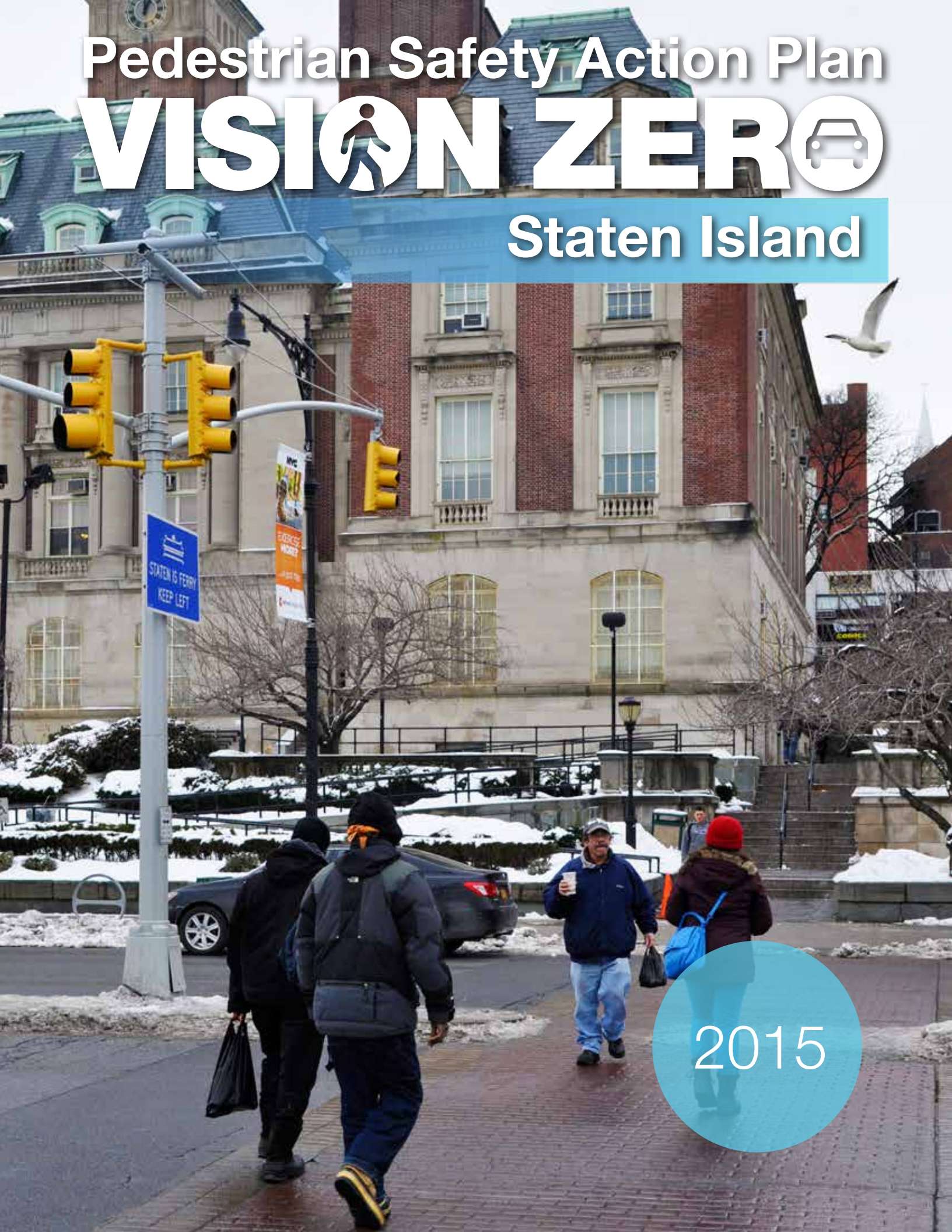


# Pedestrian Safety Action Plan

# VISION ZERO

## Staten Island



2015



SPEED  
LIMIT  
**10**

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# Letter from the Mayor



Dear Friends,

Every life in New York City is precious. It is our responsibility, as residents, workers, and visitors of this great city, to save every life we can.

This administration made Vision Zero, and the elimination of traffic fatalities, a priority from day one. The fundamental message of Vision Zero is that death and injury on city streets is not acceptable, and that we will no longer regard severe crashes as inevitable. This is reflected in the Vision Zero Action Plan that set out directives for city agencies, including the New York City Department of Transportation, the New York Police Department, and the Taxi and Limousine Commission.

Traffic crashes can claim the lives of anyone in New York City. They kill people who drive and those who bike, but overwhelmingly, the deadly toll is highest for pedestrians. This Plan acknowledges this injustice toward pedestrians and the synergies that can be realized by improving pedestrian safety for overall traffic safety, well-being, and urban livability.

In close partnership with our community and advocacy groups and our families and friends of lost loved ones, we are dedicating ourselves to ending this epidemic. NYCDOT and NYPD representatives were out in our communities this past summer listening to us, preparing us for the changes that are taking place, and explaining how to be more conscious—and conscientious—street users. Meanwhile, we have been working to improve our collection and understanding of the data behind traffic fatalities, where the ‘hot spots’ are, and what can be done to erase them from the map. The Pedestrian Safety Action Plans help us do just that.

Our recent success in reducing the citywide speed limit to 25 MPH, redesigning intersections and corridors and increasing enforcement of the most dangerous driving behaviors are just some of the ways we are making our city’s streets safer. The Pedestrian Safety Action Plans are the next step in achieving Vision Zero in your community.

New Yorkers deserve to feel safe on their streets. Thank you for your input into this process, together we will save lives.

A handwritten signature in black ink that reads "Bill de Blasio". The signature is written in a cursive, slightly informal style.

Bill de Blasio  
Mayor

**NEW  
SPEED  
LIMIT  
25**

SR-2166      DEPT. OF TRANSPORTATION

**Victory Blvd  
SLOW ZONE**



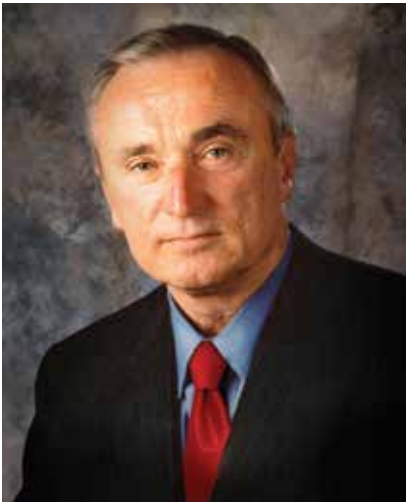
# Letter from the Commissioners



Dear fellow New Yorkers,

We are proud to bring you the Vision Zero Borough Pedestrian Safety Action Plans. These documents represent the highly detailed combination of DOT and NYPD crash data and analysis, over 10,000 online comments via the Vision Zero Public Input Map, and nine public pedestrian safety workshops across the five boroughs. These borough-specific plans outline our current progress and help define the next phase of Vision Zero.

The first year of Vision Zero in New York City proved successful; after two years of increases, the city experienced the lowest number of pedestrian fatalities since record keeping began in 1910. In 2014, the city lowered its speed limit to 25 MPH, completed over 50 major safety engineering projects, and expanded traffic enforcement dramatically, with speeding summons increasing 42% and failure-to-yield summons increasing 126%. DOT and NYPD partnered to form the Vision Zero Street Team, launching a series of two-phase, two-week campaigns focused on pedestrian safety. The first phase of the campaigns included distributing traffic safety literature to the public at collision-prone locations to promote traffic safety. These weeklong efforts to educate the public were then followed by a week of focused, safety-related enforcement to address persistent violations.



With the Borough Pedestrian Safety Action Plans, we will build on this success and continue to improve the way we monitor, design, and govern our streets. The Borough Priority Maps will serve as a guide for our agencies to systematically improve streets with the highest rates of pedestrian fatality and severe injury. By coordinating our planning, engineering, education, and enforcement efforts in these areas, DOT and NYPD can make significant progress toward the vision of eliminating pedestrian fatalities across the five boroughs.

Over the past 30 years, we have made tremendous progress in traffic safety. We have seen large decreases in the number of fatal crashes, including fatal pedestrian crashes. Motor vehicles, however, continue to seriously injure or kill a New Yorker about every two hours. Each of these tragedies compels us to come together and deliver a safer future for our city. There is plenty of work still ahead of us.

Polly Trottenberg  
DOT Commissioner

William Bratton  
NYPD Commissioner

# Executive Summary

## Staten Island Borough Profile

### Findings

- Pedestrian fatalities on Staten Island have risen by 11% in the past three decades
- Staten Island's pedestrian fatality rate is 1.4 fatalities per 100,000 residents, the lowest of the five boroughs
- **Where:** Staten Island's pedestrian fatalities and severe injuries are most heavily concentrated on the North and East Shores
- **When:** Afternoon and evening hours (3-9pm) hours account for 80% of Staten Island pedestrian fatalities, as opposed to 31% citywide
- **Who:** Staten Island seniors account for 25% of the borough's pedestrian fatalities, versus 35% citywide
- **What:** Passenger vehicles are involved in nine out of ten pedestrian fatalities on Staten Island, compared to 68% citywide
- **How:** Dangerous driver choices are the primary cause or a contributing factor in 67% of pedestrian fatalities on Staten Island

## Priority Corridors, Intersections, and Areas

	Share of Borough	Borough	% of Borough	Share of Ped KSI*	Total Ped KSI	% of Total Ped KSI	% of Total Ped Fatalities
Priority Corridors	16 corridors (53 miles)	837 miles	6%	129	238	54%	40%
Priority Intersections	17 intersections	8,011 intersections	1%	40	238	17%	5%
Priority Areas	7.5 sq miles	59 sq miles	13%	119	238	50%	33%
<b>Combined Total</b>	—	—	—	<b>172</b>	—	<b>72%</b>	<b>55%</b>

\*Ped KSI: Pedestrians Killed or Severely Injured



 Priority Intersections

 Priority Corridors

 Priority Areas

Staten Island Priority Map



# Community Dialogue and Input

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- 635 Staten Island pedestrian safety issues were shared and mapped digitally
  - Speeding (26%) and failure to yield (20%) were the most frequently cited issues
  - 57% of workshop attendees viewed wide arterial streets as the most important areas for pedestrian safety improvements
  - 51% of issues shared fall outside of the Priority Corridors, Intersections, and Areas
- 

## Action Plan

### Engineering and Planning

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- Implement at least 50 Vision Zero safety engineering improvements annually at Priority Corridors, Intersections, and Areas citywide, informed by community input at project locations
  - Significantly expand exclusive pedestrian crossing time on all Staten Island Priority Corridors by the end of 2017
  - Add exclusive pedestrian crossing time to all feasible Staten Island Priority Intersections by the end of 2017
  - Modify signal timing to reduce off-peak speeding on all feasible Staten Island Priority Corridors by the end of 2017
  - Install expanded speed limit signage on all Staten Island Priority Corridors in 2015
  - Drive community input and engagement at Staten Island Priority Corridors, Intersections, and Areas
  - Coordinate with MTA to ensure bus operations contribute to a safe pedestrian environment
  - Expand a bicycle network in Staten Island that improves safety for all road users
  - Proactively design for pedestrian safety in high-growth areas on Staten Island including locations in the *Housing New York* plan
- 

### Enforcement

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- Implement the majority of speed cameras at Priority Corridors, Intersections, and Areas
  - Focus enforcement and deploy dedicated resources to Staten Island NYPD precincts that overlap substantially with Priority Areas
  - Prioritize targeted enforcement at Staten Island Priority Corridors, Intersections, and Areas annually
  - Focus failure-to-yield and speeding enforcement in the afternoon and evening, when 80% of pedestrian fatalities occur
- 

### Education and Awareness Campaigns

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- Target child and senior safety education at Staten Island Priority Corridors and Priority Areas
  - Target Street Team outreach at Staten Island Priority Corridors, Intersections, and Areas
-

# Why a Pedestrian Plan?

## Pedestrian fatalities have grown as a share of all traffic fatalities

**Between 2007 and 2013 pedestrian fatalities grew from 51% of all traffic fatalities to 58%**

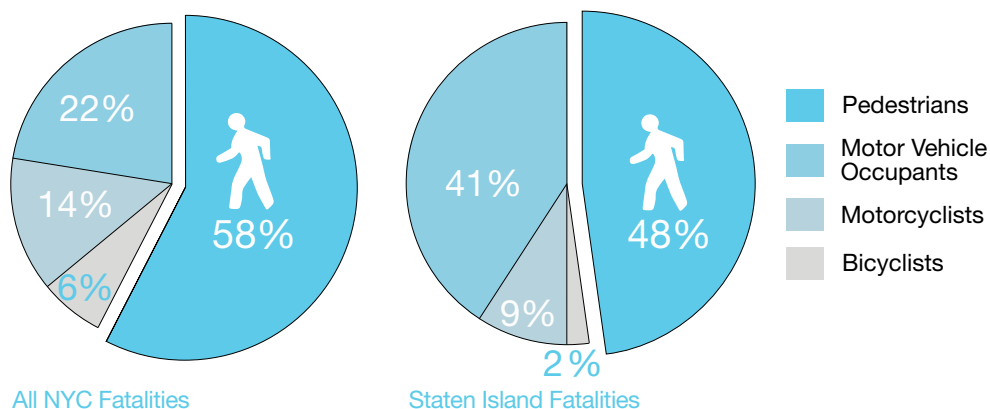
Vision Zero seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. This Borough Plan is one of 63 Vision Zero initiatives advancing that goal for all street users. Despite aggressive pedestrian-oriented street re-engineering between 2007 and 2013, citywide pedestrian fatalities have not declined. In fact, they increased in 2012 and 2013 while fatalities to other street users fell. Comparing the periods of 2005-2007 to 2011-2013, pedestrian fatalities actually rose by 2% while fatalities to all other users fell by 24%. At the same time, the pedestrian share of overall fatalities rose from 51% to 58%. Nationwide, pedestrians make up just 14% of all traffic fatalities.<sup>1</sup> In Staten Island, pedestrians are 48% of all fatalities.

