



MIDTOWN CROSSTOWN PROTECTED BIKE LANES

Presented to Manhattan Community Boards 4, 5, 6
March, 2019



PRESENTATION OVERVIEW

1. Background
2. 26th St and 29th St
Analysis & Summary
3. 52nd St and 55th St
Proposal
4. Next Steps



Background

1

Midtown 59th St to 13th St

Heavy commercial activity, transportation hubs, and tourist destinations
Major attractions cause congestion for all users



Heavy Loading Activity



High Pedestrian Volumes



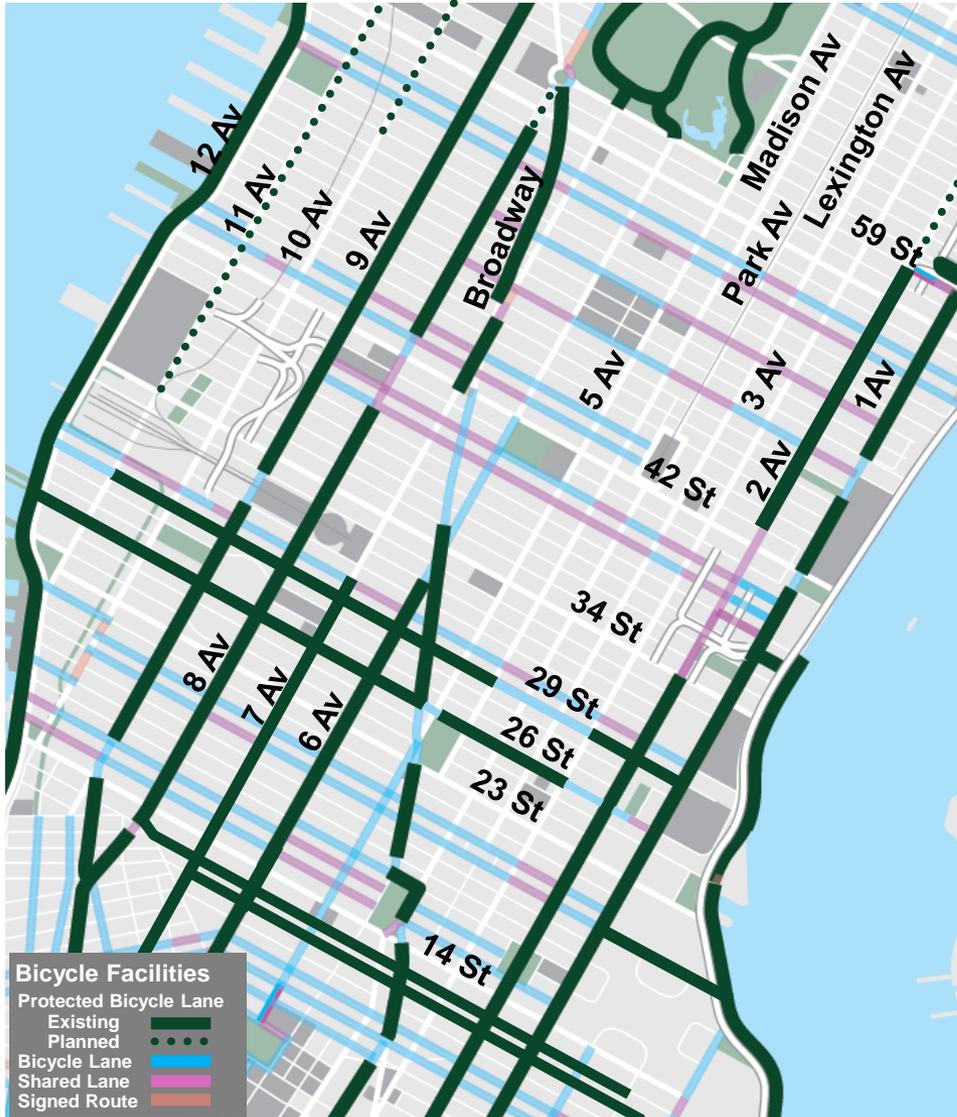
Inadequate Bike Facilities



Midtown Biking

Bike route network established with strong north – south facilities

Lack of cross town options contributes to safety issues



More people are biking in Midtown

- More than **30,000** bikes cross 50th St daily (7a – 7p)
38% increase from **2015 to 2018**
- Over **12,500 Citi Bike trips** start and end in **Midtown each day** Q2/2016, Q2/2018
- Citi Bike **adding 1,250 more bikes** to areas in Manhattan and Brooklyn in Spring 2019
- **Bike commuting** mode share is **2.2% for Midtown residents**, compared to 1.1% citywide (ACS 5-yr)

Biking is an efficient option for trips in Midtown but there are deterrents

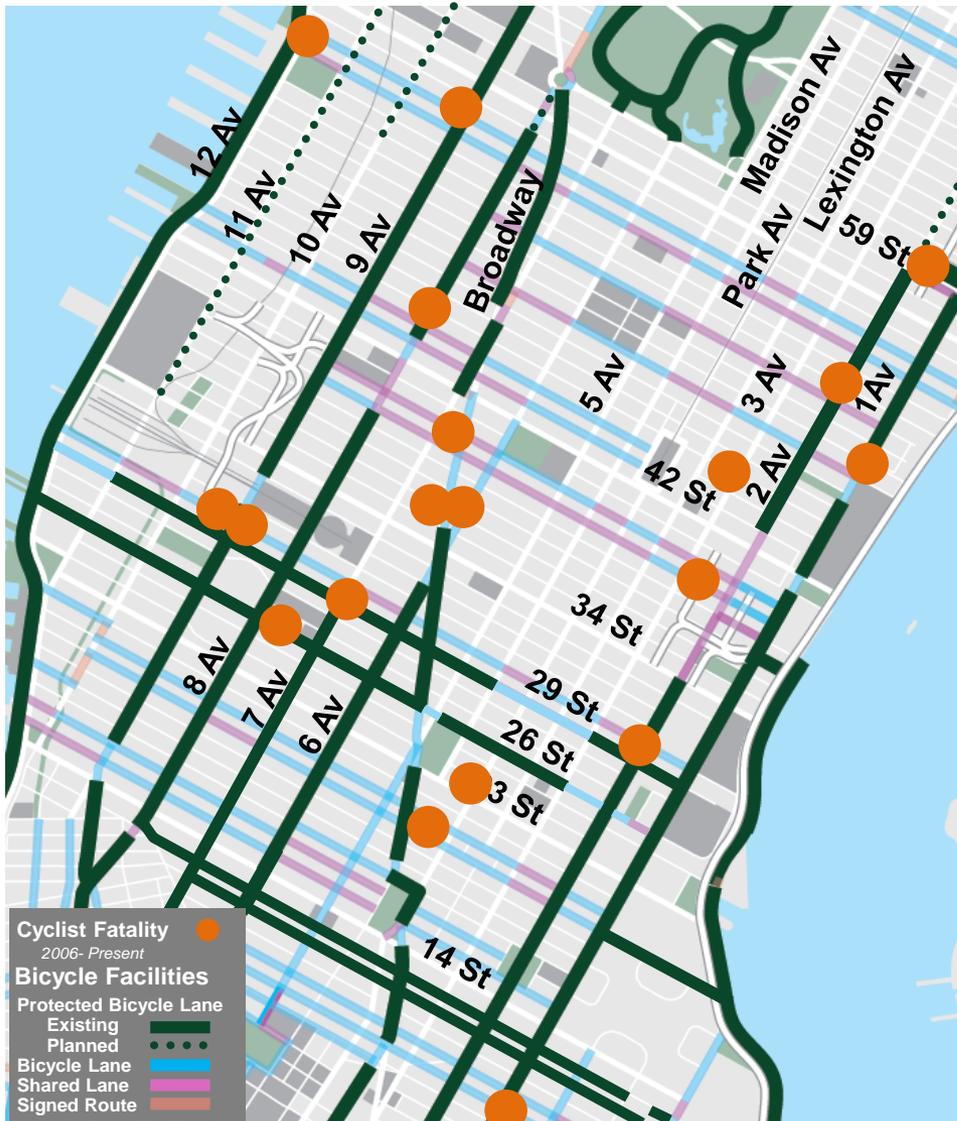
- Citi Bikes are faster and cheaper than taxis
- Many protected lane options for north-south bicycle rides, few protected crosstown routes

Safety concerns are a barrier to increased ridership

- **More women** counted riding in **protected bike lanes** at 50th St than on streets without

Midtown Bicyclist Safety

Cyclist Fatalities: 2006 to Present



While there has been dramatic growth in cycling citywide - cyclist fatalities remain low

2018 record low for cyclist fatalities, half of the year before

However, the majority of cyclist fatalities have occurred on streets without bike lanes

Community Boards 4, 5, and 6 have the highest cyclist KSI in Manhattan

Midtown Bicyclist Safety

Street designs that include protected bike lanes increase safety for all users

-15% drop in all crashes with injuries

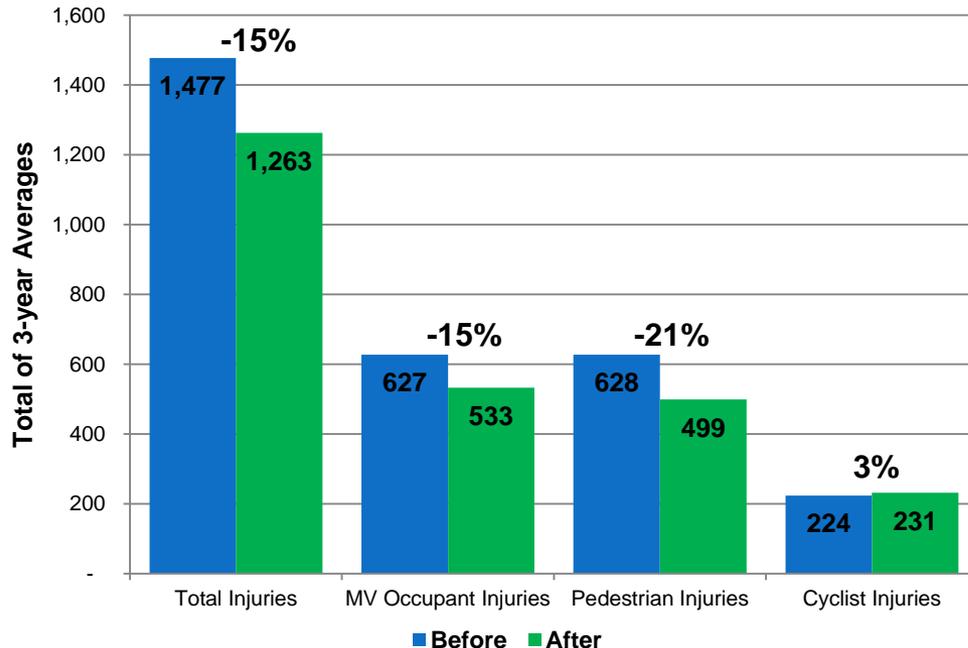
-21% drop in pedestrian injuries

on streets where protected bike lanes were installed 2007-2017

Injuries to cyclists increase only 3%,
despite a **61% bike volume increase**

Protected Bike Lanes

Before and After Crash Data, 2007 - 2017



Data from 25 separate protected bicycle lane projects installed from 2007-2014 with 3 years of after data. Includes portions of 1 Ave, 2 Ave, 8 Ave, 9 Ave, Broadway, Columbus Ave, Hudson St, Lafayette St / 4 Ave, Sands St, Allen/Pike St, Kent Ave, Prospect Park West, Flushing Ave, Bruckner Blvd & Longfellow Ave, Imlay St / Conover St, Paerdegat Ave. Only sections of projects that included protected bike lanes were analyzed.
Source: NYPD AIS/TAMS Crash Database

