



Mind The Gap:

Why Second Avenue's protected bike lanes disappear where they're needed most, and what the city needs to do about it

PUBLISHED DECEMBER 2016

Introduction

Every year, **110 people are injured** on the 18 blocks that comprise the Second Avenue bike network “gap.” This “gap” refers to the sudden absence of protected bike lanes on two distinct portions of Midtown’s Second Avenue, a key corridor of the East Side bike network in Manhattan.



Once construction on the Second Avenue subway line is complete and curbside parking-protected bike lanes from 68th to 105th Street are installed, Second Avenue will have protected bike lanes for its entire length, with the exception of two segments. The two gaps in the network are between 34th and 42nd streets, where cyclists must split an “enhanced share lane” with motor vehicles, and from 59th to 68th Street, which lacks any cyclist infrastructure whatsoever. These portions of the corridor without bike lanes also happen to be some of the most complex and dangerous intersections on the avenue. Between 59th and 60th streets, cyclists must contend with left-turning drivers approaching the Queensboro Bridge on-ramp. Further south on 36th Street, cyclists are expected to share a lane with left-turning drivers accessing

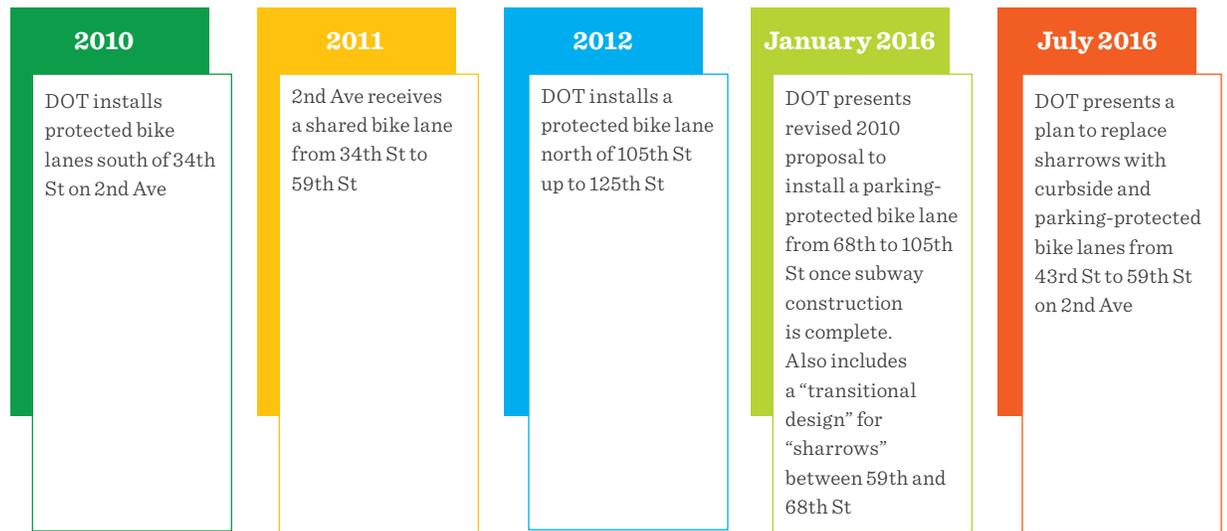
the Queens-Midtown Tunnel. At these busy intersections, pedestrians are faced with long crossing distances, cyclists must avoid construction work, and both are overwhelmed by the speeding motor vehicles that travel the avenue.

These gaps in the bike network persist in spite of strong political and community demand for action. As part of his election platform, former Mayor Bloomberg announced a series of transportation priorities that included redesigning and enhancing surface transportation on First and Second avenues. In 2010 the DOT and MTA released their first plan (see image on p. 1) to add protected bike and bus lanes to these two East Side corridors. The plan received strong support from local communities, and in June 2016, the push for a continuous, fully-protected bike lane on First Avenue was complete. Meanwhile, progress on completing the Second Avenue protected bike network has been delayed, but not due to community opposition. While Community Boards 6 and 8 have continued to endorse plans to add protected bike and bus lanes on Second, the project has been delayed by DOT, with officials citing “traffic issues,” “intersection complexity” and congestion near the bridge and tunnel approaches.

This brief report will zero in on the gap between 59th and 68th streets, with a focus on the existing dangers to pedestrians and cyclists, and will propose a design to fill the gap.