## The challenge of an aging city



Additionally, the baby-boom generation has begun to hit retirement age and New York City will soon experience a rapid growth of its senior citizen population. The city's seniors walk much more than those elsewhere in the United States, and their pedestrian fatality rate is four times that of younger New Yorkers. Without a focused strategy on pedestrian safety to address this need, New York City could potentially see an alarming rise in pedestrian fatalities.

Fatalities by Mode: Staten Island Compared to NYC, 2011-2013 Average, Rounded



	Pedestrian	Bicyclists	Motorcyclists	Motor Vehicle Occupants	Total
All NYC	157	17	37	61	272
Staten Island	7	0	1	6	14

**Most pedestrian and cyclist fatalities and severe injuries occur in the same areas of NYC**



**Since 2007, fatalities of vulnerable road users increased by 1%, while fatalities of motor vehicle occupants fell by 37%**



## Pedestrian focus improves safety for all users

Street design based around pedestrian safety is also proven to make travel safer for other street users, including bicyclists and motor vehicle occupants. Slower vehicle speeds, less chaotic, better organized traffic, and narrower vehicle lanes make streets safer (and easier to use) for cyclists. A pedestrian oriented project on Delancey Street in Manhattan contributed to a 20% reduction in injuries to cyclists. Similarly, projects and programs aimed at improving safety for pedestrians often improve motor vehicle safety as well. The pedestrian focused re-design of the Madison Square/Flatiron area contributed to a 46% reduction in injuries among motor vehicle occupants. The areas of New York City that accounted for 71% of pedestrians killed or severely injured (KSI) also accounted for 66% of cyclist KSI. Safety interventions at these locations can address safety concerns for both groups of street users.

## A comprehensive strategy addressing all modes

New York City will need to go beyond the actions in this plan to address all traffic fatalities, particularly for vulnerable road users: the pedestrians, bicyclists, and motorcyclists that use the streets without the protection of a closed vehicle. These vulnerable road users account for the vast majority (78%) of New York City's traffic fatalities. Again, comparing 2005-2007 to 2011-2013, vulnerable road user fatalities increased by 1%, while fatalities of motor vehicles occupants fell by 37%. In other words, the entire decline in traffic fatalities between 2007 and 2013 came from reductions in fatalities of drivers and passengers inside motor vehicles. Furthermore, there is significant overlap between the high-crash locations for pedestrian and cyclists.

For bicyclists, DOT will work with the New York City Department of Health and NYPD in 2015 to develop a comprehensive update to its 2006 Bicyclist Fatality and Serious Injuries study, highlighting current issues in cyclist safety in New York City and developing new recommendations. DOT is aggressively seeking to increase the amount of cycling in the city by expanding the bike network where it can generate the most ridership and expanding its Citi Bike bike sharing program. More cyclists using city streets has been shown to have a "safety in numbers" effect; while cycling in New York City has approximately quadrupled since 2000, serious injuries have remained low, representing a 75% decrease in the average risk of a serious injury. Also, DOT will release their first motorcyclist safety study in 2015, which will analyze New York City motorcycle crashes and will also put forward a safety action plan. Finally, New Yorkers with disabilities are also pedestrians. As DOT designs safer streets for all vulnerable users, the agency will continue to work with advocacy groups and members of the disabled community to ensure that the City continues to address the needs of New Yorkers with disabilities. A safer city is a more accessible City.

# About This Plan

**This strategic pedestrian safety plan for Staten Island is one of five borough-level plans created to advance the goals laid out in the 2014 Vision Zero Action Plan**

Beginning with a borough wide community dialogue and input process, DOT and NYPD worked with community members to identify local pedestrian safety issues. By re-engineering these high-crash streets and intersections, employing strategic enforcement practices, and stepping up education efforts, DOT and NYPD can effectively change the way we perceive city streets and deter the most dangerous behaviors, such as speeding and failure to yield to pedestrians.

This Staten Island Pedestrian Safety Action Plan is one of a set of five documents, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. This plan pinpoints the conditions and characteristics of Staten Island's pedestrian fatalities and severe injuries; it also identifies corridors, intersections, and areas that disproportionately account for Staten Island's pedestrian fatalities and severe injuries and strategically prioritizes them for safety interventions. Finally, the Staten Island Pedestrian Safety Action Plan recommends a series of actions to alter the physical and behavioral conditions on Staten Island's streets that lead to pedestrian fatality and injury.

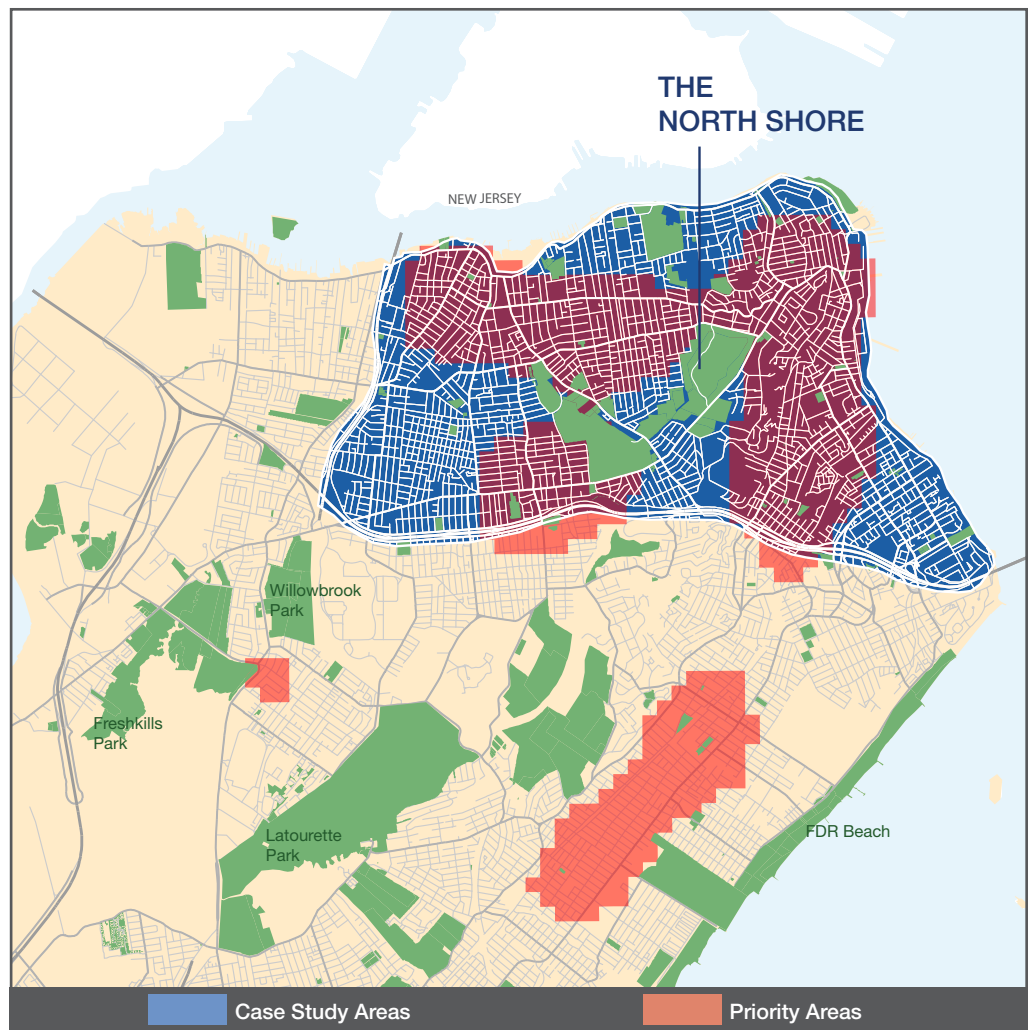
## A Five Borough Approach



In each borough, heat maps were created to highlight locations with the highest density of pedestrian fatalities and severe injuries. These maps were then used to create borough Priority Maps. Both maps were built on borough crash data, rather than citywide data. Since each borough has a different overall number and density of pedestrian crashes, each borough map is drawn at a different scale. For example, the “red” we observe in the Staten Island maps represents far fewer crashes than the “red” in the Manhattan maps. DOT and NYPD are tasked with addressing road safety for all residents in all boroughs, so creating five separate action plans was the most practical way to develop a robust set of focused, effective actions for each borough.

# North Shore Case Study

Included in this plan is a detailed case study of Staten Island’s North Shore. The North Shore was selected for deeper analysis because it is identified as the primary pedestrian safety priority location in the borough. This case study provides a more localized look at data, issues, and recommendations that may be difficult to contextualize on a borough-wide level. The case study also explores location-specific comments received from community members via the Vision Zero Public Input Map and Pedestrian Safety Workshops.





# Staten Island Borough Profile

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BUSES  
& RIGHT TURNS

Louis St





**Staten Island has the highest median household income of all boroughs**



Separated from the soaring skyline and dense grid of Manhattan by five miles of harbor, Staten Island is perhaps New York City’s most physically distinct borough. With a population of about 470,000 (roughly one-third that of the Bronx, the city’s next-smallest borough), and a population density of about 8,000 persons per square mile (more comparable to Los Angeles than the rest of New York City), much of Staten Island possesses a markedly suburban feel. It is the wealthiest borough, with a median household income of \$71,000 per year, and nearly three out of four residents identify as white.



**Staten Island is the least populous borough**

Once connected only by ferry to the rest of the city (Staten Island is the only borough without a subway), the borough was relatively isolated through the middle of the 20th century. Then, in 1964, the Verrazano-Narrows Bridge and the Staten Island Expressway both opened, launching a period of new development and expanding connections with the regional economy. In the ensuing years, Staten Island’s population more than doubled.

In contrast to the pedestrian-oriented streets of many neighborhoods across New York City, most of Staten Island can be characterized as auto-dependent. Eighty-two percent (82%) of Staten Islanders own at least one vehicle (nearly double the rate for New York City as a whole), and two out of three drive to work (more than twice the citywide rate). Much of the borough’s local streetscape consists largely of residential streets lined with single-family homes and narrow sidewalks, a suburban-style layout largely conducive to automobile travel, while three multi-lane highways (the Staten Island Expressway, West Shore Expressway, and Korean War Veterans Parkway) cut across the island. In fact, of the five boroughs, Staten Island claims the most highway mileage per capita by a wide margin.



**82% of households in Staten Island own at least one car**

The primary exceptions to Staten Island’s automobile-oriented nature can be found on the North Shore (above the Staten Island Expressway). Compared to the rest of the island, many North Shore neighborhoods can be characterized as more transit-oriented—with the Staten Island Ferry, Staten Island Railroad, and a dense bus network converging in St. George—and, in turn, the North Shore attracts higher levels of pedestrian activity. Accordingly, the majority of Staten Island’s pedestrian-KSI crashes occur in the borough’s North Shore neighborhoods. The only substantial pedestrian-KSI hot spot to the south is near Hylan Boulevard, a major traffic artery, commercial corridor, and heavily trafficked bus route.



