

1st Avenue Protected Bicycle Lane

2015



Presented on May 4, 2015 to Manhattan Community Board 6



Why 1st Avenue? Vision Zero Priority Corridor

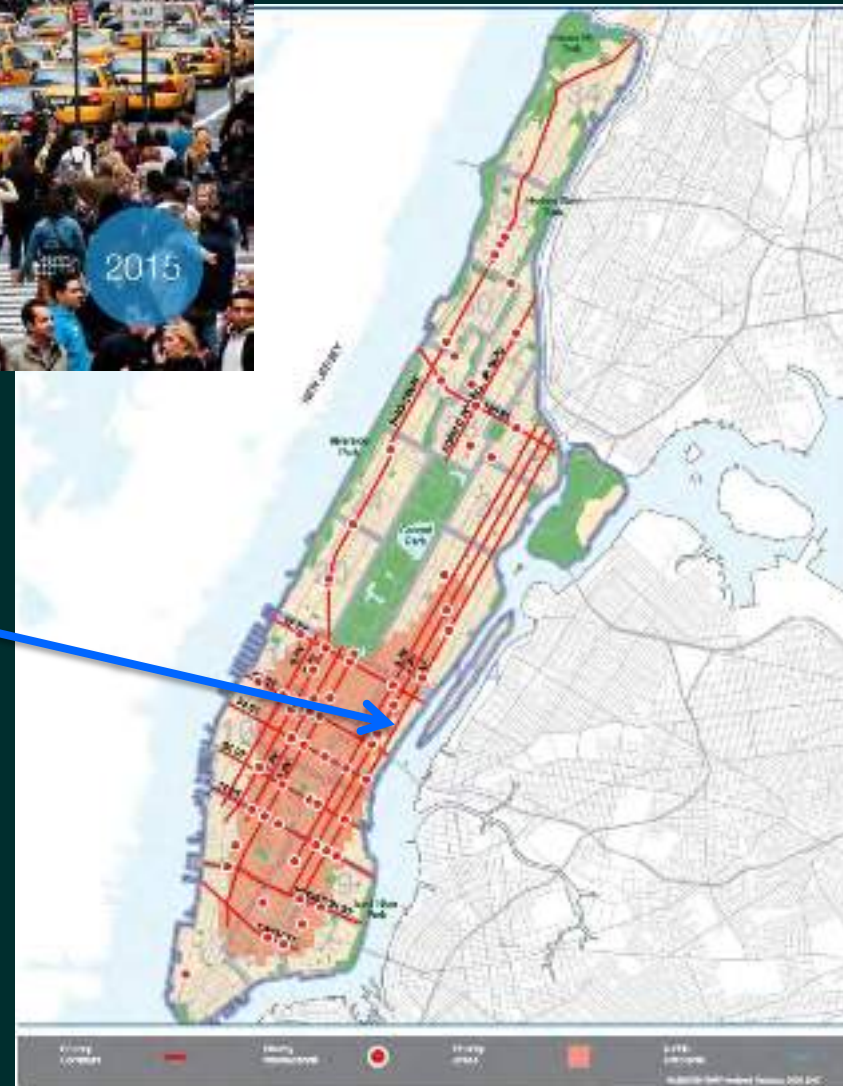
Vision Zero

- Multi-agency effort to reduce traffic fatalities in NYC
- Borough Action Plans released in 2015
- Priority Intersections, Corridors, and Areas identified for each borough
 - 1st Avenue identified as a Priority Corridor for Manhattan

