# THE VISION ZERO INVESTMENT

WHY NEW YORK MUST REBUILD ITS MOST DANGEROUS STREETS NOW



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# **ABOUT TRANSPORTATION ALTERNATIVES**

Our mission is to reclaim New York City's streets from the automobile and to promote walking, bicycling and public transit. With more than 110,000 active supporters and more than 1,000 local activists organizing in five boroughs, Transportation Alternatives fights for street transformations that reduce speeding and traffic crashes, save lives and improve everyday transportation for all New Yorkers.

Find out more and learn how you can get involved at www.transalt.org.

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# **EXECUTIVE SUMMARY**

New York City's most important roads are wide, multi-lane corridors historically built to accommodate high volumes of automobile traffic, and the results have been deadly. Roadways like Queens Boulevard, Atlantic Avenue and Sixth Avenue are the site of most traffic fatalities, even though arterial streets make up only 15 percent of the road network. Despite acknowledging this severe problem, the City chronically underfunds street reconstruction and safety improvements.

Reconstruction of arterial streets with complete street design changes, including pedestrian refuge islands, dedicated bus and bike lanes, exclusive pedestrian crossing time, and slower speeds, has proven to be the most cost-effective solution to this deadly problem. In places where the Department of Transportation has added these improvements, fatalities have decreased by 34 percent, twice the rate of improvement compared to locations that haven't been changed.

### Every year, as many as 50 fatalities and 1,200 serious pedestrian injuries could be prevented if the City reconstructs all arterial streets with complete street design changes.

To reach Vision Zero, the mayor's goal of eliminating traffic fatalities and serious injuries by 2024, the City needs to more seriously prioritize arterial street redesign. The Department of Transportation's Borough Pedestrian Safety Action Plans released in 2015 are a good first step, representing a year of community input and analysis of the city's most dangerous locations, identifying 443 miles of the most dangerous corridors that urgently need to be reconstructed.

However, Mayor de Blasio's proposed budget, the City's capital plans and the Department of Transportation's annual operating project commitment are woefully inadequate to address all of New York's most dangerous streets.

Shockingly, Mayor de Blasio's preliminary budget suggests capital street reconstruction will decline to even lower levels. Whereas historically the City has reconstructed an average of 47 lane miles each year, the Mayor's preliminary capital budget projects only 35 lane-miles per year -- 25 percent less than the previous decade. At this level of investment, it would take New York City more than 100 years to fix arterial streets.

Only with a realistic investment in redesigning arterial streets today can New York City reach Vision Zero for the New Yorkers of tomorrow.

### EXPAND AND CLARIFY ANNUAL OPERATING PROJECTS

The City of New York must expand the Department of Transportation's operating budget to allow for the completion of more than 50 annual Vision Zero projects. The Department of Transportation must define and prioritize its annual projects, focusing on the priority corridors outlined in the *Borough* Pedestrian Safety Action Plans.

# INTRODUCTION

Decades ago, New York retrofitted primary roadways into urban highways in a failed attempt to improve traffic flow and accommodate higher car volumes. With the singular intention of moving traffic, these arterial streets were designed with no consideration for the needs of people on foot, on bicycle or accessing public transportation.

This historical mistake has resulted in a city where thousands of miles of arterial streets function as speedways. Arterial streets divide communities and act as a psychological barrier to accessing local amenities. Vast widths and fast-moving traffic make them intimidating and dangerous streets to cross. In New York, one of the most pedestrian-rich cities in the country, the arterial streets that crisscross a majority of neighborhoods look as automobile-centric as the highways of Houston, Phoenix or Atlanta, and the results are dangerous for everyone.

In the winter of 2014, Mayor Bill de Blasio committed to a goal of eliminating all traffic deaths and serious injuries on New York City streets. In the first year of Vision Zero in New York, the City made great strides: the citywide speed limit was lowered to a safer 25 mph, the police department increased enforcement on the most dangerous violations, the City Council passed more than a dozen laws to improve traffic safety, and the Department of Transportation began critical street safety improvements.

