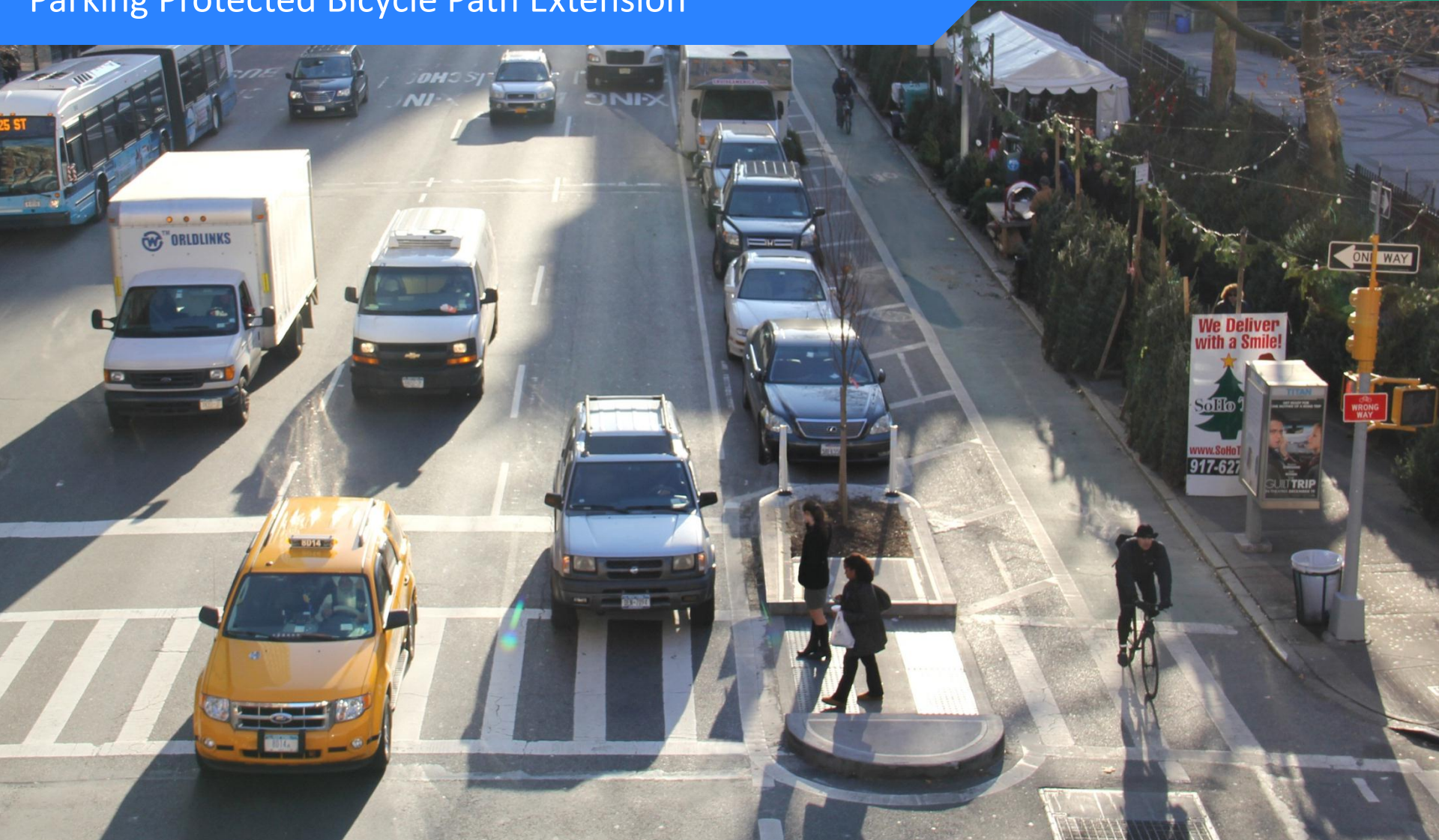


First Avenue: E 61 St to E 72 St

Parking Protected Bicycle Path Extension



Executive Summary

Building upon previously completed improvements to other sections of First and Second Avenues, DOT implemented enhancements on First Avenue between E 61 St and E 72 St in summer 2012. The project included a new bicycle path with landscaped pedestrian safety islands and mixing zones for turning vehicles. Post implementation analysis indicates an increase in bicycle ridership with a reduction in crashes while maintaining motor vehicle throughput. In addition, crossings are shorter and new street trees have enhanced the neighborhood.



Results Summary:

Safety

- Total crashes fell by 9%
- Injuries for all users fell by 36%
- 70% decrease in cyclists riding on the sidewalk on First Ave

Mobility

- Vehicle volumes along the avenue have declined modestly
- First Ave travel times improved by 8% during the afternoon peak period (4-7pm)