Requests via 311 and social media to complete the protected lane



Manhattan Priority Map

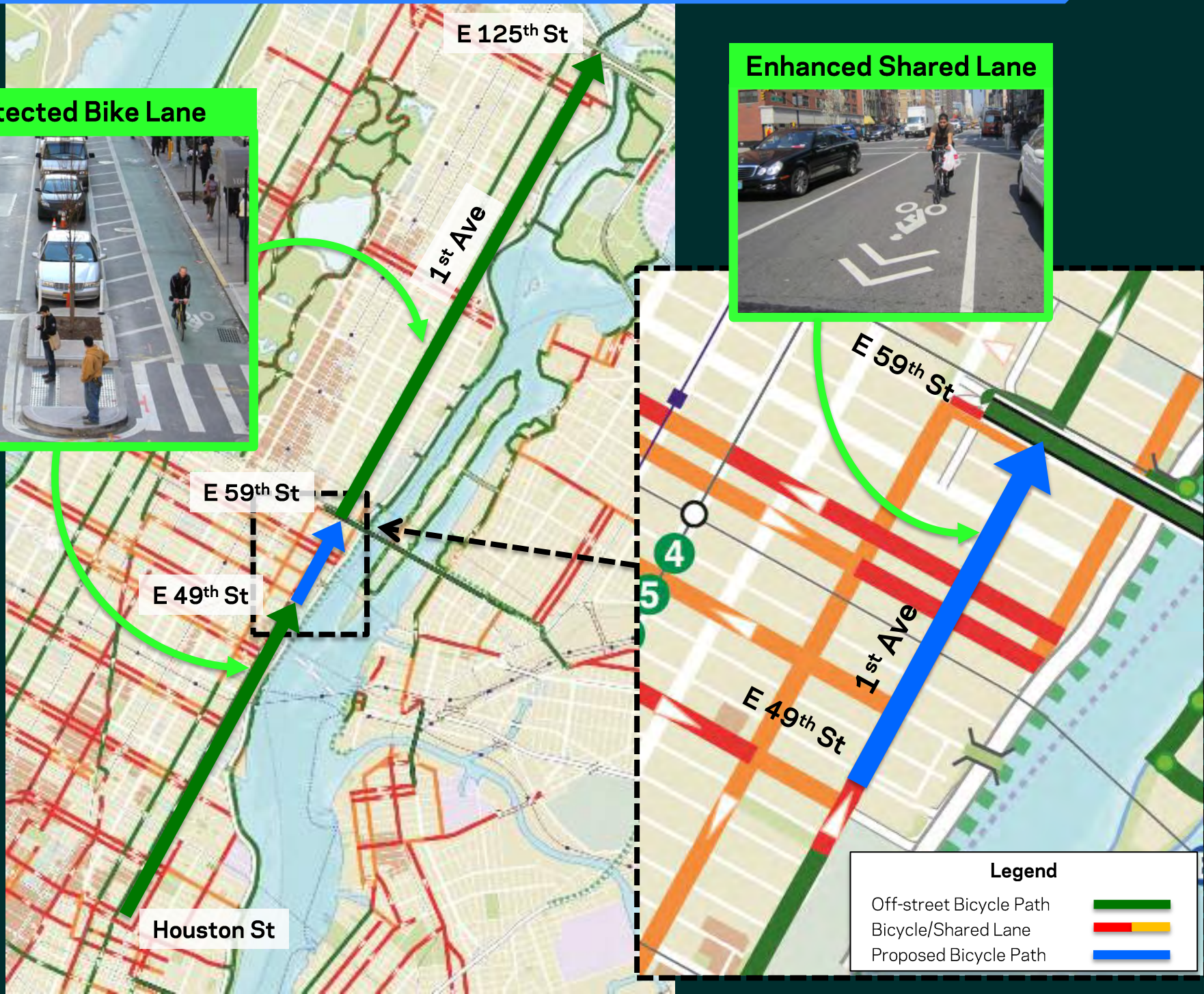


Project Background

Protected Bike Lane



Enhanced Shared Lane



