7TH AVENUE

PROTECTED BICYCLE LANE & SAFETY IMPROVEMENTS

Manhattan Community Board 4

April 2017

VISION ZERO
nyc.gov/visionzero

NEW YORK CITY DOT

Project Background

1

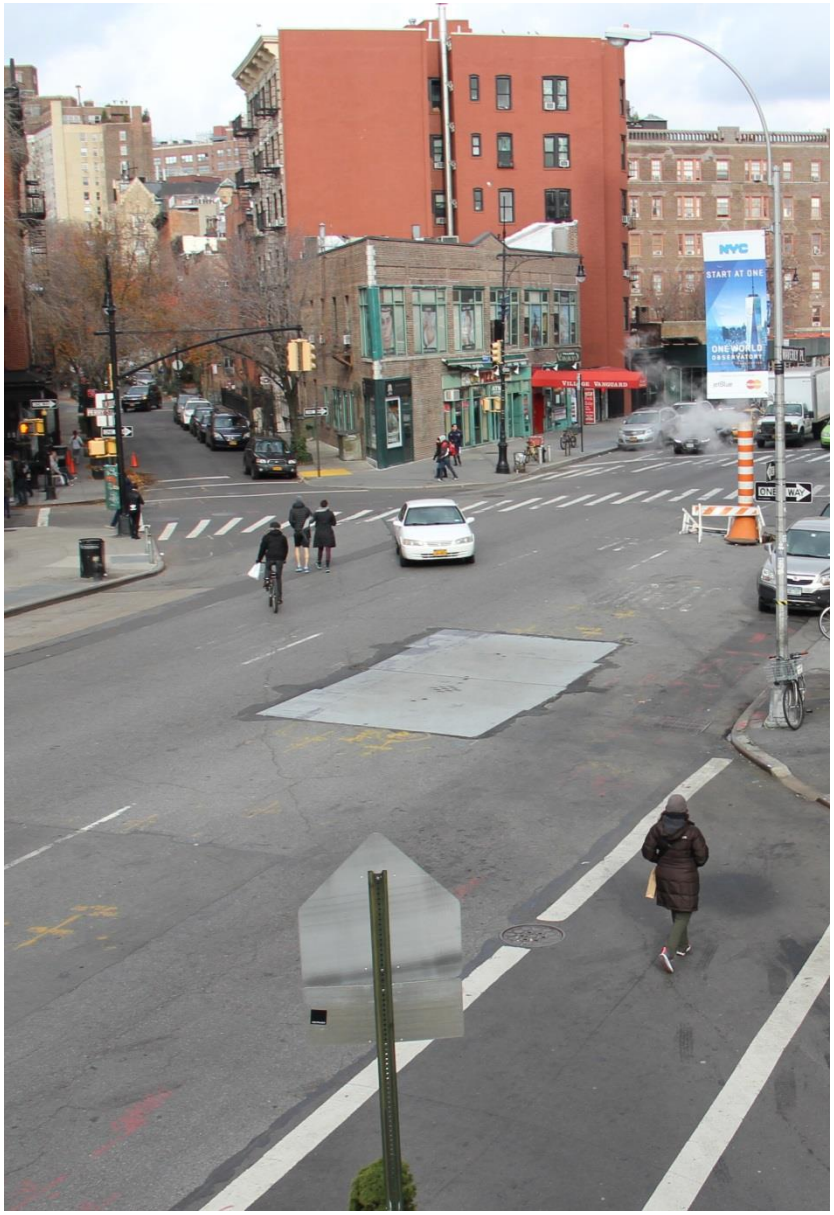
Community Requests

Community and Elected Officials have requested a complete street redesign of 7th Avenue:

- Community Board 2 and Public School 41 (2014)
- NYS Senator Hoylman (2015)
- Joint Letter from Federal, State and Local Elected Officials (2016)
  - US Rep. Nadler
  - NYS Senator Hoylman
  - NYS Assemblymember Glick
  - Borough President Brewer
  - NYC Councilmember Johnson

Safety

- 7th Ave is a Vision Zero Priority Corridor
- Vision Zero Priority Intersections at W 14th St and at Bleecker St
- Excess roadway width and complicated intersections create long, challenging crossings