Existing Network

In 2010, the Bloomberg administration made a promise to install protected bike lanes on First and Second avenues from Houston Street to 125th Street. Six years later, that promise has finally been fulfilled on First Avenue; in June 2016, Manhattan's Community Board 6 passed a plan to fill the only remaining 5-block gap on First Avenue. But efforts to fully extend the Second Avenue bike lane have been slow and difficult. Here's a quick review of the timeline:



Second Avenue Bike Network Timeline²³

As it stands now, cyclists on Second Avenue are unprotected where traffic becomes most intense: the approaches to the Queensboro Bridge and the Queens-Midtown Tunnel. In January 2016, the DOT presented its revised plans for safety and mobility improvements along Second Avenue, with a focus on what were then two of three remaining gaps in the bike network - from 59th to 68th Street and from 68th to 105th Street.⁴ The January 2016 plan promised to extend the parking-protected bike lane south to 68th Street once construction on the Second Avenue subway project is complete. Just a few months later, DOT announced plans to replace sharrows with curbside and parking-protected bike lanes from 43rd to 59th Street (see figure above), but the presentation failed to mention protection for cyclists from 34th to 42nd Street and from 59th to 68th Street.

These gaps in the bike network are problematic for a few reasons. Since these areas serve as the primary entrances to the Queensboro Bridge and the Queens-Midtown Tunnel, traffic volume is heavy, and cyclists are unprotected from approaching left-turning drivers. At the same time, many of the intersections in these gaps have long pedestrian crossing distances, disorganized roadways and disproportionate street space for motor vehicles versus other road users.



“In addition to claiming space on blocks with heavy car and truck traffic, fixing the Second Avenue gap will require design solutions for complex intersections with the approaches for the Queensboro Bridge and Queens Midtown Tunnel. [Manhattan Community Board 8 Transportation] Committee co-chair A. Scott Falk highlighted the conspicuous gap and implored DOT to make the streets by the Queensboro Bridge safer. ‘I want you to look at creative ideas because we know that there’s not an easy solution...’ he said.” (Streetsblog)

It is also notable the DOT designated Second Avenue as a Vision Zero priority corridor in its Manhattan Pedestrian Safety Action Plan, due to the high number of deaths and serious injuries on the corridor in recent years.⁵ The avenue is also the site of numerous Select Bus Service stops and Citi Bike stations. As a major transit destination, the corridor has seen a threefold increase in cycling since 2007.⁶

When community members expressed concern about the lack of cyclist protection on these two stretches during recent CB6 and CB8 meetings, DOT

Acting Director of Bicycle and Greenway Programs Ted Wright said a protected bike lane was not being considered at the time due to congestion and complex intersections near the Queensboro Bridge approach.

Potential Solution: Queensboro Bridge Approach

After the Second Avenue Subway construction is complete, DOT will transform 68th to 105th Street on Second Avenue from 4 travel lanes and 2 parking lanes to 1 bus lane with commercial loading zones, 3 travel lanes, 1 parking lane with pedestrian islands and 1 left-side parking-protected bike lane. The left-side parking-protected bike lane removes cyclists from the path of the dedicated bus lane and loading zones on the right side and improves cyclist visibility by placing the bike lane on the driver's side.⁷ Right now, the bike lane abruptly ends at 68th Street, and cyclists are left to contend with left-turning vehicles approaching the Queensboro Bridge.



To remove that conflict between left-turning drivers and cyclists, we propose extending the left-side bike lane that is currently planned through 68th Street to 63rd Street. On the block between 62nd and 63rd streets, where Second Avenue curbside parking is removed, the left-side bike lane would shift to a center bike

lane with a median separating cyclists from left-turning drivers for the two blocks ahead of the approach. Cyclists would be protected from through-traffic to their right with flexible bollards. This would reduce conflicts between cyclists and left-turning drivers approaching FDR Drive at 60th and 62nd streets and the Queensboro Bridge between 59th and 60th streets. Signal phase changes will also be made for the dedicated left-turn lanes, which will further protect pedestrians and cyclists from potential conflicts with drivers at this intersection.

Center or median bike lanes, which are increasingly common in U.S. cities can be seen on Sands Street near the Brooklyn side of the Brooklyn Bridge, on Queens Boulevard near Queens Plaza and on Pennsylvania Avenue in Washington, DC.⁹ Despite their increasing popularity, however, they are relatively new, so their impacts on traffic and other factors have not been well-documented.