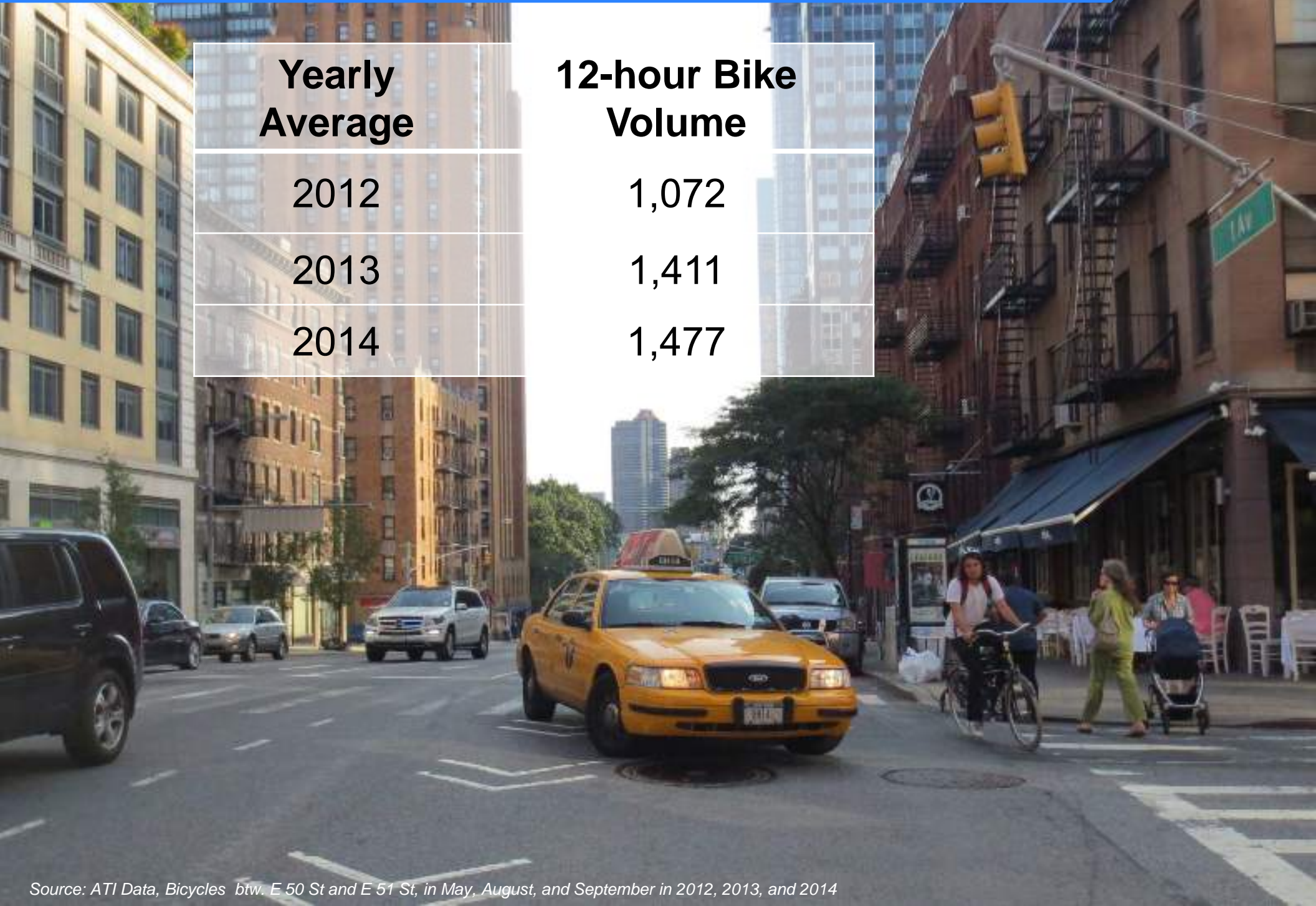
Legend

- Off-street Bicycle Path
- Bicycle/Shared Lane
- Proposed Bicycle Path



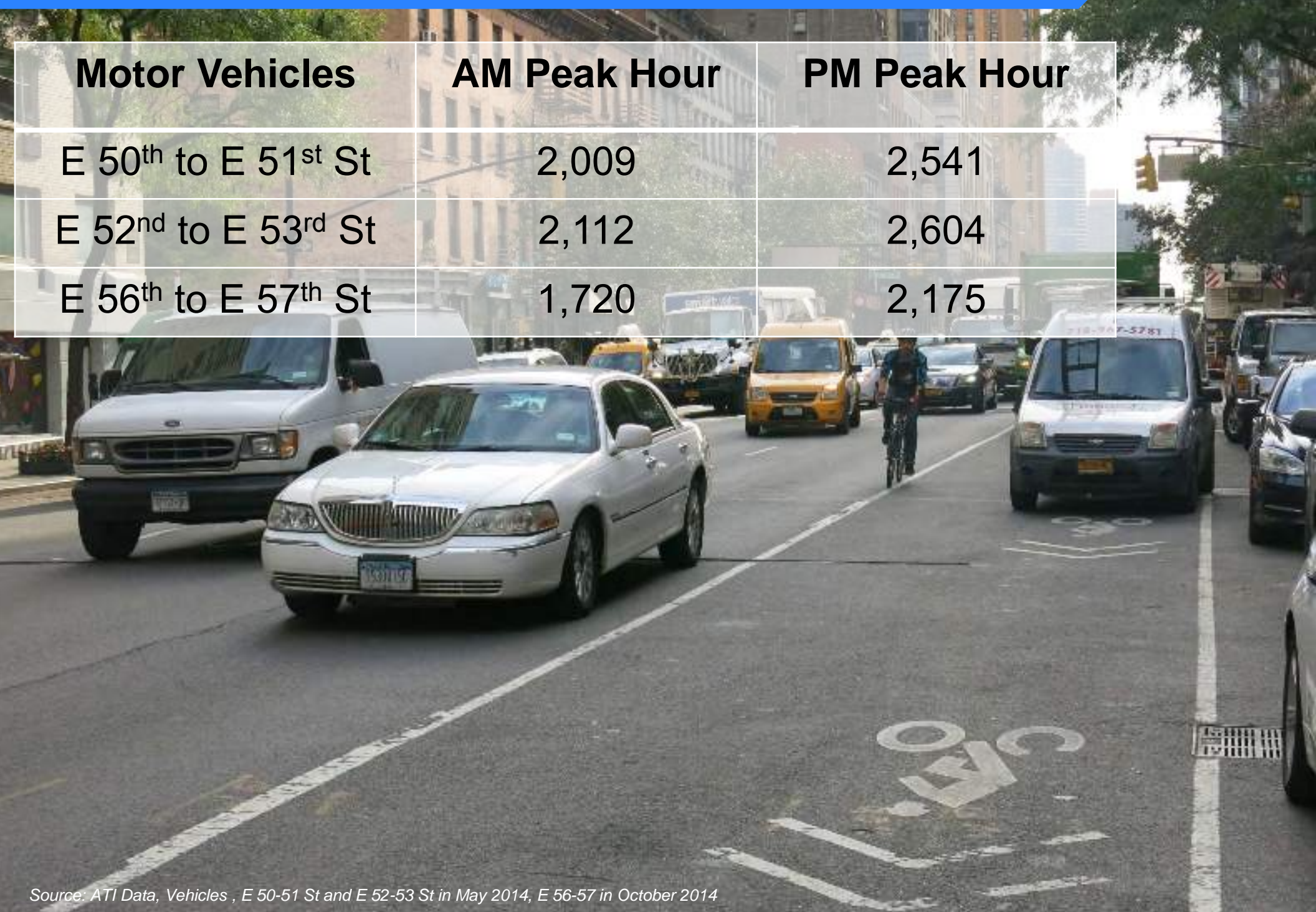
Existing Conditions - Bicycle Volume

Yearly Average	12-hour Bike Volume
2012	1,072
2013	1,411
2014	1,477



Existing Conditions

Motor Vehicles	AM Peak Hour	PM Peak Hour
E 50 th to E 51 st St	2,009	2,541
E 52 nd to E 53 rd St	2,112	2,604
E 56 th to E 57 th St	1,720	2,175



