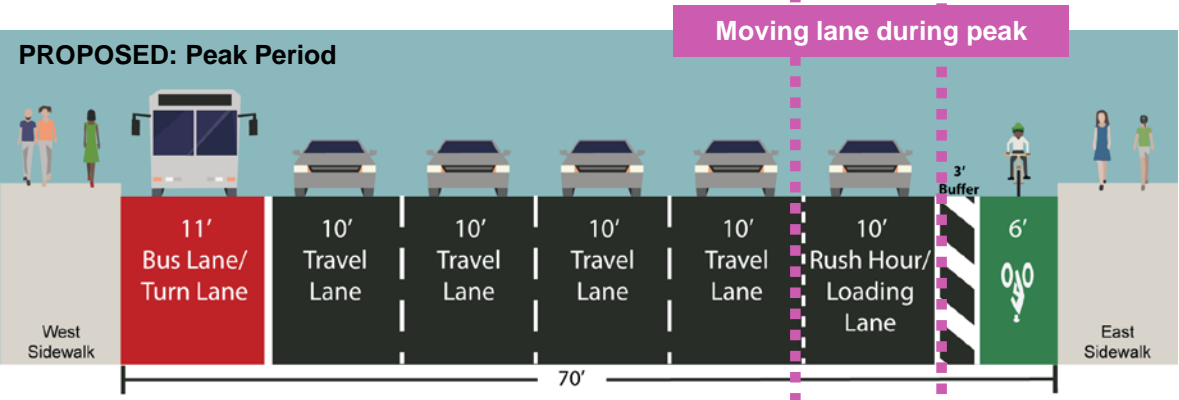
No dedicated space for cyclists
Gap in the protected bike network

CORRIDOR: PROPOSED DESIGN (68th – 60th St)



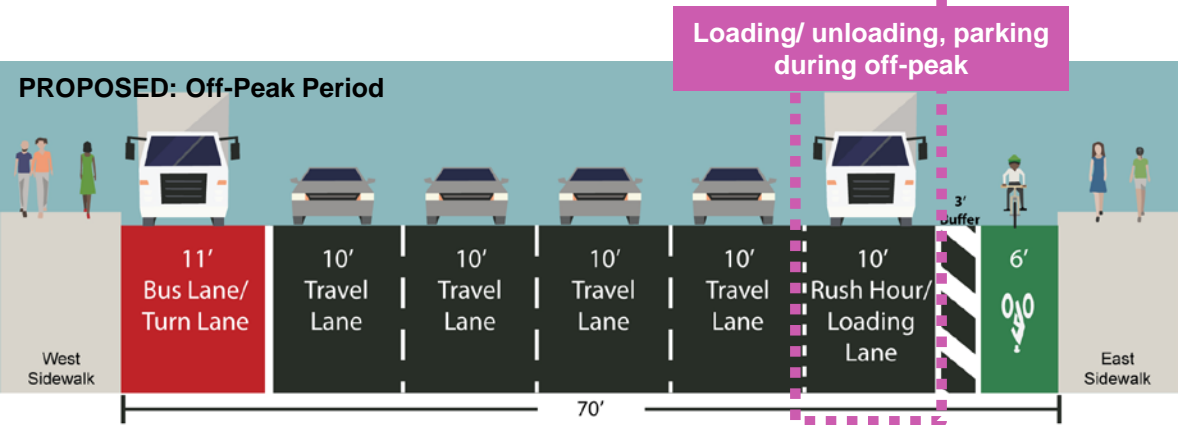
Gap in the Protected Bike Network

- No dedicated space for cyclists
- Enhanced shared lane breaks down during peak hour



Peak Period (7am - 10am, 3pm - 8pm)

- Curbside buffered bike lane
- Maintains vehicular capacity



Off-Peak Period

- Parking protected bike lane
- Traffic calming
- East curb access (loading/unloading)
- West curb access (loading/unloading) when bus lane not in effect