26th St and 29th St
Analysis & Summary

2

Madison Square Corridor

26th Street and 29th Street

Installed 2018

- Connections to Madison Square Park, Bellevue Hospital, colleges, commercial uses, multi-family residences, industrial uses



26th St at 7th Ave



29th St between 2nd Ave and 3rd Ave



26th Street and 29th Street

Summary

Community Requests and Project Adjustments



26th St (11th Ave – 10th Ave)



29th St (7th Ave – 8th Ave)

Implementation

- Coordinated markings installation with ASP regulation times
- Clarified new parking configuration with parking signage, DOT staff onsite

Updated markings and signage

- Preserved curb access for disability placards at 26th St and 1st Ave
- Additional markings at school bus loading areas
- Adjustments made for driveway and loading access

Ongoing Coordination

- Working with hotels, schools and residential areas to optimize curbside access



26th Street and 29th Street

Analysis

Bike Ridership Increased During Peak Hours

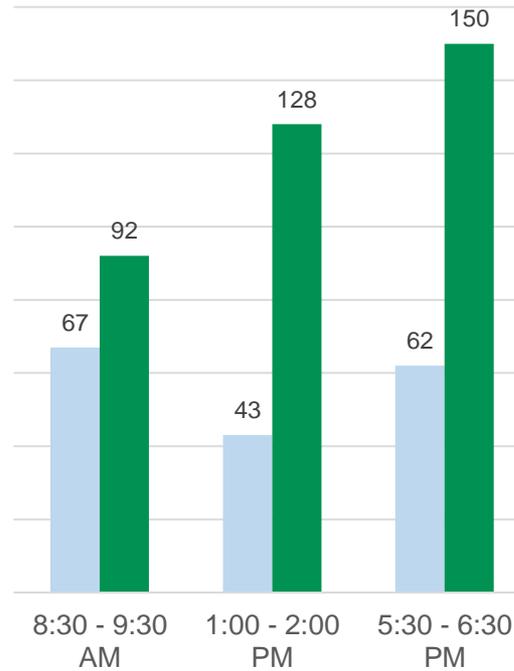
Largest increases observed on 26th St, where no bike lane existed before



26th Street

6th Ave – 7th Ave

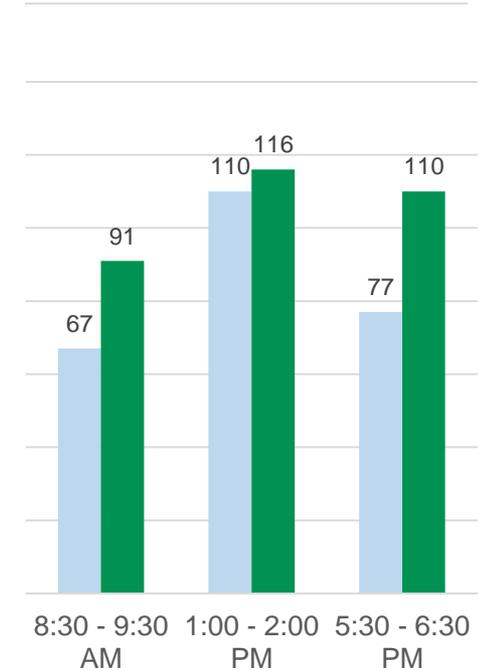
New bike lane



29th Street

6th Ave – 7th Ave

Upgraded bike lane



■ BEFORE ■ AFTER

12hr Bike Counts 7a – 7p
Before: April 2018, 55-70 degrees F
After: October 2018, 58 degrees F

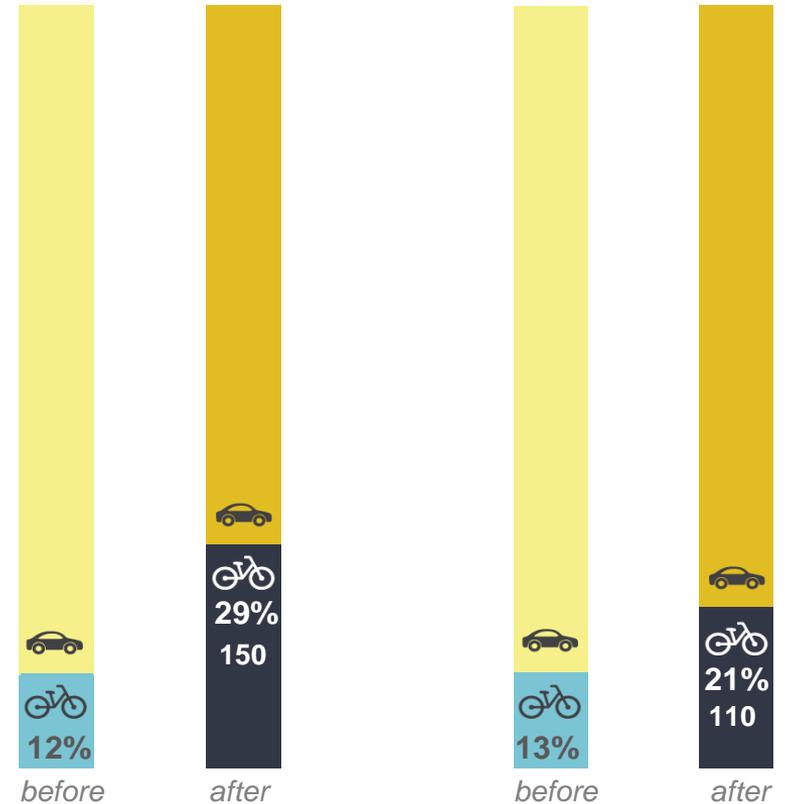
After counts conducted just 6 weeks after implementation, 2019 counts planned

26th Street and 29th Street

Analysis

Bikes as Travel Mode Increased

Share of bikes captures the percentage of bicycles in relation to vehicle volume



26th Street
New bike lane

29th Street
Upgraded bike lane

Share of Bikes reflects PM Peak Hour, 5:30 PM – 6:30 PM, between 6 Ave – 7 Ave on both corridors

26th Street and 29th Street

Analysis

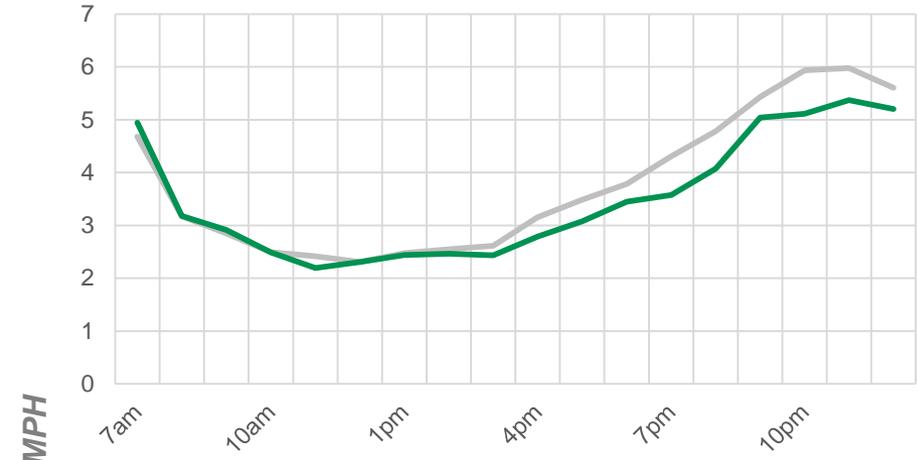
Vehicle travel times

Average speeds on both corridors remained relatively similar
Adjacent streets without new bike lanes showed similar patterns

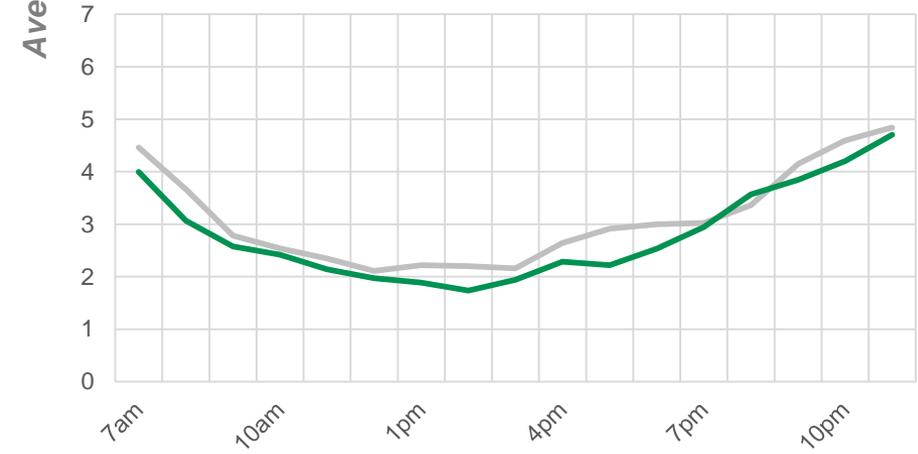


29th St at 7th Ave

26th Street



29th Street



— 11/2017 — 11/2018

Taxi Speeds collected Nov 2017 and Nov 2018,
sample sizes 900 – 12,600

Analysis

Updated Loading Regulations

Allow for varying occupation times on each block as well as potential higher turnover

North curb

1 hour Metered Commercial Loading

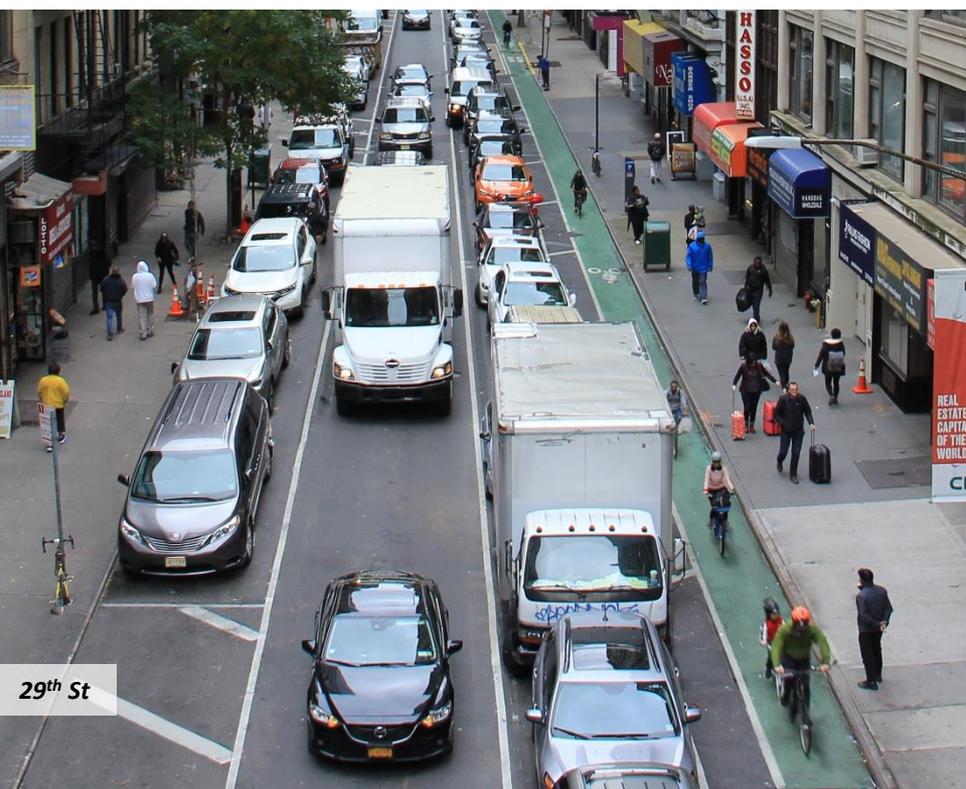
South curb (bike lane side) No Change

3 hour Metered Commercial Loading

How are the new 1 hour loading areas used?