**On average, a pedestrian is killed or severely injured in Staten Island nearly once per week**

## Staten Island Pedestrian Safety Findings

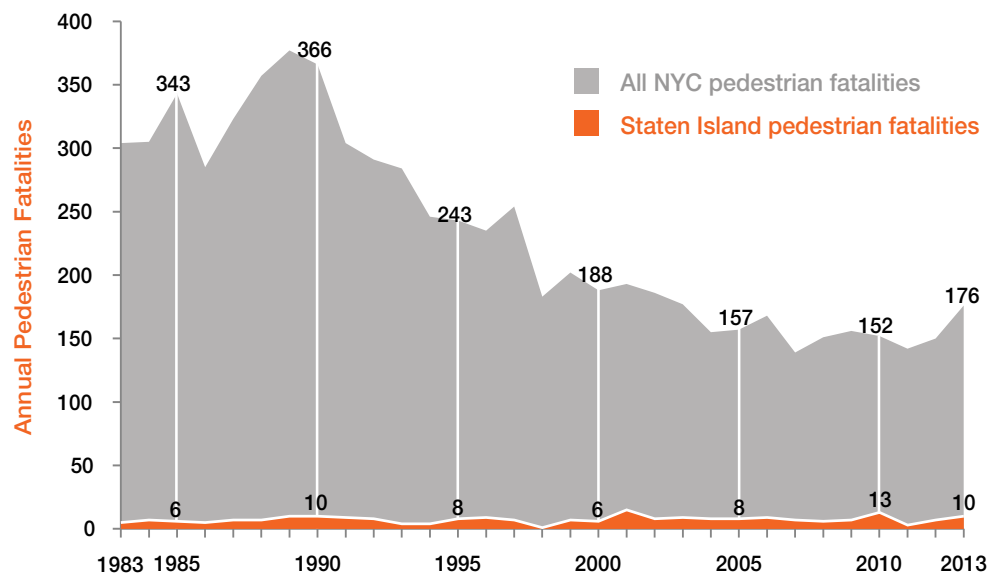
The Staten Island Borough Profile combines demographic data with crash and fatality data to provide an overview and contextual narrative for Staten Island. Demographic information was collected from the US Census Bureau. Crash and fatality data used throughout this report is based on 2011-2013 fatality data (NYPD/NYCDOT) and 2009-2013 Killed or Severely Injured (KSI) data (DMV/NYS DOT).<sup>2</sup> Estimates of pedestrian activity are based on transit ridership, which is generally proportional.

On average, about 40 pedestrians are severely injured on Staten Island streets each year, and 7 are killed. Though this number may pale in comparison to the other four boroughs, where the number of severe and fatal pedestrian injuries reaches well into the triple digits each year, its historical trajectory is significant: traffic fatalities for all street users across New York City as a whole have declined precipitously over the past 30 years, but they have remained fairly consistent on Staten Island.<sup>3</sup>

Applied strategically to high-crash locations across Staten Island, Vision Zero pedestrian safety planning can change the course of the borough's pedestrian fatality trend such that it begins to fall with the rest of the city.

**Staten Island pedestrian fatalities have remained consistent over the past 30 years**

Pedestrian Fatalities, 1983-2013





**Staten Island's pedestrian fatality rate is the lowest of all boroughs**

Pedestrian Fatalities, 2011-2013, Rounded

Borough	Average Annual Fatalities	Percent Pedestrian Fatalities	Pedestrian Fatality Rate/100,000
Bronx	27	54%	1.91
Brooklyn	46	55%	1.79
Manhattan	34	73%	2.10
Queens	43	54%	1.92
<b>Staten Island</b>	<b>7</b>	<b>48%</b>	<b>1.41</b>
<b>All NYC</b>	<b>157</b>	<b>58%</b>	<b>1.88</b>



## Where?

### Neighborhoods

As shown in the Staten Island Heat Map and Pedestrian Fatalities (page 5), pedestrian KSI are largely concentrated in the northern and eastern neighborhoods of the island. These areas appear in red and experienced a much greater density of pedestrian KSI between 2009 and 2013, relative to blue areas in the south and west of the island. The greatest concentrations are found in the higher population density North Shore neighborhoods north of the Staten Island Expressway, which account for about 45% of the borough’s pedestrian KSI but just 18% of its total area.

### Mid-Block Crashes

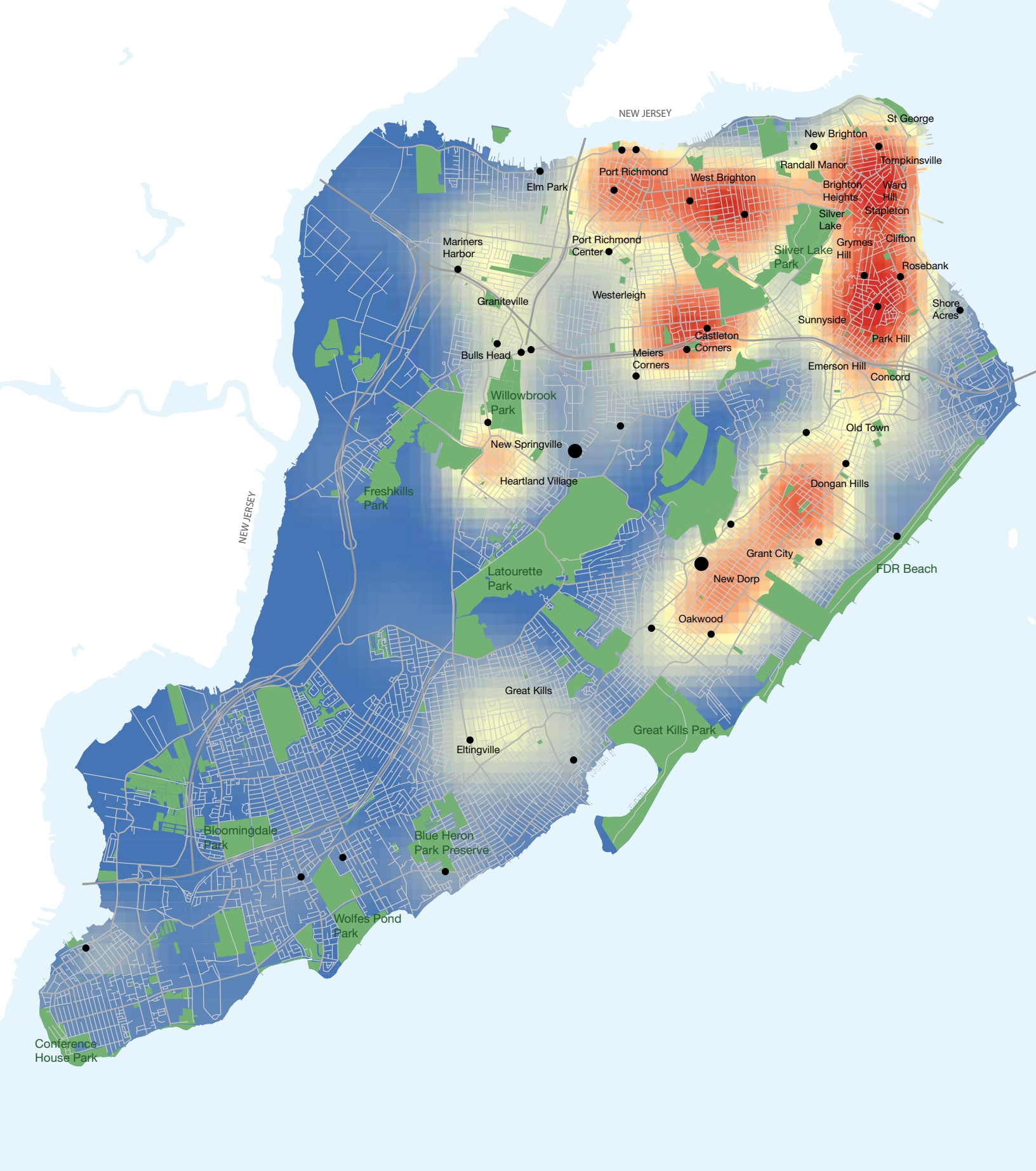
Across New York City as a whole, about one in three pedestrian fatalities occurs away from an intersection in the middle of a block. Though Staten Island claims the highest intersection density (number of intersections per mile of non-highway street) of any of the five boroughs, nearly half (45%) of its fatal pedestrian crashes occur mid-block. This disparity suggests that Staten Island may lack an adequate frequency of safe routes across streets in places where pedestrians want or need to cross.

Identifying “desire lines” — the routes pedestrians actually use to cross the street — and installing crosswalks and traffic signals at these locations can add extra safety for highly traveled routes that are presently unprotected from oncoming vehicles. Larger-scale engineering projects, such as pedestrian refuge islands and curb extensions, can also provide pedestrians with additional protected space and safer routes to cross the street while more effectively managing all traffic movements.

**Mid-block crashes account for 45% of Staten Island’s pedestrian fatalities**



# Staten Island Heat Map and Pedestrian Fatalities



Approximate pedestrian KSI per sq mile per year:



Fatalities (2009-2013):



## Pedestrian Killed or Severely Injured Kernel Density

A smoothing technique for spatial data where the expected density is calculated for every location on the map with the underlying principal that closer KSI are more heavily weighted than farther KSI. Each location is then assigned a color based on the expected density of KSI, with red showing the highest density of KSI and blue showing the lowest. It is useful for identifying and presenting hotspots.



**of Staten Island's pedestrian weekday fatalities occur during the afternoon and evening**



**Staten Island did not have a single overnight fatality between 2011 and 2013, despite these fatalities making up 21% of the city's total**

## When?

### Peak Hours, Afternoons, and Evenings

Generally speaking, fewer pedestrian fatalities than might be expected take place during rush hours (on weekdays from 7–10am and 4–7pm) in New York City. Congestion during regular commuting hours slow vehicles down, while a high level of pedestrian activity simultaneously encourages more careful driver behaviors (known as the “safety in numbers” phenomenon).

However, Staten Island has the most highway mileage per capita and fewest pedestrians of any borough, and these dynamics do not seem to apply. Peak hours account for 40% of Staten Island's pedestrian travel and 45% of its pedestrian fatalities, nearly all during the afternoon peak. The afternoon and evening hours surrounding the weekday peak appear to be especially dangerous for Staten Island pedestrians. Eighty percent of pedestrian fatalities in the borough take place between these hours.

### Overnight

A similar dynamic exists overnight on Staten Island streets. Typically, overnight hours (between midnight and 6am) account for a disproportionate share of fatal pedestrian crashes, as lower vehicle volumes enable higher speeds and more erratic vehicle movements. However, on Staten Island, traffic patterns on non-highway streets exhibit less variability between daytime and overnight hours. Accordingly, while overnight pedestrian fatalities on average account for 21% of the city's total, they are extremely uncommon on Staten Island, with not a single fatal pedestrian crash taking place during overnight hours between 2011 and 2013. However, nighttime (9 pm to midnight) pedestrian fatalities account for a greater share in Staten Island (21%) than in all New York City (15%).



**Seniors make up 14% of Staten Island's population but 25% of its pedestrian fatalities**

## Who?

### Seniors

Seniors (aged 65 and older) represent just 14% of Staten Island's population but 25% of its pedestrian fatalities. Seniors often require more time and protection when crossing the road than younger pedestrians, and they are also more susceptible to fatal and severe injuries when struck by a vehicle. Through its Safe Streets for Seniors initiative, DOT visits senior centers and community boards to get local feedback on senior pedestrian issues. DOT also implements mitigation measures to improve safety for seniors and other pedestrians, such as extending pedestrian crossing times to accommodate slower walking speeds and making engineering improvements to create safer pedestrian crossings.

Vision Zero means creating streets that are safe for even the most vulnerable road users, including seniors and children. While seniors and children benefit in general from DOT's broad efforts to engineer safer streets, DOT also specifically engages with these populations through special safety education programs.





**90% of pedestrian fatalities in Staten Island involve passenger vehicles, versus 68% citywide**



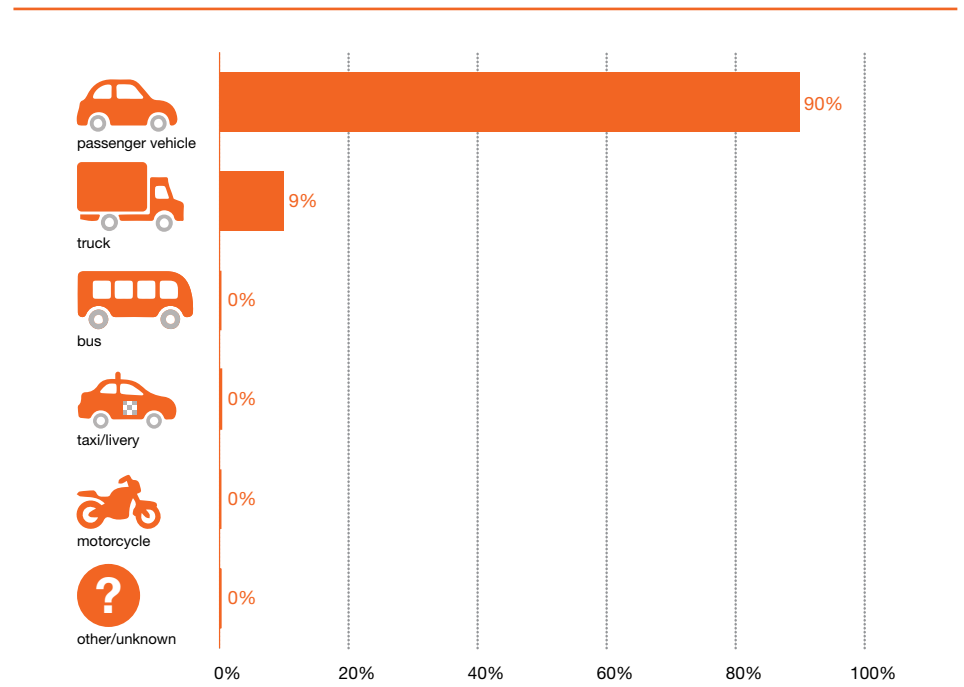
**buses, taxis, and motorcycles were involved in fatal pedestrian crashes between 2011 and 2013**

## What?

### Passenger vehicles

Nine out of ten pedestrian fatalities on Staten Island (versus 68% citywide) are the result of a crash with a passenger vehicle—the cars, SUVs, and minivans driven by ordinary New Yorkers. In fact, between 2011 and 2013, not a single bus, taxi, motorcycle, or livery vehicle was involved in a fatal pedestrian crash. Not only do passenger vehicles outnumber other vehicles on the road by a wide margin, but their drivers are also subject to limited regulation and oversight compared with the professional drivers of trucks, buses and taxi/livery vehicles.

