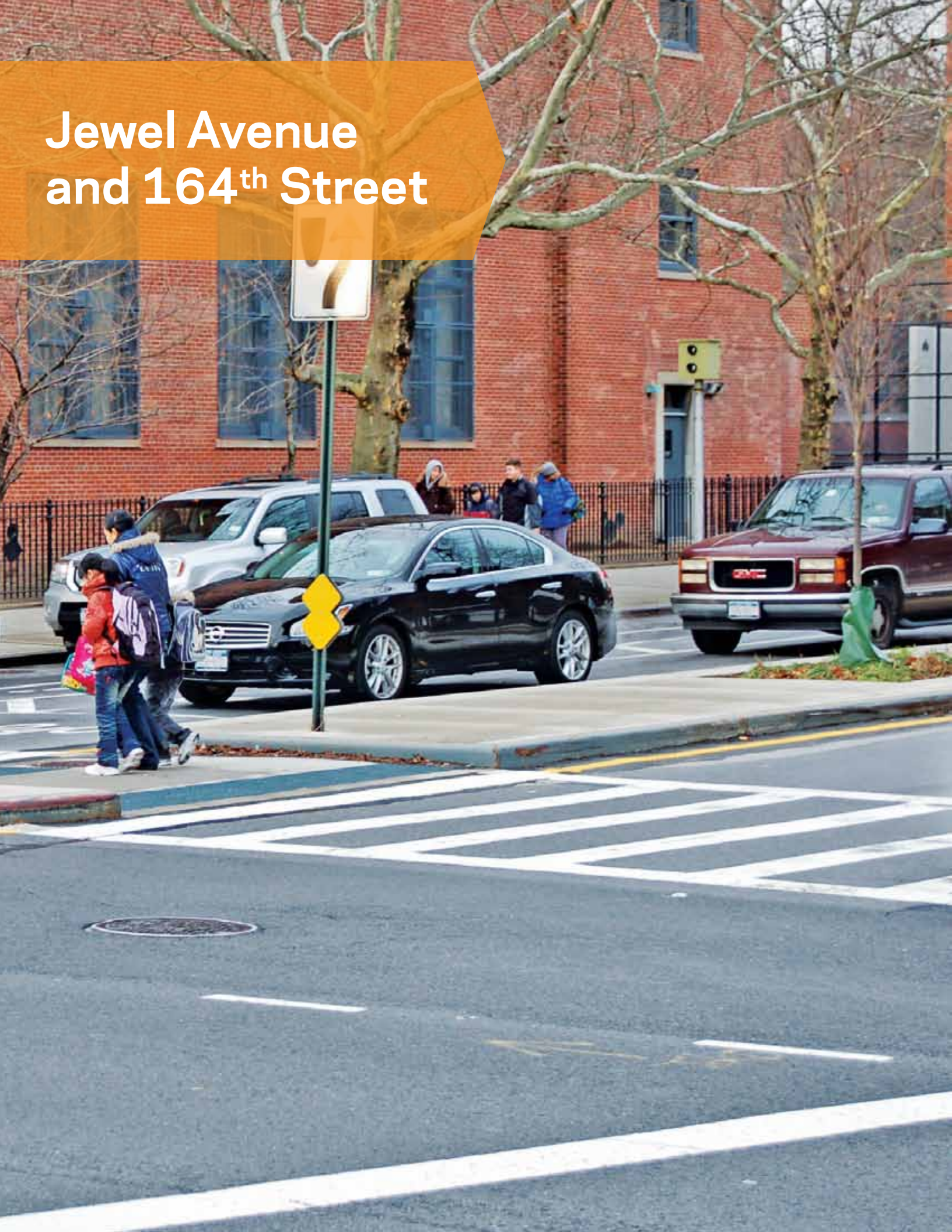


Jewel Avenue and 164th Street



Purpose

- Improve pedestrian safety near public school crossing
- Reduce excessive vehicle speeds
- Expand bicycle network

Outreach

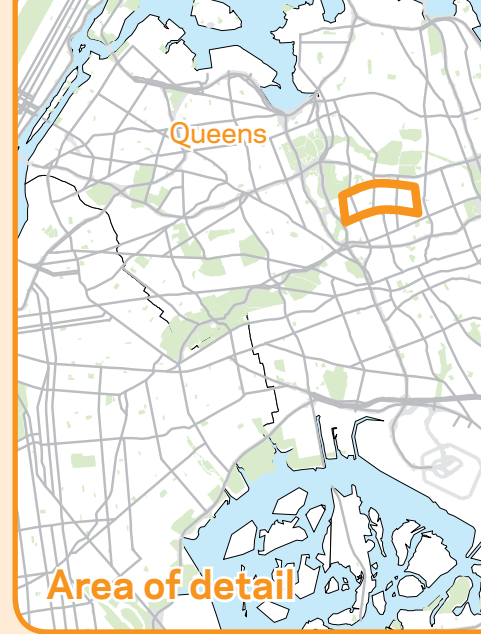
- DOT studied potential safety improvements for the area in fall 2006 in response to community concerns
- DOT presented proposed changes to Community Board 8's transportation committee and the entire board in June 2007; same plans presented to elected officials in August 2007
- Implemented the traffic calming and one-way conversion in late summer 2007; raised medians completed June 2008 and landscaped in summer 2008