QUEENSBORO BRIDGE: EXISTING CONDITIONS

Complex intersection

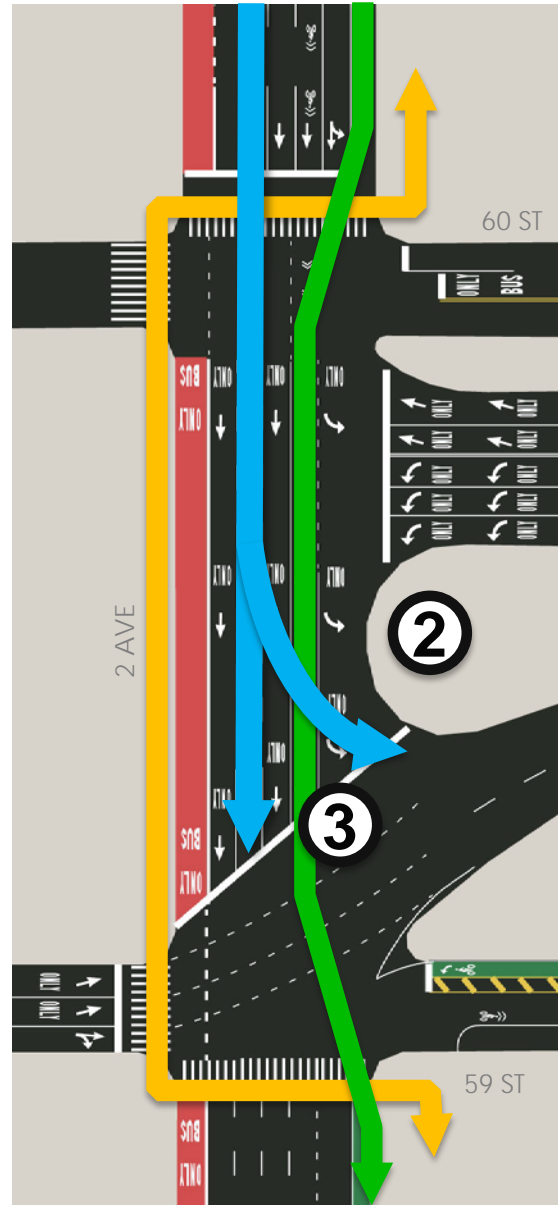
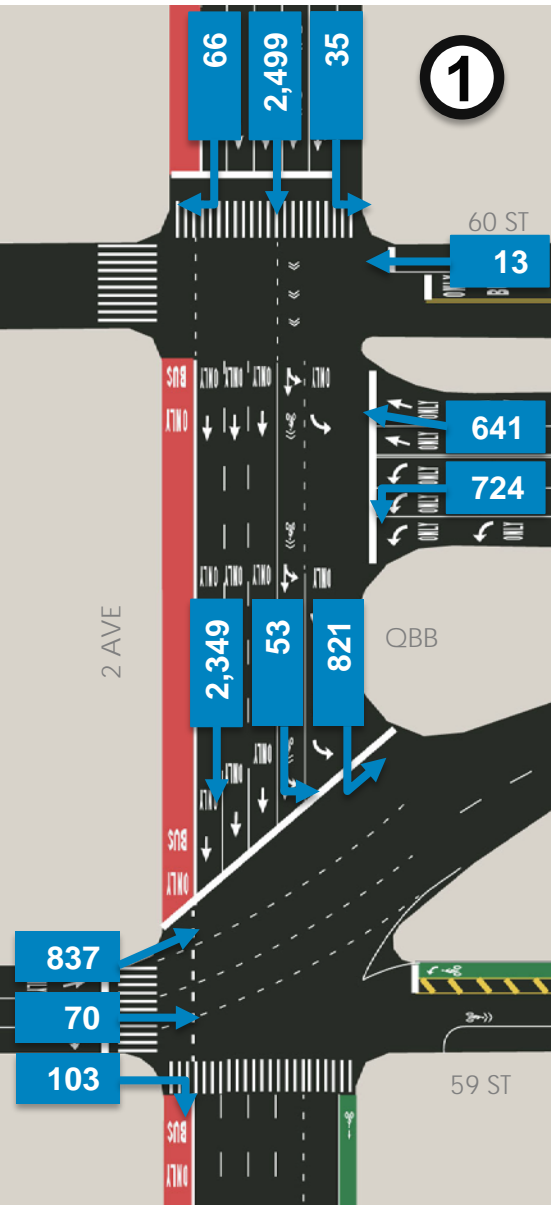
- High, constant vehicle volumes
- Limited pedestrian and bicycle access