However, the reality of Vision Zero will never be met without comprehensive change on our deadliest streets. New York City's arterial streets are ripe for transformation into safe complete streets. How to accomplish that transformation, and move New York City toward Vision Zero, is detailed in the pages that follow.

### RECOMMENDATIONS

### COMMIT TO AND SECURE ADEQUATE FUNDING FOR CAPITAL RECONSTRUCTION

The City of New York must double the capital funding alloted for street reconstruction so that all arterial streets can be reconstructed in the next 50 years. The City must also establish a strict and accelerated time-frame, with annual benchmarks, for citywide arterial street capital reconstruction

# THE PROBLEM WITH ARTERIAL STREETS

Arterial Streets are heavily trafficked, multi-lane streets that are critical for the movement of goods and people around New York. However, they have historically been car-centric, designed for vehicle speed and traffic flow, with deadly consequences. These streets make up 15 percent of New York City's roads but are the site of nearly 60 percent of pedestrian fatalities. The burden of this danger falls unequally on the poor, elderly and young.



Picture a street in your neighborhood: a place where teenagers get off the bus after school, where grandparents go grocery shopping, where families ride bikes and commuters find their subway station. Does it look like this?

# **DEADLY DESIGN**

Some of the most important, most frequented streets in New York City neighborhoods are intimidating to local residents, incompatible with small businesses and harrowing for New Yorkers who walk, bike and take public transit.

- ♦ In New York City, arterial streets are the site of nearly 60 percent of pedestrian fatalities, even though these corridors make up only 15 percent of the road network.
- In the past decade, approximately 1,500 people were killed on New York City arterial streets.
- Per mile, arterial streets in New York City are 8.5 times more deadly for pedestrians than non-arterial streets.

Decades ago, the City of New York retrofitted the streets most needed by all New Yorkers to prioritize rapid automobile travel. The result is neighborhood streets that are at best unpleasant, and at worst hazardous and inaccessible for most residents of the neighborhood.

# UNEQUAL BURDEN

While arterial streets are found in nearly every neighborhood in New York City, the burden of dangerous traffic is disproportionately felt by low income communities, the elderly and children.

- by a car than children on the Upper East Side.<sup>3</sup>

In addition to shouldering the burden of more crashes, the consequences of being struck by an automobile driver or having a family member struck can be much worse for children, seniors and low-income New Yorkers. Low-income residents are more likely to lack good health insurance and the savings needed to cover the exorbitant costs of crashes, including medical bills, lawyer fees, lost work time and funeral arrangements. Children's smaller stature makes them least likely to survive being struck by an automobile, and older New Yorkers are dramatically less likely to recover from a crash.

"The New York City Network of the Gray Panthers completely supports the concept of redesigning New York's thoroughfares to reflect the needs of a graying city. Strikingly, vehicular deaths and serious injuries affect older persons disproportionately.

At least one arterial street crisscrosses nearly every New York City neighborhood, and some neighborhoods are divided by more than 15 arterial streets.

The majority of New Yorkers killed in traffic crashes are killed on arterial streets, even though arterial streets make up only 15 percent of New York's roadway miles.

 Many of the poorest neighborhoods in the city have higher crash densities than the richest neighborhoods. On Manhattan's East Side, crashes impacting children are more prevalent around public housing, and children in East Harlem are three times more likely to die being hit

• Neighborhoods that are predominantly Black and Latino are more likely to have pedestrian fatalities, and crash analysis shows this is likely from dangerous street design in those areas.<sup>1</sup>

• Being struck by an automobile is the number one cause of injury-related death for New York City children, and the number two cause for older New Yorkers. While seniors citizens are only 12 percent of the city's population, they account for nearly 40 percent of pedestrian fatalities.<sup>1</sup>

Jack Kuperfman

### IN SHORT

New Yorkers who walk or bike are more at risk to be killed in arterial street traffic. For low-income New Yorkers, older New Yorkers and children, it's even worse.