Existing Condition



1st Avenue at E 55th St

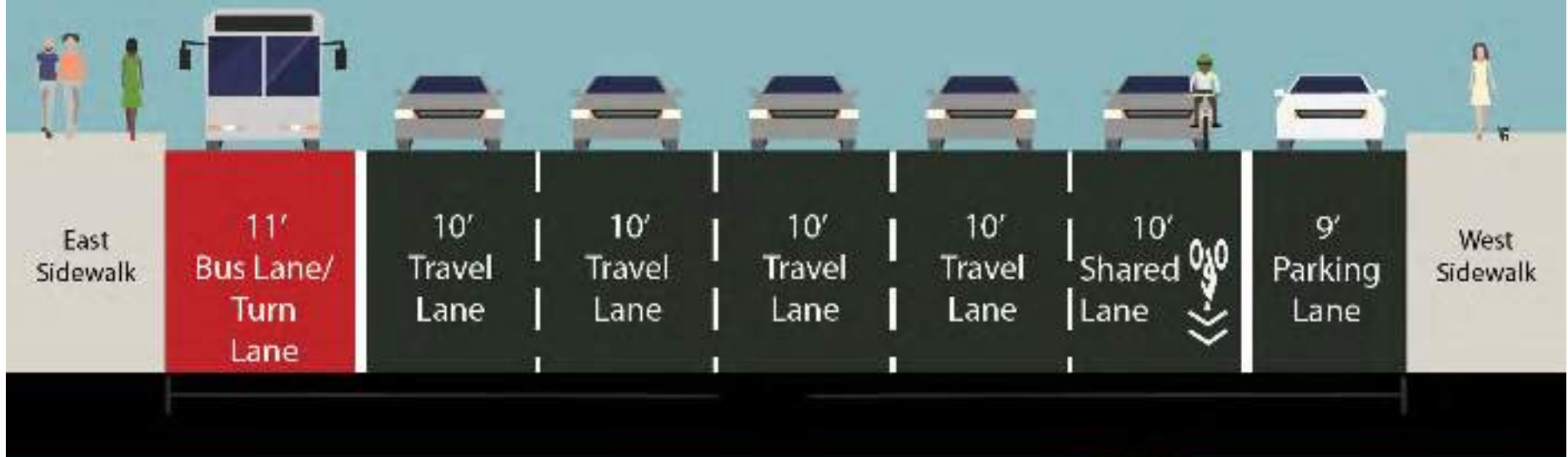
Proposed Design



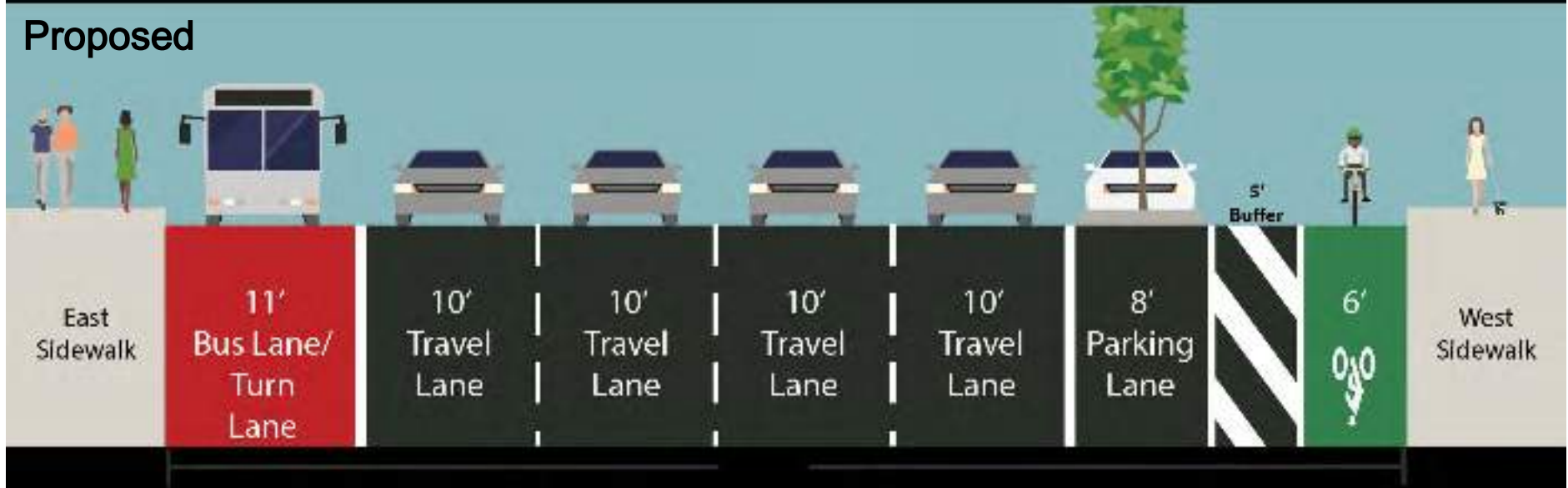
1st Avenue at E 93rd St

Proposed Configuration

Existing



Proposed



1st Ave and E 49th St - Existing Lane Assignments



1 Lane & Bus