QUEENSBORO BRIDGE: EXISTING/ISSUES



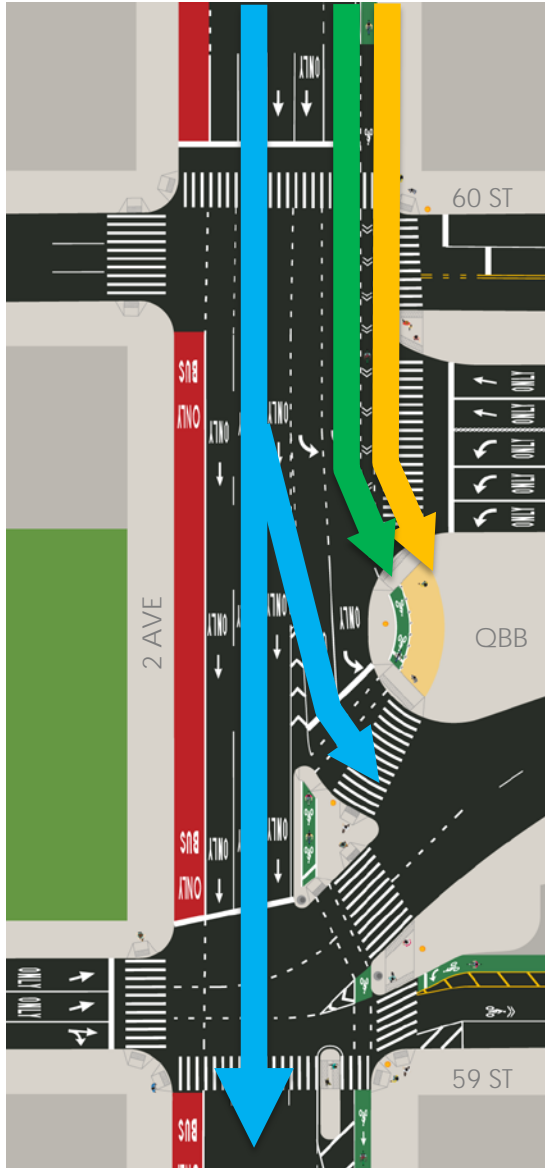
Vehicle Volumes:



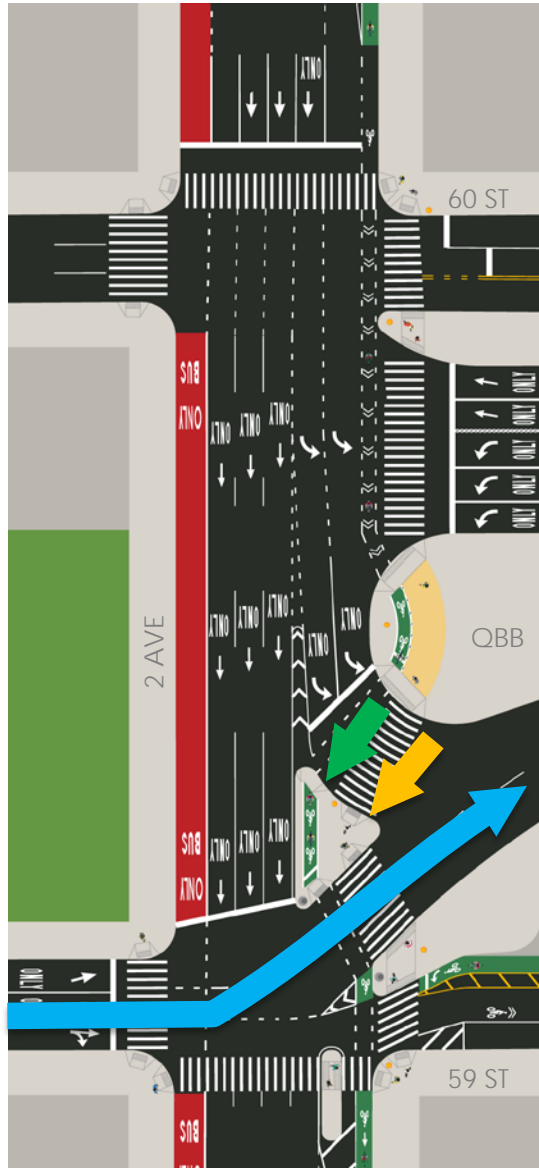
- ① High volumes throughout the day
- ② No pedestrian and bike crossing on east side from 60th and 59th St
- ③ Southbound cyclists forced to merge turning vehicles to continue traveling through