- **78%** of vehicles on north curb stayed for **less than 1 hour**
- **Most vehicles (72%)** on north curb stayed for **30 minutes or less**
- Loading zones were fully utilized for most of the day at most locations

Updated regulations appear to match usage patterns



6 locations observed in October 2018

26th Street and 29th Street

Analysis

New No Standing Zones

added to preserve short term curbside access and emergency clearance in commercial Midtown core

How are the new NSA zones used?

Occupancy

- **26th St:** Drivers stop over often, but are not parked all day
 - **80%** of drivers stay **less than 15 minutes**
- **29th St:** zones are **more than 60%** clear at all times of day

Duration

- **More than half (53%)** of all stopovers last **5 mins or less**
- **9%** of stopovers last for **30 mins – 1 hour**
- **4%** last for more than an hour

4 locations observed in October 2018



80' No Standing Anytime

Short Term Commercial Loading (1 Hour)

80' No Standing Anytime



Metered Parking and Loading Zones

26th Street and 29th Street

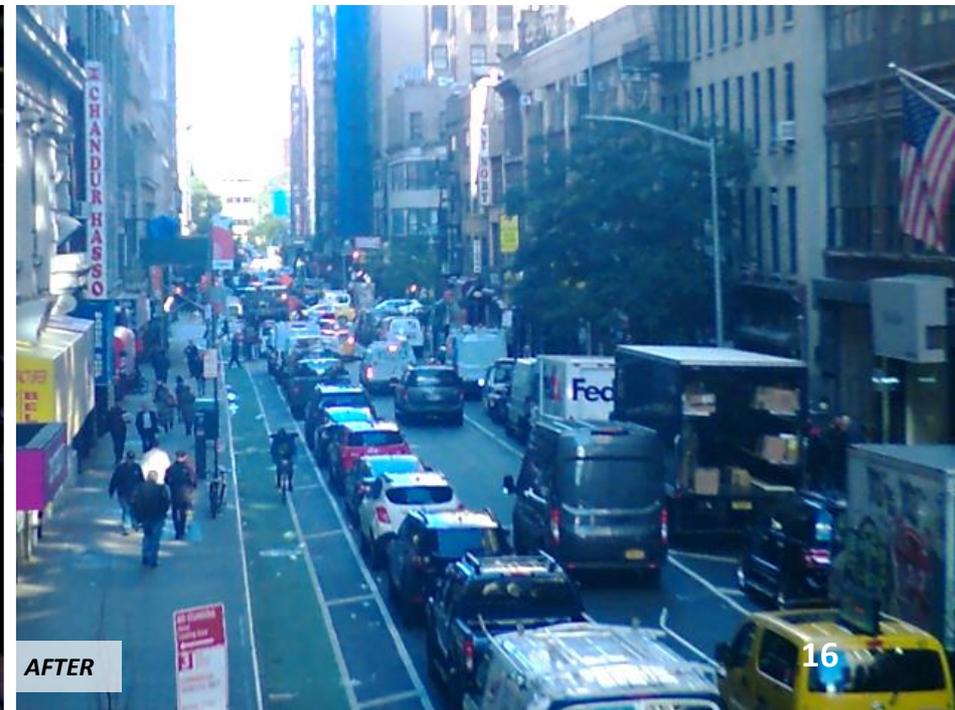
Analysis

Double Parking

Updated roadway design discourages double parking

How was double parking affected?

- **Before** the project was installed, **12% of double parking vehicles** would stop for **30 minutes or longer**
- **After** installation, double parking occurred **less frequently**, and **0% of vehicles** doubled parked for more than 30 minutes
Most (67-100%) double parked vehicles stopped for **less than 15 minutes**



Madison Square Corridor

26th Street and 29th Street

Summary

- Connections to Madison Square Park, Bellevue Hospital, colleges, commercial uses, multi-family residences, industrial uses



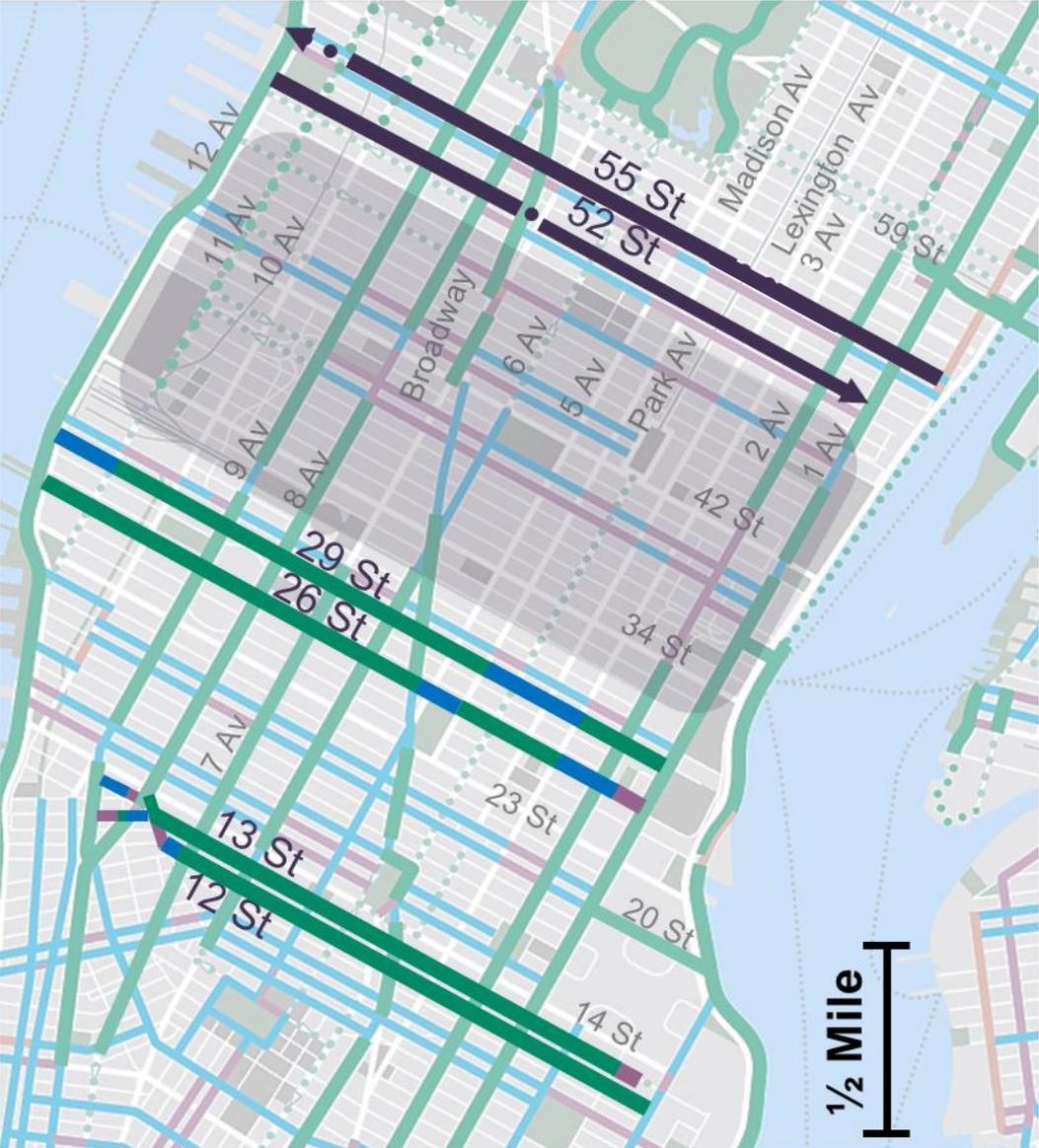
- *Number of cyclists increased*
- *Vehicle travel times not affected*
- *Curbside regulation updates well used*
- *Design elements replicable yet flexible for Midtown context*

Proposed Crosstown Routes

3

Crosstown Bike Routes Strategy

Proposed Routes - accessible every 1/2 mile through Midtown



Central Park South
52nd St and 55th St
Proposed

Times Square Area
In Development / Planning

Madison Square
26th St and 29th St
Implemented Summer 2018

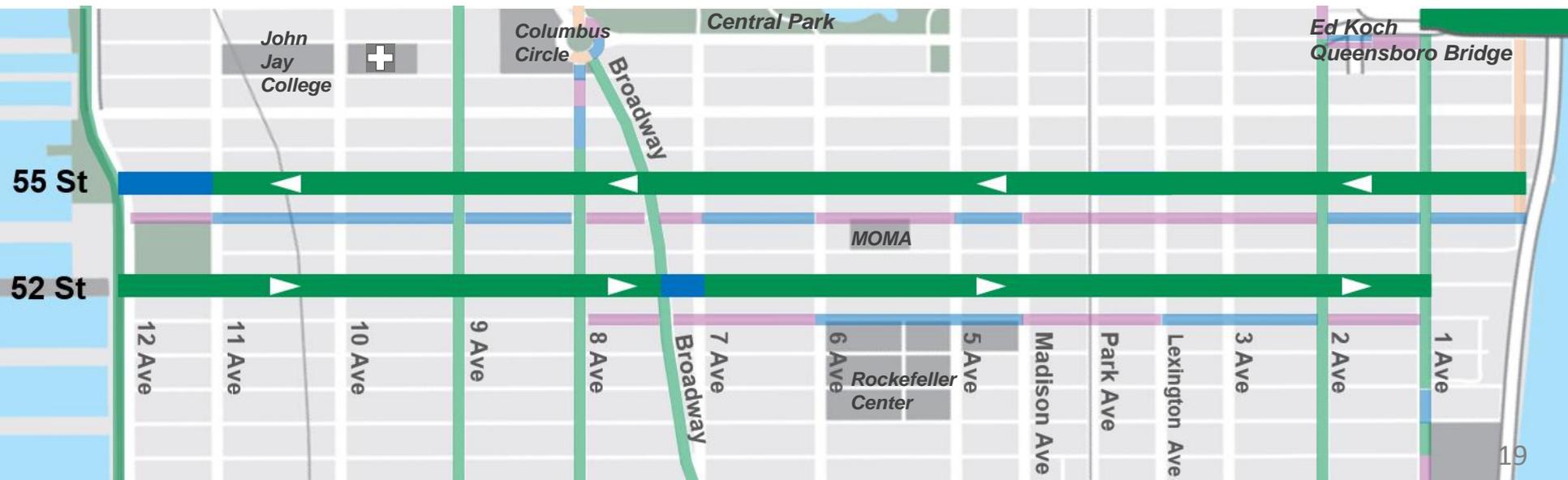
Union Square
12th St and 13th St
Implementation Began Fall 2018
Currently Under Review

- Protected Bike Lane
- Conventional or Shared Bike Lane
- Area Under Study

Central Park South Corridor

52nd Street and 55th Street

- *Connections to Ed Koch/Queensboro Bridge, Central Park, Columbus Circle, Rockefeller Center, theaters, museums, hotels, commercial uses, multi-family residences*



52nd Street and 55th Street

Route Selection

Why did we choose 52nd St and 55th St?