7th Ave/7th Ave S (W 30th St to Clarkson St), MN

Injury Summary, 2011-2015 (5 years)

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	175	19	1	20
Bicyclists	96	9	0	9
Motor Vehicle Occupant	239	10	0	10
Total	510	38	1	39

Fatalities, 01/01/2011 – 1/9/2017: 1

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

Bicycle Network and Ridership

Existing protected bicycle lanes:

- 9th Ave (southbound)
- 8th Ave (northbound)
- 6th Ave (northbound)

High bicycle volumes on 7th Ave:

(14-hour counts, July 2016)

- 1,700 bikes at W 30th St
- 2,350 bikes at W 20th St
- 1,300 bikes at Charles St

Citi Bike launched in 2013, now regularly serves 60,000 trips/day

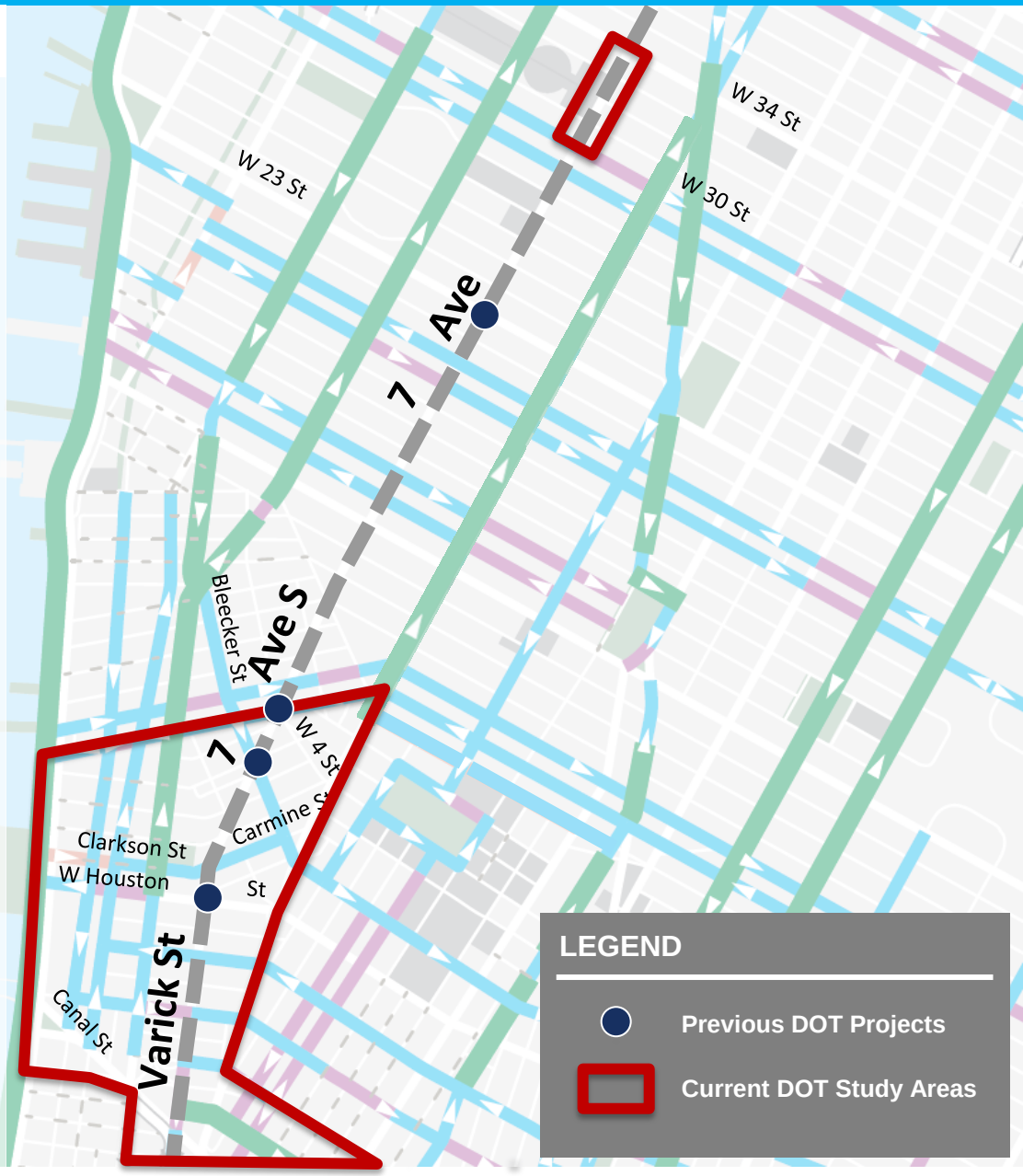
Related DOT Projects

Previously installed 7th Ave pedestrian safety projects:

- W 23rd St (2011)
- Bleecker St/Barrow St (2012)
- W 4th St (2015)
- W Houston St (2016)

On-going traffic studies:

- **7th Ave, W 34th St to W 30th St:** Traffic impacts of closing W 33rd St from 7th Ave to 8th Ave
- **Hudson Square/West Village:** Traffic impacts of proposed development at 550 Washington St