Percent of Pedestrian Fatalities by Mode, Staten Island



25%

of Staten Island's pedestrian fatalities were caused by drivers' failure to yield

### How?

#### Dangerous Choices

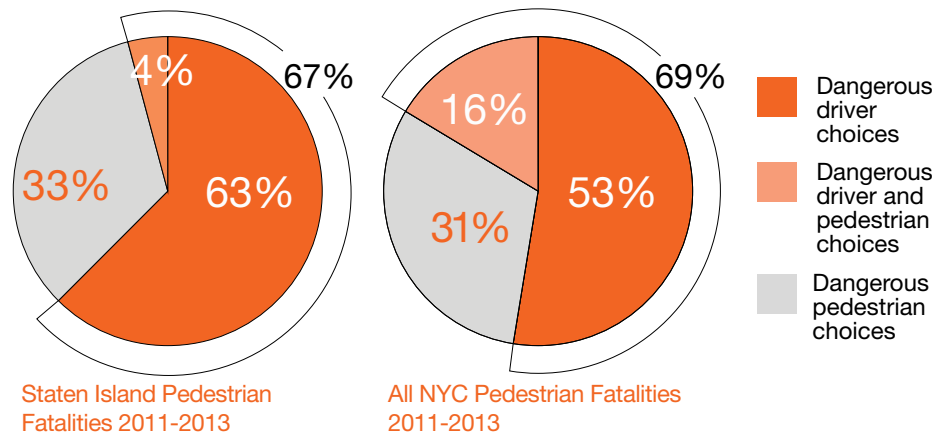
Dangerous driver choices are the primary cause or a contributing factor in two out of three pedestrian fatalities on Staten Island. These driver choices—including speeding, failing to yield to pedestrians, red light running, distracted driving, and driving under the influence—primarily occur when the pedestrian is following the law (crossing with the signal, in a crosswalk at an unsignalized intersection, walking on the sidewalk, etc.).

The City is working to create a culture of safety as education and public information campaigns are changing the dialogue and perspectives on the topic of road safety. However, street design and traffic enforcement that directly encourage safer choices (or punish dangerous choices) are also key to reaching Vision Zero. Street design helps to lower vehicle speeds, eliminate conflicts between pedestrians and vehicles, reduce unpredictable traffic movements, and guide road users toward more responsible choices. More visible, targeted, and consistent enforcement reminds street users of the laws of the road and provides a powerful disincentive to risk-taking.



Dangerous driver choices are a factor in 2 out of 3 pedestrian fatalities on Staten Island

Driver & Pedestrian Choices, Staten Island compared to NYC



# CASE STUDY: The North Shore

As evidenced in the Staten Island Pedestrian KSI Heat Map (page 5), the borough's densest concentration of pedestrian fatalities and severe injuries can be found along the North Shore, north of the Staten Island Expressway and east of the Bayonne Bridge. In fact, the North Shore encompasses just 18% of Staten Island's total land area but accounts for 45% of its pedestrian KSI. Between 2009 and 2013, there were 697 crashes in the area involving pedestrians, resulting in 103 severe injuries and 15 fatalities.

Though Staten Island is New York City's most racially and ethnically homogeneous borough, the North Shore exhibits a more diverse demographic composition, with nearly one-quarter identifying as African American, another quarter as Hispanic or Latino, and about 60% as white (versus 76% borough-wide). The North Shore is also home to a diversity of immigrant communities, with sizable populations from Mexico, China, Liberia, Ecuador, the Dominican Republic, and the Philippines. Moreover, though Staten Island's median household income is the highest citywide, the North Shore's is about 20% lower than the borough's.



697



**Total crashes involving pedestrians between 2009-2013**

**These crashes resulted in 118 pedestrian KSI:**

103  
severe injuries



15  
fatalities

45%



**of all traffic fatalities were pedestrians**





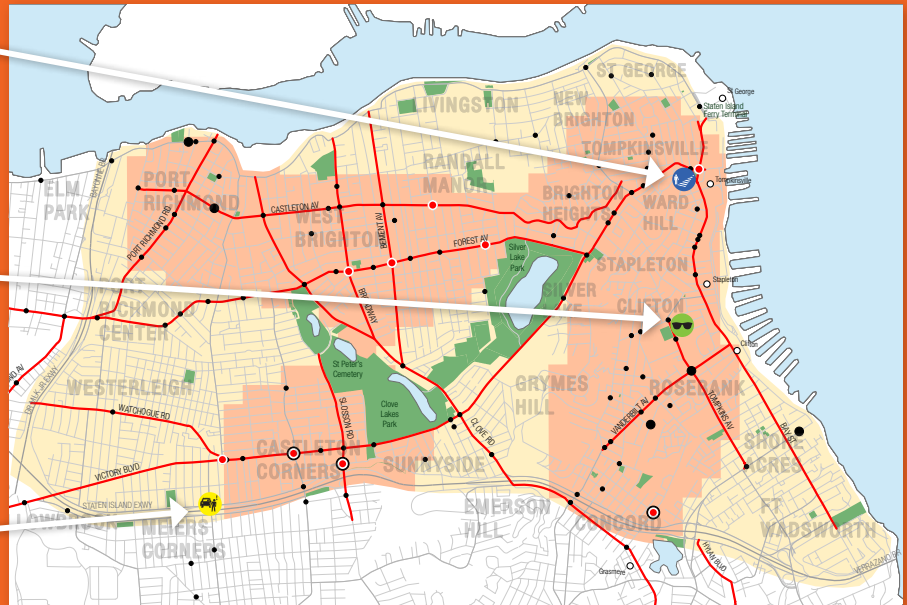
## Community Input

## The North Shore Case Study Area

**Long Distance to Cross @ Bay & Victory:** “Large intersection, lots of turns, curve and rise in wide Bay Street approaching northbound, and everyone rushing to get to the ferry on time.”

**Poor Visibility @ Tompkins Ave & Tompkins St:** “Because of cars that are parked here you can’t see oncoming traffic when making a left turn. May[be] this corner needs a stop sign. I even see a lot of parents with kids trying to cross on this corner.”

**Failure to Yield @ Bradley & N Gannon:** “Disembarking [express] bus passengers must cross illegally as best they can due to turning drivers refusing to yield.”



Priority Corridors



Priority Intersections



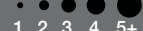
Priority Areas



Subway Stations



Pedestrian KSI



White outline represents the approximate boundary of the case study area.

# CASE STUDY: The North Shore

## Pedestrian Safety

Of the five boroughs, Staten Island is the most automobile-oriented borough. With a more limited public transportation network than the other boroughs, a largely suburban-style single family housing stock and street configuration, and an often wide separation between residential and commercial uses, Staten Island is more conducive to driving than the other boroughs. However, the North Shore is one area of Staten Island that is comparatively urban. The population density is much higher than the borough as a whole (over 12,000 persons per square mile), and households tend to own fewer vehicles and make slightly more trips using transit than the rest of the borough. For these reasons, and because of a greater prevalence of the type of dense, mixed-use development that makes New York City conducive to walking, the North Shore is likely home to a large portion of the pedestrian activity on Staten Island.

Nevertheless, the North Shore's streets present a challenge to pedestrian safety. For instance, residents report a high incidence of speeding vehicles, particularly at rush hours with motorists hurrying to catch a ferry. The area's wide arterial streets offer opportunities for speeding. Congestion can often lead to motorists cutting through neighborhood residential streets that sometimes lack adequate pedestrian infrastructure, do not offer the best visibility, and do not offer pedestrians the "safety in numbers" benefit mentioned in the Findings section. Moreover, in contrast to the orderly grids that characterize street networks across the city, the curving, hilly streets of the North Shore tend to limit visibility between cars and pedestrians, increasing the likelihood of conflict between them.

## Community Dialogue and Input

High vehicle speeds have long been a serious concern on Staten Island, particularly on the North Shore. Therefore, in 2012 when DOT rolled out its Neighborhood Slow Zone program—a community-driven initiative whereby DOT reduces the speed limit to 20 miles per hour and adds traffic calming measures on local streets—the City paid particular attention to



Iconic pedestrian walkways dot Staten Island's North Shore

neighborhood candidates on Staten Island. DOT received more Neighborhood Slow Zone requests from Staten Island than any other borough (43 of 97 total requests came from Staten Island). On behalf of St. George and New Brighton, Community Education Council 31 and the New Brighton Coalition of Concerned Citizens submitted a dual application for a Neighborhood Slow Zone that spanned pieces of both neighborhoods. The proposed area includes five schools, several senior centers, and a daycare, all of which strengthen the case for slow zone selection. The two groups also gathered a broad coalition of community support that included Councilmember Debi Rose, Assemblyman Matthew Titone, and several local schools. DOT accepted the groups' proposal and, in 2012, reduced the speed limit to 20 miles per hour, installed new signage, and constructed 17 new speed bumps throughout the area.

## Van Duzer Street

Crashes with injuries declined by 30% while increasing on-street parking

total injuries  
**↓30%**



Van Duzer Street (before)



Van Duzer Street (after)

*“I want to be sure that our roads will be safe for all Staten Islanders to use. I want to see pedestrians, cyclists, and drivers all using our roads safely as they enjoy our waterfront and surrounding neighborhoods.”*

—Councilmember  
Debi Rose

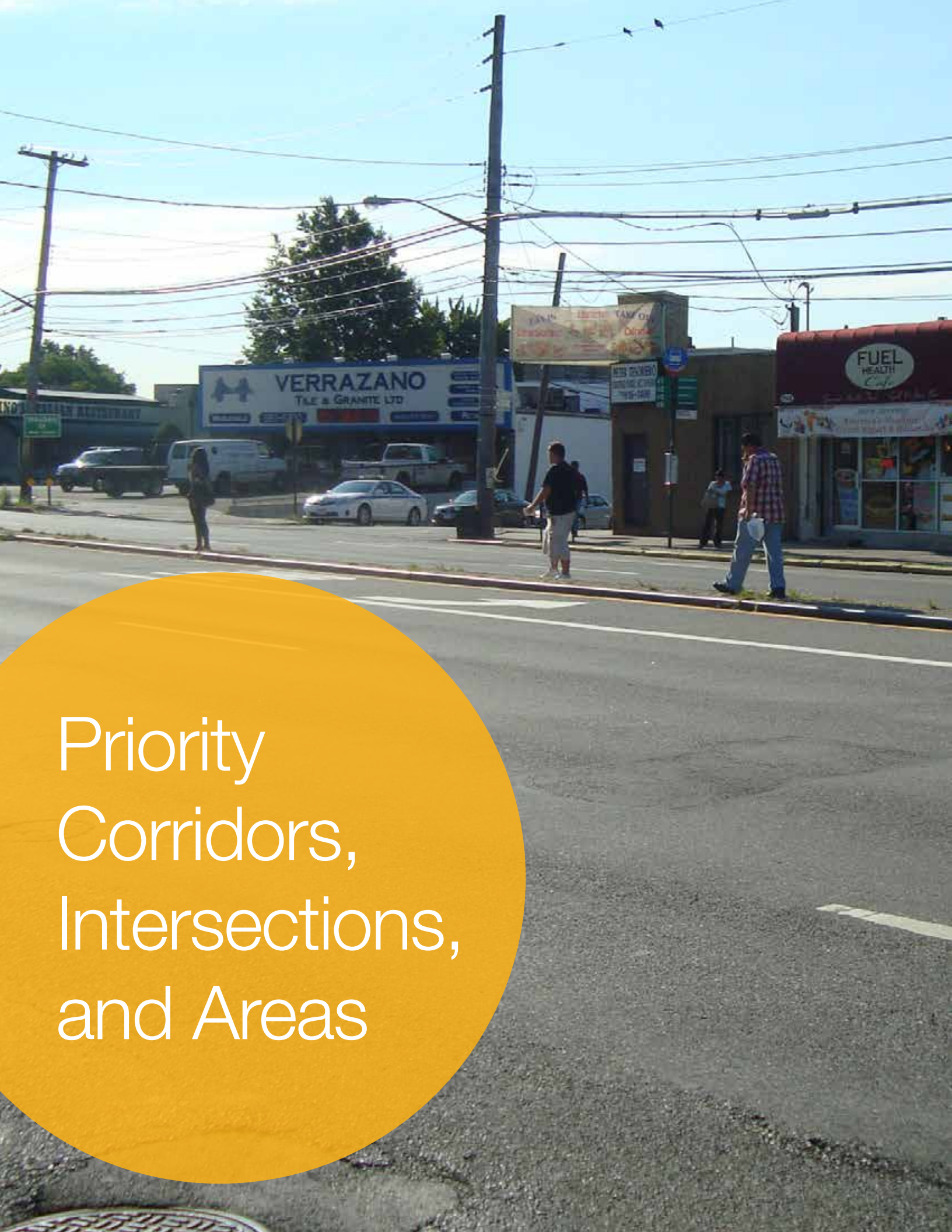
## DOT Safety Improvements

DOT has completed a number of projects across the North Shore designed to make automobile-oriented streets safer for pedestrians.

