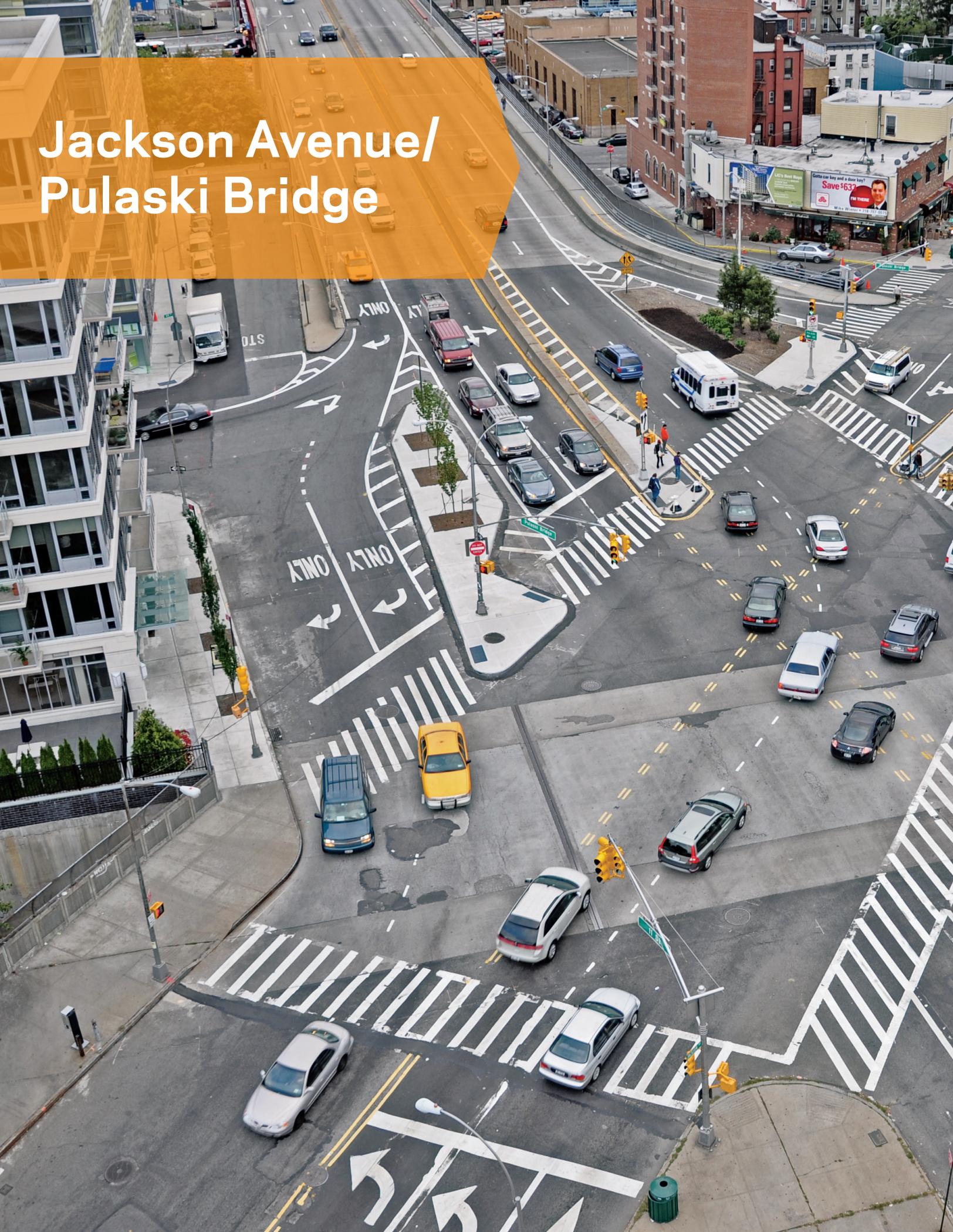


Jackson Avenue/ Pulaski Bridge



Purpose

- Provide safer pedestrian crossings
- Improve pedestrian access between bus stops and subway entrance and new apartment buildings
- Reduce crashes
- Reduce traffic congestion and improve intersection operation
- Enhance the streetscape

Outreach

- DOT studied potential safety improvements for the area in response to community and developers' concerns
- DOT presented proposed changes to the Queens Community Board 2 Transportation Committee (CB2) in January 2009 and received feedback
- DOT made adjustments to the plan and received support from CB2 in March 2009

Approach

- Installed new signal-protected crosswalk at the foot of the Pulaski Bridge, as well as new and expanded pedestrian refuge islands
- Reconfigured and retimed the intersections of Pulaski Bridge/ Jackson Avenue/11th Street and 11th Street/49th Avenue
- Landscaped new/expanded refuge islands for aesthetic and sustainability purposes

Results

- Improved pedestrian safety and connectivity - no pedestrian or bicyclist injuries since implementation (17+ months)
- Reduced delay for traffic traveling from Pulaski Bridge to eastbound Jackson Avenue by 70%
- Landscaped refuge areas added for safety, aesthetic quality and sustainability



Located at the foot of the Pulaski Bridge in Long Island City, the intersection of Jackson Avenue and 11th Street is a key intersection, serving motorists travelling to and from major roadways in the City and providing a direct connection between Queens and Brooklyn via the Pulaski Bridge. The area is served by the #7 local and express subway trains and the B62 bus line, and is a major transfer point between these two modes. The area was recently rezoned to include residential high-rise buildings and is experiencing growth as are surrounding neighborhoods.