QUEENSBORO BRIDGE: PROPOSED THREE STAGE CROSSING

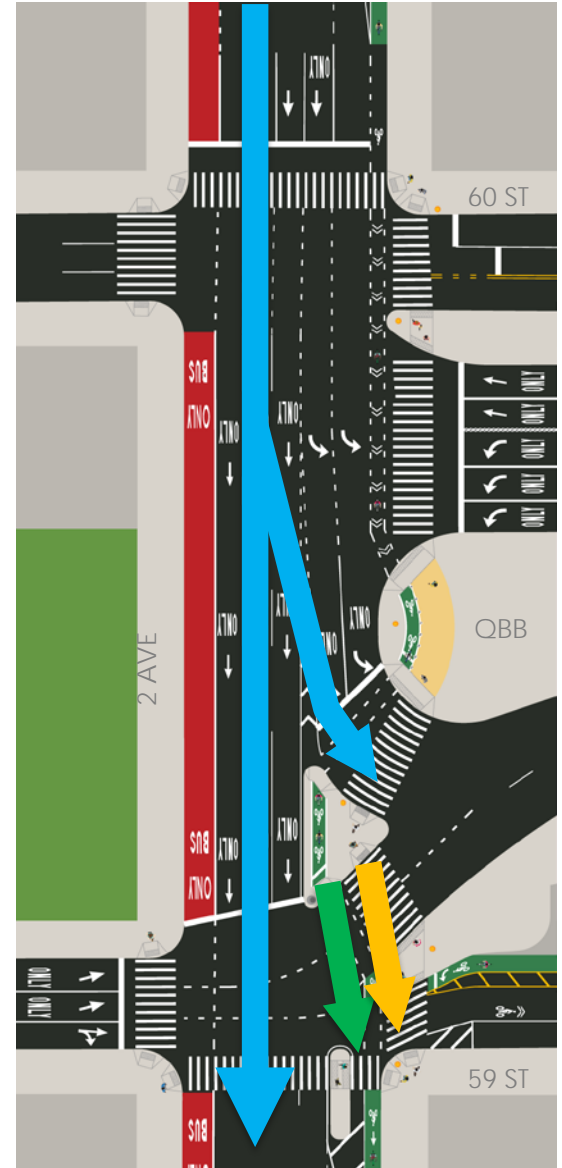
Phase 1   