2 Lanes

1 Lane

1 Lane

1st Ave and E 49th St - Proposed Design



1 Lane & 1 Bus Lane

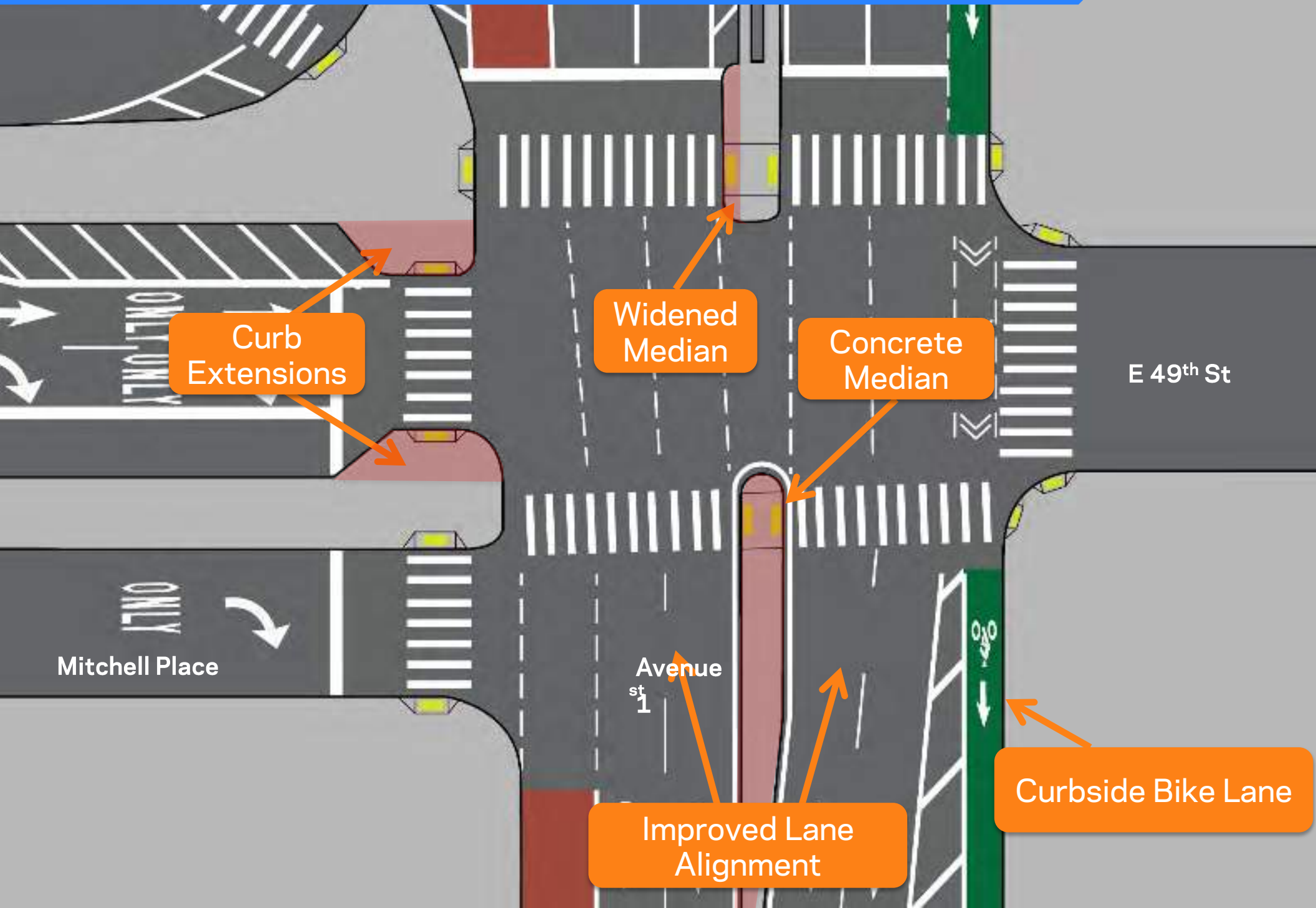
1 Lane

1 Lane

1 Lane

1st Avenue at E 49th St

1st Ave and E 49th St - Proposed Design



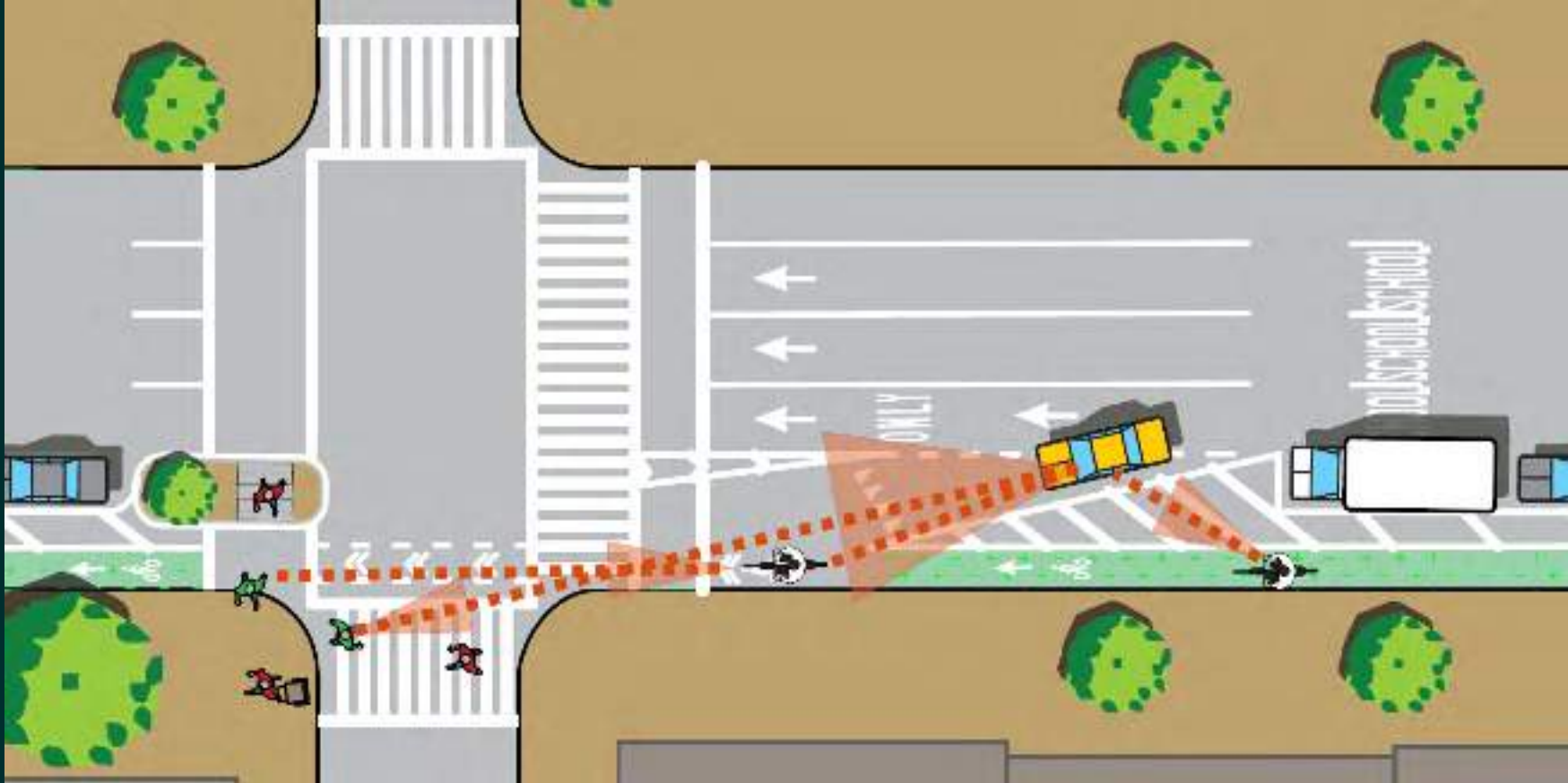
Parking/Loading Changes

Converted Parking Spaces *	Parking Space Equivalents (Approx.) Total *
Turn Lanes/ Mixing Zones	36
Pedestrian Islands	10
Parking Buffers	6
Total Spaces Repurposed	52

- Curbside access retained for 70% of 1st Avenue corridor

* Total includes streets with daytime parking restrictions.