Continuity

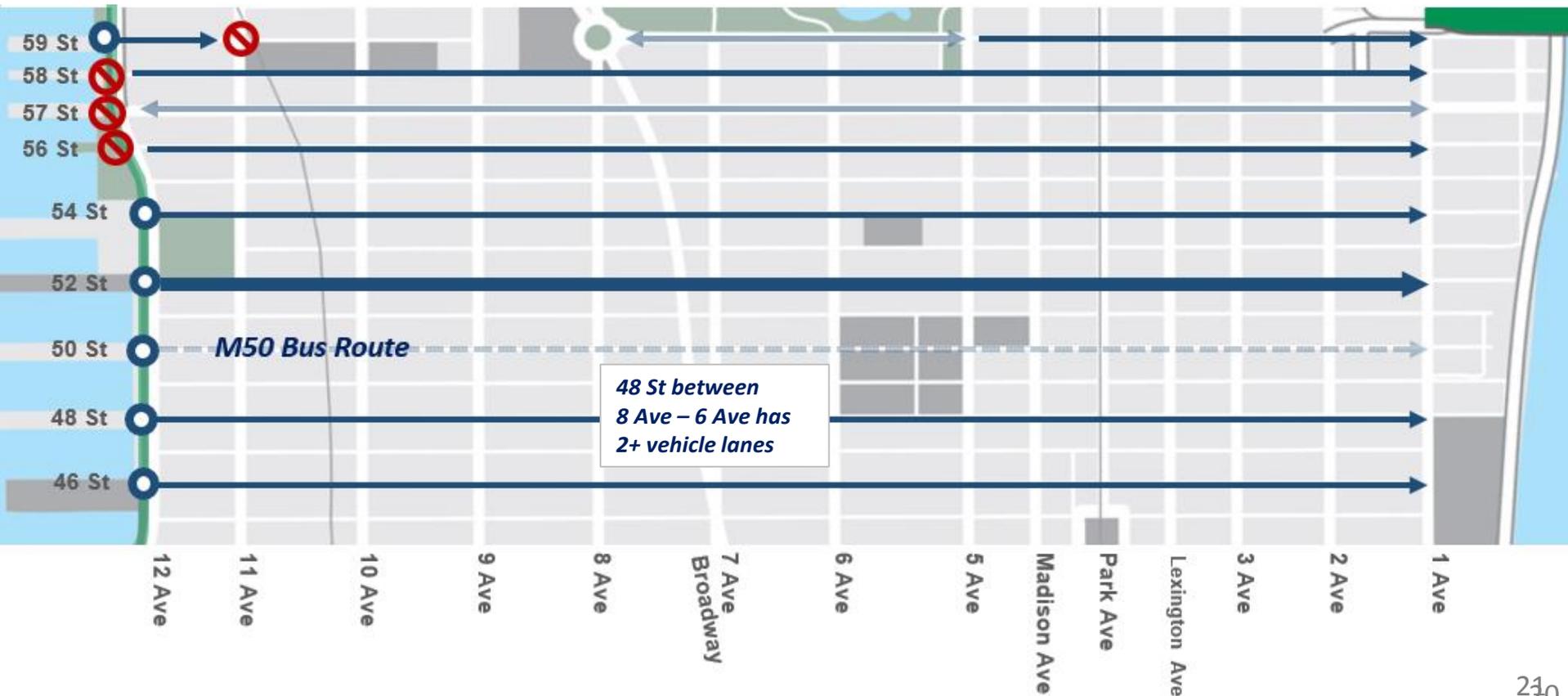
Uninterrupted Crosstown Streets

Connectivity

- Hudson River Greenway Access
- Connection to 1st Ave Bike Lane

EASTBOUND

multiple eastbound options based on connectivity



52nd Street and 55th Street

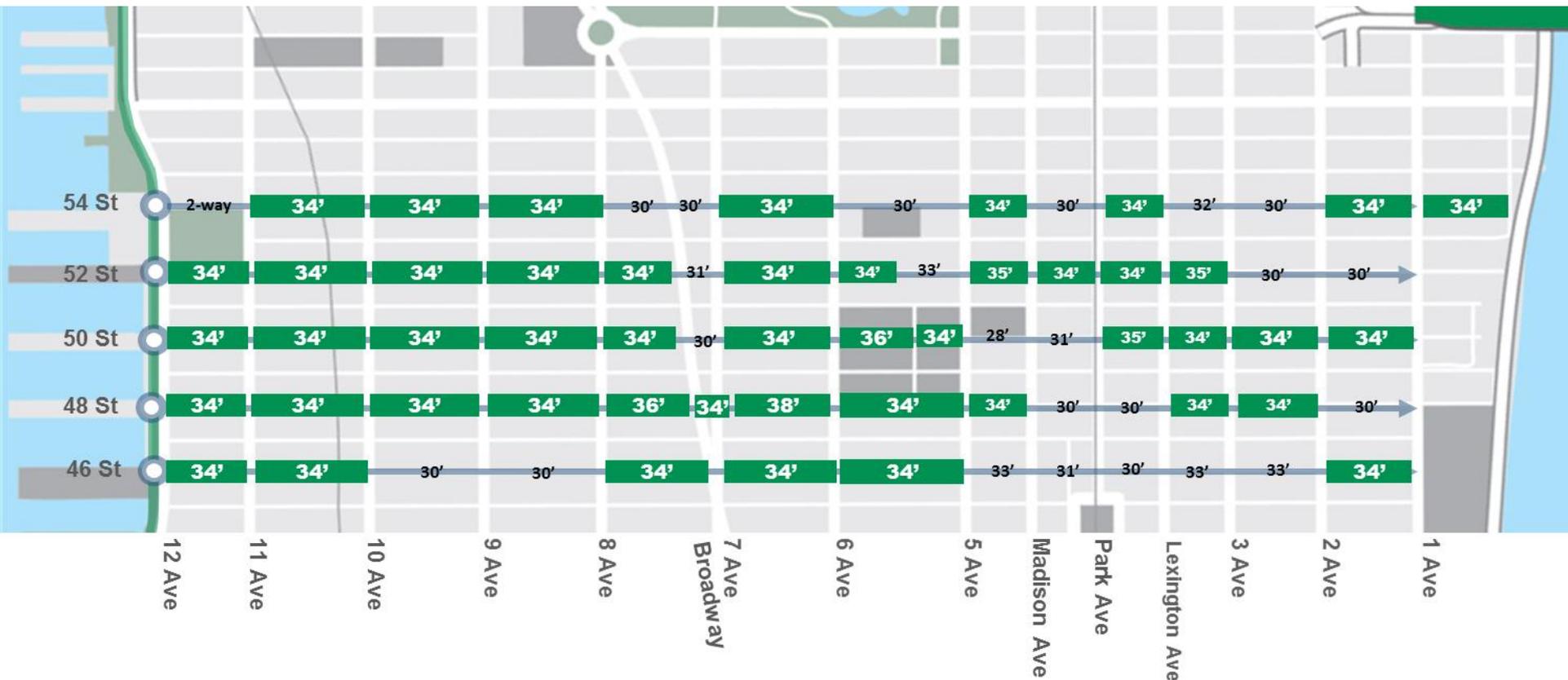
Route Selection

Why did we choose 52nd St and 55th St?

Street Widths

EASTBOUND

52nd St has the most 34' + blocks without multiple travel lanes



Protected Bike Lane Feasible:

52nd Street and 55th Street

Route Selection

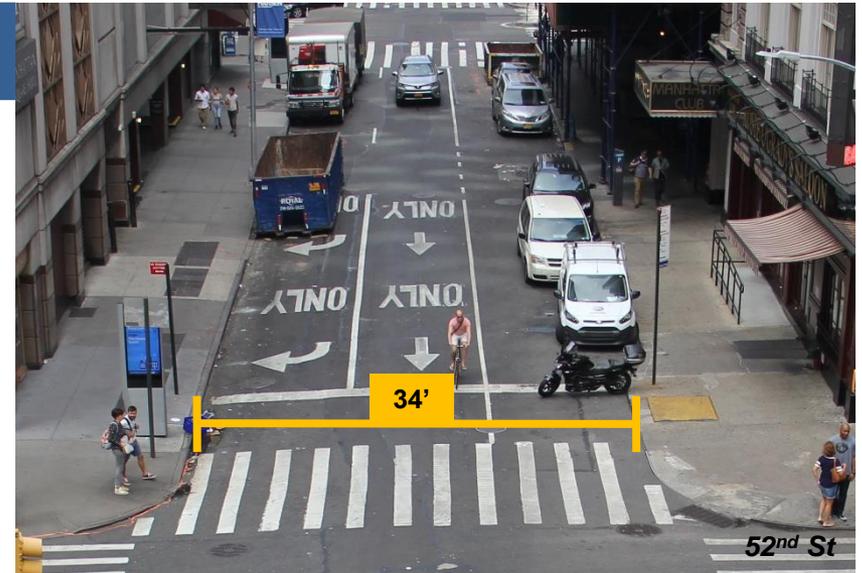
Why did we choose 52nd St and 55th St?