### Van Duzer Street

**Crash-related injuries for all street users declined by 30%.**

- Van Duzer Street is a one-way street that formerly consisted of two combined moving/parking lanes.
- With parking banned from 7am-7pm, though, the moving lanes were effectively wider during daytime hours, and speeding and reckless driving were commonplace. Accordingly, Van Duzer Street ranked in the top third of Staten Island streets in terms of KSI per mile (2008–2012).
- DOT implemented a multi-phased traffic calming project along Van Duzer Street that narrowed the street to just one moving lane by adding wide parking lanes on both sides of the road. This configuration inhibits speeding while increasing the availability of on-street parking.
- In the three years following implementation, crash-related injuries (between Broad and Bay Streets) for all street users declined by 30%.



Priority  
Corridors,  
Intersections,  
and Areas

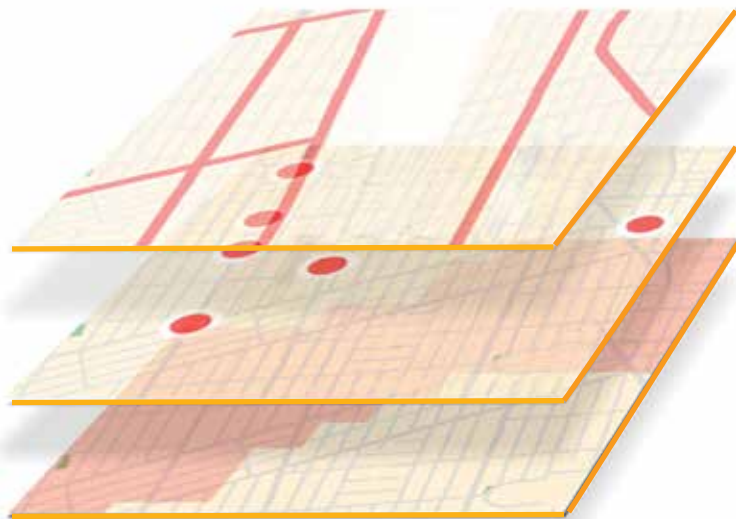
# 2.

Staten Island has more than 837 miles of roadway and more than 8,000 intersections. Since resources are always finite, it is necessary for New York City to focus its safety efforts on a reasonable number of high-crash locations that demonstrate a need for focused interventions. Using pedestrian KSI data from the last five available years (2009-2013), DOT developed a process for selecting Priority Corridors, Priority Intersections, and Priority Areas. These locations account for 55% of Staten Island’s total pedestrian fatalities.

Pedestrian KSI data was employed in this analysis for two reasons. First, a pedestrian who has been severely injured typically departs the crash scene in an ambulance and often experiences life-changing injuries (e.g., loss of mobility, brain function, limbs). A comprehensive street safety program must address these types of pedestrian injuries as well, not just fatalities. Second, severe injuries are more numerous and less randomly dispersed than traffic fatalities. Thus, severe injuries are more useful and reliable in terms of ranking one corridor, intersection or area.

55%

**of Staten Island’s pedestrian fatalities occur on Priority Corridors, at Priority Intersections, or in Priority Areas**

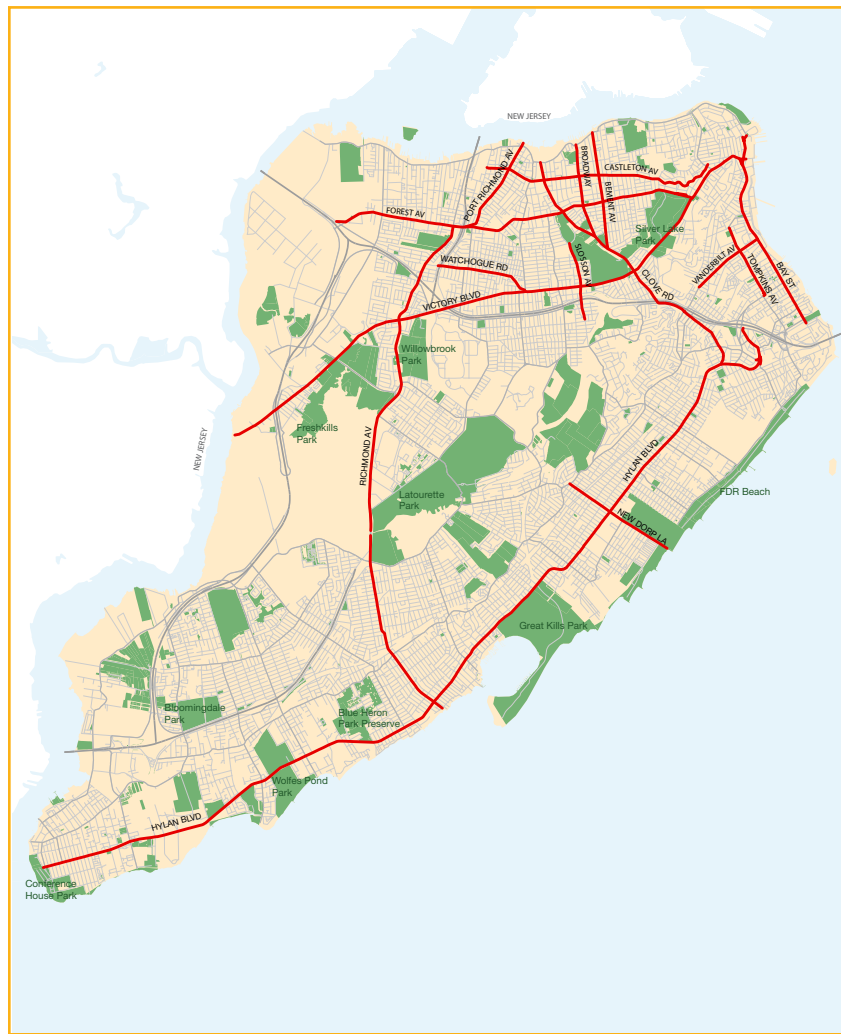


## Priority Corridors

Prioritizing corridors (streets measuring at least one mile in length) reflects the fact that pedestrian KSI crashes are concentrated on particular streets (65% of Staten Island pedestrian fatalities are on arterials) and that strings of intersections along certain streets often exhibit similar safety concerns and should be considered together. In addition, an intersection-only analysis would not account for the large share (45%) of Staten Island pedestrian fatalities that occurs midblock.

To determine the Priority Corridors, all corridors on Staten Island were ranked on a pedestrian KSI per-mile basis. Corridors were selected from the top of this list until the cumulative number of pedestrian KSI reached half of the borough’s total. Together, Staten Island’s 16 Priority Corridors constitute 6% of the borough’s total street network but account for 54% of its total pedestrian KSI. See appendix for a complete list of the Priority Corridors.

**54% of Staten Island’s pedestrian KSI occur on just 6% of the borough’s total street mileage**



Priority Corridors

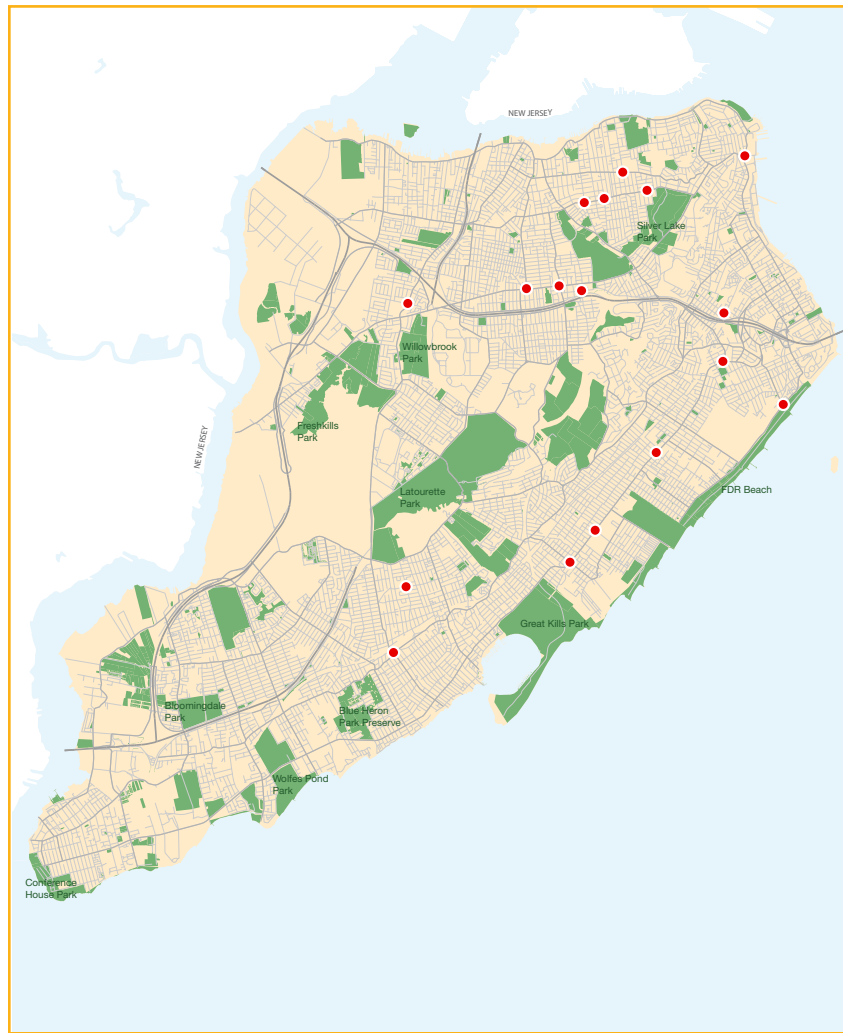


## Priority Intersections

In order to identify which of Staten Island’s 8,000 intersections have the highest need and greatest potential safety gains, DOT used an approach similar to the Priority Corridor process. DOT selected the intersections with the highest number of pedestrian KSI that cumulatively account for 15% of the borough’s total pedestrian KSI. This is a lower share than that used for corridors and areas because crashes resulting in pedestrian KSI are spread out widely among 150 intersections. Not only would such a large number of individual intersections be impossible to address within the scope of this plan, but at most of these intersections only one pedestrian KSI occurs in the data, which may not indicate a systematic need for intervention.

This methodology yielded 17 Priority Intersections with a minimum of two pedestrian KSI in the five-year data. Together, these intersections account for 17% of all pedestrian KSI in the borough but represent less than 1% of all its intersections. See appendix for a complete list of the Priority Intersections.

**17% of Staten Island’s KSI occurred at less than 1% of the borough’s intersections**



Priority Intersections





EXCEPT LOCAL DELIVERIES

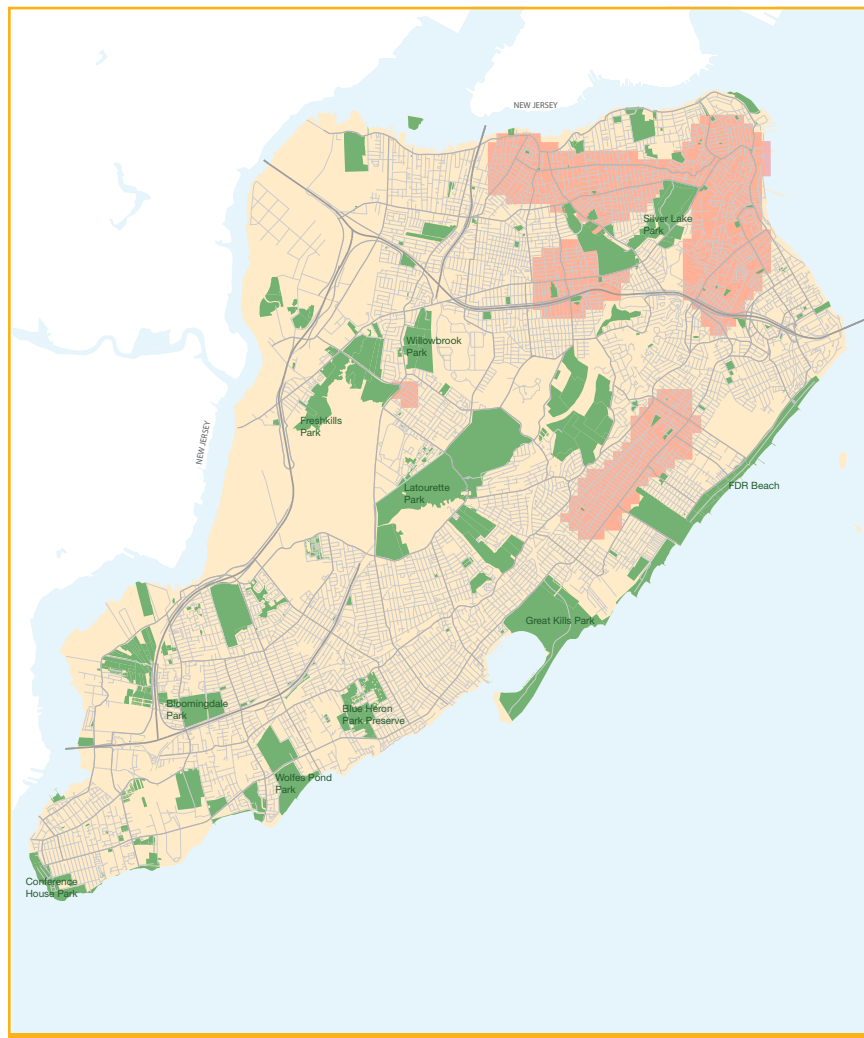
LEFT TURN ON  ONLY



## Priority Areas

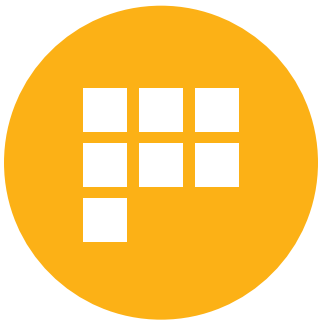
Some of the safety issues throughout Staten Island occur systematically on an area-wide level and are not confined to a single intersection or street. To account for these areas, the pedestrian KSI crash dataset was transformed into a kernel density map—or heat map—which indicates where the density of these crashes is highest. The Priority Areas were determined by identifying the “hottest” areas on the map that, when combined, account for half of all of pedestrian KSI in the borough.