Approach

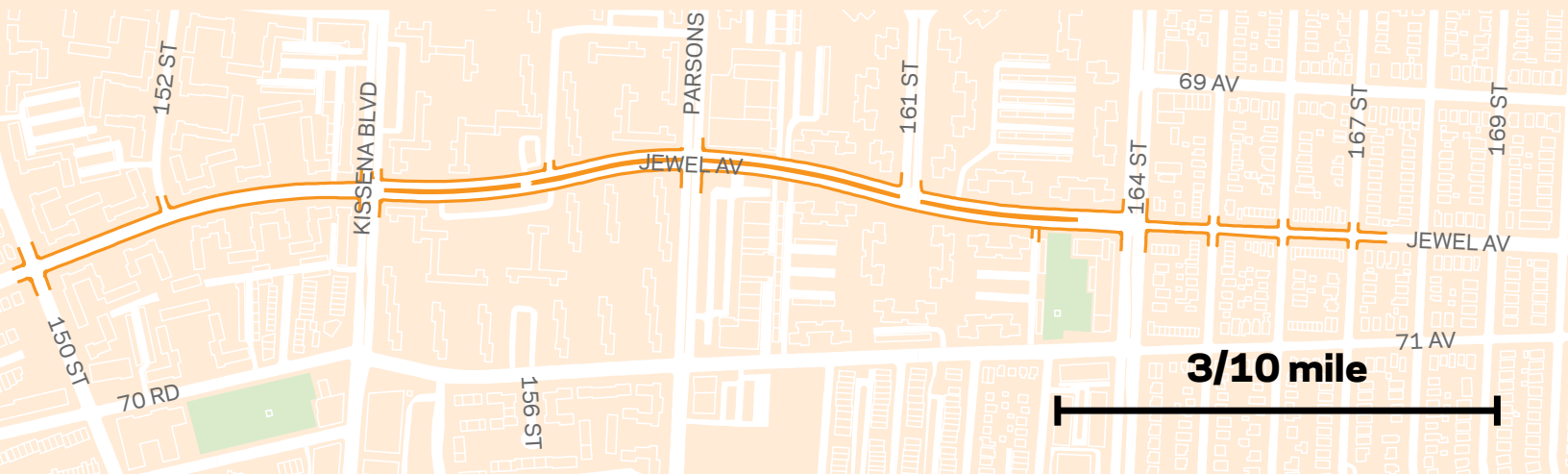
- Increased pedestrian crossing time
- Widened and landscape median on Jewel Avenue
- Simplified intersection of Jewel Avenue and 164th Street
- Replaced one vehicle travel lane on Jewel Avenue with a buffered bike lane

Results

- 91% of vehicles observed during the morning peak on Jewel Avenue were traveling at or below the speed limit
- Greened the corridor
- Fewer lanes have not caused congestion
- Five-fold increase in bike volumes



Jewel Avenue is an important east-west arterial that connects the central Queens neighborhoods of Fresh Meadows and Kew Garden Hills with Forest Hills. Most of the neighboring land uses are residential with some small retail strips and community facilities like a library and a school. Jewel Avenue carries the Q64 and QM4 bus routes.



In fall 2006, local residents, elected officials and the staff and parents of P.S. 200 approached DOT regarding safety concerns at the intersection of Jewel Avenue and 164th Street. Their primary concerns included crossing conditions and vehicle speeds during school hours. In December 2006, while DOT was evaluating the intersection, a teacher was struck and killed at this location.

Based upon the evaluation and input from these groups, DOT identified a number of street design elements that affected safety at this intersection. These included the length of crossing distances for pedestrians; wide travel lanes that contributed to vehicle speeding and poor yielding behavior by motorists; numerous potential conflicts between turning vehicles and pedestrians crossing the street; and misaligned lanes as eastbound vehicles on Jewel Avenue cross 164th Street.

Based on these issues, DOT developed a traffic calming treatment and one-way conversion. These plans were presented to Community Board 8 (CB8) and its transportation committee in June 2007 and to elected officials in August 2007. DOT worked with these stakeholders on the details on the safety improvements and informed CB8 and the elected officials in advance of implementation.

The final plan was designed to increase safety and calm traffic by simplifying the intersection, increasing crossing times provided to pedestrians, creating a pedestrian refuge and eliminating lanes to decrease speeding. Implementation began with changes to the signal timing in spring 2007 followed by the installation of bike lanes and the one way conversion late summer 2007. DOT began construction of the raised median in January 2008 and completed the project in June 2008. The Department of Parks and Recreation landscaped the new median in late summer 2008.