- Bicycle volumes on First Ave increase by 45% on weekdays
- An acceptable Vehicle Level of Service was maintained after implementation

Economic Vitality/Quality of Life

- The project has had no adverse effects on FDNY and NYPD operations
- Created 70 parking spaces during afternoon peak period
- 14 trees planted within concrete safety islands

Project Summary

Before



Completed June 2012:

- Installed 0.6 miles of separated bicycle path with mixing zones
- Installed dedicated bicycle signal at E 72nd St
- Constructed 14 landscaped pedestrian safety islands
- Removed afternoon peak period parking restrictions

After



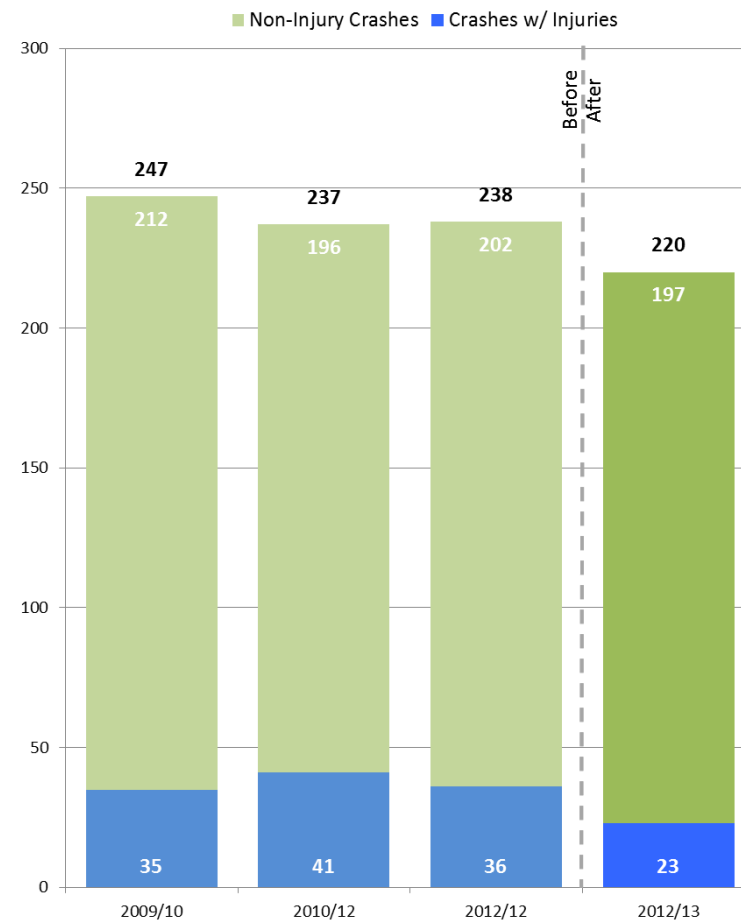
Safety – Crashes and Injuries

- Injuries for all users fell by 36%



Crashes, One-Year After Analysis

First Avenue (E. 61st to E. 72nd)



Each before year period is the 12-month period beginning March 1 and ending February 28. The 1-yr after period is July 1, 2012 to June 30, 2013. The implementation period of March 1, 2012 to June 30, 2012 is excluded.

