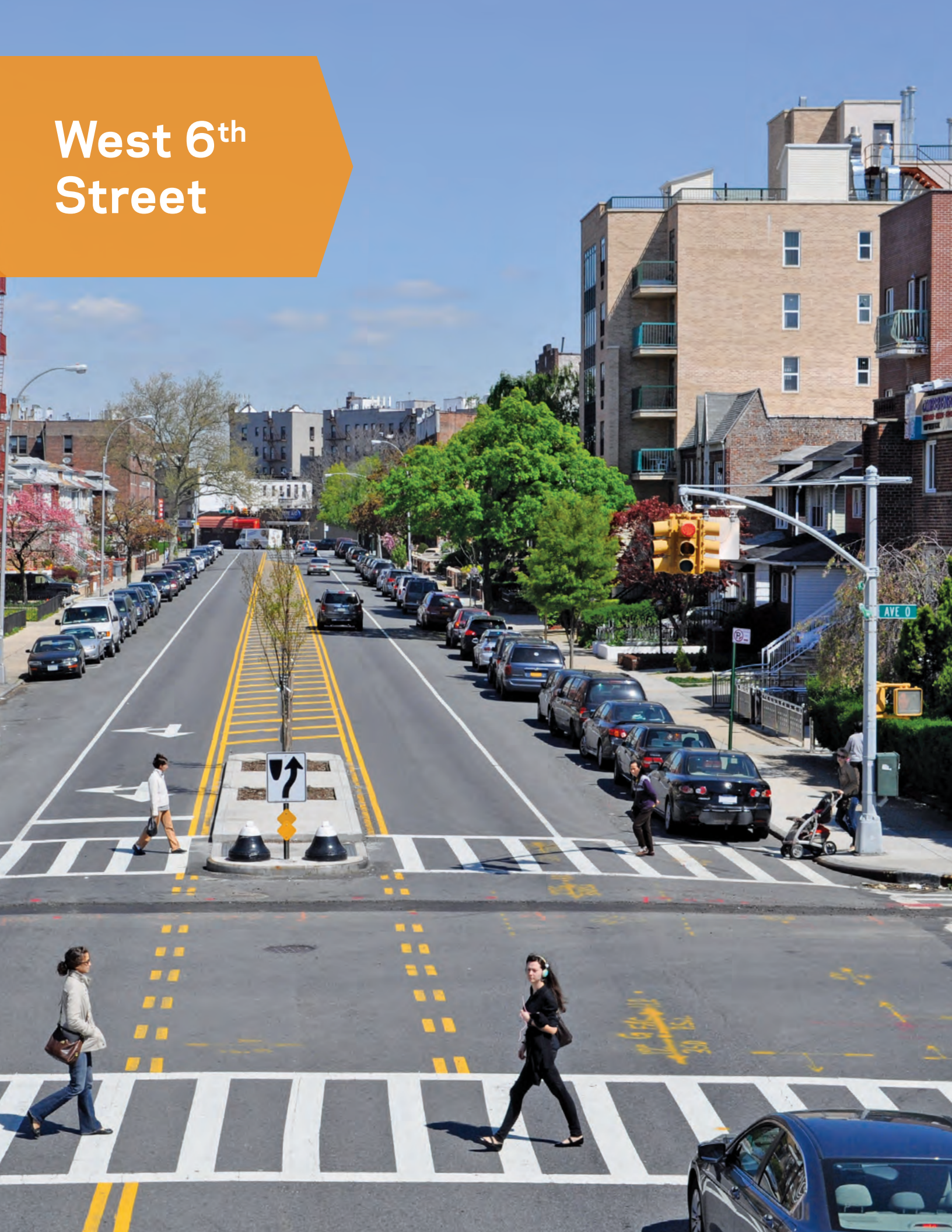
# West 6th Street



## Purpose

- Reduce speeding
- Provide safer pedestrian crossings
- Enhance the streetscape

## Outreach

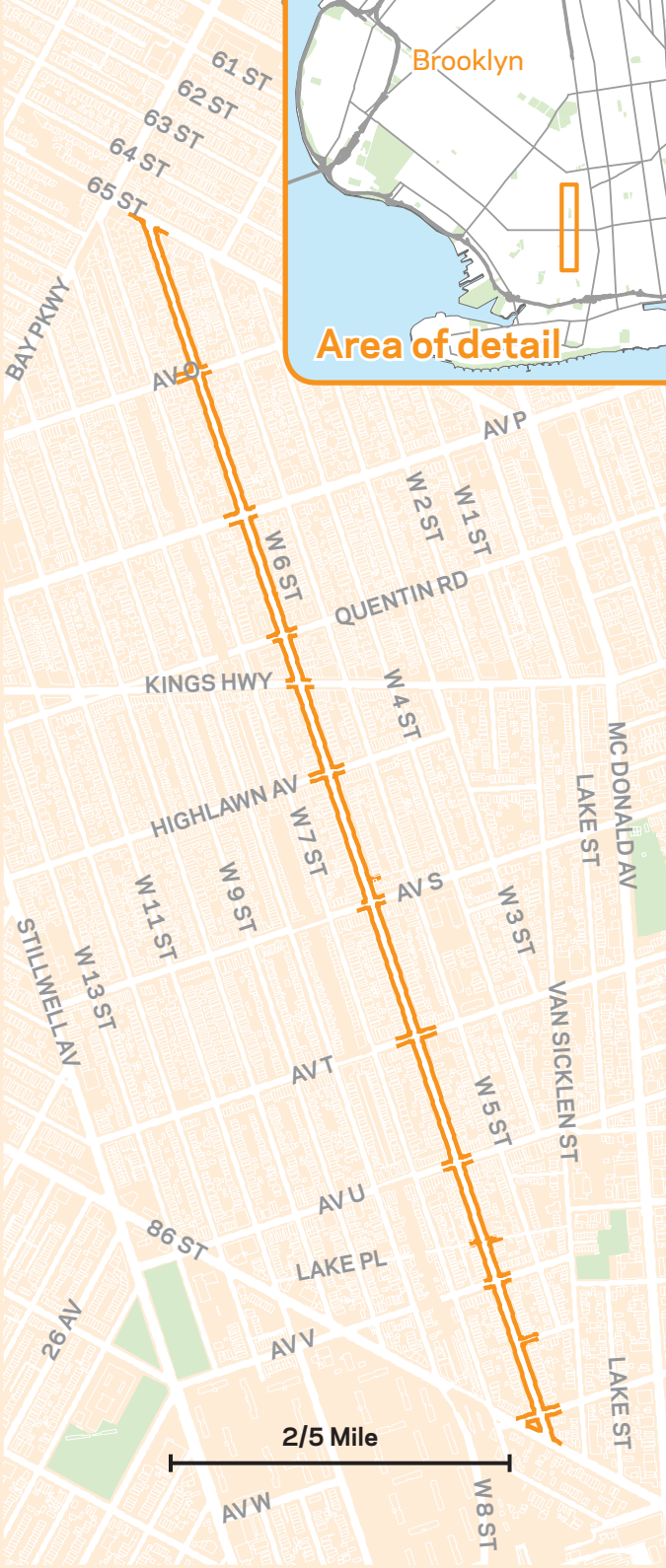
- Brooklyn Community Board 11 (CB11) asked DOT to explore traffic calming measures on West 6th Street in November 2009 following three pedestrian fatalities
- DOT presented plans to the CB11 Transportation Committee and local elected officials in April and May 2010 and received feedback
- DOT presented the modified plans to the CB11 Transportation Committee and local elected officials in May 2010 and received support for the plan

## Approach

- Narrowed roadway from two moving lanes to one in each direction from 65th Street to 86th Street
- Installed a wide center, painted median
- Installed pedestrian refuge islands and left-turn bays at key intersections
- Marked wide parking lanes and maintained all parking
- Installed high visibility markings for crosswalks at three intersections

## Results

- Vehicles traveling over the speed limit decreased by 42% on southbound West 6th Street and by 29% on northbound West 6th Street
- Total number of crashes involving injuries and number of crashes involving injuries to motor vehicle occupants and pedestrians lower than the average for the three prior years
- Shorter pedestrian crossing distances
- Greened the corridor




West 6th Street is a north-south arterial that runs through the Bensonhurst and Gravesend neighborhoods of Brooklyn. The project corridor is primarily a residential neighborhood. West 6th Street runs parallel to the N subway train just one block to the west and there are four subway stops within the project corridor: Bay Parkway, Kings Highway, Avenue U, and 86th Street.

# West 6th Street

A north-south thoroughfare, West 6th Street carried fast through-moving traffic along its two moving lanes in each direction. The 1.5 mile-length corridor connects 65th Street to 86th Street in Bensonhurst and Gravesend, Brooklyn, one block east of the N train. West 6th Street has numerous pedestrians crossing the street to reach the subway stations located at Bay Parkway, Kings Highway, Avenue U, and 86th Street.