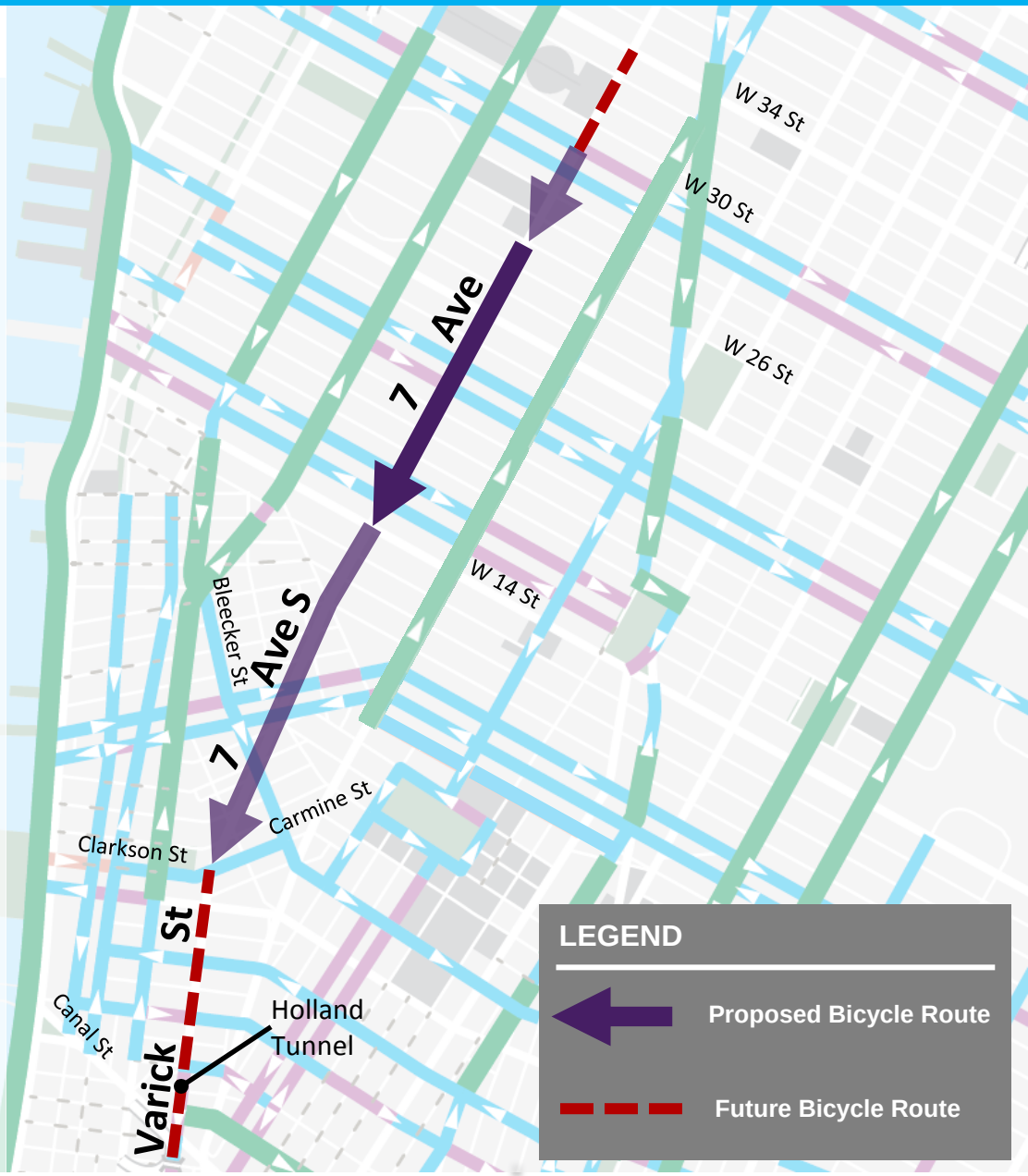


Proposed Project Scope

CB 4 Project Proposal:
7th Ave, W 26th St to W 14th St

Overall Project Area:
7th Ave, W 30th St to Clarkson St

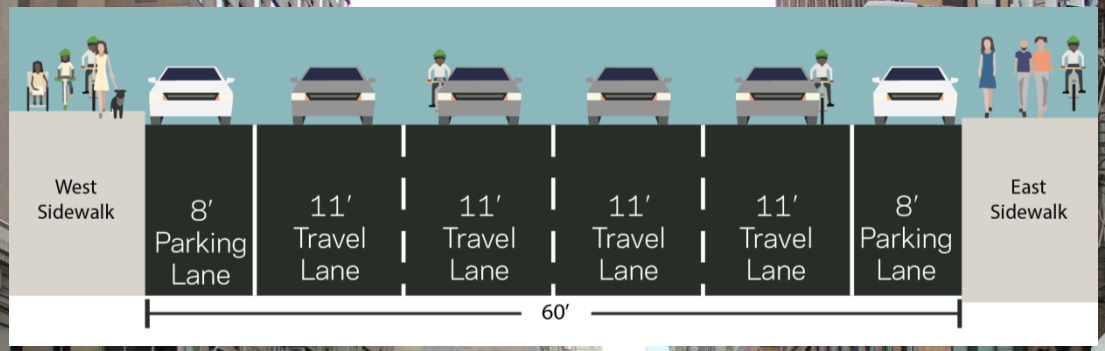
Potential future extensions to the north and south