Source: NYPD AIS/TAMS Crash Database

Safety – Crashes and Injuries

- Total crashes fell by 9%

Crashes and Injuries

One-Year After Analysis, First Avenue (E 61 St to E 72 St)

| | Before | | | After |
|-------------------------------|-------------|-------------|-------------|-------------|
| | '09/ '10 | '10/ '12 | '12/ '12 | '12/ '13 |
| Total Crashes | 247 | 237 | 238 | 220 |
| Crashes w/ Injuries | 35 | 41 | 36 | 23 |
| Motor Vehicle Occupant | 18 | 21 | 17 | 15 |
| Pedestrian | 18 | 16 | 16 | 12 |
| Cyclist | 7 | 9 | 4 | 0 |
| Total Injuries | 43 | 46 | 37 | 27 |



Each before year period is the 12-month period beginning March 1 and ending February 28.

The 1-yr after period is July 1, 2012 to June 30, 2013. The implementation period of March 1, 2012 to June 30, 2012 is excluded.

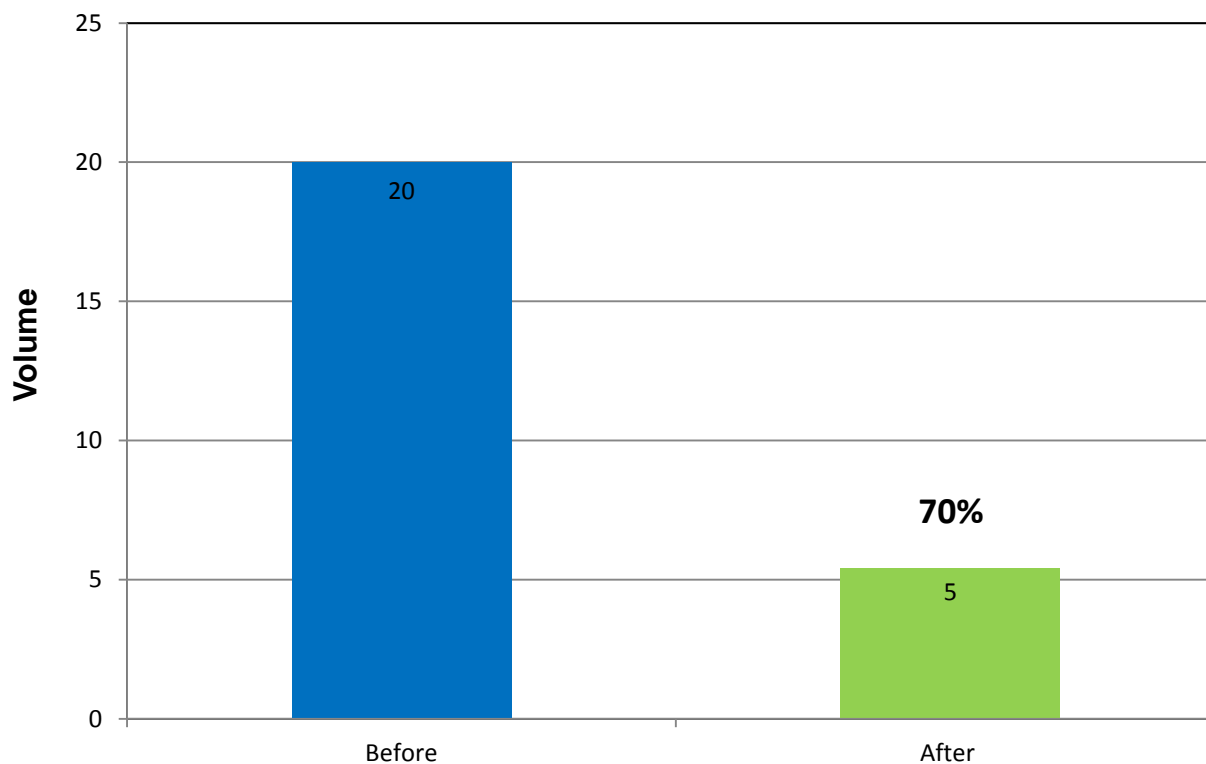
Source: NYPD AIS/TAMS Crash Database

Safety – Sidewalk Riding

- 70% decrease in cyclists riding on the sidewalk on First Ave

12-Hour Weekday Sidewalk Riding Volumes

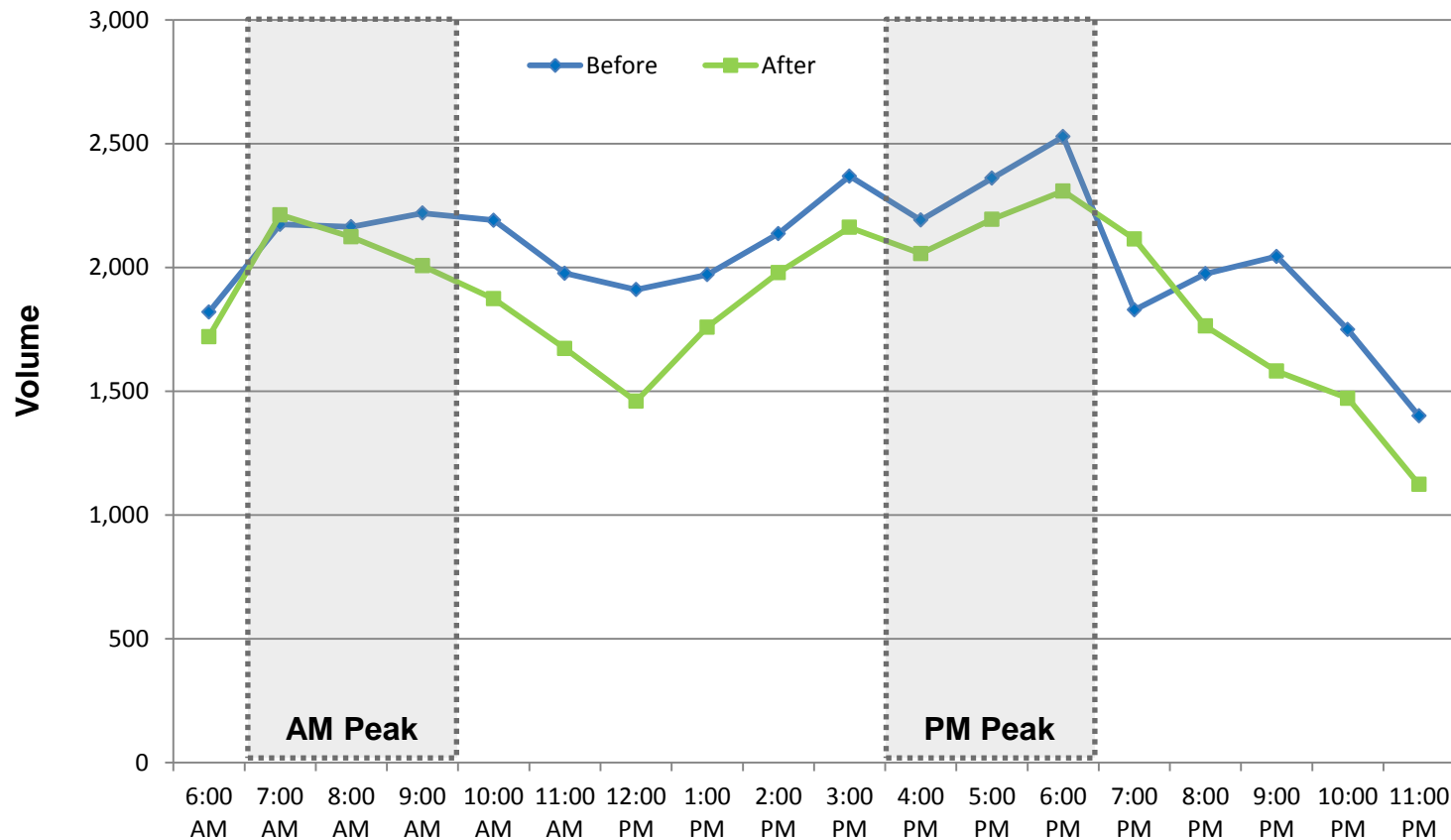
(First Ave between E 67 St and E 68 St, 7:00a – 7:00p)