The landscaped median offers a wider area for pedestrians and shortens the crossing distances.

The total number of daily vehicles for a weekday was almost unchanged in the eastbound lane. The morning volumes decreased by 5%, and the afternoon peak hour saw a 2% increase. Across the entire day there was a 4% increase in eastbound traffic.

There was a small decrease in westbound vehicle volumes on Jewel Avenue west of 164th Street. This is likely the result of the new traffic pattern that prohibits westbound traffic on Jewel Avenue east of 164th Street. The main difference occurred during the morning peak; between 7 and 10 a.m. westbound traffic was reduced by 26%. During the afternoon peak westbound traffic was 8% lower.

The reduced lane may have the additional benefit of keeping drivers below the speed limit. On eastbound Jewel Avenue, the same side of the street as P.S. 200, 93% of vehicles were traveling below the speed limit between 8 and 8:30 am and the average speed of all vehicles was 23 m.p.h.

The intersection had two crashes involving injury in each of the three years prior to implementation; and an annual rate of 1.6 crashes since the changes were completed. This change is not statistically significant based on roughly one year of data (for crash analysis methodology, see page 72).

This project also improved the connectivity of bicycle facilities in Queens, especially to parks and greenways. The number of cyclists counted on Jewel Avenue during DOT's annual bicycle count increased from 20 bicyclists per day before implementation to 112 per day one year after implementation, a five-fold increase.

Crashes with Injuries at Jewel Avenue and 164th Street

	Before* (three previous years)			After
Total Crashes with Injuries	2	2	2	1.6
Number of Crashes with Injuries to:				
Motor Vehicle Occupants	0	1	0	0.8
Pedestrians	1	1	1	0.8
Bicyclists	1	0	1	0.0

* Before columns show the crash history for each of the three years immediately prior to project implementation. After column shows number of crashes since implementation (through November 2009) at annual rate. See page 72 for further information on crash data source and analysis methodology. The sum of the three specific categories may not equal "Total Crashes with Injuries" because some crashes involved injuries in multiple categories.



Buffered bike lanes replaced vehicle travel lanes on Jewel Avenue.

Eastbound Jewel Avenue Traffic Volumes
Parsons Boulevard to 164th Street (average vehicles per hour)

	Before	After	%Change
7-10 a.m.	252	239	-5%
3-6 p.m.	429	437	2%
Daily	237	248	5%

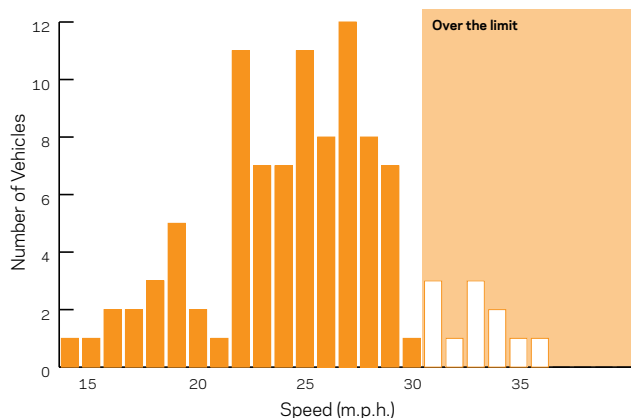
Before data collected in January 2007. After data collected in October 2009. Daily represents volumes between 5 a.m. and 12 a.m. Volumes shown in average vehicles per hour.

Westbound Jewel Avenue Traffic Volumes
164th Street to Parsons Boulevard (average vehicles per hour)

	Before	After	%Change
7-10 a.m.	403	297	-26%
3-6 p.m.	312	287	-8%
Daily	233	201	-14%

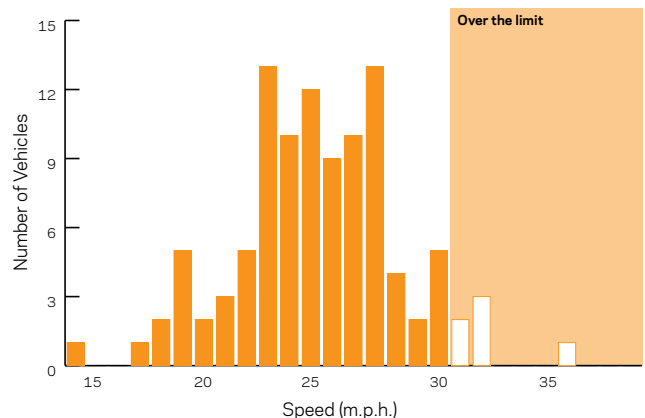
Before data collected in January 2007. After data collected in October 2009. Daily represents volumes between 5 a.m. and 12 a.m. Volumes shown in average vehicles per hour.

Vehicle Speeds on Eastbound Jewel Avenue



Data collected between 8-8:30 a.m. on a weekday in fall 2009

Vehicle Speeds on Westbound Jewel Avenue



Data collected between 8-8:30 a.m. on a weekday in fall 2009