



NYC Streets Plan

December 1, 2021





1	Message from the Commissioner	4
2	About This Plan	8
	Executive Summary	10
	Introduction	12
	Planning Context	14
	Our Process	17
3	NYC Mobility Landscape	20
	Challenges of NYC Streets	22
	Mobility in the City Today	24
	What's New?	30
4	Vision and Goals	32
	Vision and Goals	34
	Focusing Our Investments	42
5	The Streets Plan	46
	Public Engagement	48
	Program Areas	52
	Safety & Vision Zero	54
	Walking & Pedestrians	58
	Transit	62
	Cycling	66
	Bike Share & Micromobility	70
	Accessibility	72
	Public Space & Streetscapes	74
	Freight	78
	Curbside Management & Parking	82
	Traffic Management	86
	Sustainability & Resilience	90
	Implementation Strategies	94
	Next Steps	95

1 Message from the Commissioner





Henry “Hank” Gutman

Commissioner,
NYC Department of Transportation

New York City’s streets are a critical resource – they are some of our most valuable assets, playing an important role in the lives of all New Yorkers. At the height of the COVID-19 pandemic, when many New Yorkers were effectively confined to their homes and in need of safe places to socially distance, the NYC DOT and our sister agencies, in close partnership with the NYC Council, turned to the streets to find an outlet – launching the Open Restaurants, Open Streets, Open Boulevards, and other innovative programs. Whatever doubts may have existed before, this experience proved it is essential that we reclaim the streets of New York for its people.

At the same time, under the leadership of Mayor Bill de Blasio, we have been reimagining how people move in this City, creating record miles of new bike lanes and busways, promoting walking and all forms of mass transit, and introducing other innovative new programs to reduce dependence on private car ownership by promoting more attractive and environmentally-friendly alternatives. To that end, we have recently launched a new initiative to reimagine how goods move and are delivered in our City. Doing so will reduce our dependence on large, polluting, diesel trucks by shifting freight to waterways, our rail system, and other smaller, greener alternatives. These efforts are governed by three overriding priorities: (1) to ensure that improvements are distributed equitably among the neighborhoods and people of our City, (2) to pursue the goal of Vision Zero to make our streets safer for all New Yorkers, and (3) to reduce our carbon footprint and fight climate change.

These efforts have not been without their setbacks and frustrations. During the height of the pandemic, the limited availability of both human and financial resources was a major challenge. We nonetheless built record miles of bike lanes and bus lanes, and implemented many other important safety projects thanks to the hard work and dedication of our front-line City employees. On the Vision Zero front, COVID brought a second pandemic — a nationwide pandemic of speeding and other reckless driving – requiring us to redouble our efforts in street engineering, improve safety education for all who share our streets, and expand the use of critical and highly effective automated enforcement tools in addition to existing enforcement resources. But today, as we emerge from the COVID pandemic and look forward to unprecedented new Federal funding for our infrastructure needs, we must accept the challenge, confront these obstacles, and work to make our streets better and safer for all New Yorkers. We really have no choice.

That is why I am particularly pleased to be presenting this New York City Streets Plan. This plan is the product of legislation (Local Law 195 of 2019) that was sponsored

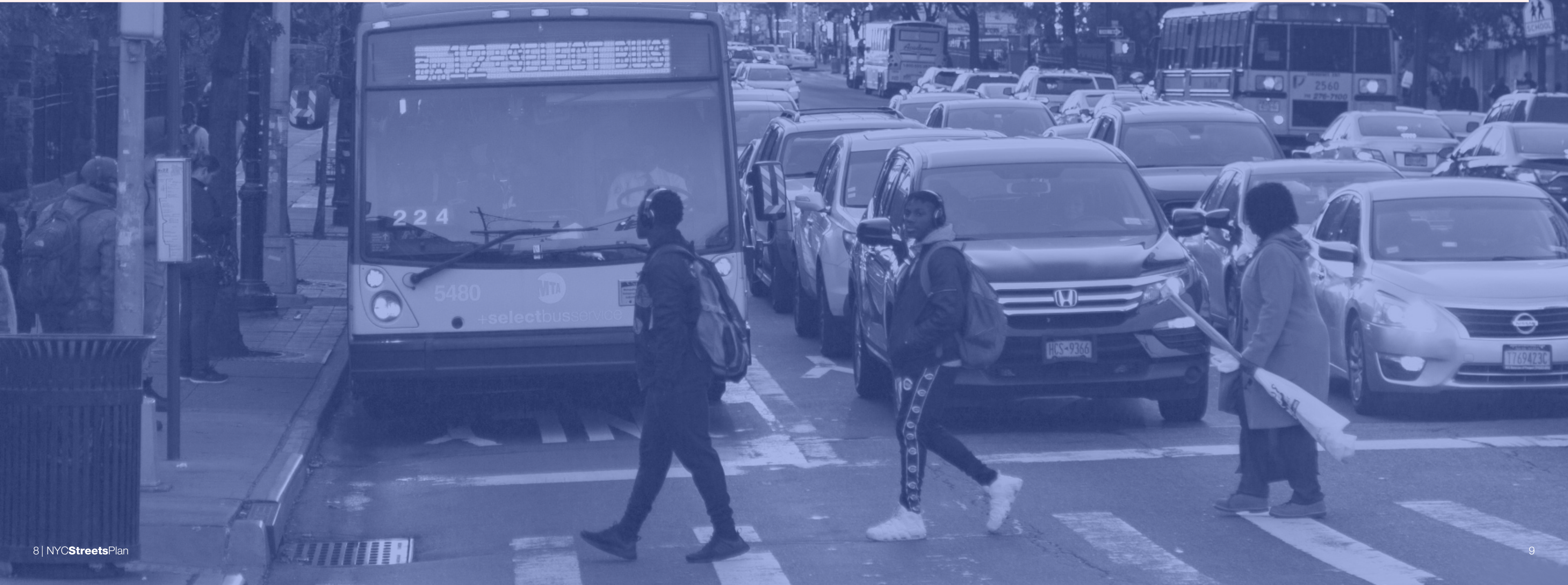
and championed by Speaker Corey Johnson, passed by the City Council, and signed into law by Mayor Bill de Blasio. The legislation required the NYC Department of Transportation to produce this plan, laying out detailed and actionable recommendations that current and future leaders can implement over the next five years. In some respects, it is a draft – a work in progress – and we fully expect it to be amended, expanded, and modified in the years ahead. But this blueprint is an important start and we are proud to have been able to complete and deliver it on time.

The NYC Streets Plan provides a roadmap for the future, featuring concrete goals, a new prioritization framework, and a robust set of recommendations for the City’s leadership to execute. It includes both longstanding programs that have proven successful, as well as new initiatives to meet our evolving challenges. Some are truly innovative, others are modern adaptations of old ideas, and still others are great concepts borrowed from cities around the world. For the first time, we include lists and maps showing potential locations for upcoming projects and priorities for the next few years. These are proposals, not final determinations, and we expect them to change as our planning work and the community outreach process progresses. Equity will be a guiding principle as we implement this plan – focusing attention on historically underserved neighborhoods and populations. To that end, we have identified Priority Investment Areas, chosen to reflect those equity concerns.

A few important caveats as to what the NYC Streets Plan represents. First, as noted above, this is a “draft” blueprint for the future of our streets. The Council’s legislation contemplates, and the NYC DOT intends, that this Plan be the starting point for a robust public outreach program and that the final Streets Plan reflect the concerns and particular needs of the various affected communities. Rethinking street use in New York City has always required balancing the needs of our diverse communities. But we have learned over the years that redesigning our streets and deciding what goes where is not a cookie cutter, one size fits all, undertaking. The most successful street design projects have been context sensitive, designed to address everything from the geometry of the street itself, to the nature of the activity occurring there, to how the street fits into its community, and the overall city transportation network. Meaningful community input helps illuminate that context. Second, while the legislation sets — and the plan includes — various benchmarks measured in miles of new bike lanes, busways and the like, the Department must look closely at a number of metrics other than mileage to measure progress and success. For example, with respect to busways, the NYC DOT prioritizes those routes where the potential ridership impact is greatest, not necessarily those representing the most miles. In 2021 we implemented a 0.5 mile busway that speeds up travel times for 66,000 bus passengers on five MTA routes. So too, when it comes to protected bike lanes, we try to focus on constructing and completing greenway networks, not simply racking up miles of lanes. Finally, I would be remiss not to mention that execution of this Plan will depend upon the continued availability in the years ahead of the financial, material, and human resources necessary to meet such ambitious objectives, as well as the political commitment to pursue the selected projects in the face of the near inevitable opposition of at least some in any given community.