# **A VISION FOR COMPLETE STREETS**

**Complete Streets** prioritize the needs of all road users, including people walking, biking, taking public transportation and using automobiles, and people of all ages and abilities. Complete streets provide safe, dedicated space for every type of user and are designed for convenience and experience, allowing people to easily cross the street, shop at local businesses and travel between neighborhoods.



Complete street designs implemented on First and Second Avenues in Manhattan with protected bike lanes, dedicated bus lanes and pedestrian infrastructure have reduced crashes, increased bus and bike ridership, and boosted local business.

# PUBLIC SPACE

With streets accounting for 80 percent of New York's public space, the reconstruction of each arterial street should seek to foster community and improve equity.

- When designed as social spaces, arterial streets can act as small business hubs, facilitate deliveries and patronage, and support individuals' ability to be active in their neighborhoods.
- ◆ Complete street design changes can maximize sustainability and increase resiliency to climate change with permeable pavement materials and landscaping.

# DESIGNED FOR RESULTS

Reducing traffic fatalities and serious injuries requires streets that allow for everyone to make mistakes. The consequence for everyday mistakes by pedestrians, drivers and people on bikes should never be death.

- Complete streets on First and Second avenues in Manhattan caused bicycle ridership to triple, overall injuries to decline eight percent, bus efficiency to increase 18 percent and commercial vacancies to halve.
- ◆ In general, complete street design changes have reduced fatalities by 34 percent in New York, twice the rate of improvement at locations where there were no design changes.<sup>6</sup>
- Every year, as many as 50 fatalities and the serious injury of more than 1,200 pedestrians could be prevented by reconstructing arterial streets with complete street design changes.

# THE VALUE OF COMPLETE STREETS

New York City's dangerous arterial streets present an opportunity for future generations. By reconstructing these corridors into complete streets, New York can enliven the communities these streets now divide and reap the benefit of a sound investment and equitable design solutions.

# HIGH COST OF CRASHES

The cost of constructing complete streets should be viewed against the immense fiscal costs imposed by dangerous streets, in addition to the unfathomable human loss and suffering.

- percent of the Gross City Product.7
- costs of traffic crashes in New York City exceed \$12 billion.7

# BENEFITS OF REDUCING CRASHES

Reconstructing New York City's arterial streets has an even broader benefit than safe streets: complete streets can help create a more sustainable city with widespread economic benefit.

- as 120 percent within two years of construction.

"We envision a neighborhood where it is not a death wish to cross the street, but rather a daily pleasure to walk, bike and bus around our boroughs."

> A. Redd Sevilla. Executive Director of the New Life Fellowship Church and New Life CDC

◆ Traffic crashes directly cost New York City's economy approximately \$3.9 billion annually, about one

According to Comptroller Stringer, the City paid almost \$90 million to pedestrian victims of drivers of City-owned vehicles from 2007-2014, not including claims related to unsafe street conditions.<sup>8</sup>

Accounting for other losses, including lost life-years, chronic disability and pain, total annual social

• New York's pool of affordable housing will benefit from shortened travel times created by arterial street reconstruction, improving quality of life in outlying communities.

• Resiliency goals set after Hurricane Sandy can be met with improved storm water management, reduced heat island effects and increased tree cover in complete street design changes.

◆ Arterial street reconstruction creates opportunities to enhance subsurface infrastructure, Including fiber optic cables, updated gas lines and improved water systems. This saves money over time by reducing repair work and street closures, and extending the life of the street.

• Businesses directly benefit from reconstructed streets, with annual sales increasing as much



# FINANCING

In 2014, Mayor Bill de Blasio set a goal of Vision Zero for New York City – the prevention of all traffic fatalities and serious injuries by 2024. Because of the outsize danger of New York's arterial streets, a first step toward Vision Zero will be to reconstruct all of these corridors with complete street design changes. To realistically complete this citywide project, current operating and capital budget allocations must dramatically expand.