Protected Bicycle Path Mixing Zone



- **Mixing Zone Provides Space to Negotiate Conflict**
 - Informs cyclist that vehicle is turning, no guesswork
 - Removes vehicle from traffic stream/eliminates “back pressure”
 - Gentle approach angle, vehicle gradually approaches cyclist, no abrupt “hook” turns
- **Mixing Zone Provides Visibility**
 - Eliminates visual obstruction of parked cars
 - Angle improves drivers’ peripheral vision
 - Cyclist & Motorist can see each other and avoid a crash

Turn Lanes and Mixing Zone Locations

Total of 3 mixing zones proposed

Bicycle Signals at the two existing left turn lanes



Left Turn Lanes

Left-turning motorists have their own protected phase

Bicycle lane remains curbside. Cyclists proceed with through-traffic while left turns are held

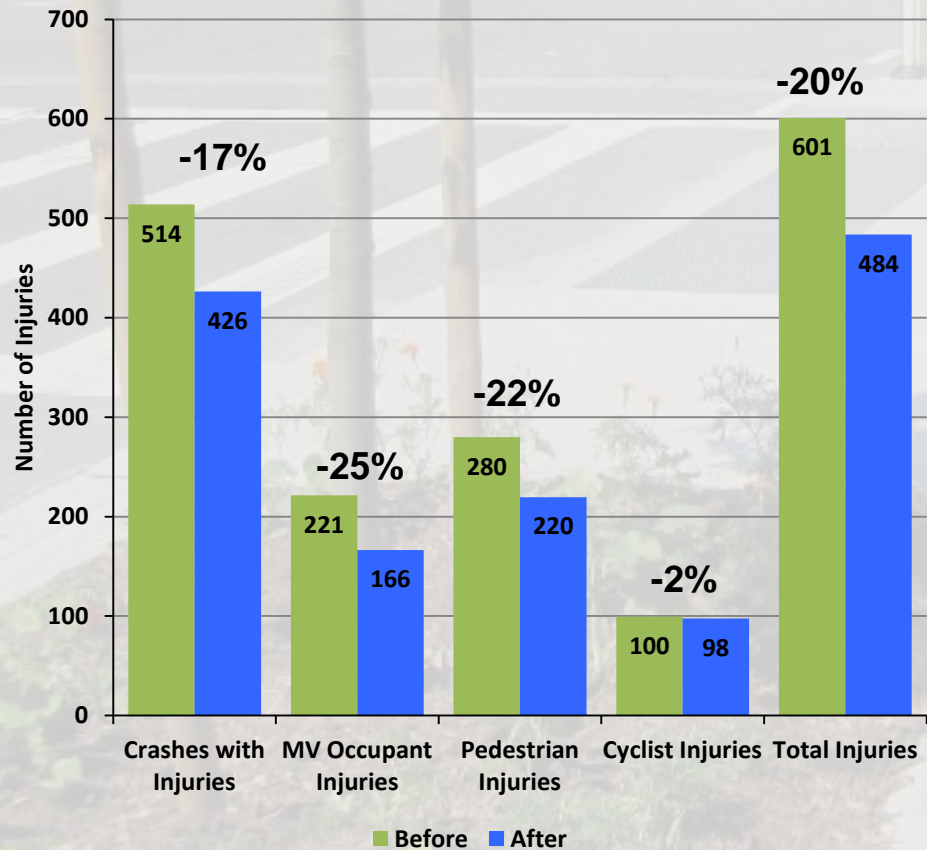
Takes advantage of the existing left turn signals at E 57th St and E 59th St intersections

Columbus Avenue at 86th St



Safety Benefits

Protected Bicycle Lanes with 3 yrs of After Data: Before vs After



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



Columbus Avenue at W 90th St

Summary

- Separates cyclists from moving traffic
- Decreases pedestrian crossing distances
- Improves vehicle alignment
- Improves safety for all road users
- Simpler, safer left turns
- Extends existing protected bicycle lane
- Greens the corridor



2nd Avenue at St Marks Pl

Questions?

Thank
You