But with this Plan we have begun this structured conversation and, in so doing, taken an important step in steering our City towards a better future. It will help bring about improved and more accessible mass transit, as well as streets that are safer and reprioritized to benefit pedestrians and cyclists instead of automobiles. Doing all of this will ensure that meaningful strides towards fighting climate change and other environmental dangers will have been made. We can and will assume New York City’s rightful leadership role in these endeavors.

2 About This Plan



Executive Summary

The *New York City Streets Plan (Streets Plan)* presents a historic opportunity to think holistically about how we plan for and design our streets. The result of a rigorous process of planning, data analysis, and listening to New Yorkers, this plan:

- » Addresses the **key themes** we heard from the public
- » Provides **history, context, and trends** related to New York City transportation
- » Defines **vision and goals** for planning and designing New York City's streets
- » Makes recommendations across 11 program areas, including **new programs, reimagined programs, and transformative ideas**
- » Identifies **opportunities for process improvements** to help deliver the recommendations of the *Streets Plan*

The plan's recommendations can be summarized as follows:

Street Design: Do more – Build on our existing successful street design programs, including:

- » Implement more and better safety redesign projects to meet Vision Zero goals
- » Expand infrastructure for transit, cycling, and pedestrians
- » Solve bottlenecks in the project implementation process

Transformative Ideas: Take on new efforts needed to achieve our goals, including:

- » Reduce dangerous vehicles and drivers on our streets
- » Dramatically increase automated enforcement
- » Reform on-street parking
- » Improve connectivity around our highways

Equity Focus: Add an explicit equity lens to our work, including:

- » Focus investment in areas that need it most
- » Engage communities proactively about transportation in their neighborhoods
- » Make the city accessible to all



Introduction

NYC DOT is the New York City agency responsible for 6,300 miles of streets and highways, over 12,000 miles of sidewalk, and nearly 800 bridges and tunnels. We also operate the Staten Island Ferry. While we do not manage train and bus service, we work very closely with our partners at the MTA to improve transit. We also work closely with the New York State Department of Transportation on planning and maintaining the highways and streets under their ownership or jurisdiction in New York City.



The *New York City Streets Plan (Streets Plan)* is a five-year transportation master plan to improve the safety, accessibility, and quality of the city’s streets for all New Yorkers. The plan was developed in response to Local Law 195 enacted in December 2019 (LL195), which directed New York City Department of Transportation (NYC DOT) to issue and implement a transportation master plan every five years and issue annual status reports beginning in 2023.

LL195 provides a series of benchmarks to be included in the *Streets Plan*. These benchmarks lay out targets that would greatly improve the design and operation of the streets of New York. Meeting these benchmarks—and the other key parts of this plan—will require increased staffing, funding, facility space, and new implementation strategies. Some items also require changes to contracts, increased support from the contractor community, and other ways to build capacity. We will work aggressively towards meeting these targets, within the limits of the agency’s resources.

One key point is that counting location miles is not the only way to measure success. We will install bus lanes, bike lanes, and other helpful street elements where they will provide the most possible benefits – which may not always align with maximizing mileage or total units installed. This will affect our progress on the benchmarks, but will ultimately be better for transportation in New York.

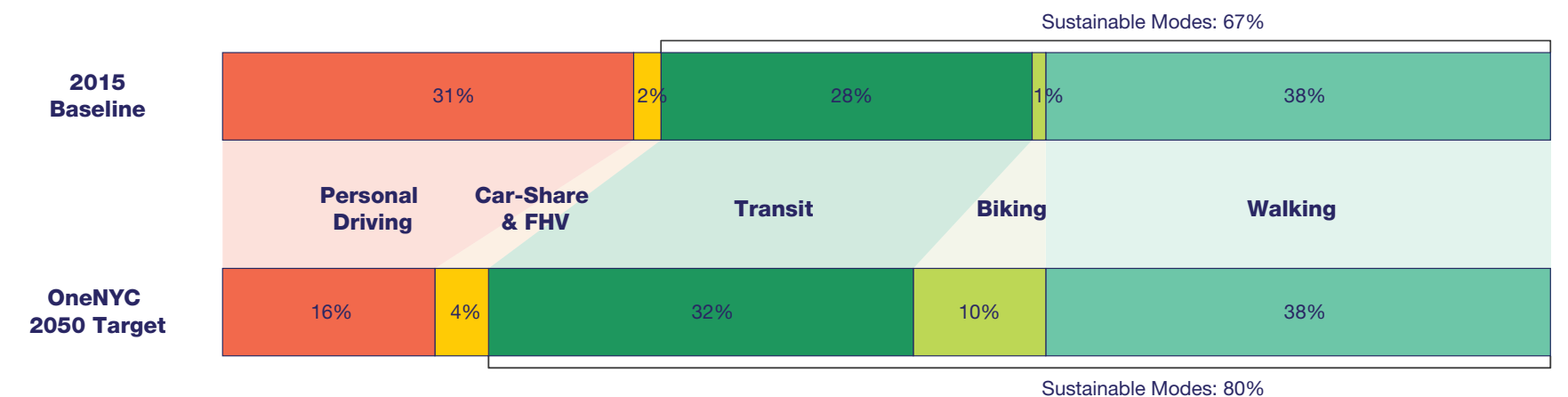
Benchmark Category	2022 Benchmark Targets	2022-26 Average Per Year Benchmark Targets	2022 NYC DOT Capacity
Protected Bus Lanes (Miles)	20	30	20
Protected Bike Lanes (Miles)	30	50	30
Bus Stop Upgrades (Shelters or Benches AND Bus Time Poles)	500	500	500*
Transit Signal Priority (Intersections)	750	1,000	Up to 750
Accessible Pedestrian Signals (Intersections)	500	500	500
Pedestrian Space (Sq. Ft.)	500,000**	N/A**	400,000
Redesign Intersections	400	400	400
Commercial Loading Zones and Truck Routes		Qualitative Benchmark	
Parking Policy Revisions		Qualitative Benchmark	

* Subject to new contract being executed

** Local Law 195 calls for an addition of 1,000,000 square feet of pedestrian space by December 31, 2023

Since the passage of LL195, the transportation landscape has changed. New programs like Open Streets and Open Restaurants have begun to transform our streets as public spaces, the demands of freight on our streets have increased, and the tremendous imperative of dealing with climate change has increased our focus on resiliency and de-carbonizing our transportation sector. This plan is faithful to the intent of the law, while also acknowledging that there are many other critical issues we must undertake, including several enshrined in other local laws.

All street changes will require political and community support; while we never expect unanimity among New Yorkers, it is important that street design reflects local needs as well as citywide goals. In the *Streets Plan*, we lay out a framework for prioritizing future work. We look forward to working with the next administration to put in place the funding and support necessary to meet the benchmarks over the first five-year plan and beyond. Above we identify the LL195 benchmarks and NYC DOT capacity for 2022.



OneNYC Sustainable Mode Share Targets

Source: OneNYC

Planning Context

The Streets Plan builds on a foundation of prior planning and analysis work.