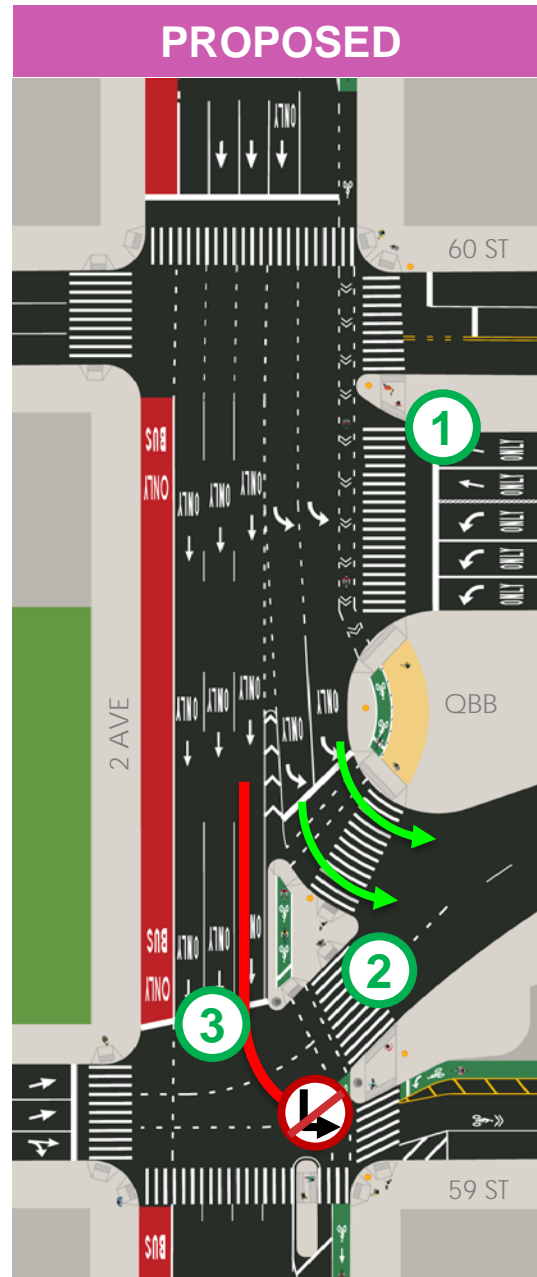
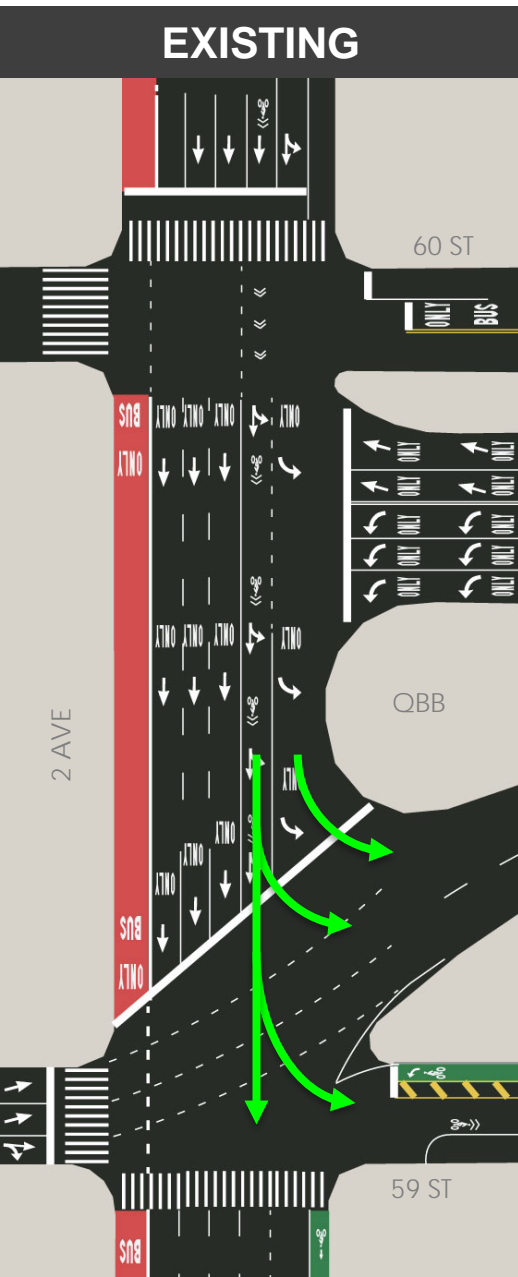
Phase 2   