Street Widths

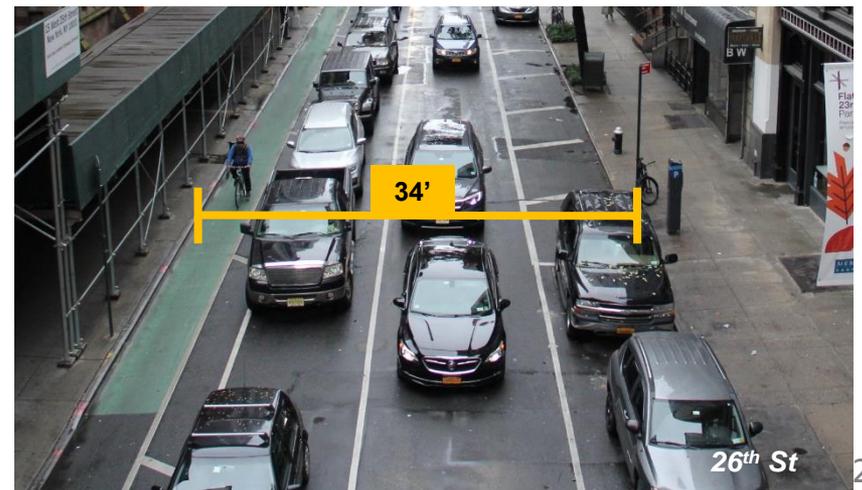
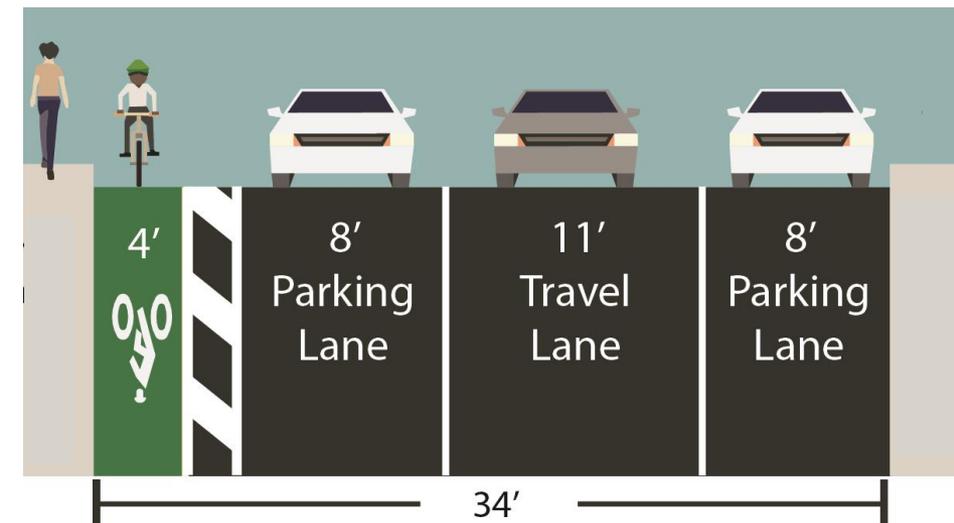
34' allows for protected bike lane on a one-way street with parallel parking on both sides

Narrower blocks require parking removal on one side

52nd and 55th St have the most blocks that fit a protected bike lane without removing a travel lane or parking lane



Protected Bike Lane *Typical*



52nd Street and 55th Street

Route Selection

Why did we choose 52nd St and 55th St?

Continuity

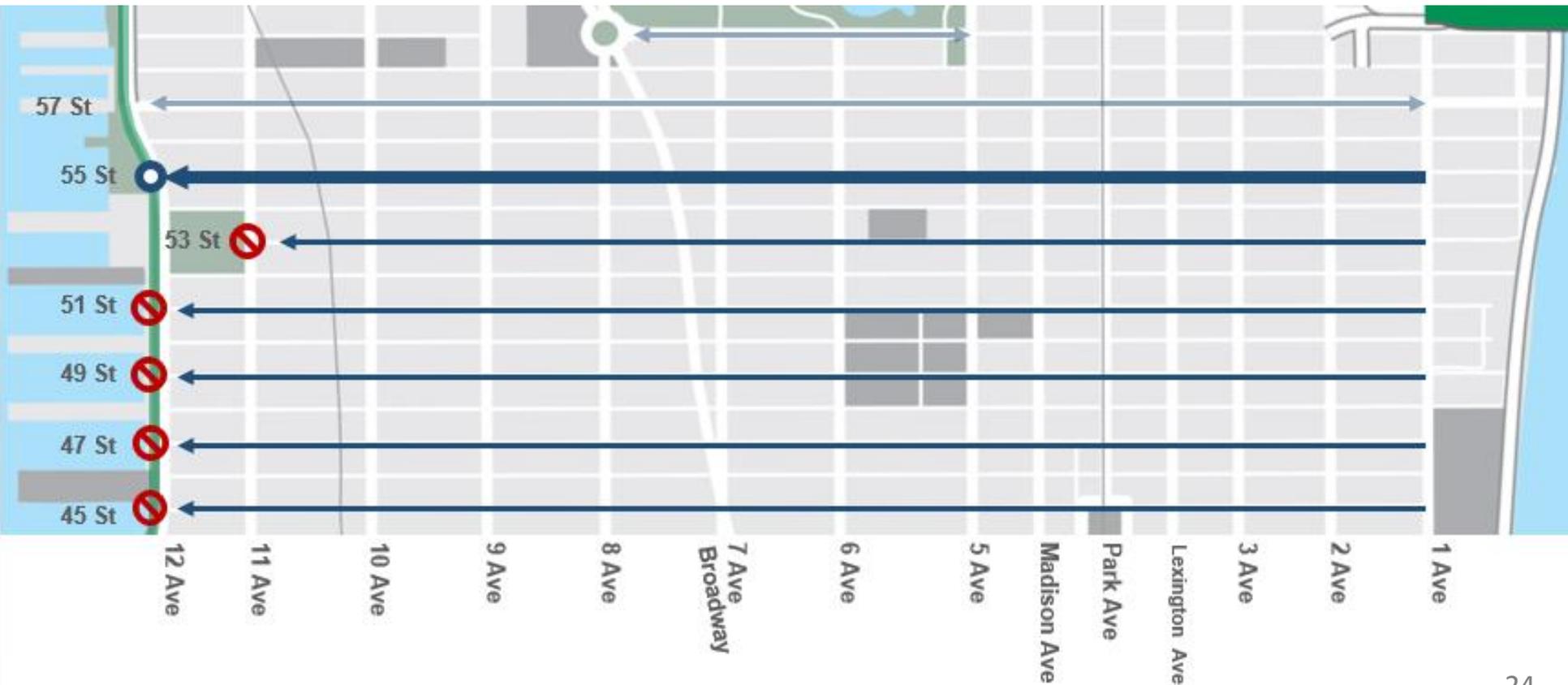
Uninterrupted Crosstown Streets

Connectivity

- Hudson River Greenway Access
- Connection to 1st Ave Bike Lane

WESTBOUND

55th St has the only crossing to Hudson River Greenway



52nd Street and 55th Street

Design

Curb Management

Accommodations for land uses

- Update parking regulations to mitigate double parking
- Additional locations delineated for pick ups/drop offs
- Maintain emergency access with No Standing zones
- Hotels / commercial floating loading
- Theaters / loading zones

Adjusted Loading Zones



No Standing Markings



Hotel Loading Zones

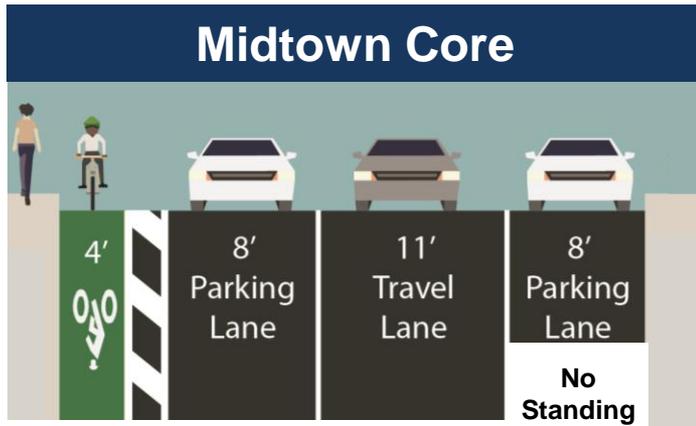


52nd Street and 55th Street

Design

Curb Management

Preserve short term curbside access and emergency clearance in the commercial Midtown core blocks
Consider adjacent land use of new NSA zones

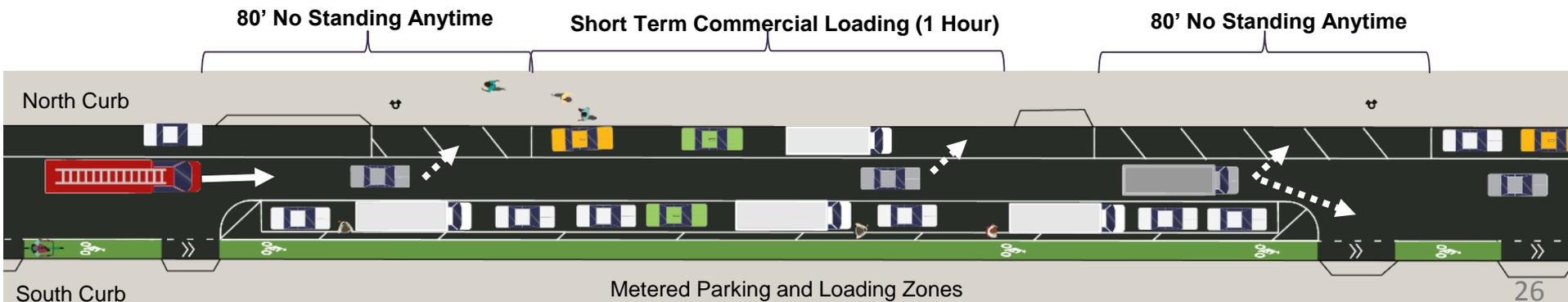


North Curb

- *Restrict curbside use, while allowing short term access*
 - Increase No Standing zones
 - Existing loading zones will be maintained where necessary

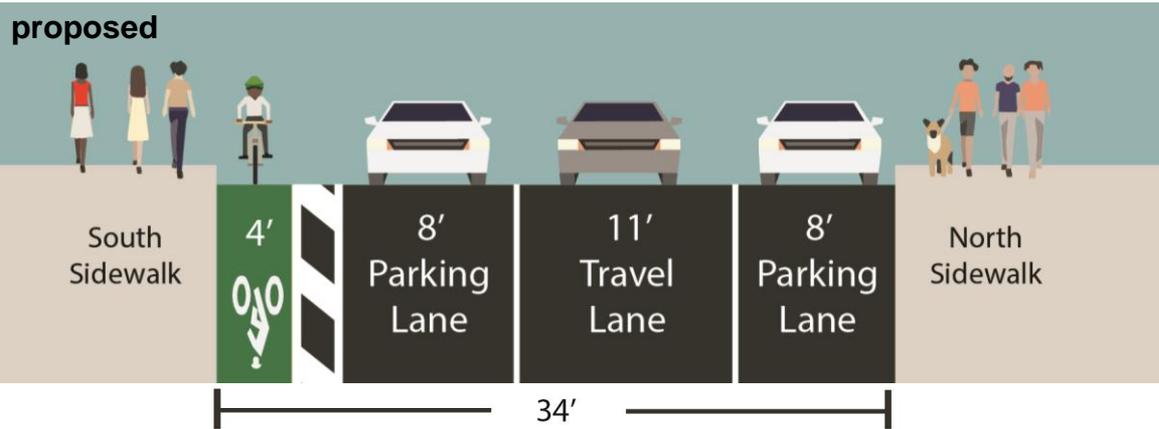
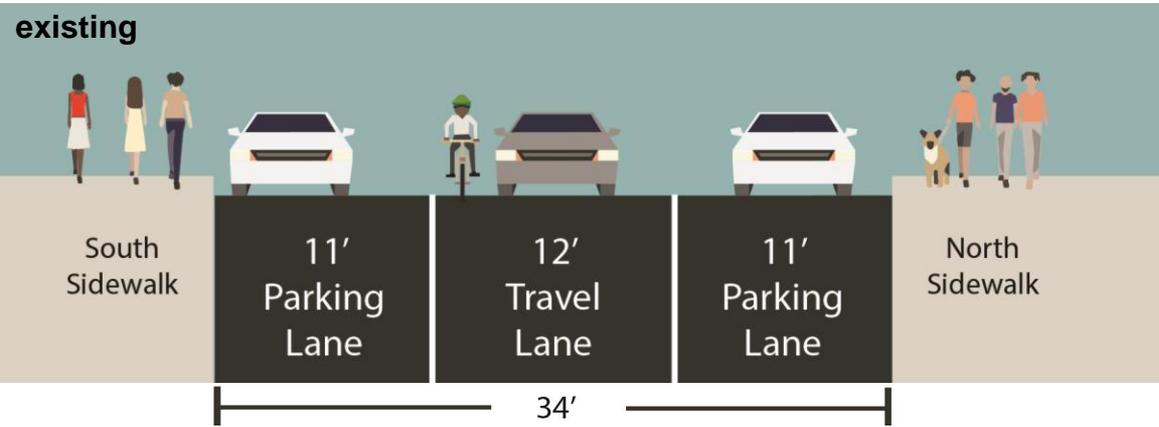
Emergency Access