Mayor de Blasio's preliminary 10-year capital budget, released in February 2015, actually reduced the funding allocated for street reconstruction. This slowdown could result in as many as 5,000 lives needlessly lost in the next 100 years. At the pace of reconstruction outlined in Mayor de Blasio's preliminary budget, arterial streets reconstructed today will fall into disrepair long before neighboring streets are completed.

Arterial reconstruction is a two-phase process: first, early action treatment, financed by the operating budget, will produce immediate results with paint and temporary materials; second, long-term reconstruction, financed by the capital budget, will create fundamental change.

# EARLY ACTION TREATMENT: OPERATING BUDGET

To achieve immediate gains, the City must expand the number of early action treatments completed on priority arterial street reconstruction projects. These quick projects are produced through the operations budget of the Department of Transportation, with paint, rule changes and temporary materials. Early action treatments are inexpensive, quickly moved from concept to implementation, and effective in directly lowering crash, injury and fatality numbers -- a down payment on future capital reconstruction.

The approximately 60 projects completed by the Department of Transportation in 2014 – including the addition of pedestrian islands, reduction of travel lanes, protected bike lanes and more – are good examples of how to make quick and cost-effective work of saving lives.

• **STATUS QUO**: Mayor de Blasio committed to 50 "safety-oriented operational street projects" for 2016. This target is too modest and lacks definition of the size and breadth of each project.

• **CURRENT NEED**: The DOT should develop a timeline and articulate the operating budget necessary to bring street design changes to the 443 miles of dangerous corridors designated as priorities in the 2015 Vision Zero Borough Pedestrian Safety Action Plans.

◆ OPERATION BUDGET ALLOCATIONS: While expense costs are challenging to determine, an effort to redesign the already identified priority arterials during the remainder of the mayor's term would require an estimated \$50 million per year. In an \$80 billion city budget with Vision Zero as a top mayoral priority, an expanded operating budget will empower the Department of Transportation to implement more life saving street design.

# LONG-TERM RECONSTRUCTION: CAPITAL BUDGET

Capital budget projects will include fully constructed sidewalks, pedestrian islands, new signals, bus stops, bike lanes and curbs. With design solutions that provide maximum safety benefits, greatly increased durability, climate resilience and lifetime cost savings, these longterm reconstruction projects will minimize future street cuts and maintenance, allow for more robust transit and incorporate sustainable designs.

The long-term arterial reconstruction project on First and Second avenues with protected bike lanes, pedestrian islands and Select Bus Service is a notable example of the dramatic power of capital budget allocations to transform the neighborhoods that connect to an arterial street.

◆ **STATUS QUO**: Since 2002, the Department of Transportation has reconstructed an average of 47 lane-miles of arterial streets per year. Mayor de Blasio's preliminary capital budget allocates financing for only 35 lane-miles per year. At that rate, arterial reconstruction would take more than 100 years, until 2118, while the mayor's imperative is to reach Vision Zero by 2024.

◆ CURRENT NEED: In Mayor de Blasio's preliminary 10-year capital budget, \$250 million is allocated to reconstruct only four "Vision Zero Great Streets" on an accelerated timeline, while in almost every neighborhood, there is a need and opportunity for capital reconstruction on arterial streets.

• CAPITAL BUDGET ALLOCATIONS: The capital budget for arterial street reconstruction should be doubled to \$2.4 billion over 10-years. This will allow an accelerated timeline for all arterial street reconstruction projects, a 50-year life-cycle that ensures streets reconstructed today will not fall into disrepair before neighboring streets are completed.

# **POLICY RECOMMENDATIONS**

In order to achieve Vision Zero, New York City must prioritize the reconstruction of dangerous, antiquated arterial streets. Complete street design changes provide an effective, affordable and achievable way to protect New Yorkers and modernize the streetscape. Mayor Bill de Blasio must make arterial street reconstruction a political priority for his administration and a financial priority for the City of New York.