Note: Before data; average of single weekday counts between 7a & 7p on 3/20/12, 3/21/12 and 3/22/12; After data is the average of single weekday counts on 4/24/13, 6/25/13, 7/17/13, 9/17/13, 10/19/13

Mobility – Vehicle Volumes

- Vehicle volumes along the avenue have declined modestly

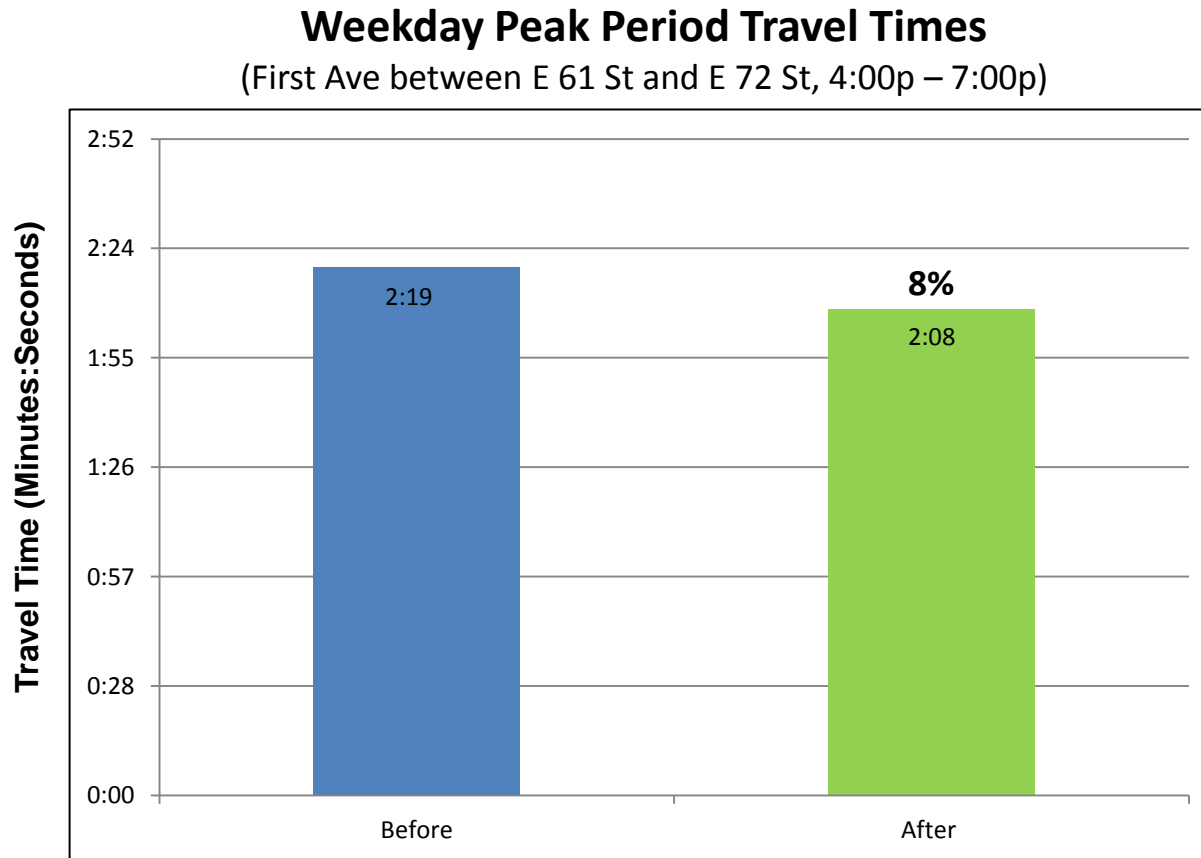


Before: Average midweek peak volume week of May 16, 2010

After: Average midweek peak volume week of January 7, 2013

Mobility – Travel Times