Phase 1   



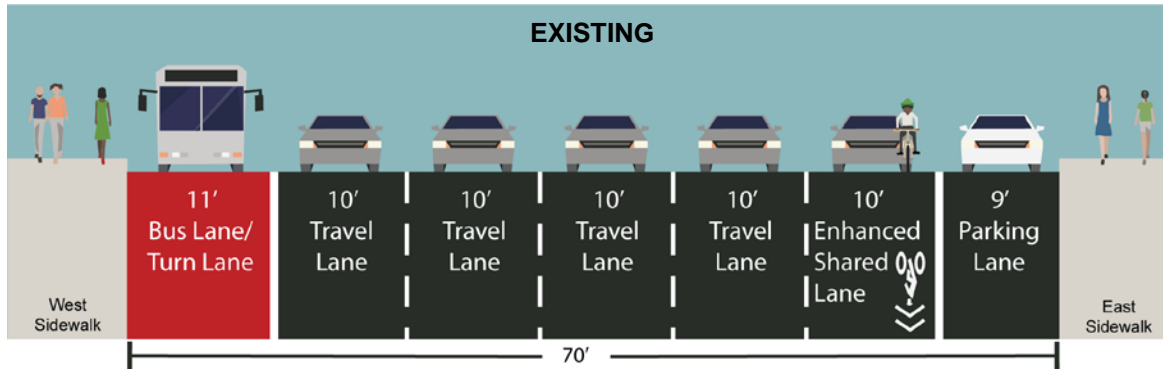
QUEENSBORO BRIDGE: PROPOSAL



- 1 Add pedestrian and bicycle crossing**
 - Allows pedestrian crossing along east side
 - Closes the gap on the protected bike network on 2nd Ave
- 2 Add concrete island and tip extension**
 - Shorter pedestrian and bicycle crossing that works with signal timing
- 3 Change in lane configuration**

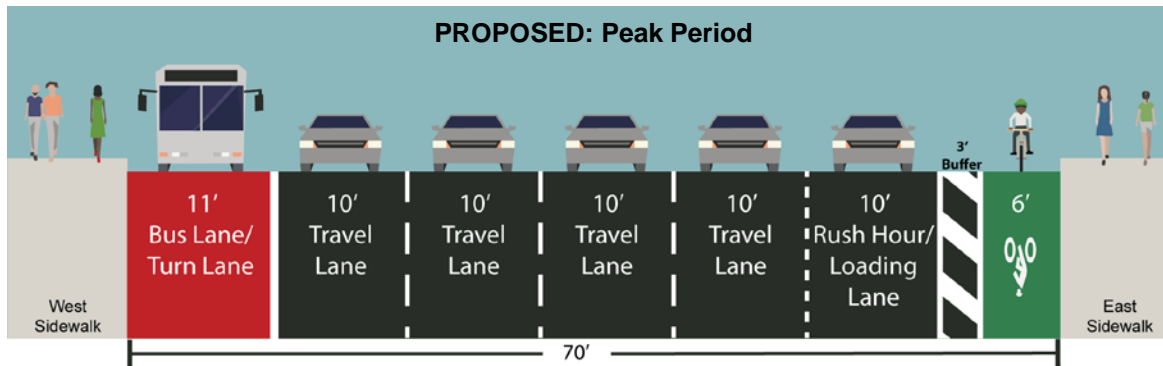
| Existing: | Proposed: |
|-------------------------|--|
| ▪ 3 SB through | ▪ 3 SB through |
| ▪ 1 shared SB/left lane | ▪ 2 left lanes onto QBB |
| ▪ 1 left lane onto QBB | ▪ No left turn from 2 nd Ave onto 59 th St |
- 4 No change to signal timing**

PROPOSED DESIGN ELEMENTS AND BENEFITS



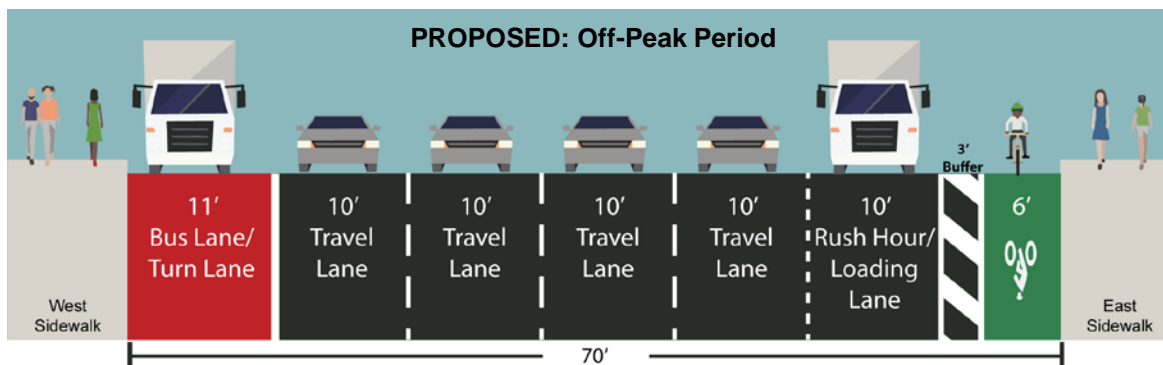
Continue existing lane south to 59th St

- Bike lane is now continuous from 125th to 43rd Street
- Shared lanes replaced with dedicated bike lanes at bridge