Below we'll review some potential questions readers may have about our plan to fill the Second Avenue bike network gap.

Question + Answer

How will this design proposal affect traffic flow on Second Avenue?

A center, median-protected bike lane on Second Avenue would have a similar or identical effect on traffic flow as other protected bike lanes have had throughout New York City, as it will require the same amount of space as a typical redesign with a travel-lane conversion. Studies in NYC show that protected bike lanes have positive impacts on safety, mobility, economic vitality and quality of life. A 2014 NYC Department of Transportation analysis showed that streets that received protected bike lanes experienced either improvements or steady travel times.¹⁰

- On Columbus Avenue, the installation of a protected bike lane improved travel times by 35%.¹¹ The bike lane was created by narrowing travel and parking lanes, which also decreased the incidence of speeding.
- On First Avenue, a redesign that converted five travel lanes and two parking lanes to three travel lanes, two parking lanes, a bus lane and a protected bike lane had a negligible impact on travel speeds. According to CityLab: “Average daytime taxi speeds dropped maybe one mile per hour after the reconfiguration, according to DOT figures. But that minuscule delay was likely countered by an overall rise in mobility: bicycle volume increased 160 percent, for instance, in addition to whatever transit gains the bus enhancement provided.”¹²

What’s the precedent for this design?

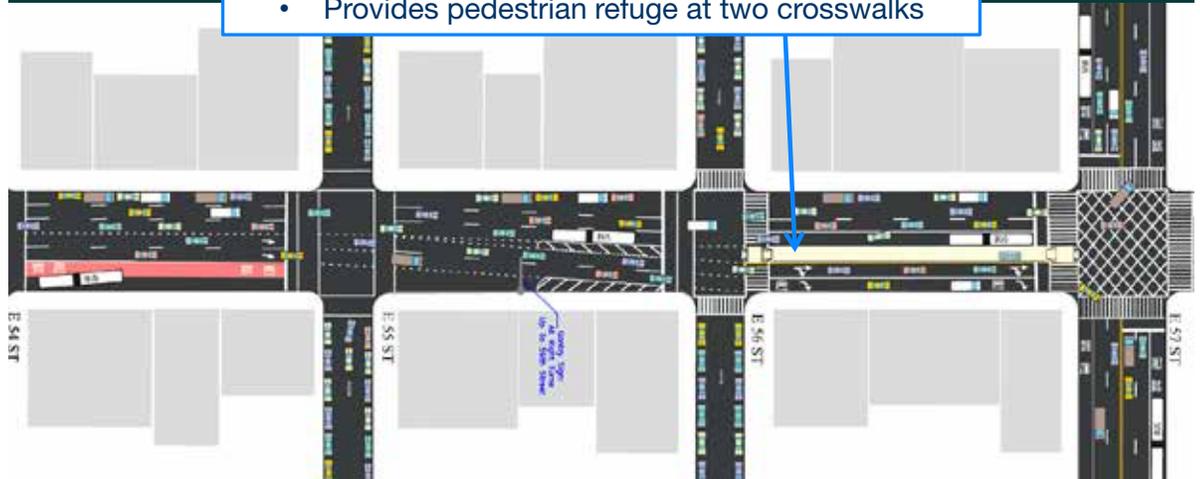
A similar design on Third Avenue and 57th Street in Midtown - a block-long pedestrian island with a bus stop and shelter - was completed late last year. High pedestrian volumes combined with heavy traffic turning onto the Queensboro Bridge made the intersection notoriously unsafe for pedestrians.¹³ To reduce pedestrian conflicts with turning vehicles, and to accommodate bus passengers boarding on Third Avenue, DOT constructed a pedestrian boarding island between 56th and 57th streets that creates space for the M101, M102 and M103 to safely stop and pick up passengers, while also providing refuge for pedestrians at two different crosswalks. Those safety improvements, along with signal changes, have resulted in improved traffic flow and protection for pedestrians crossing the wide avenue.