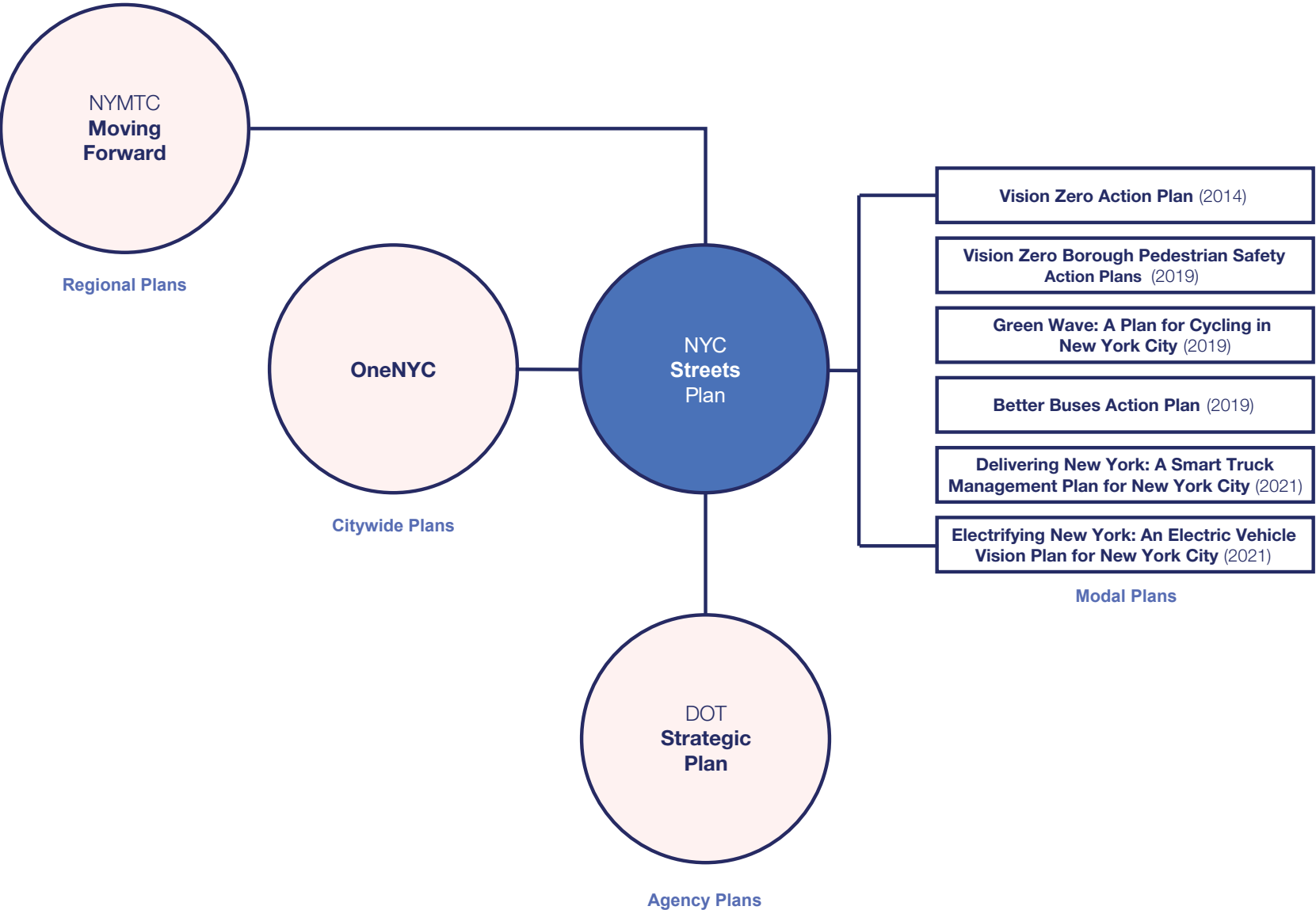
OneNYC 2050, first released in 2015 and followed by yearly progress reports, aimed to limit greenhouse gas (GHG) emissions by prioritizing transit, walking, and cycling, continue efforts to eliminate traffic injuries and fatalities, and foster a livable streetscape. Other goals included reducing traffic congestion, increasing bus performance, modernizing the subway system, and improving regional connectivity.

As part of *OneNYC*'s commitment to become carbon-neutral by 2050, the 2019 *OneNYC* update included specific transportation mode shift goals to reduce the use of single-occupancy vehicles and increase the use of more efficient and sustainable modes such as public transit, walking, cycling, and cleaner freight movement.

NYC DOT has developed several additional plans that are focused on specific transportation modes or programmatic areas. The *Vision Zero Action Plan*, released in 2014, laid out a roadmap to reduce traffic fatalities to zero, and was followed by borough-specific plans in 2015 and 2019. The *Green Wave* plan of 2019 presented a long-term citywide vision for improving cycling safety and the riding experience for cyclists, in addition to more immediate improvements. It focused on the Protected Bike Lane (PBL) network, new design standards, targeted enforcement, legislation, policy, education, and outreach. The *Better Buses Action Plan* (2019) set a goal of improving bus speeds citywide and reversing downward bus ridership trends. The *Delivering New York Freight Plan*, released in May 2021, is NYC DOT's blueprint to advance our vision of a safe, sustainable, equitable, and efficient "last-mile" freight delivery system. *Electrifying New York* (2021) is NYC DOT's vision to accelerate the adoption of electric vehicles in the city. The goals and priority investments identified through this prior work serve as key inputs into the *Streets Plan*.

Likewise, NYC DOT released an agency strategic plan in 2016 which was updated in 2017. While the *Strategic Plan* included recommendations for streets and public spaces, the *Streets Plan* is a data-driven citywide transportation blueprint that lays the foundation for NYC DOT's programs well into the future.

Importantly, the *Streets Plan* also aligns with regional priorities and plans, including the New York Metropolitan Transportation Council (NYMTC)'s *Moving Forward* regional transportation plan.














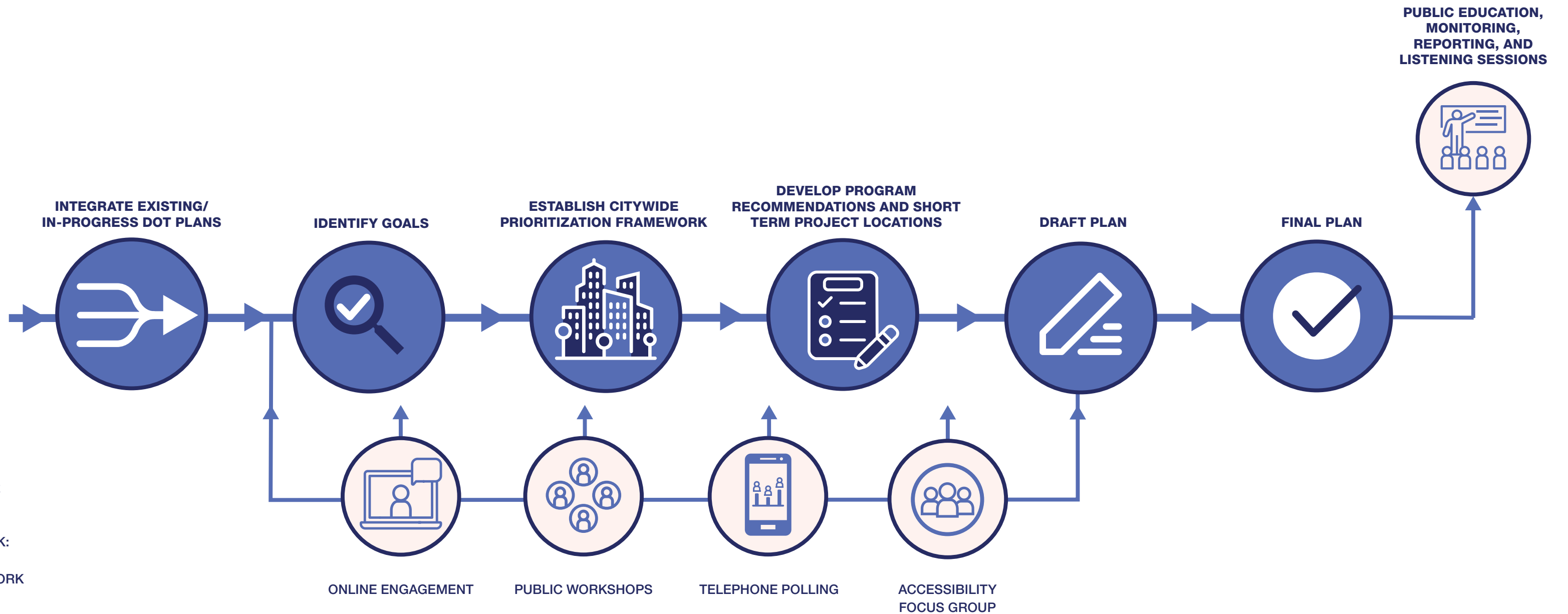
Our Process

The *Streets Plan* was developed through a process that included research, technical analysis, and broad public engagement. We defined overarching goals based on LL195, previously established City and NYC DOT plans, and input received from New Yorkers through online engagement and public workshops. And the project team researched what our peer cities are doing, evaluating innovative practices being used across the country and around the world and adapting them to the New York City context.

At the heart of the process was the development of new frameworks for prioritizing future street improvements. We evaluated historic priorities and patterns of investment across our different programs and considered how future investments should be targeted to address both historic inequities as well as ongoing needs. The input we received from the public through the public workshops played a key role in helping to create these frameworks. Equity, too, was central: we conducted a comprehensive scan of how transportation equity has been measured and prioritized in New York City, at the state and federal levels, and in peer cities. At the same time, NYC DOT stood up a set of internal equity and inclusion initiatives, which also helped develop equity metrics for future priorities.