- 80' No Standing Anytime zones (2-3 per block, sited at hydrants and driveways to minimize impact)



52nd Street and 55th Street

52nd Street Typical Design



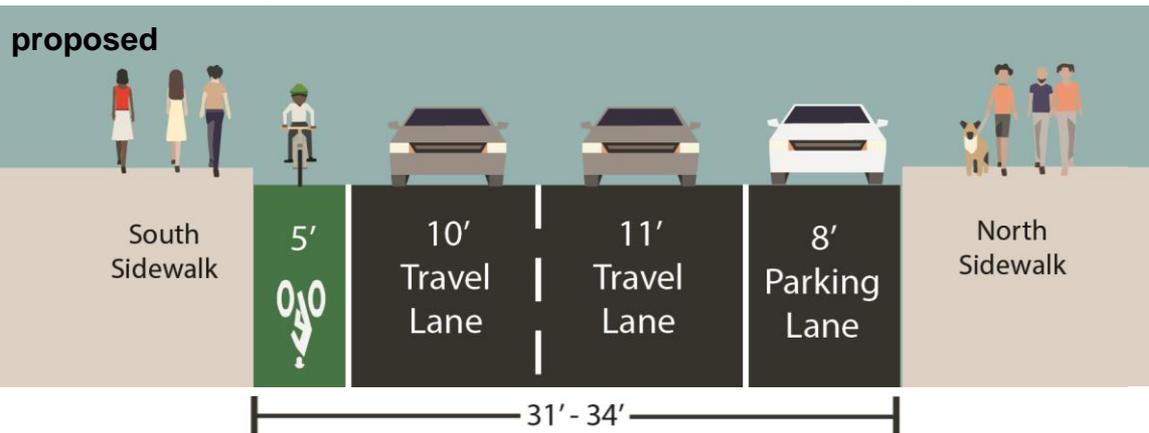
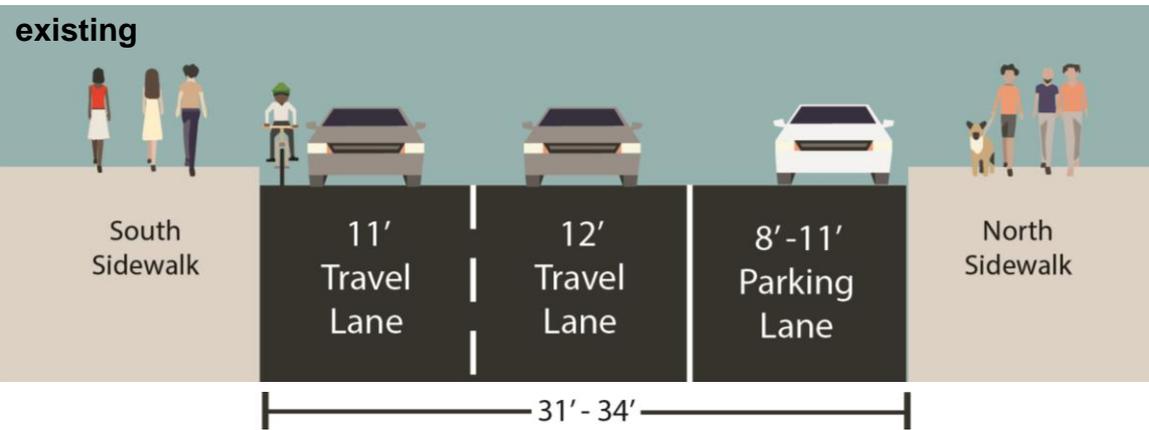
South side of street aligns with greenway access

Requires approx 2-3 parking spaces per block for daylighting at intersections



52nd Street and 55th Street

52nd Street Atypical Block: Broadway-7th Ave



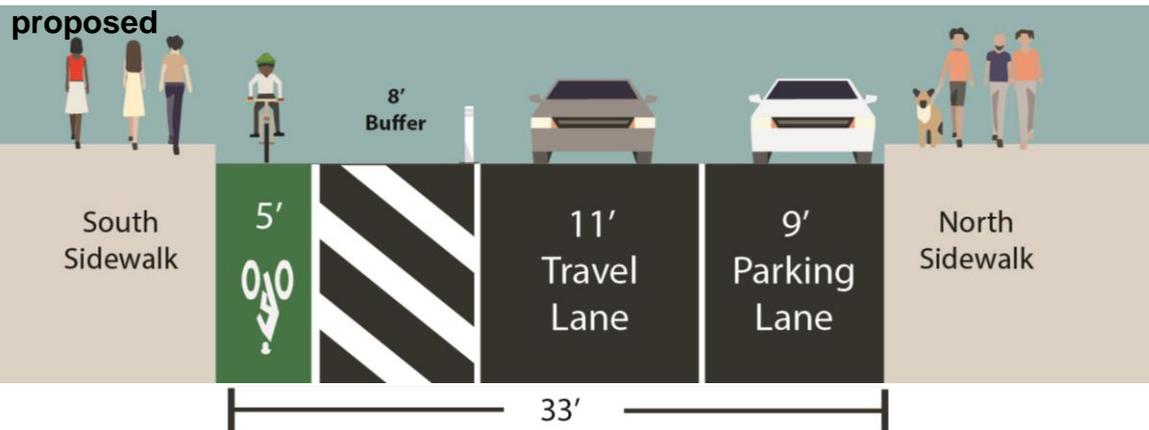
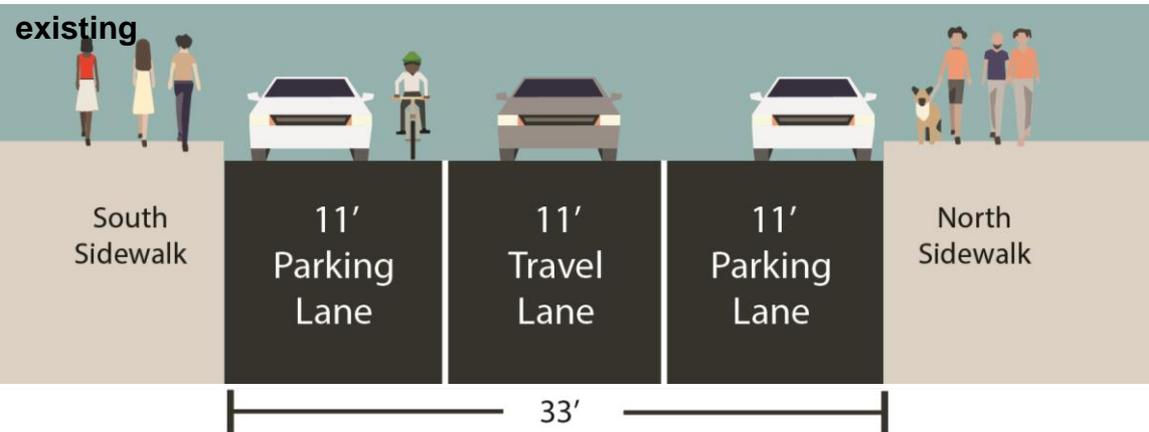
Curbside lane to be painted green

Requires removal of 1 loading space on north curb (6 remain)



52nd Street and 55th Street

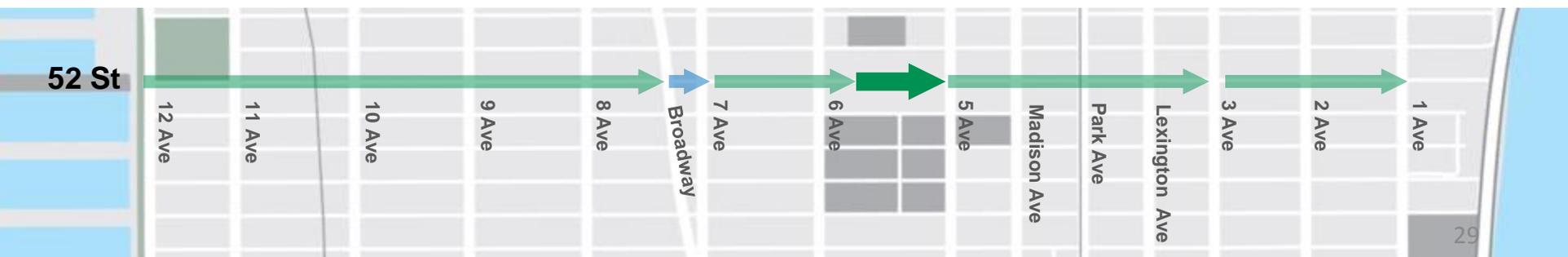
52nd Street Atypical Block: 6th Ave – 5th Ave



Flexible Delineators

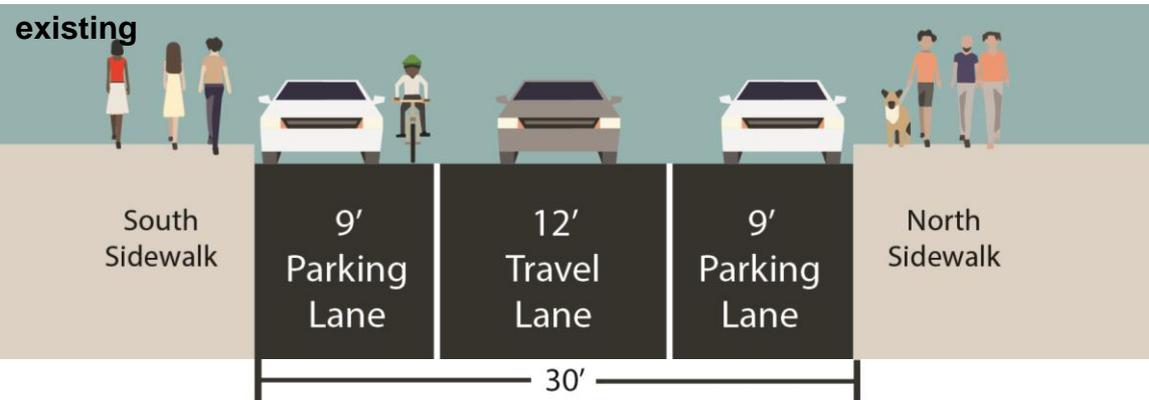
Enough clearance to install flexible bollards along bike lane buffer