In total there are 7 square miles of Priority Areas. Although these contain 50% of all pedestrian KSI on Staten Island, they constitute just 13% of the borough’s land area.



Priority Areas

The combined map of Priority Corridors, Intersections, and Areas covers 72% of all pedestrian KSI on Staten Island and shows where DOT and NYPD interventions are needed most. This map will serve as a guide to where engineering, enforcement, and education measures will be most effective at reducing pedestrian fatalities and severe injuries.



There are 7 square miles of Priority Areas in Staten Island



of Staten Island’s pedestrian KSI occur in just 13% of the borough’s total land area

# Staten Island Priority Map

	Share of Borough	Borough	% of Borough	Share of Ped KSI*	Total Ped KSI	% of Total Ped KSI	% of Total Ped Fatalities
Priority Corridors	16 corridors (53 miles)	837 miles	6%	129	238	54%	40%
Priority Intersections	17 intersections	8,011 intersections	1%	40	238	17%	5%
Priority Areas	7.5 sq miles	59 sq miles	13%	119	238	50%	33%
<b>Combined Total</b>	—	—	—	<b>172</b>	—	<b>72%</b>	<b>55%</b>



Priority Corridors



Priority Intersections



Priority Areas



NYPD Precincts





Community  
Dialogue  
and Input



Achieving Vision Zero—and truly making New York City’s streets safe for all users—hinges upon an active dialogue between the public and the City. While DOT utilized quantitative crash data to determine the highest-priority corridors, intersections, and geographic areas on Staten Island, qualitative feedback from community members deeply enriches DOT’s understanding of these priority locations. Feedback collected online and via public workshops produced a geographic database of community safety concerns that will allow DOT to design high-quality Vision Zero safety projects that incorporate local knowledge of pedestrian issues.

DOT took a proactive and innovative approach to community engagement to yield a robust dataset of local expertise. This section details the public outreach activities DOT conducted to gather feedback from Staten Island residents.

# Vision Zero Public Input Map

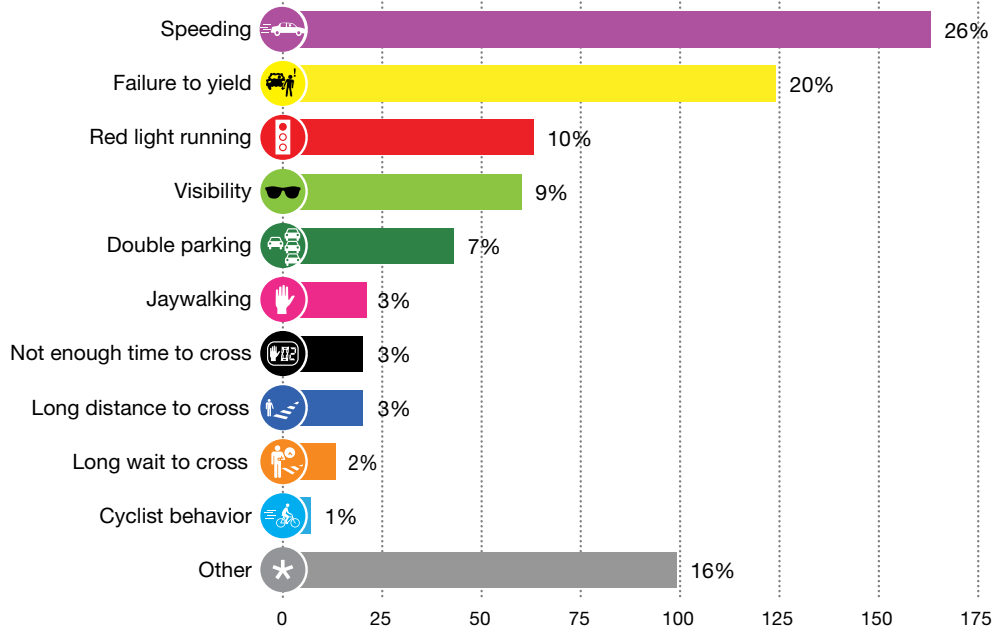
**Staten Island residents shared 635 pedestrian safety issues**

The interactive, online Vision Zero Public Input Map offered New Yorkers the opportunity to identify pedestrian safety issues at any time, from anywhere (even mobile devices). To report a pedestrian safety issue, users panned across a map of New York City and zoomed to an intersection of concern. Clicking on the intersection caused a Google Street View image of the selected intersection to appear. Users then chose one of ten safety issue icons, dragged it to the precise location where the issue occurs, and provided comments detailing their issue (see figure below). Other users could then share additional comments about, or voice their agreement with, existing comments.



**46%**

**of issues shared on the website focus on speeding and failure to yield to pedestrians**



The breakdown of issues by category logged on the Vision Zero website closely reflected that of the issues recorded at the Pedestrian Safety Workshops.

## Website Findings

At the close of the three-month online comment period (May–July 2014), location-specific issues collected at the Pedestrian Safety Workshops were geocoded and added to the online map, producing a unified geographic database of residents' pedestrian safety concerns (see the Staten Island Community Input Map, page 35). In total, users shared 635 issues at 416 unique locations across Staten Island—an average of 1.5 issues per location. Moreover, Staten Island residents not only engaged with DOT on these issues but with each other as well: users commented on others' issues 145 times and gave clicks of support 204 times.

Of the ten pedestrian safety issues identified on the Vision Zero website, Staten Island users most frequently expressed concern for aggressive driving behaviors such as speeding (26%) and failure to yield (20%).



## Public Events

In May 2014, Staten Island elected officials held a town hall meeting, and, in June, DOT hosted an interactive public workshop on Staten Island. These events were designed to gather local pedestrian safety concerns, launch an ongoing dialogue about street safety on Staten Island, and instill the message that pedestrian fatalities are preventable and not the inevitable feature of city life they are often perceived to be.

### Town Halls

Kicking off Vision Zero outreach on Staten Island, the office of City Council Speaker Melissa Mark-Viverito hosted a town hall meeting on May 7th at Curtis High School in St. George. More than 60 Staten Islanders turned out to share pedestrian safety concerns with their elected representatives. A nine-member panel including DOT Commissioner Polly Trottenberg, City Council Transportation Chair Ydanis Rodriguez, Councilmember Debi Rose, Taxi and Limousine Commissioner Meera Joshi, and three NYPD officers engaged in an active dialogue with community members. Meeting attendees most frequently raised the issue of rampant speeding across Staten Island, particularly in residential neighborhoods and school zones, and pressed for increased enforcement of dangerous driving behaviors. One participant lamented the perpetual domination of automobiles on Staten Island streets, expressing the perception that “pedestrians are an afterthought, if they are a thought at all.”<sup>4</sup>



Spanish public outreach flyer used to advertise the workshops





43+

**participants  
attended a public  
workshop on  
Staten Island**

## Pedestrian Safety Workshops

Several weeks following the town hall meeting, DOT hosted a Staten Island public workshop at Curtis High School, which drew nearly 50 participants. DOT worked with 24 elected officials, community boards, and civic groups to promote the workshops to a broad range of constituencies across the borough. Spanish interpreters were also available to allow participation by a diverse cross section of Staten Island residents.



Discussion of pedestrian safety concerns at Curtis High School



**93% of workshop attendees identified speeding as major problem for pedestrian safety**

## Workshop Format

At tables of approximately eight people—including two DOT staff members and one NYPD officer—a DOT facilitator made a brief presentation on Vision Zero safety strategies then led a group discussion around pedestrian safety issues on Staten Island. Next, participants visited a mapping station, where, using ten distinct stickers (which corresponded to the ten issue icons on the Vision Zero Public Input Map), they pinpointed the precise locations where pedestrian safety issues occur around Staten Island (see page 31). Participants then recorded these issues and locations on worksheets, which DOT staff collected at the conclusion of the workshop. Finally, participants completed a survey designed to gather both general and specific pedestrian safety concerns and to evaluate DOT’s public outreach strategies.



Workshop attendees identifying pedestrian safety issues at Curtis High School

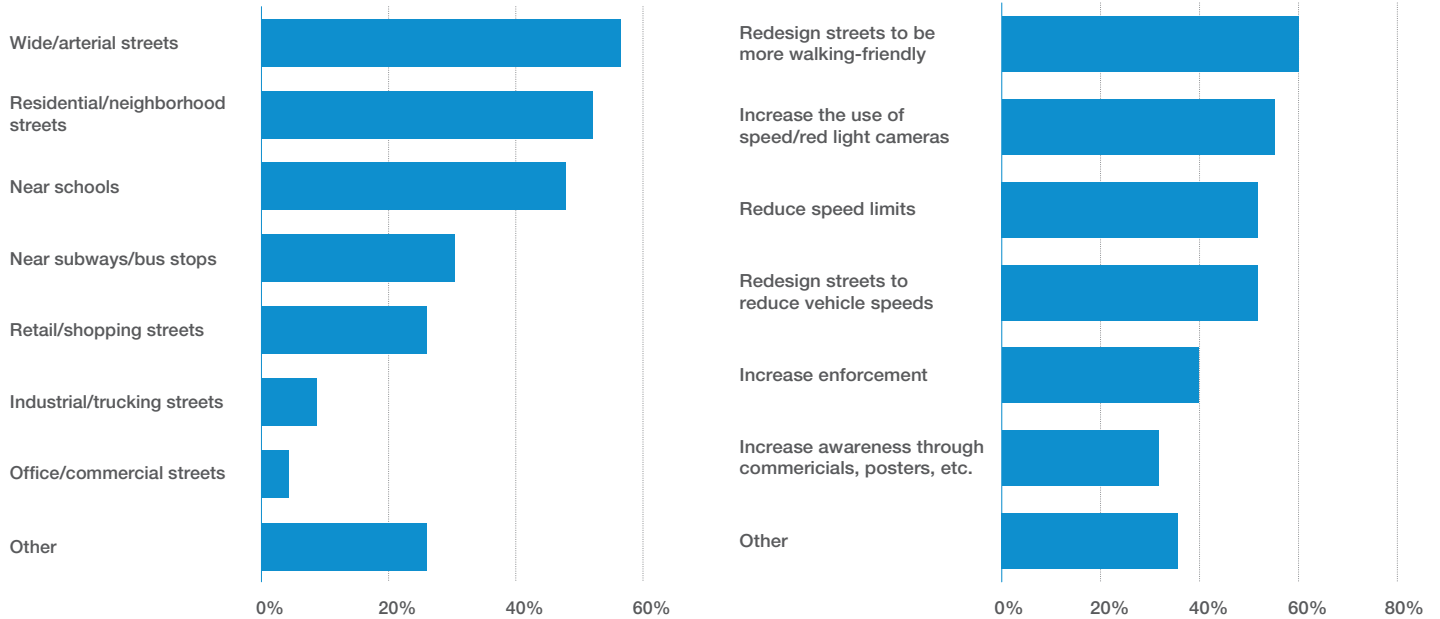
60%

**of workshop attendees view redesigning streets as one of the most important steps for improving pedestrian safety**

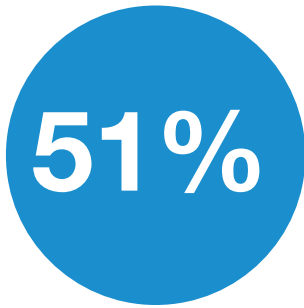
### Workshop Findings

Consistent with the Vision Zero website findings, participants at Staten Island’s Vision Zero workshop most frequently identified speeding and failure to yield to pedestrians (as the greatest threats to pedestrian safety in their neighborhoods), with 90% and 75%, respectively, saying that these were “major problems.”