In collaboration with NYC DOT's numerous planning and operational teams, the agency's programs affecting streets were assessed in light of the *Streets Plan's* goals, determining where work should be focused going forward, how current programs should evolve or be reimagined, and what new types of programs may be needed to best meet the goals of the plan. In many cases, new methods of prioritizing work were developed, tailored to the specific planning considerations of different transportation modes and functional areas. In tandem, we looked internally at our key processes—such as project identification and development, and public engagement—to work more effectively and efficiently in meeting the goals of the *Streets Plan*.

-  ONENYC 2050: EFFICIENT MOBILITY (2013)
-  VISION ZERO ACTION PLAN (2014)
-  NEW YORK CITY DOT STRATEGIC PLAN (2016)
-  BETTER BUSES ACTION PLAN (2019)
-  GREEN WAVE: A PLAN FOR CYCLING IN NEW YORK CITY (2019)
-  VISION ZERO BOROUGH PEDESTRIAN SAFETY ACTION PLANS (2019)
-  DELIVERING NEW YORK: A SMART TRUCK MANAGEMENT PLAN FOR NEW YORK CITY (2021)
-  ELECTRIFYING NEW YORK: AN ELECTRIC VEHICLE VISION PLAN FOR NEW YORK CITY (2021)
-  DELIVERING GREEN: A VISION FOR SUSTAINABLE FREIGHT NETWORK (2021)



3 NYC Mobility Landscape



Challenges of NYC Streets

No matter where you live in New York City, streets are an indispensable part of daily life. They help us get where we need to go—to work, school, shopping, houses of worship, cultural destinations, recreation, and more—and serve as our collective front yard and public square, providing space to gather, socialize, and even protest. Our streets affect almost every aspect of our society, from our economy (by supporting goods movement and access to businesses) to our environment (by mitigating storm water and urban heat and providing cleaner transportation modes), to our public health (by supporting more physically active ways of moving around).



New York City's streets accommodate many users—pedestrians, bus passengers, cyclists, motorists, people making deliveries, and others. Although most of the city's streets were built before the widespread adoption of the automobile, like in other American cities, New York City's streets evolved to prioritize motor vehicle movement during the twentieth century. Prioritizing private motor vehicles has led to negative effects in the form of deaths and injuries, congestion, noise, pollution, and a less comfortable environment for walking and cycling. Even today, while most trips across the city are made using a sustainable mode—walking, public transit, or cycling—the overwhelming majority of street space is devoted to private cars and trucks.

In recent decades, the City has worked to rebalance these priorities, improving conditions for sustainable modes and establishing new programs and design guidelines to create an accessible, sustainable, and vibrant public realm.

Street space is finite in a dense city like New York, so every decision about how we design and operate our streets will require trade-offs, and the decisions we make reflect our collective priorities—whether spoken or unspoken, every street design will have benefits and costs. The central challenge is how we strike the best possible balance between different modes of transportation and different functions that take place on our streets, especially in light of the city's widely varying neighborhoods.



Mobility in the City Today

New York City is a large and diverse city with neighborhoods that vary widely. The city's transportation system, too, varies widely. Some areas have access to more travel options while others have fewer options. And the city is always changing. This section presents several key mobility-related data points and trends that provide further context to the *Streets Plan* and can help the plan respond to both citywide and local considerations.

The City Is Growing (Despite COVID-19)

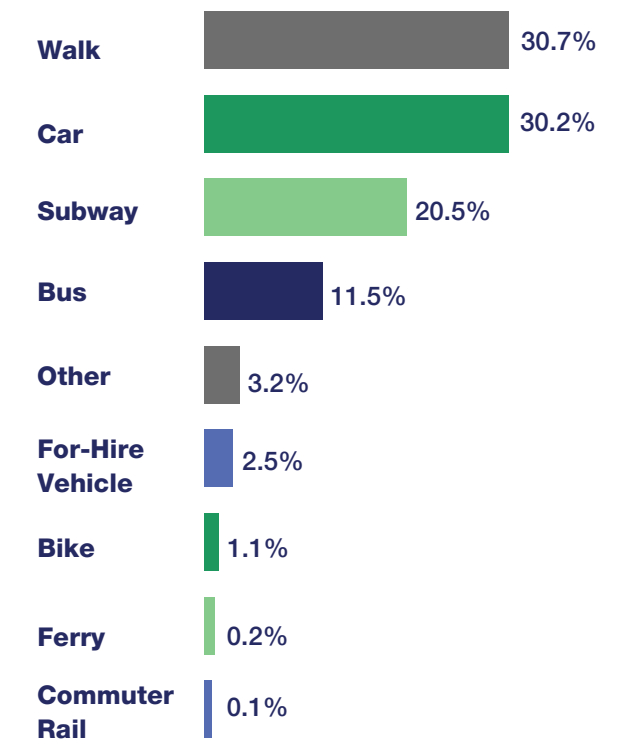
The number of residents, jobs, and visitors continue a decade-long trend of steady growth. Population (8.8 million in the 2020 Census) increased more than 7% since 2010. Employment is rebounding and tourism was growing by over a million visitors a year prior to 2020. This growth comes with ever-increasing demand for a finite amount of street space and the imperative to use our streets more efficiently.



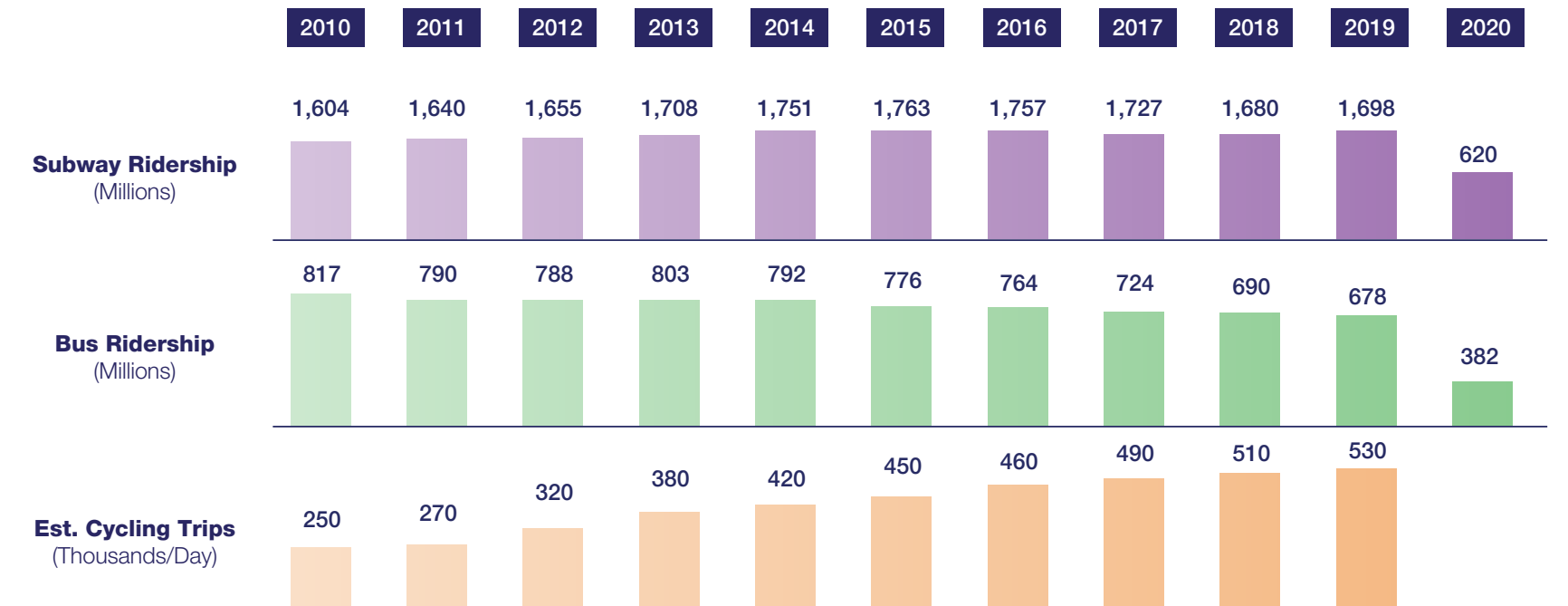
New York City Remains a Transit (and Walking) City

Mode share varies greatly across the city, but New York continues to be a place of sustainable travel. With the exception of eastern Queens and Staten Island, the majority of trips taken by residents are made by a sustainable mode, such as walking, transit, or cycling. Sustainable mode share is as high as 85% in parts of Manhattan, with the city overall averaging 64%. These percentages are despite declines in bus ridership since 2013 and an uncertain future for the subway after pandemic losses. New Yorkers make most trips by walking, and daily cycling trips are growing (580,000 daily trips in 2019 versus 380,000 in 2013).