Requires removal of 27 loading spaces on south curb (31 remain on the block)

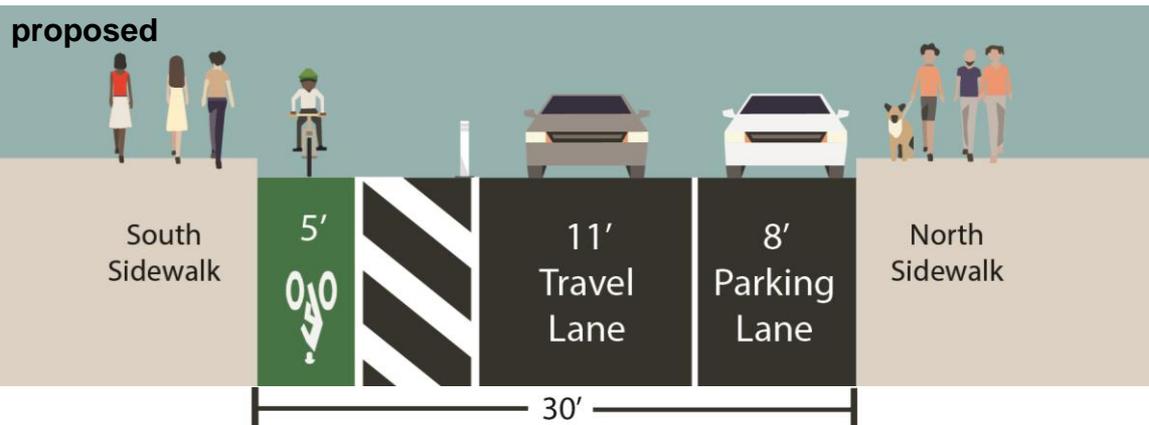


52nd Street and 55th Street

52nd Street Atypical Blocks: 3rd Ave – 1st Ave



Flexible Delineators



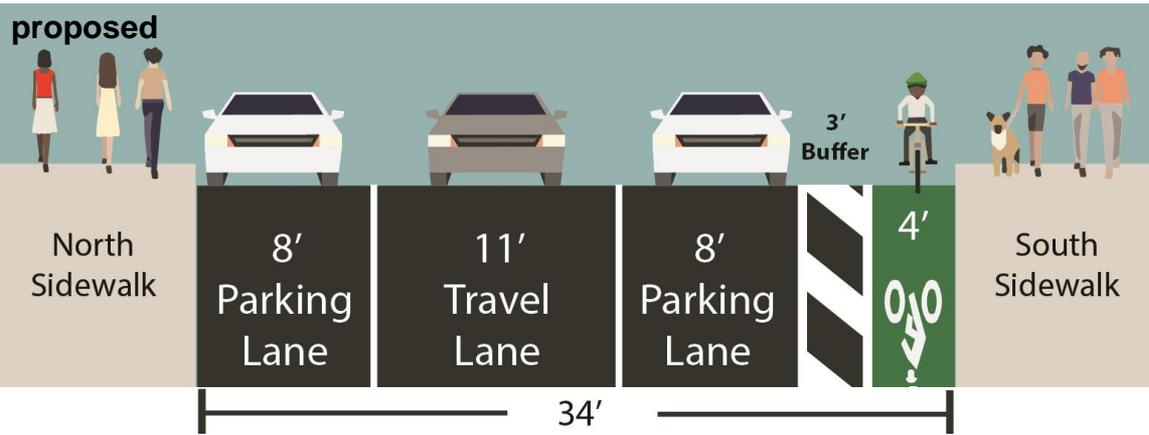
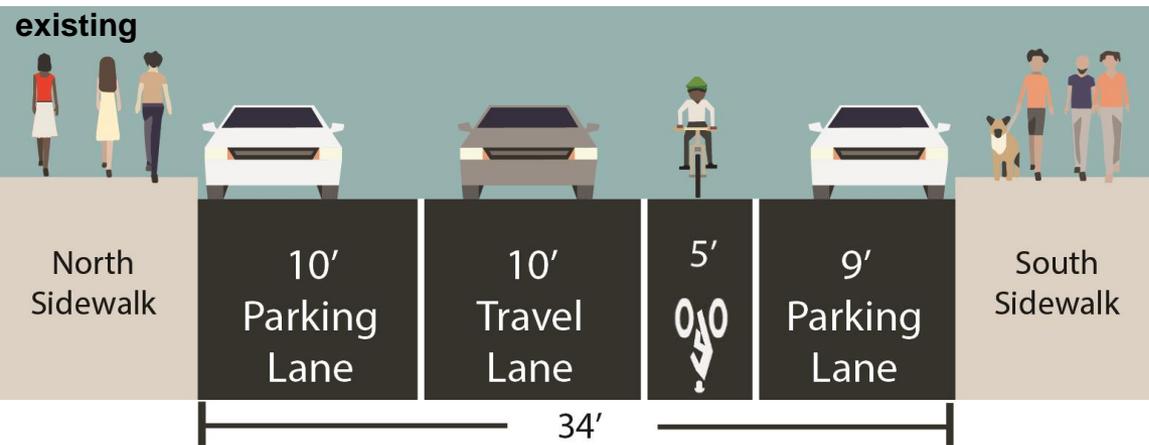
Enough clearance to install flexible bollards along bike lane buffer

Removal of approx. 24 loading and AVO spaces per block on south curbs (27 remain on north curbs)



52nd Street and 55th Street

55th Street Typical Design



New design 'flips' parking lane and bike lane

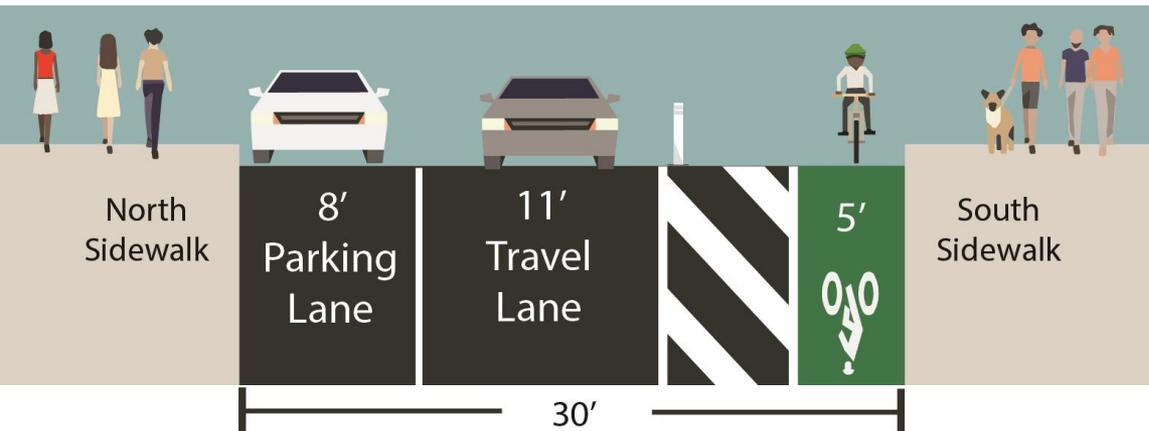
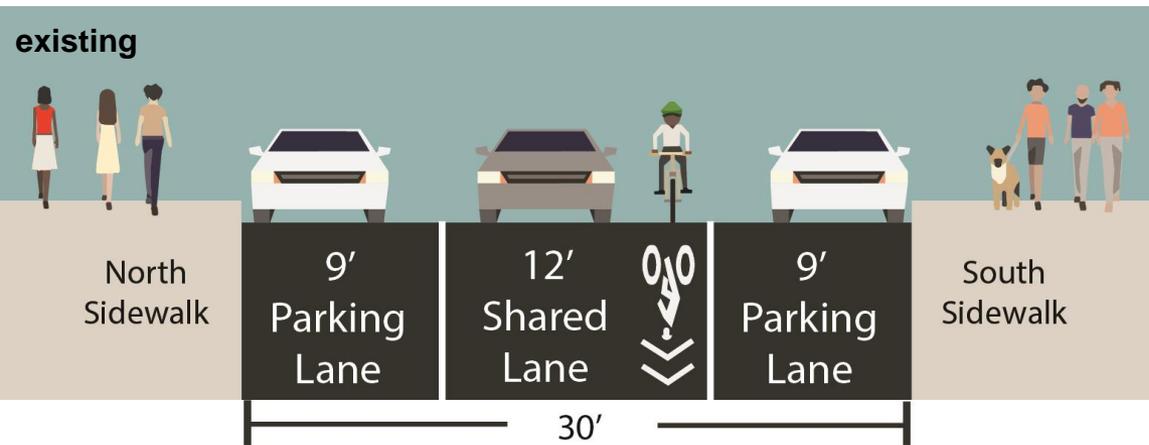
Buffer allows flexibility for people accessing vehicles or cyclists to maneuver

Design accommodates M57 Bus Stop at 1st Ave



52nd Street and 55th Street

55th Street Atypical Block: Lexington Ave – Park Ave



Flexible Delineators

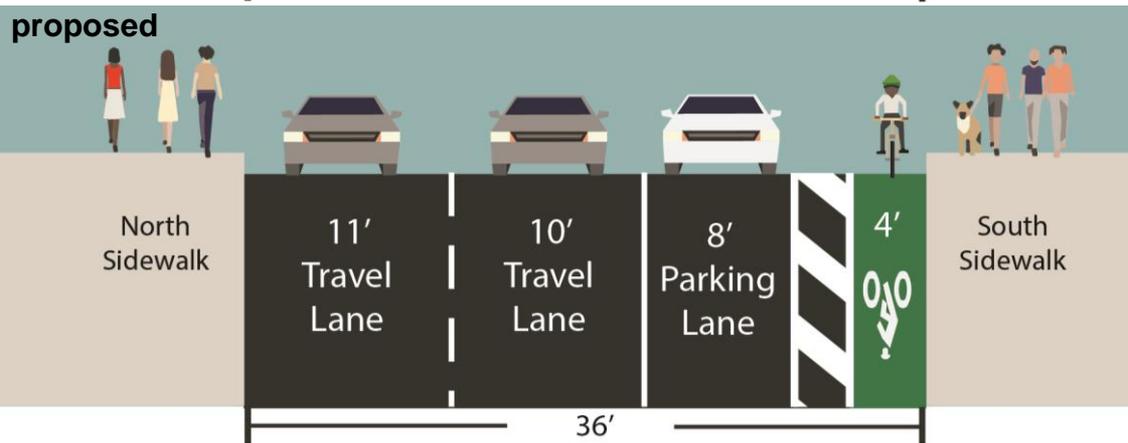
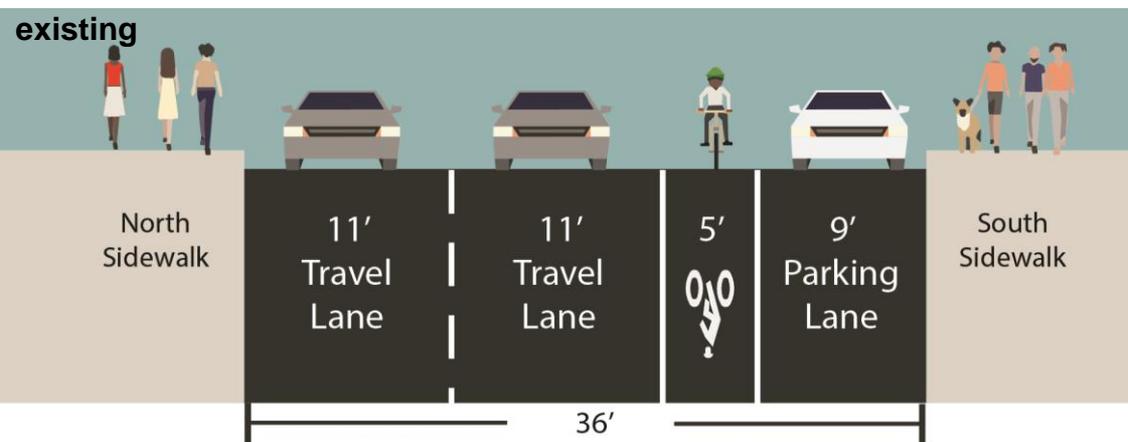
Enough clearance to install flexible bollards along bike lane buffer