Project Proposal

2

Existing Conditions



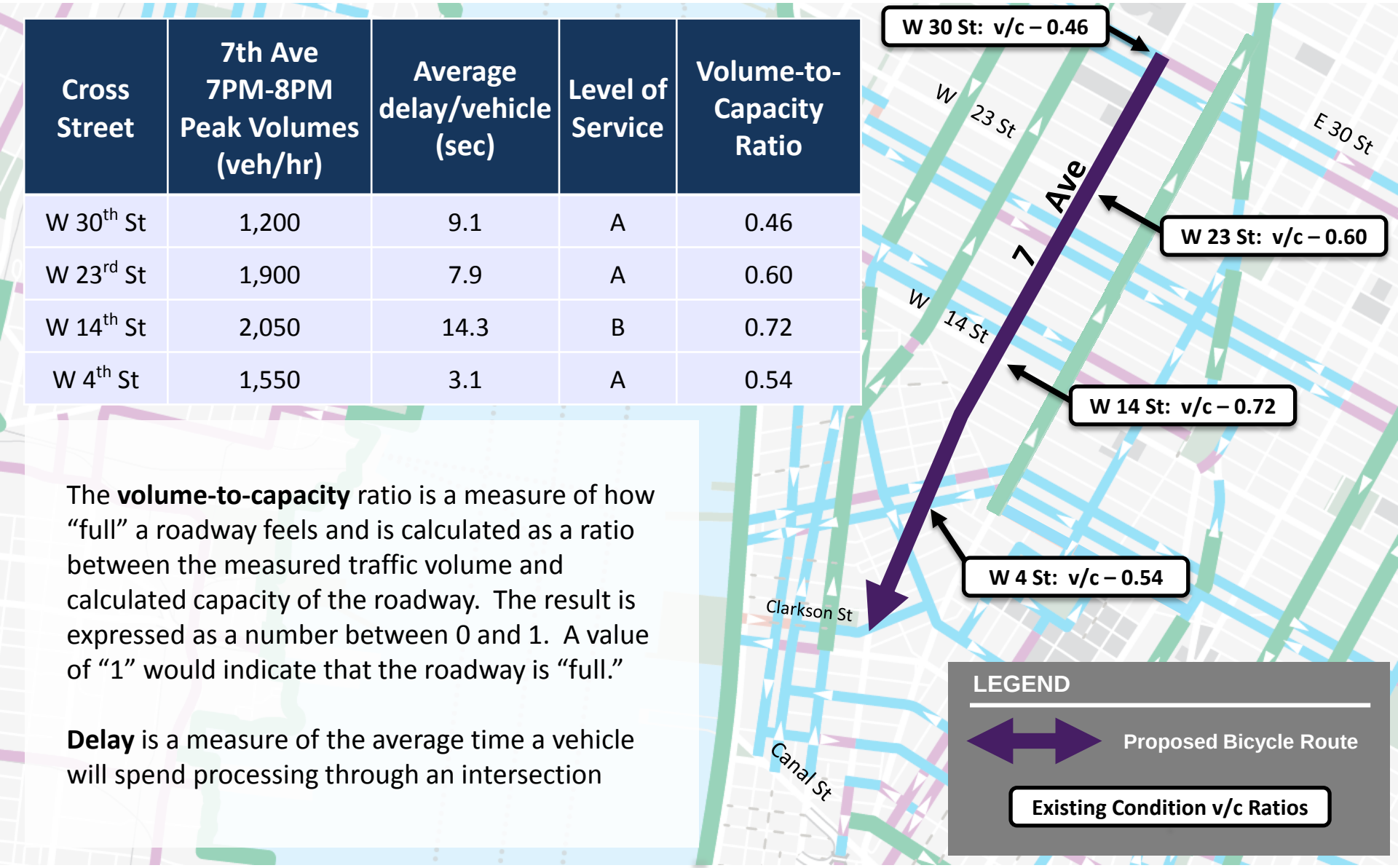
7 Ave (W 24 St to W 25 St)

Existing Vehicular Capacity

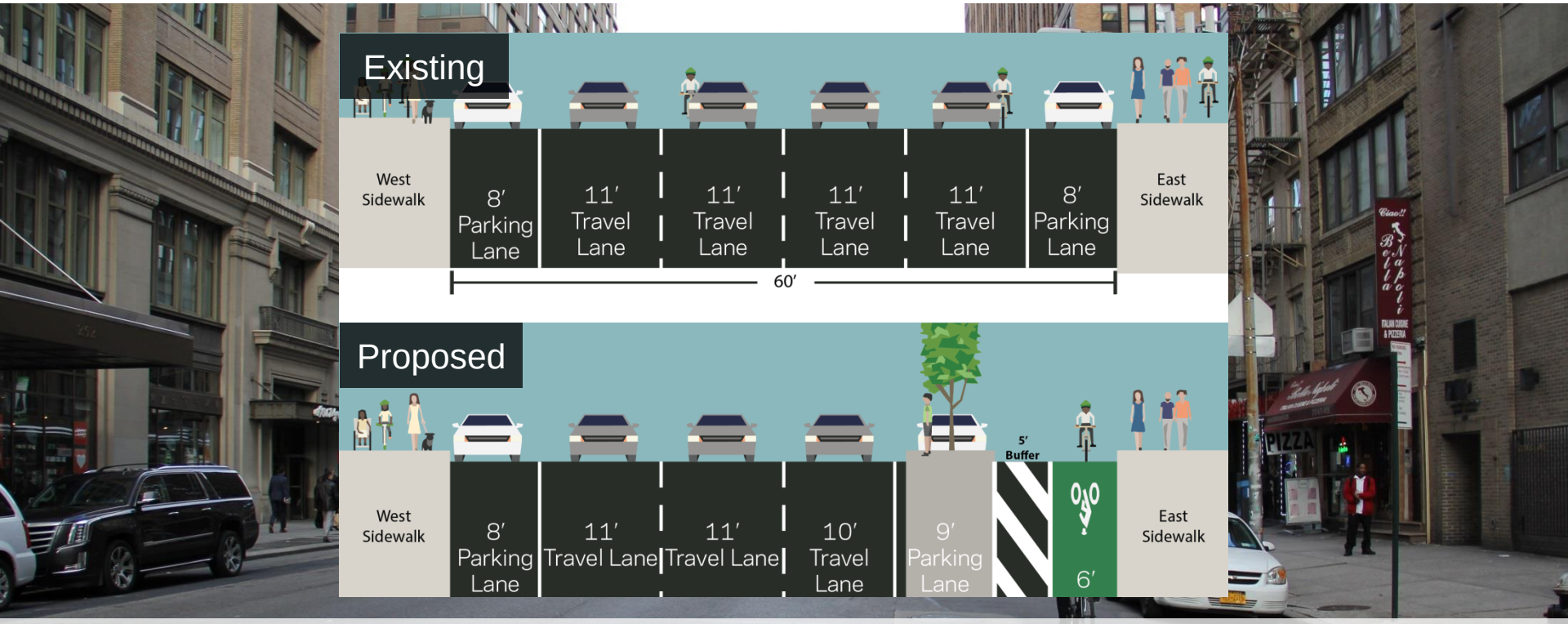
Cross Street	7th Ave 7PM-8PM Peak Volumes (veh/hr)	Average delay/vehicle (sec)	Level of Service	Volume-to-Capacity Ratio
W 30th St	1,200	9.1	A	0.46
W 23rd St	1,900	7.9	A	0.60
W 14th St	2,050	14.3	B	0.72
W 4th St	1,550	3.1	A	0.54