New pedestrian crossing at QB Bridge

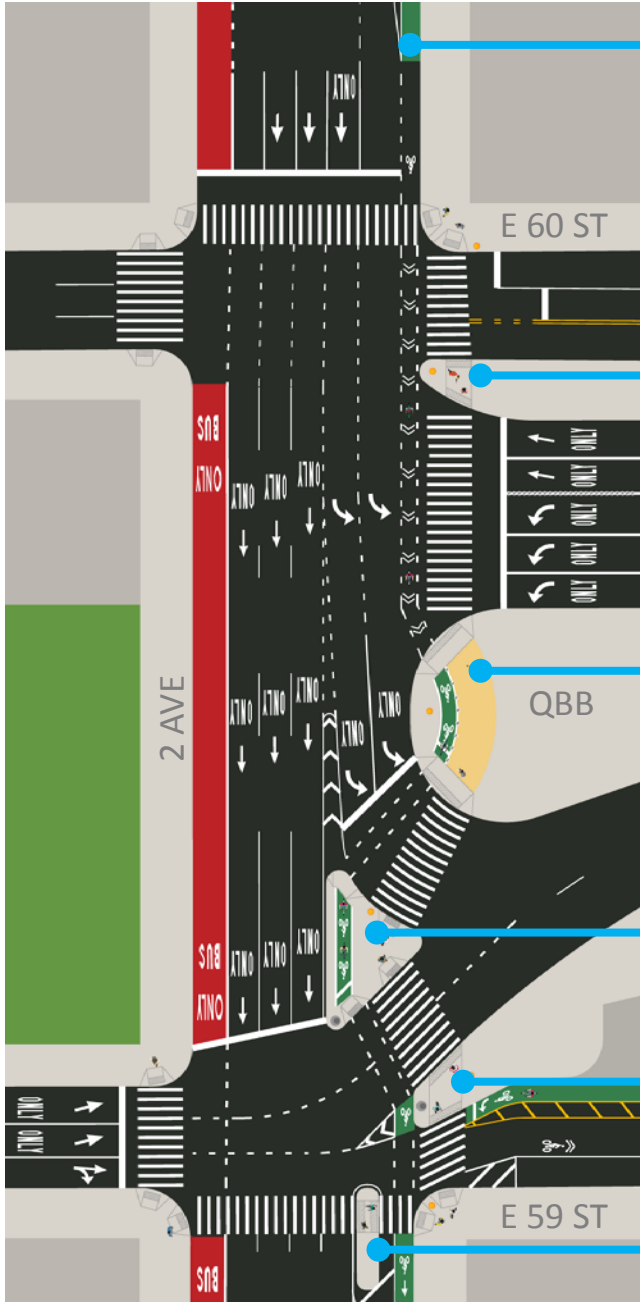
- People can now walk continuously along east side



Minimize congestion impacts

- Signal timing remains the same, minimizing back-ups into surrounding streets

PROPOSED DESIGN ELEMENTS AND BENEFITS



New Curbside Bike Lane:
Fills the gap in bike network on 2 Ave from E 68 St to E 59 St