Removal of 14 commercial loading spaces on south curb (17 remain on north)



52nd Street and 55th Street

55th Street Atypical Block: Broadway – 8th Ave



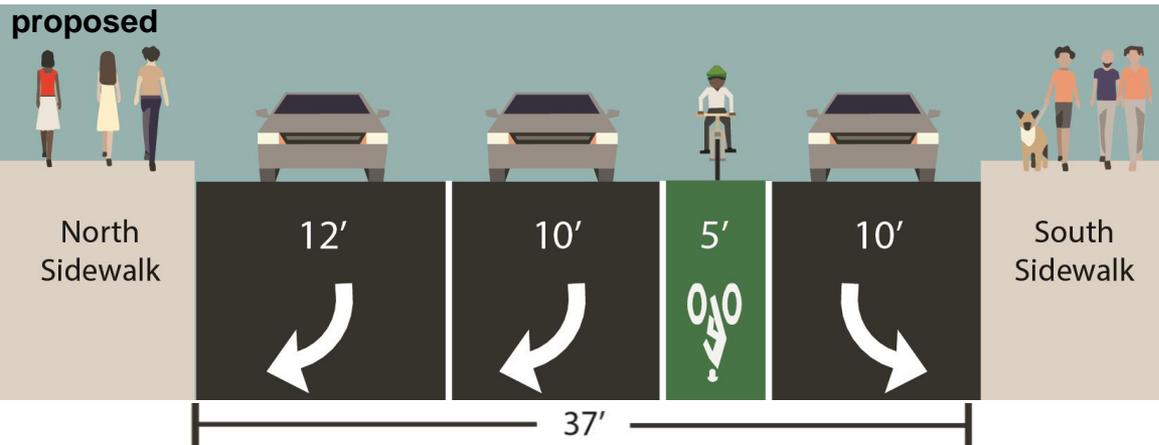
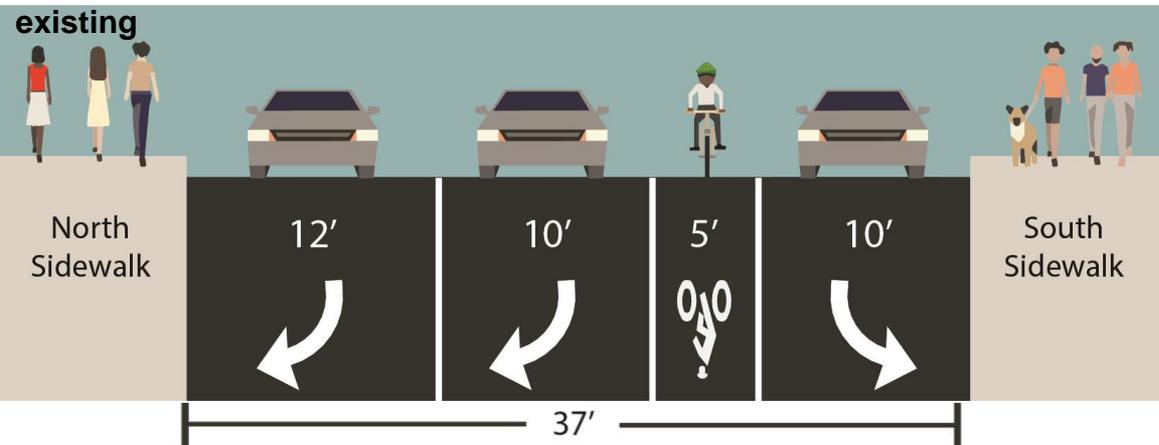
New design 'flips' parking lane and bike lane

2 travel lanes maintained



52nd Street and 55th Street

55th Street Atypical Block: 11th Ave – 12th Ave



3 turn lanes maintained

Cyclists can continue to Hudson River Greenway without turning conflict



52nd Street and 55th Street

Typical Design Benefits

Cyclist Safety

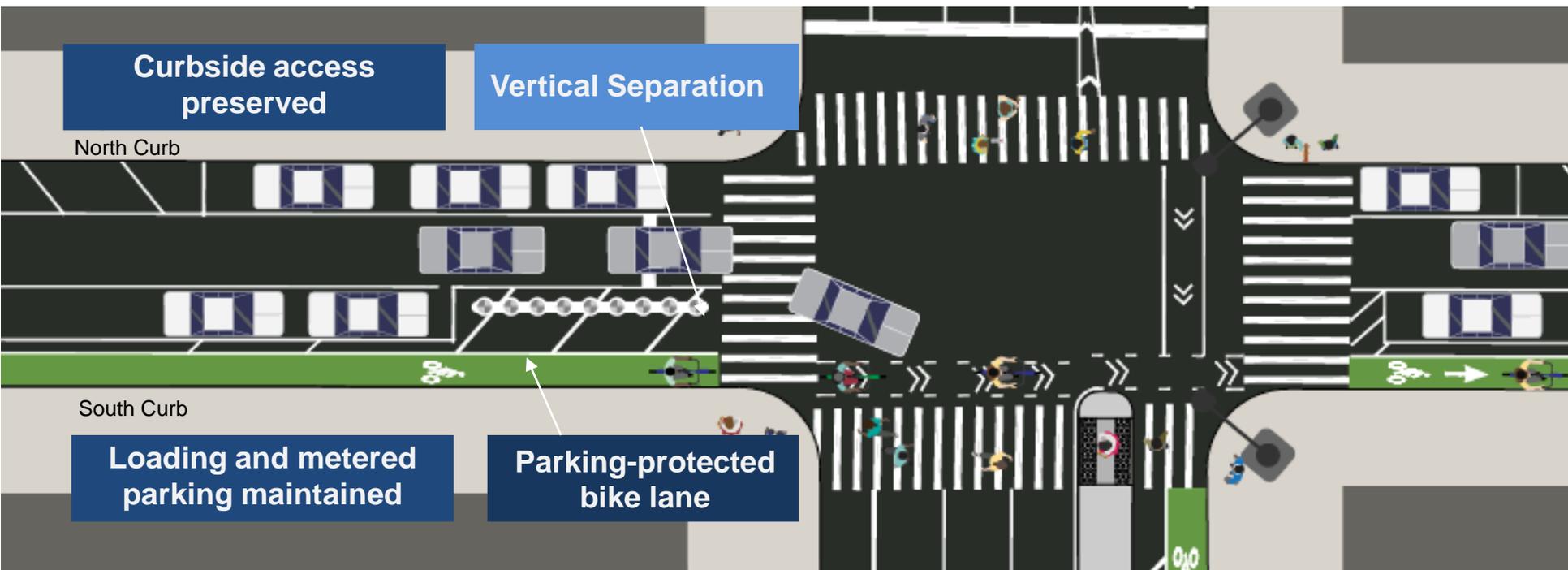
- Cyclists are separated from through traffic by parked cars, from turning vehicles by quick curb
- Cyclists to use existing LPIs

Pedestrian Safety

- Simplified vehicular movements
- Ease congestion by providing space for turns

Curb Management

- Preserves loading and curbside access



52nd Street and 55th Street

Parking Spaces and Curb Management

52nd Street

52nd St	Remove		Remaining
CB 4	Remove		Remaining
Block	Bike Lane Design	NSA Zones	
12 Ave - 11 Ave	11	-	21
11 Ave - 10 Ave	4	-	65
10 Ave - 9 Ave	3	-	70
9 Ave - 8 Ave	-	3	53

CB 5	Remove		Remaining
Block	Bike Lane Design	NSA Zones	
8 Ave - Broadway	3	2	37
Broadway - 7 Ave	1	-	6
7 Ave - 6 Ave	2	3	47
6 Ave - 5 Ave	29	-	31
5 Ave - Madison Ave	2	2	30
Madison Ave - Park Ave	4	3	28
Park Ave - Lexington Ave	-	-	23

CB 6	Remove		Remaining
Block	Bike Lane Design	NSA Zones	
Lexington Ave - 3 Ave	4	-	32
3 Ave - 2 Ave	28	2	25
2 Ave - 1 Ave	26	-	28
1 Ave - Sutton Pl	-	-	36

55th Street

CB 4	Remove		Remaining
Block	Bike Lane Design	NSA Zones	
12 Ave - 11 Ave	2	-	26
11 Ave - 10 Ave	2	-	58
10 Ave - 9 Ave	5	-	58
9 Ave - 8 Ave	2	3	61

CB 5	Remove		Remaining
Block	Bike Lane Design	NSA Zones	
8 Ave - Broadway	3	-	13
Broadway - 7 Ave	1	3	22
7 Ave - 6 Ave	2	6	41
6 Ave - 5 Ave	2	7	71
5 Ave - Madison Ave	2	3	32
Madison Ave - Park Ave	1	4	21
Park Ave - Lexington Ave	14	-	17

CB 6	Remove		Remaining
Block	Bike Lane Design	NSA Zones	
Lexington Ave - 3 Ave	-	-	27
3 Ave - 2 Ave	4	-	35
2 Ave - 1 Ave	2	-	51
1 Ave - Sutton Pl	3	-	44

Bolded numbers are commercial loading spaces

Parking Regulations to be updated based on 26th St and 29th St analysis and feedback

Next Steps

4

Next Steps

Winter - Spring 2019

- Community Board presentations for 52nd St and 55th St Project
- On-going Stakeholder Engagement

Summer – Fall 2019

- Implementation of 52nd St and 55th St Project
- Collection of One-Year After Data for 26th St and 29th St Project

Fall 2019 – Winter 2020

- Development and Planning for Times Square Area Project



THANK YOU!

Questions?



NYC DOT



NYC DOT



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