The **volume-to-capacity** ratio is a measure of how "full" a roadway feels and is calculated as a ratio between the measured traffic volume and calculated capacity of the roadway. The result is expressed as a number between 0 and 1. A value of "1" would indicate that the roadway is "full."

Delay is a measure of the average time a vehicle will spend processing through an intersection



Proposed Improvements



- **Remove one travel lane**
- **Install a parking-protected bike lane with planted concrete pedestrian islands**
- **Install split phase signals at W 14th St and maintain existing split-phase at W 23rd St**
- **Install mixing zones at all other intersections**
- **Maintain existing rush hour bus lane on west curb (north of W 23rd St)**
- ***Requires removal of 1 pedestrian island at W 23rd St and approximately 37 parking spaces (roughly 22% of corridor parking capacity)***

Example of Proposed Corridor Design

4 Ave, Manhattan

Proposed Vehicular Capacity

Cross Street	Average delay/vehicle (sec)				Volume-to-Capacity Ratio	
	Existing		Proposed		Existing	Proposed
	Delay	LOS	Delay	LOS		
W 30th St	9.1	A	6.5	A	0.46	0.48
W 23rd St	7.9	A	7.9	A	0.60	0.60
W 14th St	14.3	B	8.4	A	0.72	0.82
W 4th St	3.1	A	3.4	A	0.54	0.49

- **W 23rd St** existing split-phase signal operation and number of lanes to remain the same
- **W 14th St** and **W 4th St** benefit from dedicated left-turn phase

Summary

3

Project Summary

- Install a parking protected bicycle lane with planted concrete pedestrian islands on 7th Ave between W 26th St and W 14th St
- Implement split phase signal operation at W 14th St and maintain existing split phase at W 23rd St
- Install mixing zones at all other conflicting bicycle/vehicle conflicts
- Requires the removal of 1 travel lane, 1 pedestrian refuge island (at W 23rd St), and roughly 22% of on-street parking spaces along the corridor within Community Board 4

Project Benefits

- Reduced pedestrian crossing distance
- Split-phase signal operation at intersections with heavy left turns reduces conflicts between pedestrians/bicyclists and turning vehicles
- Parking-protected bicycle lane reduces bicyclists exposure to vehicular traffic
  - Potential future expansion to the north and south
- Narrowed road discourages speeding
- Existing vehicle volumes can fit in 3 lanes

THANK YOU!

Questions?

VISION ZERO
nyc.gov/visionzero

NEW YORK CITY DOT

NYC DOT | NYC DOT | nyc_dot | NYC DOT