New Cut Through:
Improves Pedestrian Access

New Pedestrian and Bicycle Access:
Ramp to QBB

New Concrete Island:
Creates Shared Pedestrians and Cyclists Space

New Tip Extension and Cut Through

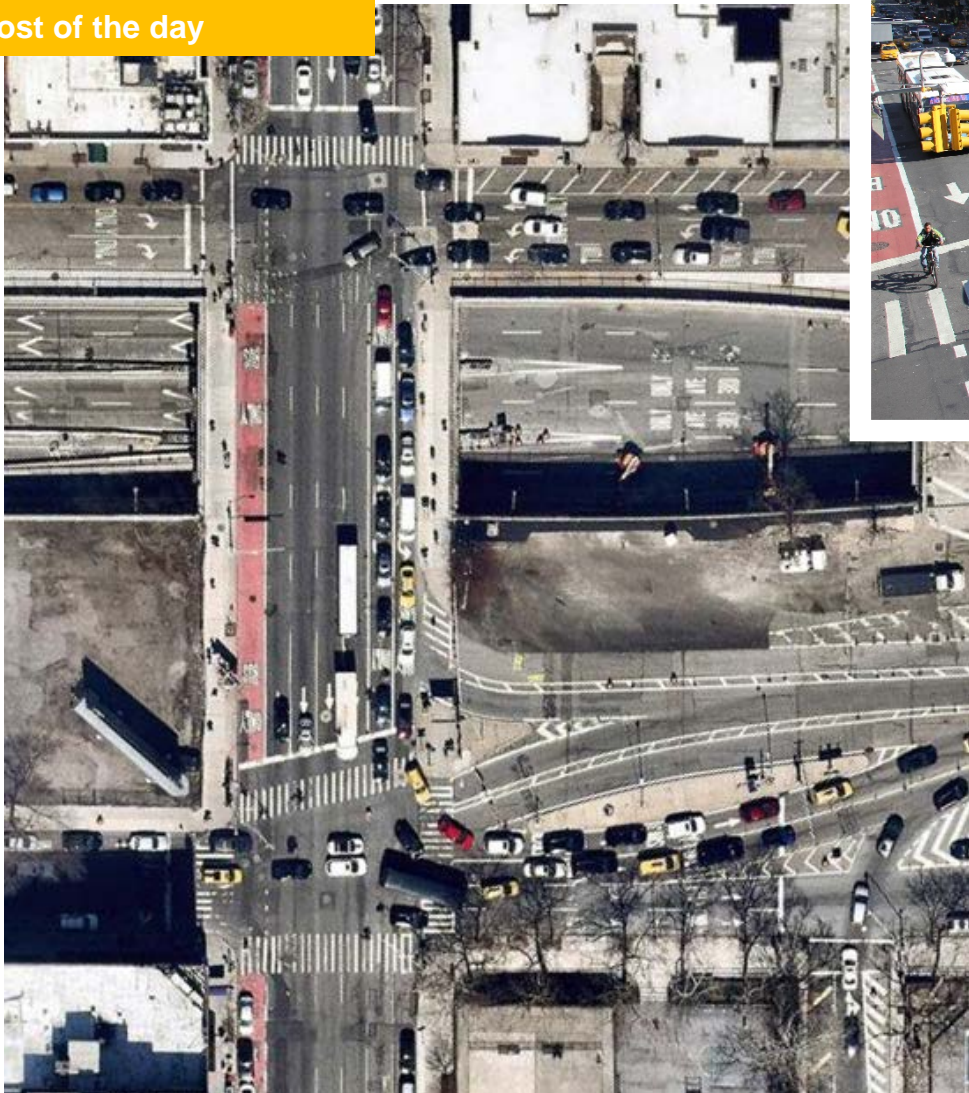
New Pedestrian Island

**New Signal Infrastructure:
(Same Signal Timing)**
Allows for pedestrians and cyclists to cross 2 Ave from E 60 St to E 59 St along the east side

QUEENS MIDTOWN TUNNEL: ISSUES

Complex intersection

**High vehicular volume
for most of the day**



**Ongoing MTA work around
the Tunnel area**

**DOT is currently working
with MTA to develop a plan**

Next Steps

5

QUEENSBORO BRIDGE

- **Project Development**
 - Complete analysis and design of corridor during all traffic configurations
 - Finalize proposal for rush hour/parking regulations
- **Community Outreach**
 - Present finalized designs to
 - Elected Officials
 - Community Board 6 and 8
- **Implementation**
 - Late 2018 / Early 2019

QUEENS MIDTOWN TUNNEL

- DEP capital work on 2nd Ave between 34th and 36th Streets
- DOT is working with MTA to develop a plan for the area
- Due to ongoing work and coordination efforts, facilities between 34th and 43rd Streets will not be implemented at the same time as QBB



THANK YOU!

Questions?



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