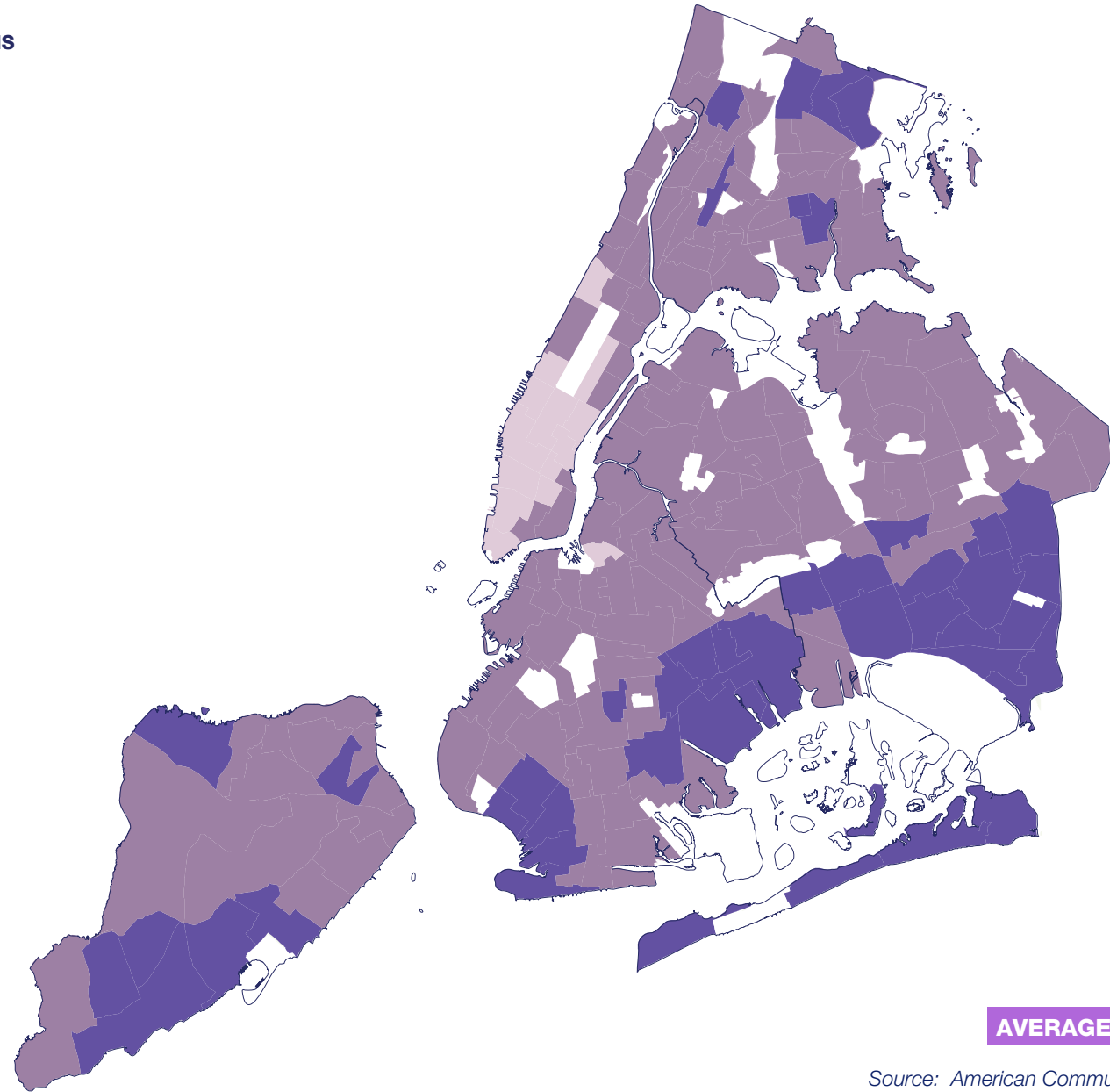
New York is a leader in sustainable mode share among its American peers. Even Chicago, a transit-rich and pedestrian-friendly city, has a significantly lower sustainable mode share. Internationally, New York fares well compared to London and Berlin, but falls short of Paris and Hong Kong (gold standards of 87% and 93%, respectively, according to the 2016 NYC DOT *Strategic Plan*).



New York City Trip Profile:
Based on Trip Diary Phone Responses



< 30 MINS
 31- 45 MINS
 > 45 MINS



AVERAGE COMMUTE TIME

Source: American Community Survey 2014-2019

...But Some Neighborhoods Have Access to Better Transit Options

The variation in mode share across the city is not surprising given that some neighborhoods have access to many modes (convenient transit, bikeshare, etc.) while others have fewer options and are more car-dependent. Likewise, average commute times vary widely among neighborhoods, from just over a half hour to just under an hour. Residents may face longer travel times due not only to the availability of travel options but proximity to destinations. Average commute trip times increase as you go further from Manhattan, which in part reflects the availability, frequency, and directness of transit.

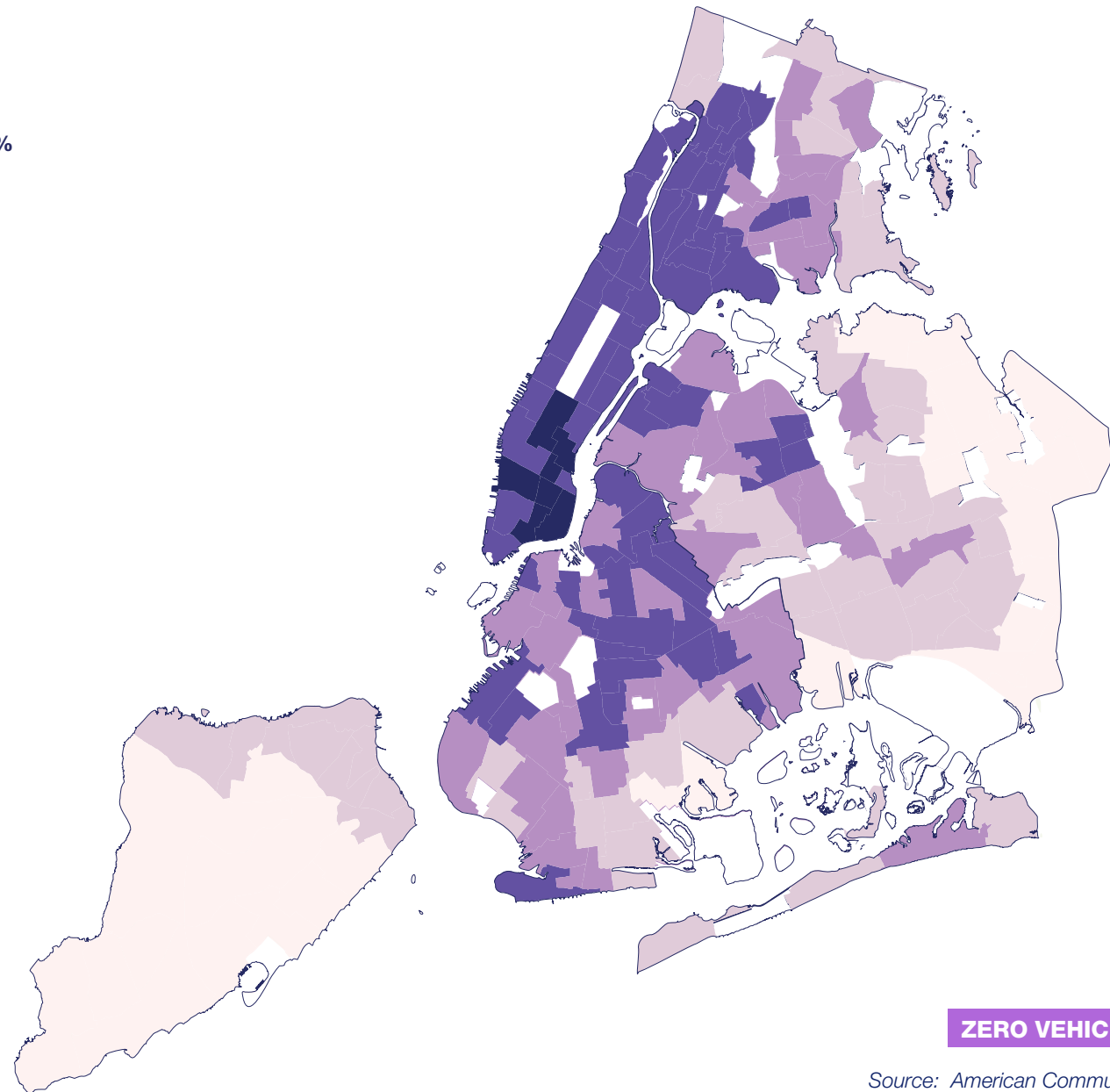
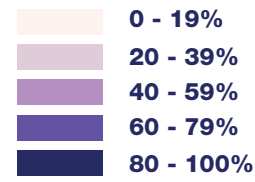
Metropolitan Area	Transportation Expenditures	Income Before Taxes	Transportation Spending as Percent of Income
Miami	\$9,730	\$67,286	14.5%
Los Angeles	\$10,681	\$93,449	11.4%
Atlanta	\$8,711	\$77,339	11.3%
Chicago	\$8,852	\$84,208	10.5%
New York	\$9,350	\$100,425	9.3%
Philadelphia	\$9,823	\$106,767	9.2%
Washington, DC	\$10,912	\$131,740	8.3%