Third Avenue and 57th Street

Proposed

Bus Boarding Island

- Allows for M101, M102, and M103 to stop at 57th Street
- Provides pedestrian refuge at two crosswalks



Third Avenue and 57th Street boarding island and pedestrian safety improvements.¹⁴

Why is a bike lane in the center of the street superior to “cross-over” lanes? (ex. Flushing Avenue)

Evidence shows that cyclists are in great danger when they are forced to cross a busy arterial street from a left-side bike lane to a right-side bike lane (aka a “cross-over” lane).

- For example, in May of this year, Manhattan CB 3 approved a two-way protected bike lane on Chrystie Street that will replace dangerous cross-over bike lanes at Houston and Canal streets. The existing lanes require cyclists to cross traffic to continue riding in the bike lane, which leads to wrong-way cycling. The transition to a consolidated bike lane to the east side of Chrystie Street will allow for a protected east side crossing for bikes and pedestrians while also maintaining traffic flow.¹⁵

Conclusion

T There are many reasons to close the gap in the Second Avenue bike lane: enhancing cyclist safety, protecting pedestrians and calming traffic. But perhaps most importantly, completing the Second Avenue bike lane will increase ridership, give cyclists a sense of safety, and ultimately decrease traffic congestion by shifting travel patterns from car travel to cycling.

The proposed design for the gap on Second Avenue near the Queensboro Bridge is an easily replicable, affordable option to protect cyclists traveling at this dangerous intersection. Given the high number of traffic injuries that have occurred on Second Avenue in recent years, we have no time to waste. Transportation Alternatives urges the NYC Department of Transportation to overcome its misgivings and fill the gaps in the Second Avenue bike network today.

Endnotes

- 1 New York City Department of Transportation. (2010, January 14). "First Avenue/Second Avenue SBS Community Advisory Committee". <http://www.nyc.gov/html/brt/downloads/pdf/2010-01-14-brt-1st2nd-cac3.pdf>
- 2 New York City Department of Transportation. (2016, January). "2nd Avenue: Safety and Mobility Improvements". Electronically retrieved here: <http://www.nyc.gov/html/dot/downloads/pdf/2nd-ave-protected-bike-lane-2016.pdf>
- 3 New York City Department of Transportation. (2016, July). "2nd Avenue E 59th St to E 43rd St Protected Bike Lane". Electronically retrieved here: <http://www.nyc.gov/html/dot/downloads/pdf/2nd-avenue-59th-43rd-sts-bike-lanes-jul2016.pdf>
- 4 New York City Department of Transportation. (2016, January). "2nd Avenue: Safety and Mobility Improvements". Electronically retrieved here: <http://www.nyc.gov/html/dot/downloads/pdf/2nd-ave-protected-bike-lane-2016.pdf>
- 5 NYC Department of Transportation. (2015). "Manhattan Pedestrian Safety Action Plan". <http://www.nyc.gov/html/dot/downloads/pdf/ped-safety-action-plan-manhattan.pdf>
- 6 ATI Data, Bicycles btw. E 85th St and E 86th St on 1st Ave and btw. E 87th St and E 86th St on 2nd Ave in October 2007, 2011, and 2015. 7am-7pm.
- 7 NACTO. (2012). *NACTO Urban Bikeway Design Guide*.
- 8 Created using streetmix.net
- 9 StreetMix. (2013, August). Electronically retrieved from: streetmix.net/post/58182940451/streetmix-strategies-center-bike-lanes
- 10 New York City Department of Transportation (2014, September). "Protected Bicycle Lanes in NYC". Electronically retrieved from: <http://www.nyc.gov/html/dot/downloads/pdf/2014-09-03-bicycle-path-data-analysis.pdf>
- 11 http://www.nyc.gov/html/dot/downloads/pdf/2011_columbus_assessment.pdf
- 12 <http://www.citylab.com/cityfixer/2014/09/when-adding-bike-lanes-actually-reduces-traffic-delays/379623/>
- 13 New York City Department of Transportation. (2014, December). "Third Avenue and 57th Street: Bus Boarding Island and Pedestrian Safety Improvements". Electronically retrieved here: <http://www.nyc.gov/html/brt/downloads/pdf/2014-12-01-brt-thirdave-cb6-presentation.pdf>
- 14 Ibid
- 15 New York City Department of Transportation. (2016, March). "Chrystie Street: Two-way Protected Bicycle Lane". Electronically retrieved from: <http://www.nyc.gov/html/dot/downloads/pdf/chrystie-st-bike-lane-mar2016.pdf>