DOT began studying West 6th Street at the request of CB11 in November 2009. At the time of the request, there had been three pedestrian fatalities; one at the intersection with Avenue O, Kings Highway and Avenue T. Another pedestrian was killed at Avenue O in early 2010. DOT met with local elected officials in April and presented plans to the CB11 Transportation Committee in May 2010 and received feedback. CB11 approved the revised project plans in May 2010. Project implementation began in late May and was completed in June 2010.

Based on observations and data collected by DOT, West 6th Street had excess capacity, a high incidence of speeding, long crossing distances for pedestrians and great distance between crosswalks which led to jaywalking midblock.

In order to calm traffic and improve safety, DOT narrowed West 6th Street to one moving lane in each direction, installed a wide parking lane and a 12-foot painted median with left-turn bays at key intersections. The one lane of traffic in each direction readily accommodates existing traffic volumes. The left-turn bays help organize traffic movements by moving vehicles waiting to turn out of the way of through traffic. The wide parking lane allows the occupants of parked cars to more safely open car doors.

At the three locations where there was a high frequency of pedestrian crashes, Avenue O, Quentin Road, and Kings Highway, DOT installed pedestrian refuge islands and high visibility crosswalk markings. The refuge islands provide pedestrians with a safe space to wait in the center of the street if they did not make it all the way across during their signal phase. Installing the pedestrian refuge islands required banning left turns in the direction with the lowest existing left-turn volume at the three locations. Banning the left turns ensures that cars making turns would not interfere with pedestrians in the safety refuge or with opposing left turners. Installing pedestrian refuges also provides the opportunity to beautify the street with trees in the center of the street. Six trees were planted, two in each of the three new pedestrian refuge islands.

Speeding decreased markedly as a result of the project. Radar spot speed studies were performed on West 6th Street between Avenue V and Avenue W before and after the project was implemented. On average, in the northbound direction, the percentage of vehicles traveling over the speed limit of 30 mph decreased 29% from 53% to 24%. In the southbound direction, the percentage of vehicles traveling over the speed limit decreased 42% from 60% to 18%. Average speeds between Avenue V and Avenue W decreased in the northbound direction from 30.4 mph to 27.9 mph, an 8% decrease and in the southbound direction speeds were reduced by 12% from 31.3 mph to 27.7 mph.

**A refuge island, high visibility crosswalk markings and landscaping in the north crosswalk of West 6th Street at Avenue O provides a safer crossing and improves the streetscape.**

**Traffic calming measures applied on West 6th Street included the narrowing of the roadway from two lanes in each direction to one and the addition of painted center medians.**

# The incidence of speeding fell by more than half as a result of converting an unneeded through lane into turn lanes, a median and a wider parking lane.

Analysis of the New York City Police Department crash data shows total crash rates and crash rates for motor vehicle occupants and pedestrians after implementation were lower than the average for the three prior years. In addition, the annualized crash rate involving injuries to motor vehicle occupants after implementation was lower than the number of crashes in any of the 10 prior years (for crash analysis methodology, see page 68).

The safety improvements along West 6th Street benefits both pedestrians and drivers by calming traffic, simplifying turning movements, installing pedestrian refuge islands, while not negatively affecting the flow of traffic.

**Crashes with Injuries along West 6th Street 65th Street to 86th Street**

| | Before* (three previous years) | | | After |
|---|---|---|---|---|
| **Total Crashes with Injuries** | 36 | 22 | 27 | 21.5 |
| **Number of Crashes with Injuries to:** | | | | |
| **Motor Vehicle Occupants** | 15 | 11 | 14 | 8.8 |
| **Pedestrians** | 20 | 10 | 9 | 10.1 |
| **Bicyclists** | 1 | 1 | 4 | 2.5 |

*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 January 2012) at annual rate. See page 68 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.

**West 6th Street Average Traffic Speeds (in m.p.h.) Avenue V to Avenue W**

| | Before | After | % Change |
|---|---|---|---|
| **Northbound** | 30.4 | 27.9 | -8% |
| **Southbound** | 31.3 | 27.7 | -12% |

Data collected between 12 -2 p.m. on a weekday. Before data collected in August 2009. After data collected in January 2011.

**Percentage of Vehicles Over the Speed Limit on West 6th Street Avenue V to Avenue W**

| | Before | After | % Change |
|---|---|---|---|
| **Northbound** | 53% | 24% | -29% |
| **Southbound** | 60% | 18% | -42% |

Data collected between 12 -2 p.m. on a weekday. Before data collected in August 2009. After data collected in January 2011.