Source: US Bureau of Labor Statistics, Consumer Expenditure Surveys, 2019-2020

And Some New Yorkers Pay a Larger Share of Their Income for Transportation

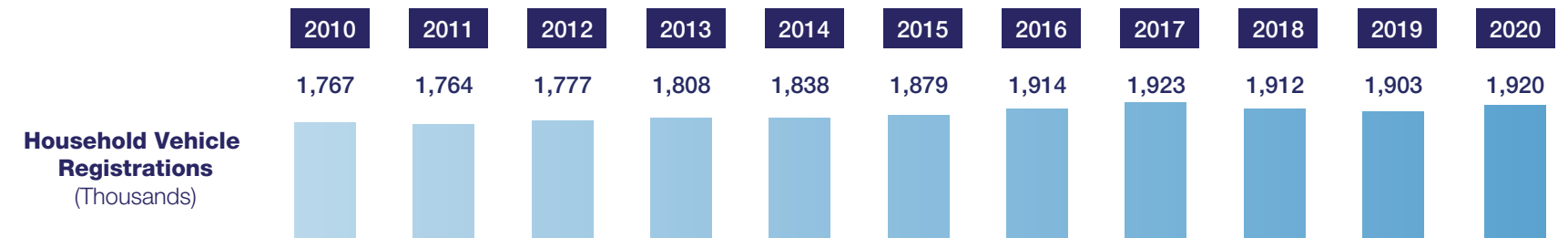
Most New Yorkers benefit from having such a robust transit system – on average, transportation costs made up only 9% of household costs on average, compared to an average of 12% nationwide. Looking closer, however, transportation is a significantly larger portion of household costs in some New York City neighborhoods, particularly more car-dependent neighborhoods such as Staten Island, southeast Brooklyn, eastern Queens, and the northeast Bronx, per the Center for Neighborhood Technology’s Housing and Transportation Affordability Index. And, of course, the cost of transportation can be a much higher burden for those who have lower income.





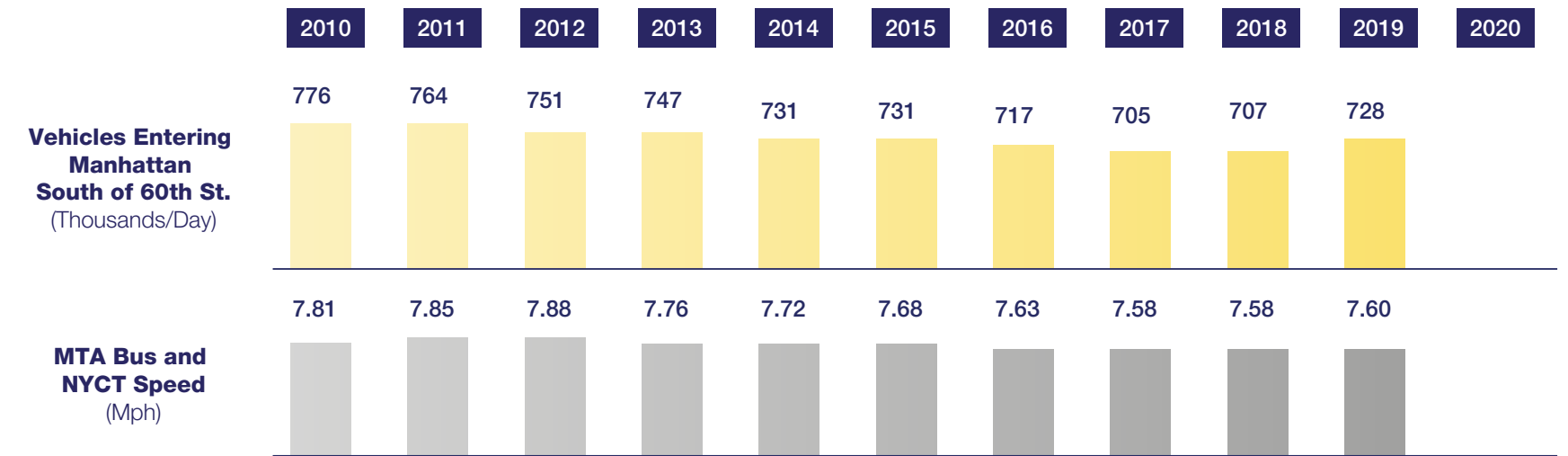
ZERO VEHICLE HOUSEHOLDS

Source: American Community Survey 2014-2019



While Car Ownership Is Relatively Low, It Varies Widely Across The City

Zero-vehicle households are concentrated in Manhattan and southern parts of the Bronx. Outer borough households generally have more vehicles, a function of land use and density, non-vehicle transportation options, and income. The number of household vehicle registrations increased by 8.7% between 2010 and 2020, resulting in a very slight increase in the ratio of vehicle registrations to the total number of New Yorkers — from 0.215 to 0.218. While this continues the City’s car-light growth pattern, it contrasts with its previous period of growth (between 1990 and 2000), when per capita car ownership declined as the population increased. More cars in a city with finite street space will increase congestion as well as posing a challenge to the City’s climate and Vision Zero goals.



Car Trips Into the Manhattan Central Business District Are Stable...But So Are Average Bus Speeds

Trips in the core of the city dropped between 2010 and 2017 but began rising in 2018 and 2019. This pattern was disrupted by COVID-19, and car trips may be rising again as some employees return from remote work. At the same time, bus speeds citywide have also been relatively consistent. Spring 2020 saw a slight jump, but speeds have since returned to the pre-pandemic average. Vehicle congestion and bus speeds are closely related, and the expected implementation of the Central Business District Tolling Program (also known as congestion pricing) will help reduce some of the areas of the worst congestion in the city, boosting bus speeds in the process.

What's New?

The travel trends described on the preceding pages emphasize the need to advance initiatives across modes to better connect New Yorkers to resources and opportunities.

NYC DOT has continued to innovate in how we use our streets, in response to both the COVID-19 pandemic and other larger trends shaping the world. These have included:

- Dramatically expanding the use of “low traffic” treatments, where private vehicles are largely reduced, and sustainable uses are prioritized. These include shared streets, open streets, busways, and bike boulevards. These treatments all recognize the need for local access and deliveries while also making sure that other needs are prioritized over through traffic.
- Reimagining our curb space to be more than long-term private vehicle storage. This has included Open Restaurants, reserved spaces for shared cars, substantially increasing BikeCorrals, the Neighborhood Loading Zone program, on-street electrical vehicle charging, pay-by-cell parking meters, and more. We must continue to innovate with our curb space to help meet all of our city's needs.
- Expanding our palette of materials to help implement projects more efficiently and safely. This has included tests of colored asphalt for bus and bike lanes, tests of new barriers to protect bus and bike lanes, and increased use of technology to monitor transportation conditions. Continuing to pursue new technology and new treatments helps us continually improve the products we deliver on our streets.