Participants stressed the importance of a wide array of measures to help curb speeding including redesigning streets to make them more pedestrian-friendly (60%) and installing additional speed and red light cameras (56%), particularly on wide arterial streets, in residential areas, and near schools.



Types of locations and interventions workshop attendees would like DOT/NYPD to focus on in Staten Island, by frequency.



**51%**  
**of shared  
issues fall  
outside  
of Priority  
Corridors,  
Intersections,  
and Areas**

## Community Input Influencing Design

In late summer 2014, following the completion of the final workshop and the closure of the online Vision Zero Public Input Map, DOT compiled all community feedback, pedestrian safety worksheets, participant surveys, completed maps, and issues shared on the Vision Zero website. This information is being maintained and analyzed to support future public outreach, education, enforcement, and engineering. It will also be referenced in the following section of this Plan.

The Community Input Map, combined with the Staten Island Priority Map laid out in Section 2, forms a geographically specific knowledge base of both quantitative pedestrian crash data and qualitative community feedback. This allows DOT to integrate local knowledge into Vision Zero project planning in order to foster a proactive, responsive project planning process at the borough's highest-crash locations. A composite priority map for Staten Island is shown on the facing page. This map will serve as the basis of DOT's Staten Island Pedestrian Safety Action Plan.

As the map reveals, the locations with the most public input and high pedestrian-KSI-crash density do not always overlap. There are several factors influencing the likelihood of particular communities throughout Staten Island to log issues, from the strength of local outreach and advocacy groups, to the location of workshops, to language and internet connectivity barriers.

It is vital to the success of Vision Zero on Staten Island that all communities across the borough are given an equal opportunity to share their pedestrian safety concerns. As such, DOT will redouble its outreach efforts to communities with low levels of existing feedback, especially those in high pedestrian-crash areas. Also, DOT and NYPD will ensure that traffic engineering, enforcement, and education work will be conducted in the areas with the highest need, not just those with the loudest voices.

# Staten Island Community Input Map



- |                            |                          |                                   |                          |
|----------------------------|--------------------------|-----------------------------------|--------------------------|
| ● Not enough time to cross | ● Jaywalking             | ● Failure to yield to pedestrians | ○ Priority Intersections |
| ● Double parking           | ● Poor visibility        | ● Cyclist behavior                | — Priority Corridors     |
| ● Long wait to cross       | ● Speeding               | ● Other                           | ■ Priority Areas         |
| ● Red light running        | ● Long distance to cross |                                   |                          |



# Borough Action Plan



# 4.

Based on the crash findings, prioritization, and community input presented previously in this report, DOT and NYPD have developed a comprehensive set of actions to be implemented in Staten Island. These actions, and the findings that informed their creation, will be reviewed every three years from the release of this plan.

DOT and NYPD use a three-pronged approach to pedestrian safety, including Engineering and Planning actions, Enforcement actions, and Education and Marketing actions. These proposed actions are vital tools in achieving Vision Zero in Staten Island and across New York City.

DOT and NYPD worked closely together, as well as consulting other city agencies, to formulate these actions. Moving forward, the implementation of the proposed actions will require continuing and strengthening these partnerships. This will enable all aspects of pedestrian safety to continue to improve.

## Engineering and Planning

### **Implement at least 50 Vision Zero safety engineering improvements at Priority Corridors, Intersections, and Areas citywide, informed by community input at project locations**

The *Vision Zero Action Plan* calls for safety engineering improvements citywide at 50 intersections and corridors annually. Starting with the 2015 construction season, DOT will set the goal of building 50 Vision Zero safety engineering improvements annually at the Priority Corridors, Intersections, and Areas defined in all five Borough Pedestrian Safety Action Plans. This will ensure a laser focus on the chronically high-crash locations where pedestrians are killed and severely injured, where DOT interventions will have a maximum impact. The safety engineering improvements will be informed by Borough Plan outreach findings and, as always, DOT and NYPD will work with communities to shape and develop better safety projects. Lastly, since Vision Zero ultimately means eliminating fatalities for all road users, safety engineering improvements will also include safety-focused bicycle, transit, and motor vehicle projects.

### **Significantly expand exclusive pedestrian crossing time on all Staten Island Priority Corridors by the end of 2017**



High-crash corridors for pedestrians tend to be on wide arterial streets with higher speeds and aggressively turning vehicles. DOT will address these issues by installing Leading Pedestrian Intervals (LPIs) at every feasible school crosswalk on all Staten Island Priority Corridors. The LPI is a proven method of reducing pedestrian-vehicle conflicts at high pedestrian crash locations; it is a signal timing treatment that provides pedestrian-only walk time before vehicles—including turning vehicles—receive the green light.

### **Add exclusive pedestrian crossing time to all feasible Staten Island Priority Intersections by the end of 2017**

DOT will install LPIs at every feasible Staten Island Priority Intersection by the end of 2017. As noted previously, the LPI is a signal timing treatment that provides pedestrian-only walk time before vehicles receive the green light.

### **Modify signal timing to reduce off-peak speeding on all feasible Staten Island Priority Corridors by the end of 2017**

At off-peak times, congestion is diminished and vehicle speeds are higher, increasing the risk for pedestrian crashes as well as increasing the severity of those crashes. To better control speeds, DOT will modify off-peak signal timing on all feasible Staten Island Priority Corridors by the end of 2017.



# Staten Island Priority Map



Priority Corridors



Priority Intersections



Priority Areas



NYPD Precincts





### **Install expanded speed limit signage on all Staten Island Priority Corridors in 2015**

Effective November 7th, the speed limit on all unsigned streets in New York City was reduced to 25 MPH. However, streets that are signed for 30 MPH (or higher) will be evaluated on a case-by-case basis and switched to 25 MPH where feasible. DOT will evaluate all signage on Staten Island Priority Corridors in 2015 and convert these to 25 MPH where feasible. In addition, signage will be expanded so the speed limit will be posted at a higher frequency along Staten Island Priority Corridors. This will help to increase compliance with the speed limit, better educate the public about the new citywide speed limit, and make NYPD enforcement simpler and less ambiguous.

### **Drive community input and engagement at Staten Island Priority Corridors, Intersections, and Areas**

As discussed earlier in this plan, areas in Staten Island that have the highest incidence of pedestrian fatalities and severe injuries are not always the loudest voices providing input for transportation improvements. DOT commits to reaching out to these sections of Staten Island and soliciting ground-level input from community members. This dialogue will take many forms, including full-fledged planning workshops and charettes; streamlined, mobile meetings at places where community members already gather (libraries, community centers, parks, etc.); community walk-throughs; and direct communication with elected officials and community leaders in Priority Areas. To further facilitate and institutionalize this effort, DOT will hire a dedicated staff member in their Staten Island office. This staff member will be assigned to neighborhoods that have historically been less engaged with the planning process.

### **Coordinate with MTA to ensure bus operations contribute to a safe pedestrian environment**

The MTA operates the largest bus system in the United States, with more than twice as many daily riders than the next leading system.<sup>5</sup> Buses are an extremely important part of the city's transportation network and vehicle mix in Staten Island, constantly operating around and interacting with pedestrians (both riders and non-riders), cyclists and other road users. DOT will work closely with the MTA to provide for a safe, efficient and effective transportation network that coexists with pedestrians and other modes, focusing on routes and stops at and around Priority Corridors and Priority Intersections, ensuring that facilities are designed and located to maximize pedestrian safety.



Pedestrian injuries declined 22% on New York City streets with protected bicycle lanes, like this one off of Father Capodanno Boulevard.

## Expand a bicycle network in Staten Island that improves safety for all road users

Vision Zero's focus on vulnerable users—those most likely to be severely injured and killed in event of a crash—is an opportunity for a coordinated, complete streets approach to bicycle and pedestrian planning. Although there has been a marked downward trend in cyclist risk in New York in the past ten years, there were still 52 bicyclist fatalities in the city between 2011 and 2013, including one on Staten Island. While this plan identifies priority corridors, intersections, and areas for pedestrian safety improvements, these locations also account for 53% of cyclist KSI on Staten Island and can represent priorities for bicycle safety as well.

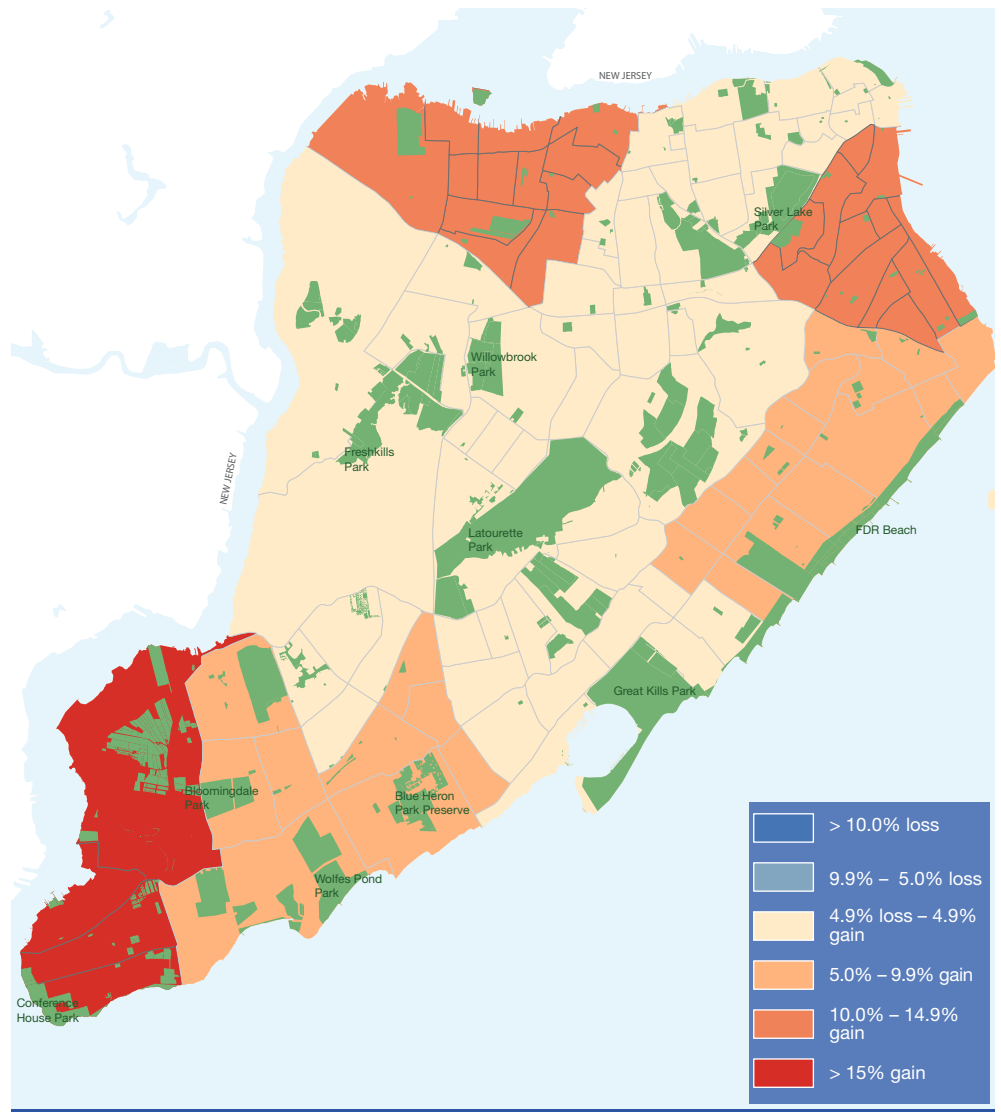
Pedestrian and bicycle planning share many of the same fundamental strategies to increase safety. Both groups benefit from reductions in speeds, efforts to enforce the traffic laws that make streets safe, and comprehensive engineering solutions that better organize traffic flow and reduce conflicts. In addition, well-designed bicycle lanes perform an important traffic calming function by right-sizing streets to the needed capacity and may also include pedestrian refuges that shorten crossing distances. A recent study found that pedestrian injuries declined 22% on New York streets with protected bicycle lanes. That is why DOT will work closely with communities in Staten Island to expand a bicycle network that improves safety for all road users, including constructing an additional 5 lane miles of protected bike lanes per year.



Staten Island Detail from 2014 New York City Bike Map

**Proactively design for pedestrian safety in high-growth areas in Staten Island, including locations in the *Housing New York* plan**

In his 2014 housing plan—entitled *Housing New York: A Five-Borough, Ten-Year Plan*—Mayor de Blasio has laid out actions to spur affordable housing by increasing density, rezoning neighborhoods, redeveloping underutilized land, adaptively reusing buildings and space, and a host of other tools. Since these new housing locations will often be on vacant and underused sites, they may lack sufficient pedestrian safety infrastructure, and pedestrian activity (and pedestrian crashes) may presently be low.