The intersection of Jackson Avenue and 11th Street at the Pulaski Bridge is a major connection between the boroughs of Queens and Brooklyn. The design and operation of streets at this intersection, a relic from Long Island City's manufacturing origins, were in need of a substantial update. This Queens neighborhood was recently rezoned to attract residential high-rise buildings, and the Brooklyn neighborhood of Greenpoint - just south of Pulaski Bridge - has also experienced significant growth in recent years. With the resulting increase in pedestrian activity, the importance of configuring the intersection to function for all users and modes has been highlighted by local residents and businesses.

Safety concerns regarding this intersection were raised by the community and residential developers. As a result of these concerns, DOT presented plans to CB2 in January 2009. DOT received feedback from the board and after DOT modified the plan, CB2 supported the project in March 2009.

One of the key changes made at the intersection of Jackson Avenue and the Pulaski Bridge was the addition of a crosswalk at the base of the bridge and a pedestrian signal phase to make the intersection safer and more inviting for pedestrians. The crosswalk connects a busy B62 bus stop on one side with a subway station for the #7 line on the other. In building this crosswalk, DOT also added two refuge islands, expanded an existing one, and added a signal phase dedicated solely for pedestrians to cross. This set of improvements replaced a long and difficult pedestrian crossing with three shorter and safer crossing segments. Other crosswalks were improved by upgrading crosswalk markings. Several refuge islands were planted with trees to improve the landscape, adding to the creation of a sustainable and welcoming gateway between the boroughs.

Pedestrian changes at the intersection were accompanied by changes in the traffic patterns as well. Previously right turns from Pulaski Bridge onto Jackson Avenue were being made from both sides of a concrete island; the new configuration designates that only vehicles in the two lanes to the right of the expanded refuge island can make this turn. By isolating this two-lane channel for

right turns only, a separate signal phase was dedicated to these turns allowing pedestrians to cross conflict free in the east crosswalk. It also ensures that vehicles move through the intersection in a more predictable manner, thus enhancing safety for all.

These changes produced a 70% reduction in delay for a turning movement which had previously experienced excessive delays - the northbound right turn in the morning peak hour from Pulaski Bridge to Jackson Avenue. As a result of this improvement, travel times for vehicles making this turn from the Pulaski Bridge and traveling eastbound along Jackson Avenue to 47th Avenue decreased by 32 seconds, a decrease of 20%.

Another modification completed as part of this project was the lane realignment at the base of the Pulaski Bridge for both directions of travel. The right-most northbound lane on the bridge was striped as a right-turn only lane and directs vehicles to the 11th Street service road and the channelized right-turn lanes at the Jackson Avenue approach. The merging point for southbound vehicles accessing the bridge was eliminated by removing one lane at the entry point from 11th Street so the 49th Avenue slip ramp can access the bridge with a dedicated lane. These changes were made to improve safety by delineating vehicular movements and to provide additional space for the new pedestrian refuge islands. In making these changes, delays for all approaches at the Jackson Avenue and 11th Street intersection were kept within acceptable levels.

On westbound Jackson Avenue, an additional left-turn lane was installed to accommodate heavy left-turn volumes from Jackson Avenue onto the Pulaski Bridge via 11th Street. The westbound left-turn signal phase was also paired with the northbound right-turn phase detailed above, as the two could be paired together to efficiently operate the intersection. The necessary road space for the additional westbound left-turn lane was obtained by removing several on-street parking spaces, a move supported by CB2. After the changes were implemented, travel time for westbound vehicles on Jackson Avenue declined by 29% in the morning peak and 23% in the evening peak.



An expanded, landscaped refuge island/median was added at the southwest corner of Jackson Avenue and 11th Street to improve safety for motorists and pedestrians and to enhance the streetscape.



The new crosswalk at the base of the Pulaski Bridge makes the intersection safer and more inviting for pedestrians and provides a safe connection between the B62 bus stop and the #7 subway station.

Pedestrian safety and connectivity improved at Jackson Avenue and the Pulaski Bridge with the installation of signal-protected crosswalks, pedestrian refuge islands and upgraded crosswalk markings.

Other traffic changes included converting 49th Avenue from a two-way to a one-way eastbound street from the intersection of the Pulaski Bridge exit and the 11th Street service road to 11th Place. This modification eliminates vehicular conflict since all traffic from the service road is directed onto 49th Avenue instead of merging with bridge traffic to make a right turn at Jackson Avenue. Also, the left turn from southbound 11th Street to eastbound Jackson Avenue was prohibited, as a more efficient route was already available by using 47th Road two blocks to the north.

Analysis of the New York City Police Department (NYPD) crash data shows there were no statistically significant changes in the number of crashes involving injuries in the project area, although crash rates after implementation were lower than the average for the three prior years. In 17 months since changes were installed, there have been no bicycle or pedestrian injuries, compared with 18 such injuries in the 10 years prior.

Following the project's completion and observation during the summer of 2009, minor adjustments were made to several signals and markings. The overall changes have improved pedestrian safety and connectivity, supported new economic development and residential growth, clarified paths and movements for motorists, and expanded landscaped area of the intersection.



Vehicles at the foot of the Pulaski Bridge can only turn right from the designated right-turn lanes.

Crashes with Injuries at Jackson Avenue and Pulaski Bridge

	Before* (three previous years)			After
Total Crashes with Injuries	9	6	5	5.6
Number of Crashes with Injuries to:				
Motor Vehicle Occupants	8	4	5	5.6
Pedestrians	0	1	0	0
Bicyclists	1	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 October 2010) 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.