### COMMIT TO RECONSTRUCTING ALL OF NEW YORK CITY'S ARTERIAL STREETS |

- OPERATING PROJECTS: Define and expand Vision Zero projects in the operational budget to include early action treatment on the most deadly corridors identified in the Borough Pedestrian Safety Action Plans published in 2015.
- CAPITAL PROJECTS: Develop plans and a timeline for comprehensive capital arterial redesign within the next 50 years, to save lives and meet industry standards of street reconstruction.
- **PROCESSES:** Publish time-bound goals to track progress toward arterial street reconstruction and regularly re-evaluate strategy.

### SECURE ADEQUATE FUNDING FOR ARTERIAL STREETS

- **OPERATING PROJECTS:** Expand the operating budget for early action treatment to arterial streets, including funding for additional staff to do necessary community outreach.
- CAPITAL PROJECTS: Ensure all arterial streets are reconstructed within one lifetime by doubling the capital budget for long-term arterial reconstruction and begin streamlining this funding into priority projects.
- **PROCESSES:** Pursue new streams of funding and add budget line items that contribute resources to Vision Zero programs.

### ACCELERATE THE PACE OF ARTERIAL STREET REDESIGN & RECONSTRUCTION

- **OPERATING PROJECTS:** Begin early action treatments on priority projects financed by the operating budget by 2015.
- CAPITAL PROJECTS: Begin groundbreaking on the first arterial street reconstruction projects financed by the capital budget by 2017.
- PROCESSES: Reform the City's capital delivery process to enable an ambitious, fast-tracked reconstruction plan.

### Arterial streets in New York City





## ON BUSES

**DEDICATED BUS LANES** provide an express space so buses are never slowed by traffic

**BUS BULBS** give people more room to wait for the bus and prevent buses from weaving in and out of traffic

**PRIORITY SIGNALIZATION** for buses reduces bus travel times up to 18 percent



## EVERYONE

TREES AND LANDSCAPING provide shade and better aesthetics

**PERMEABLE SURFACES** reduce runoff and increase resiliency

**BENCHES AND PLAZAS** encourage people to be active and provide space to take a break





Queens Boulevard is an arterial street that connects more than ten neighborhoods, spanning the diverse communities between Jamaica and Long Island City. The Boulevard is Queens' most central east-west corridor, providing a direct route for hundreds of thousands of daily commuters on the bus, on bike, on foot and in cars. Historically known as the "Boulevard of Death," Queens Boulevard is better known for dangerous conditions than for the hundreds of important cultural institutions along the street, including multiple business districts, over 45 schools and countless civic and faith-based centers, and other hubs of activity.

"In Sunnyside, nearly 90 percent of our local shoppers walk to neighborhood businesses on Queens Boulevard, and they deserve to do so safely. No one should have to risk their life crossing the street in order to get to the grocery store."

Rachel Thieme Executive Director, Sunnyside Shines Business Improvement District



"We envision a safer boulevard that bridges our communities, rather than creates divisions among them."

7.3

MILES LONG

11

LANES WIDE

SINCE JULY 2012

PEOPLE KILLED INCLUDING 8 ON FOOT, 1 ON BIKE **PEOPLE INJURED** 

1,225



A. Redd Sevilla Executive Director, New Life Fellowship Church and New Life CDC





Atlantic Avenue is one of the longest, widest and busiest arterial streets in Central Brooklyn. It traverses more than 10 neighborhoods and two boroughs. As the neighborhoods on either side of Atlantic Avenue boom with residential and commercial activity, the number of people on foot and bicycle traveling along the street has increased dramatically. This critical east-west corridor runs through dense commercial and residential neighborhoods, houses shopping centers and cultural institutions and connects to most of Brooklyn's major transportation hubs, including a majority of subway lines, the Long Island Railroad and John F. Kennedy Airport. Its dangerous conditions make it a divisive border between neighborhoods.