OPEN RESTAURANTS

During the COVID-19 pandemic the restrictions on indoor dining threatened the livelihood of New York City's restaurants. What started as an emergency response to support the restaurant industry by allowing outdoor dining is being made permanent. The program has assisted over 11,000 restaurants so far. The success and positive response of New Yorkers to outdoor dining is spurring the creation of a permanent Open Restaurants program in partnership with the City Council, and managed by NYC DOT, with an application process and clear and enforceable rules and guidelines. The permanent program requires a set of legal actions and an initial application round before it will launch in 2023.



OPEN STREETS

Building on a strong history of creating car free streets, NYC DOT responded to a desire for additional outdoor public space during the COVID-19 pandemic by creating the Open Streets program. NYC DOT works in partnership with local organizations or schools to limit or restrict vehicle access and designate streets for pedestrian and cyclist use, as well as car-free activities supporting local businesses and schools.



BUSWAYS

Busways prioritize travel for buses and often trucks, with other motorized vehicles limited to local access. This treatment significantly reduces traffic volumes and congestion, improving bus speeds and reliability, while enhancing safety for all roadway users. The 14th Street Busway in Manhattan started as a pilot program in October 2019 and immediately had a tremendous positive effect on bus speeds and ridership. As a result of this success, and in an effort to use this approach to serve essential workers and strengthen bus transportation during the COVID-19 pandemic, the pilot was made permanent in June 2020. At the same time, the City announced additional busway locations. NYC DOT has since initiated busway pilots on Jay Street in Brooklyn (now permanent); Main Street, Jamaica Avenue, and Archer Avenue in Queens; and 5th Avenue (2022) and 181st Street in Manhattan.



BIKE BOULEVARDS

The Mayor and NYC DOT also announced 30 miles of new Protected Bike Lanes (PBLs) to be installed in 2021 featuring a new bike boulevard in each borough. A bike boulevard slows vehicle traffic and limits vehicle volumes to create a low-stress and safe cycling and pedestrian-friendly space. By creating these safe spaces, bike boulevards further the City's Vision Zero goals. Planned bike boulevards will include a portion of the following streets:

- 21st Street in South Slope, Brooklyn
- 39th Avenue in Sunnyside, Queens
- Jackson Avenue in Mott Haven, Bronx
- University Place in Greenwich Village, Manhattan (Under Review)
- Netherland Avenue Mariners Harbor, Staten Island



NEW FREIGHT INITIATIVES

Vehicles provide goods and services to people across the city. In fact, close to 90% of the City's goods are moved into and around the city by truck. Now, our dependency on trucks to meet an increasing demand for good exacerbates traffic congestion, pollutes our air, stresses our aging infrastructure, and harms our residential neighborhoods' quality of life.. One of the City's biggest initiatives regarding commercial vehicles is expanding the Off-Hour Deliveries (OHD) program to reduce daytime traffic and congestion. Through this program, the City will work to consolidate deliveries, developing delivery service plans with these organizations. In response to increasing demand for curb space and to reduce delays and safety issues that stem from double parking, NYC DOT is increasing the placement of Neighborhood Loading Zones (NLZs) throughout the city. These zones accommodate personal vehicle pickup or drop-off, commercial delivery vehicles, and taxis and for-hire vehicle (FHV) passenger pickup or drop-off. So far, double parking has decreased on corridors with NLZs from 10% to 70%.



ELECTRIC VEHICLE CHARGING STATIONS

With transportation currently accounting for 30% of the city's emissions, Electric Vehicles (EVs)—cars that are fully or partially electric—are an important part of the City's effort to fight climate change by achieving carbon neutrality by 2050. The Electrifying New York plan set a goal of growing the city-operated fast charging network to over 80 plugs by 2025. In 2021, DOT began installation of 120 level 2 curbside charging plugs in partnership with Con Edison and opened its first two DC fast-charging stations. Moving forward, the agency plans to install 1,000 curbside chargers and to build a dozen more fast-charging stations by 2025. EVs are becoming much more affordable, battery range is increasing, and more models are hitting the market. To help EV owners easily charge their vehicles, the City is creating PlugNYC, a comprehensive network of publicly accessible Level 2 chargers and direct current (DC) fast chargers. Level 2 charging stations allow EV owners to charge their vehicles while parked near their homes, workplaces, or other destinations. DC fast chargers offer a charging experience comparable to a gas station.

4 Vision and Goals



Vision and Goals

VISION

The New York City *Streets Plan* will support progress towards the following vision for the future of New York City’s streets, public realm, and transportation landscape. This vision aligns with NYC DOT’s Mission Statement.

New York City will be a place where everyone has access to reliable and environmentally-friendly transportation options and to safe and welcoming streets and public spaces. Cars and trucks will be substantially fewer and cleaner.

GOALS

Drawing on the recent City and NYC DOT plans described earlier, and based on the input received from New Yorkers through our public engagement process, we established ten overall goals for the *Streets Plan* to organize our efforts and track our progress.

1. **Safety**
2. **Equity**
3. **Mode Shift and Transportation Options**
4. **Access to Jobs**
5. **Accessibility**
6. **Public Space**
7. **Sustainable Infrastructure**
8. **Curb Management**
9. **Freight**
10. **Public Participation**

NYC DOT’s Mission Statement

NYC DOT’s mission is to provide for the safe, efficient, and environmentally responsible movement of people and goods in the City of New York and to maintain and enhance the transportation infrastructure crucial to the economic vitality and quality of life of our primary customers, city residents.

Goal 1: Safety

Enhance street safety for all street users

NYC DOT plays a leading role in the citywide, multiagency Vision Zero initiative, which is centered on the principle that serious crashes are preventable and therefore the only acceptable number of deaths and serious injuries is zero. Safety is paramount in our mission and the actions we take every day. That includes ensuring that existing infrastructure such as bridges, roads, traffic signals, and signs are properly maintained, and that we are deploying a comprehensive portfolio of design and traffic engineering interventions to make streets and intersections safer. We focus on the most vulnerable of these users — pedestrians and cyclists — but our improvements often enhance safety for all users including motorists. In addition to implementing design changes, NYC DOT administers an extensive safety education and outreach program for all street users including drivers, who are involved in the vast majority of traffic fatalities and serious injuries. The New York City Police Department (NYPD) is the primary agency responsible for enforcement of traffic laws, and we meet regularly with NYPD to develop strategies for using all our collective tools to enhance safety. We also manage a growing automated enforcement strategy, issuing fines based on evidence from cameras for speeding in school zones, red light infractions, and bus lane violations. With other City agencies, we advocate for State legislation that expands our authority to employ automated enforcement or which otherwise improves street safety.

The Vision Zero safety approach is data driven. NYC DOT focuses its safety improvements in Vision Zero priority corridors, intersections and areas, which are identified based on the rate of pedestrian fatalities and serious injuries. This methodology ensures that resources are targeted to where they are needed most. We seek to not only employ state-of-the-art engineering solutions, but also to innovate and develop new approaches, such as implementing turn calming treatments at intersections where pedestrians are most likely to be struck.



Goal 2: Equity



Incorporate equity into NYC DOT's programs and projects

Incorporating equity includes prioritizing resources for communities in need of greater transportation mobility and access. Over time and for multiple reasons low-income neighborhoods have received less investment of all types from the private sector and in some cases the public sector. In some cases, these neighborhoods are also subject to negative effects of historical transportation investments, such as highways that create pollution and create de facto barriers to local mobility. These neighborhoods often had less political influence to resist these projects, and sometimes depressed property values had over time made them some of the few places where lower-income people could afford to live.

We believe that the positive benefits of our transportation investments should be available to all New Yorkers. Because people in lower-income neighborhoods often have a greater need for safety and mobility, this means not just an equal distribution of our resources but an equitable one. The *Streets Plan* has an investment strategy that defines these areas, as well as incorporating a series of other measures to promote equity.