- First Ave travel times improved by 8% during the afternoon peak period (4-7pm)



Before: weekday average travel time derived from (2) runs every hour over 3 days conducted May 11-13, 2010

After: weekday average travel time derived from (4) runs every hour over 2 days conducted November 20-21, 2013

Mobility – Level of Service

- An acceptable Vehicle Level of Service was maintained after implementation

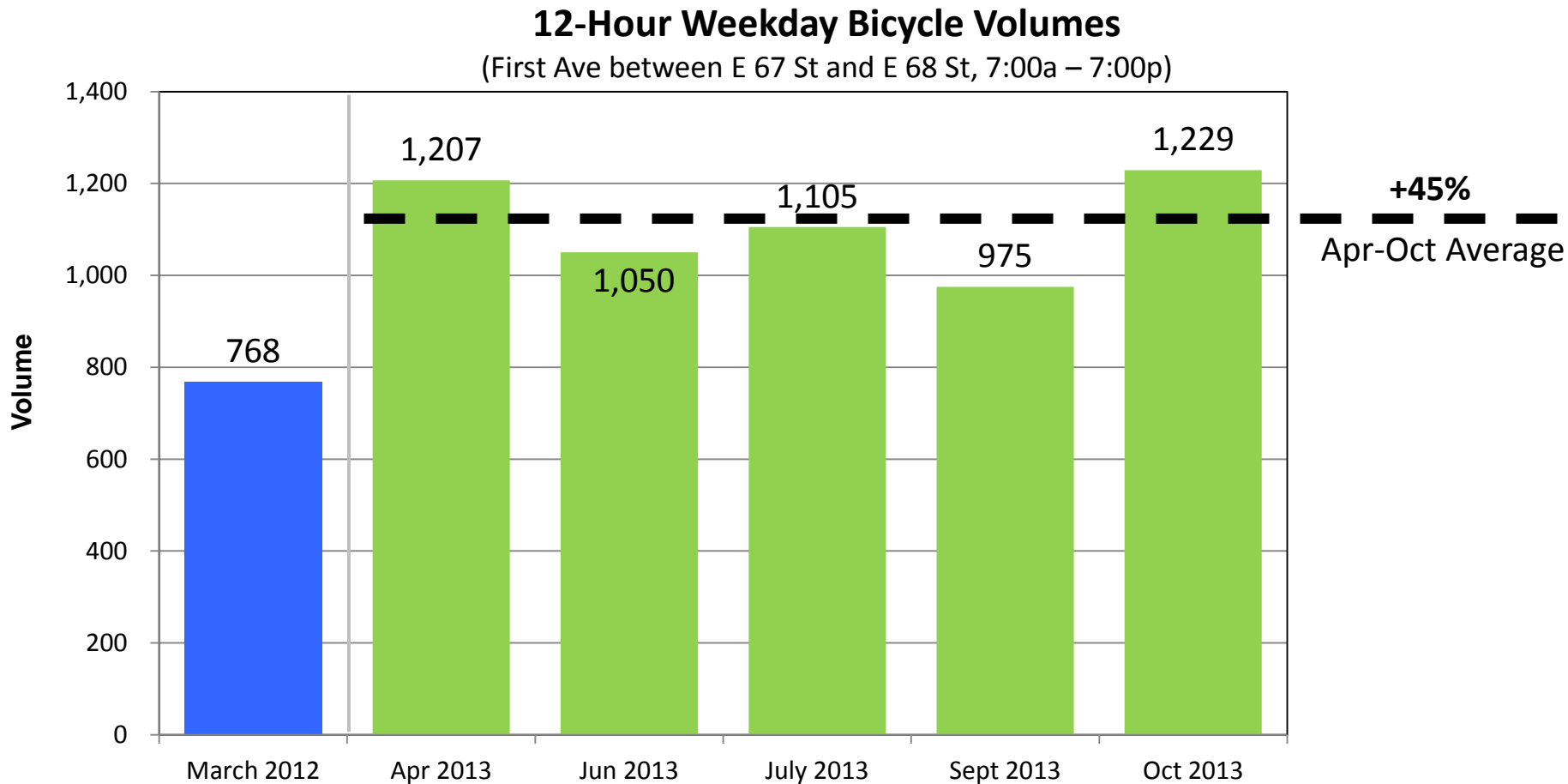
Level of Service of First Ave at E. 72nd Street
(PM Peak 6p-7p)