Staten Island Population Growth, 2000-2010

The City will be proactive and will develop pedestrian safety enhancements around housing development locations. DOT will work with the Department of Housing Preservation and Development (HPD), the Department of City Planning (DCP), the School Construction Authority (SCA) and the Mayor's Office to ensure that housing plan projects incorporate the highest-quality, modern standards in pedestrian safety. Development at these locations is an opportunity for New York City to develop streets that are even safer than the status quo.

A model for this collaborative work in a Priority Area is the New Stapleton Waterfront Esplanade, where the City is working with community partners to revitalize a decommissioned navy pier with new housing, retail, and significant infrastructure and public space improvements that honors the historic nature of the neighborhood.



## Enforcement

The *Vision Zero Action Plan* calls upon NYPD and DOT to develop a data-driven, citywide strategy for the enforcement of traffic safety violations. This plan will guide that strategy in Staten Island.



### **Implement the majority of speed camera locations at Priority Corridors, Intersections, and Areas**

The New York State Legislature recently approved the use of speed cameras at 140 total locations near schools in all five boroughs. In Staten Island, DOT will deploy those cameras by schools in and around Priority Corridors, Intersections, and Areas, unless a higher-crash location is also feasible. As always, speed cameras will only be deployed in accordance with their enabling legislation.

### **Prioritize targeted enforcement at Staten Island Priority Corridors, Intersections, and Areas annually**

- Prioritize enforcement along all 53 miles of Staten Island Priority Corridors.
- Prioritize enforcement at all 17 Staten Island Priority Intersections.
- Prioritize enforcement within all 7 square miles of Staten Island Priority Areas.

To further inform enforcement efforts, DOT will provide detailed crash analyses of Staten Island Priority Corridors, Intersections, and Areas to NYPD precincts. Enforcement will focus tightly on infractions that are particularly threatening to pedestrians, such as speeding and failure to yield.

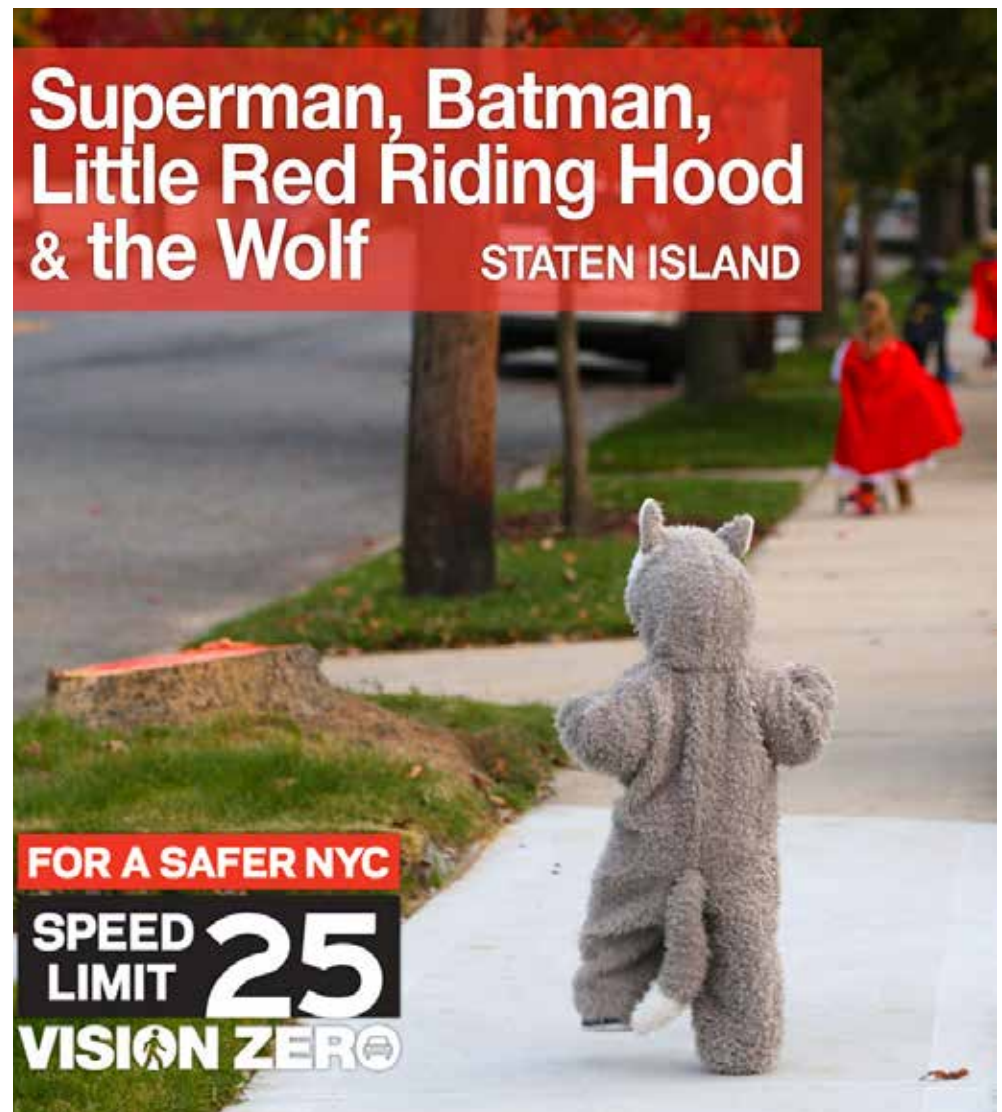
Similar to crime data, effective evaluation of enforcement data must be conducted geographically (i.e., by street, intersection, or address). Currently, NYPD tracks and monitors activity at “Collision Prone Locations,” which are established using accumulated collision data. On the local level, each precinct conducts extensive analysis and mapping of their enforcement efforts in regards to collision reduction, particularly at Collision Prone Locations. These efforts are further scrutinized at the Department’s TrafficStat forums, wherein the precincts’ Executive Officers and Traffic Safety Teams are called upon to provide in-depth analysis of their traffic safety programs and enforcement efforts. In 2015, the NYPD plans to launch a major technological upgrade to its traffic analysis capabilities which will allow a more in-depth review, tracking, and accounting of collisions and enforcement in Brooklyn’s Priority Corridors, Intersections, and Areas.

### **Focus enforcement and deploy dedicated resources to Staten Island NYPD precincts that overlap substantially with Priority Areas**

Just as NYPD regularly targets chronically high-crime areas, NYPD will take the same tightly focused approach to chronically high-crash areas. NYPD will focus traffic enforcement at precincts in Priority Areas and provide additional dedicated resources to handle this stepped-up enforcement.

### **Focus failure-to-yield and speeding enforcement in the afternoon and evening**

In Staten Island, 80% of fatal pedestrian crashes appear to occur between the hours of 3pm and 9pm. NYPD will focus traffic enforcement during this time period to make the most efficient use of available resources.



# Education and Awareness Campaigns



## Target child and senior safety education at Staten Island Priority Corridors and Priority Areas

The *Vision Zero Action Plan* calls for DOT to make effective, age-appropriate safety curricula available to schools throughout the city. This Borough Action Plan will guide that strategy in Staten Island; DOT's Safety Education team will focus their programs at or near Priority Corridors, Intersections, and Areas with a high incidence of child pedestrian injury. Safety educators will work with schools to deliver comprehensive lessons to all members of the school community as well as utilize Staten Island Safety City, which is a traffic safety program for children that uses a simulated city street. All Vision Zero outreach and education to senior citizens will also be conducted within the Priority Areas and/or near Priority Corridors. In addition, hands-on safety demonstrations such as car safety seat checks, free helmet fittings and giveaways, anti-DWI information sessions, and Saturday table seminars will be made available through Staten Island councilmembers and community groups.

## Target Street Team outreach at Staten Island Priority Corridors, Intersections, and Areas

As directed by the *Vision Zero Action Plan*, NYPD and DOT have been conducting intensive street-level outreach on safety issues and traffic laws. This Borough Pedestrian Safety Action Plan will further guide those efforts, as all future street-level outreach in Staten Island will be conducted along Priority Corridors, at Priority Intersections, or within Priority Areas. Locations will be further prioritized based on pedestrian volumes (for efficient outreach) and by historically problematic locations identified by local communities.





## REFERENCES

- American Community Survey. 2012. *2012 1-Year Estimates, Detailed Tables*. Washington, DC: United States Census Bureau.
- American Community Survey. 2013. *2009-2013 5-Year Estimates, Detailed Tables*. Washington, DC: United States Census Bureau.
- New York State Department of Transportation/New York State Department of Motor Vehicles. *Accident Database, 2009-2013*. Albany, NY: NYSDOT/NYS DMV
- New York State Department of Transportation/New York State Department of Motor Vehicles. *Reconciled Fatality Database, 2011-2013*. Albany, NY: NYSDOT/NYS DMV
- New York City Transit: Transit Boardings by Time of Day. New York, NY: MTA/NYCT

## ENDNOTES

- <sup>1</sup> National Highway Traffic Safety Administration, Traffic Safety Facts, 2012 Data.  
<http://www-nrd.nhtsa.dot.gov/Pubs/811888.pdf>
- <sup>2</sup> Data sources accessed 12-01-2014, killed or severely injured data includes only crashed that can be mapped
- <sup>3</sup> Decline in fatalities based on change in 3-year averages (1985-2013).
- <sup>4</sup> [http://www.silive.com/news/index.ssf/2014/05/staten\\_islanders\\_voice\\_their\\_c.html](http://www.silive.com/news/index.ssf/2014/05/staten_islanders_voice_their_c.html)
- <sup>5</sup> American Public Transportation Association, Quarterly Ridership Statistics, Third Quarter 2014.  
<http://www.apta.com/resources/statistics/Pages/ridershipreport.aspx>

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# Appendix A

## Staten Island

### Priority Corridors

DOT identified **16 Priority Corridors** encompassing **54% of Staten Island's total pedestrian KSI** and representing **53 miles (6%) of Staten Island's total street network**:

Street Name	From	To	Ped Fatalities (2009-2013)	Ped KSI (2009-2013)	Miles	Ped KSI per mile (2009-2013)
Vanderbilt Av	Bay St	Richmond Rd	1	6	1.0	6.0
Slosson Av	Martling Av	Todt Hill Rd	1	5	1.0	4.9
Tompkins Av	Broad St	Hylan Blvd	1	5	1.0	4.8
Forest Av	Victory Blvd	Goethals Rd N	2	21	5.0	4.2
Broadway	Richmond Ter	Clove Rd	0	4	1.2	3.2
Castleton Av	Brook St	Nicholas Av	0	10	3.2	3.2
Victory Blvd	Wild Av	Bay St	2	24	8.1	3.0
Port Richmond Av	Forest Av	Richmond Ter	2	4	1.4	2.9
Clove Rd	Richmond Ter	Hylan Blvd	0	10	3.8	2.6
New Dorp La	Richmond Rd	Cedar Grove Av	2	4	1.5	2.6
Bement Av	Richmond Ter	Clove Rd	0	4	1.5	2.6
Richmond Av <i>[north leg]</i>	Morningstar Rd	Arthur Kill Rd	2	11	4.4	2.5
Bay St	North Rd	Richmond Ter	0	7	2.9	2.4
Watchogue Rd	Victory Blvd	Willow Rd W	0	3	1.3	2.4
Richmond Av <i>[south leg]</i>	Arthur Kill Rd	Tennyson Dr	1	6	2.6	2.3
Hylan Blvd	Satterlee St	Staten Is Exwy	3	29	13.0	2.2

*\*Nearest cross street, corridor ends at dead-end.*

# Appendix B

## Staten Island

### Priority Intersections

DOT identified **17 Priority Intersections** in Staten Island, which cumulatively encompass **17% of the borough's total pedestrian KSI** and approximately **1% of all its intersections**.\*

Intersection	Ped KSI (2009-2013)	Ped Fatalities (2009-2013)
Hylan Blvd & Jefferson Av	4	0
Manor Rd & Victory Blvd	3	0
Norway Av & Hylan Blvd & Clove Rd	3	0
Steuben St & Mosel Av	3	0
Slosson Av & Windsor Rd	3	1
Hylan Blvd & Allison Av & Ebbitts St	2	0
Hylan Blvd & Guyon Av	2	0
Forest Av & Broadway	2	0
Victory Blvd & Jewett Av & Watchogue Rd	2	0
Morani St & Richmond Av & Merrill Av	2	1
Amboy Rd & Richmond Av	2	0
Bement Av & Forest Av	2	0
Sand La & Fr Capodanno Blvd	2	0
Forest Av & Hart Blvd	2	0
Leverett Av & Armstrong Av	2	0
Bay St & Victory Blvd & Central Av	2	0
Castleton Av & Bard Av	2	0

\*To select a set of Priority Intersections that account for approximately 15% of pedestrian KSI, a "tiebreaker" system was necessary. To break the tie amongst intersections with three pedestrian KSI, a cut-off at four pedestrian injuries was used. Intersections that had three pedestrian KSI and four or more pedestrian injuries were included; intersections with less pedestrian injuries were excluded.

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