"For our small businesses, making customers feel welcome and safe is our top priority. It's incredibly important for us to make Atlantic Avenue into a livable, vibrant street for all people, which is integrated into the beautiful residential communities that surround it."

> Josef Szende Executive Director, Planning, Atlantic Avenue BID



"Instead of connecting communities, Atlantic Avenue divides us, separating Cypress Hills and East New York. People don't walk around Atlantic because there is nothing; it is a boundary between two neighborhoods. It's a forgotten area."

MILES LONG

10

8

LANES WIDE

PEOPLE KILLED

2,322

SINCE JULY 2012

PEOPLE INJURED



Yakima Pena Senior Project Manager, Cypress Hills Development





The Grand Concourse, recently proclaimed a historic district, has the potential to be an amazing community destination. It is frequented by New Yorkers and tourists alike for nearby landmarks and attractions like Poe Cottage, the Kingsbridge Armory, the Bronx Museum of the Arts and Yankee Stadium. Outside the safety of these special New York attractions, the crosswalks, sidewalks and narrow bike lanes on the Grand Concourse present dangerous challenges to reaching public spaces, like children's playgrounds or cultural centers.

"With limited safe, affordable spaces for physical activity in the Bronx, making the Grand Concourse safer for walking and bicycling is an important step in encouraging Bronx residents to live a more active lifestyle and, by doing so, possibly improve the rates of obesity for Bronxites."

Charmaine Ruddock Executive Director, Planning, Atlantic Avenue BIDMS, Project Director, Bronx Health REACH



"Access to the Bronx River Greenway and other destinations like it relies on safe connections from local streets. We strongly support safer arterial corridors that provide a more complete transportation network, as well as access to waterfront and recreational destinations like the Bronx River Greenway."

5.2

MILES LONG



LANES WIDE

SINCE JULY 2012

PEOPLE KILLED

**PEOPLE INJURED** 

812





Claudia Ibaven Greenway Coordinator, Bronx River Alliance





Running through the heart of Manhattan, Sixth Avenue is an arterial street that is both home and destination for hundreds of thousands of people. It is the most bicycled corridor in Manhattan, and one of the most walked. Home to New York's wholesale flower district, historic department store district, major museums, parks, Rockefeller Center and Radio City Music Hall, the street is a hub for tourists and residents alike. Sixth Avenue has been highlighted as a priority arterial street for traffic safety improvements in Manhattan, where arterial street make up 12 percent of roadway miles and account for 50 percent of pedestrian fatalities in the borough.

"Sixth Avenue presents an opportunity for the City to expand its network of bike lanes and pockets of green-space in the public realm. The bike lanes will eventually become a robust network, providing a viable transportation alternative for our citizens. Delineating those lanes with planted protective barriers expands the urban park experience and provides opportunities for rest, relaxation and enjoyment throughout all of New York's neighborhoods."



"Sixth Avenue is a vibrant commercial area. "Complete streets" improve business and quality of life, and help bring happiness to the neighborhood. As residents, we're willing to step up to the plate to make the transformation happen."

3.5

MILES LONG

7

LANES WIDE

PEOPLE KILLED INCLUDING 1 ON FOOT, 1 ON BIKE

3

PEOPLE INJURED

859

SINCE JULY 2012

Barbara Randall Garment District Alliance



Will Rogers Council of Chelsea Block Associations



# **HYLAN BOULEVARD**

**STATEN ISLAND** 



# ABOUT THE STREET

Hylan Boulevard is a major arterial street on Staten Island and the only continuous north-south route on the South Shore. The boulevard is home to the Alice Austen House, the historical home of Staten Island's famous hometown photographer, Great Kills Park, part of the Gateway National Recreation Area, and Conference House, where Ben Franklin and John Adams attempted to negotiate an end to the Revolutionary War in 1776. Commercial establishments of every kind line the boulevard, including large shopping centers around the New Dorp neighborhood. On a typical weekday, 44,000 vehicles and 32,000 bus riders use the 17-mile-long corridor, where a high level of traffic makes crashes all too common.