| Approach | Before | | | | | | After | | | | | |
|-----------------------------|------------------------------|------------|-----------|-----|--------------------|--------------|------------------------------|------------|-----------|-----|--------------------|--------------|
| | Vehicles (v/hr) | Lane Group | | | Approach | | Vehicles (v/hr) | Lane Group | | | Approach | |
| | | V/C Ratio | Delay (s) | LOS | Approach Delay (s) | Approach LOS | | V/C Ratio | Delay (s) | LOS | Approach Delay (s) | Approach LOS |
| NB 1st Ave | L = 145 | 0.38 | 17.1 | B | 19.0 | B | L = 158 | 0.67 | 48.4 | D | 20.2 | C |
| | T = 2253 | 0.73 | 19.4 | B | | | T = 1996 | 0.67 | 18.2 | B | | |
| | R = 130 | 0.29 | 15.2 | B | | | R = 155 | 0.35 | 16.2 | B | | |
| WB E. 72nd St | L = 0 | 0.20 | 18.8 | B | 18.8 | B | L = 0 | 0.27 | 19.5 | B | 19.5 | B |
| | T = 162 | | | | | | T = 215 | | | | | |
| | R = 54 | | | | | | R = 54 | | | | | |
| EB E. 72nd St | L = 118 | 0.44 | 22.1 | C | 22.1 | C | L = 124 | 0.50 | 23.1 | C | 23.1 | C |
| | T = 247 | | | | | | T = 290 | | | | | |
| | R = 0 | | | | | | R = 0 | | | | | |
| Overall Intersection | Delay: 19.4(s) LOS: C | | | | | | Delay: 20.5(s) LOS: C | | | | | |

sat flow rate = 2050 vphpl

Mobility – Bicycle Volumes

- Bicycle volumes on First Ave increased by 45% on weekdays



Note: Before data; average of single weekday counts between 7a & 7p on 3/20/12, 3/21/12 and 3/22/12. After data; single weekday counts between 7a-7p on 4/24/13, 6/25/13, 7/17/13, 9/17/13, 10/19/13

Warm weather months (April-October) are averaged to provide a seasonal factor in comparison to other months

Quality of Life – Emergency Response

- The project has had no adverse effects on FDNY and NYPD operations



- NYPD confirmation date November 14, 2013
- FDNY confirmation date November 14, 2013

First Avenue: E 61st St to E 72nd St

Economic Vitality/Quality of Life

- Created 70 parking spaces during afternoon peak period
- 14 trees planted within concrete safety islands