"The Staten Island Museum is all about the environment, the history and the richness of Staten Island, which in the 19th century was a favorite place to cycle and a fabulous, natural get-away from urban New York. Today, we have maxed-out with our car culture and not added public transportation to encourage safe passage for islanders, let alone the influx of recreational visitors. Working on safer, smarter streets is critical to alternative access in the greenest borough."

> Diane Matyas Vice President of Exhibitions & Programs, Staten Island Museum

17

MILES LONG

6

LANES WIDE

6

SINCE JULY 2012

PEOPLE KILLED **INCLUDING 3 ON FOOT** 

902

**PEOPLE INJURED** 



# **RESOURCES & WORKS CITED**

# RESOURCES

## RECENT ARTERIAL STREET RECONSTRUCTION AND RESULTS

◆ Pedestrian Safety Study and Action Plan, New York City Department of Transportation (NYC DOT), 2010	STREET	DESIGN CHANGE	REDUCTION IN CRASHES WITH INJURIES
◆ Measuring the Street, NYC DOT, 2012	1st Avenue 1-33	bike path and bus lanes	12%
◆ Street Design Manual, NYC DOT, 2013	8th Ave, Bank-23	bike path	20%
▲ The Economic Benefits of Sustainable Streets NVC DOT 2012	9th Ave, 16th-23rd	bike path	52%
	9th Ave, 23-31	bike path	44%
◆ Making Safer Streets, NYC DOT, 2013	Allen Street	bike path, pedestrian plazas	18%
◆ Urban Street Design Guide, National Association of City Transportation Officials (NACTO), 2013	Allerton Ave	lane reduction, ped islands, bike lanes	28%
	Bowne St	lane reduction, ped safety islands	23%
	Broadway 17-23	bike path, street network changes	24%
WORKS CITED	Broadway 26-59	pedestrian plaza, street network changes	24%
	Broadway, 35-42	bike path, pedestrian plazas	32%
1 New York City Department of Transportation, Pedestrian Safety Study and Action Plan, 2010	Columbus Av, 77-96	bike path	25%
2 New York City Police Department, NYPD Motor Vehicle Collisions on NYC Open Data, 2015	Gerrittsen Ave	lane reduction, ped safety islands	40%
3 Transportation Alternatives, <i>Child Crashes: An Unequal Burden</i> , 2012	Jewel Avenue	lane reduction, median, bike lanes	37%
	Lafayette Ave	lane reduction, ped safety islands	24%
4 New York City Department of Transportation, DOT Launches Plaza Program, 2008	Macombs Rd	lane reduction, ped safety islands	41%
5 New York City Department of Transportation, <i>Measuring the Street</i> , 2012	Randall/Leggett Tiffany	lane reduction, bike lanes	23%
6 City of New York Mayor Bill de Blasio, <i>Vision Zero Action Plan</i> , 2014	Southern Blvd, Boston-Bx Pk S	bike lanes	28%
7 National Highway Traffic Safety Administration calculations by Jon	Southern Blvd, Westch-142	lane reduction, ped safety islands	20%

8 Office of the New York City Comptroller Scott Stringer, ClaimStat Alert - Protecting Pedestrians: The City's Fleet and Vision Zero, 2014

9 New York City Department of Transportation, The Economic Benefits of Sustainable Streets, 2013

10 New York City Independent Budget Office, New York City by the Numbers, 2014

## **RECONSTRUCTION BUDGET ANALYSIS**



Table 2: Number of lane-miles reconstructed each year through the capital budget, according to previous Mayor's Management reports, compared to the proposed 2016 preliminary capital budget presented in February 2015.

# **APPENDICES**

Table 1: Recent New York City arterial roadway interventions and safety results, according to Making Safer Streets, NYC DOT, November 2013. Injury crash reduction is calculated from crash rates two to three years before and after project implementation.

		2010	2011	2012	2013		AVG.	proposed 2016
ô	66	43	32	28	52	43	47.4	35



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