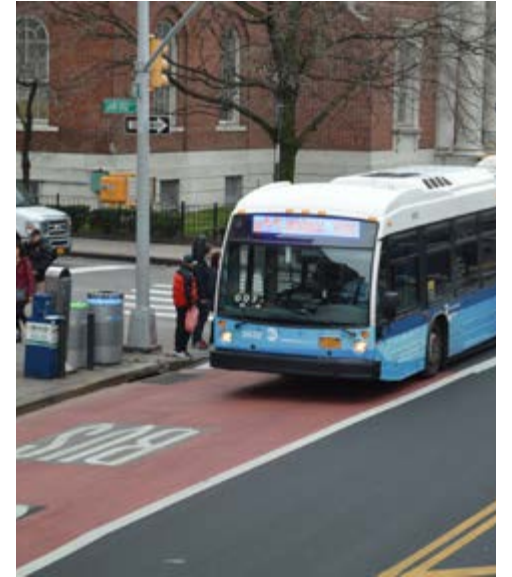
We will work with all communities, regardless of historic resource allocation, in a proactive and cooperative way, and will develop projects that respond as much as possible to broad community concerns. When making project decisions, we will balance disagreement from some community members with the expressed needs of the community as a whole.

Goal 3: Mode Shift and Transportation Options

Increase sustainable travel modes by reconfiguring streets and making more attractive choices available for New Yorkers to support the continued growth of NYC while reducing congestion and emissions

New York City has many different ways of getting around, with walkable neighborhoods, a growing bike lane network, a comprehensive bus network, ferries, and new options like scooters, electric bikes, and other forms of micromobility. Taxis, car services, and car share are available in addition to personal cars. We can increase the use of sustainable modes by supporting the expansion of private sector options and investing in street infrastructure that encourages alternatives to the private automobile throughout the city, making it easier for more people to choose these more sustainable ways of getting around. These choices are important to the future of New York City as it continues to grow. Our dense development patterns and limited roadway space means that it is not feasible for the majority of our residents to meet most of their travel needs by driving their own vehicles, and congestion and quality of life worsens when more people drive. Cars and trucks on our roadway are also a major contributor to environmental pollution and climate change.

It is important to recognize that walking, cycling, or taking transit is easier to do in some parts of the city than others. For instance, parts of eastern Queens and Staten Island are less dense, requiring longer trips for residents to access places they want or need to go. Although in these areas it is not reasonable to expect that the same proportion of residents will walk, cycle, or use transit as in denser parts of the city, we believe that designing our roads and adding infrastructure to better serve these sustainable modes and expanding options like Citi Bike will make it easier for some people in these neighborhoods to become less reliant on car travel. In the areas where walking, cycling, and transit is already more convenient, we will be even more aggressive in reallocating roadway space to support their use and to make it safe.



Goal 4: Access to Jobs

Expand access to job opportunities and encourage job creation through faster and more reliable transportation options

For many people, getting to work is the most important trip that they need to make. Where people are able to work and still do everything else they need to do in their daily lives is constrained by their commute length. This is true especially for people who rely on public transit to access work. Reducing commute times means that more people can access jobs they would otherwise not consider, and therefore it expands their opportunities to improve their lives. This is especially true with our current lack of affordable housing, limiting the ability of many to live closer to where they would like to work.

Although our subway system is the most extensive in the country, many neighborhoods do not have access to this rapid form of transit. In the long term, investment in subway extensions or other forms of rapid transit could be a solution, but in the five-year time horizon of this plan making buses move more quickly and reliably is our focus. This means implementing bus only lanes and other street changes that prioritize buses, especially on streets that do not have subway service.

In addition to providing improved access to jobs for individuals, investments in our streets have the potential to create jobs. Businesses want to be in places that their employees and customers can reach in a variety of ways. Improvements to public spaces can be beneficial to small retail businesses by attracting more people on foot to the area.



Goal 5: Accessibility

Allow all New Yorkers, regardless of ability, to get around the city in multiple ways without encountering barriers to travel

Traveling around the city can be challenging for anyone, but New Yorkers with disabilities often face additional challenges navigating our transportation infrastructure and services. NYC DOT aims to make transportation functional and convenient for all New Yorkers. That means employing design compatible with applicable local and federal laws like the Americans with Disabilities Act (ADA) of 1990 and the Rehabilitation Act of 1973 in all our programs and projects, and also installing infrastructure like pedestrian ramps and audible pedestrian signals that benefit a wide range of users. It is also important to engage and communicate with New Yorkers with disabilities in an accessible way so that that we can listen to and respond to their concerns.



Goal 6: Public Space

Allow all New Yorkers to have access to safe, welcoming and attractive public spaces close to where they live

We recognize that our streets not only support the movement of people and goods, but are also places where people work, play, and interact with others. We are dedicated to creating environments that acknowledge these human needs. This is done by creating streets that are pleasant not only for walking through but also experiencing in other ways. In some instances, this means reclaiming road space entirely or limiting access for certain types of vehicles or during certain times of day. High-quality design, and amenities such as seating and landscaping are necessary to create safe and comfortable environments where people want to spend time. Effective public spaces also need to be managed, cleaned, maintained, and in many cases programmed with events that maximize their benefits for their communities. We realize that not all neighborhoods have the same resources, but that should not be a barrier to bringing high quality public spaces to all neighborhoods, especially those that currently have less access to open space. NYC DOT has a role in supporting and building capacity for public space maintenance throughout the city, and not just areas where business improvement districts (BIDs) or other traditional maintenance partners are already in place.



Goal 7: Sustainable Infrastructure

Rebuild old and build new infrastructure in a way that is sustainable, future-proof, and resilient to the impacts of climate change

Our city, including our streets and the people who use them, has become more susceptible to the effects of flooding, heat, and other climate-related effects. To make neighborhoods resilient we will need to use the street right-of-way for protective infrastructure like flood walls. Moving forward, we will design our capital projects in a way that takes into account increased climate-change related threats. In addition to making our streets climate resilient, we will design, build, and maintain our streets and the infrastructure on them using sustainable materials and technology that reduces resources and fossil fuel emissions. Curbside electric vehicle charging stations are essential for a wide-scale shift to cleaner electric vehicles. Even the most well-built infrastructure needs to be maintained, and we will maintain a state of repair for the infrastructure in and on our streets. Finally, sustainable streets are also ones that promote sustainable modes through design that encourage more trips by walking, cycling, and using transit (see goal 2).



Goal 8: Curb Management

Ensure that curb access is allocated in a rational manner to a diversity of users and uses

Parts of our city are characterized by fierce competition for the space along the curb, which is valuable for its access to the sidewalk and adjacent land uses (e.g., parking and loading), as space that can be used for additional travel capacity (e.g., bike, bus, or travel lanes), and as places that can host public spaces and amenities (e.g., parklets, bike share stations). Despite the variety of potential uses, the vast majority of curb space in the city is allocated to free vehicle parking. We recognize the need for a reallocation of some curb space away from long-term free parking in many parts of the city, while acknowledging that in less dense parts of the city parking may continue to be a rational primary use. Even as we transition to uses other than long-term parking, there is a need to carefully evaluate and balance the needs of the many other competing uses. Though there is no simple formula for doing this, we will endeavor to develop and apply consistent and reasonable guidelines for curb space allocation.



Goal 9: Freight

Encourage more efficient and sustainable goods movement and decrease the negative effects of truck traffic

Ensuring that freight can be efficiently delivered to where it needs to go is necessary for maintaining economic activity. Trucks and other commercial vehicles on our streets also impact other users of the streets and, like passenger vehicles, contribute to climate change. As large and heavy vehicles, trucks present unique safety challenges and contribute to the wear and tear of our streets and bridges over time. Off-street loading is relatively rare in the city, meaning that commercial deliveries must often take place in the roadway, which has impacts on congestion and safety as well. Absent a rethinking of our freight network, the increasing volume of the freight being carried into the city will result in tens of thousands more trucks crossing into the city every day, while the city's network of streets and bridges will remain fixed. As such, we are committed to exploring bold new strategies for increasing the safety and efficiency of our freight movement, and encouraging alternatives such as commercial cargo bikes, rail, and waterborne freight. This includes lessening their environmental impacts or creating safer operating conditions through road designs and curb regulations that facilitate truck movements and deliveries while balancing the needs of other users.



Goal 10: Public Participation

Allow for greater public awareness of and impactful participation in transportation planning by expanding proactive outreach

We want more, not fewer, people to be aware of what we are planning and hope that they participate in the planning process, especially for projects that affect them directly. This can be accomplished by using multiple means of communication, both digital and non-digital, and ensuring that our communications are accessible to people of all abilities and backgrounds. We also want to engage communities early in planning for projects and programs, so that their input can influence what we propose. Outreach should be broad-based and innovative as we continuously explore new ways of talking to and listening to people, in addition to traditional approaches like meeting with community boards and elected officials. Different people will have different ideas about what is best for their community, and opinions within communities vary considerably. Therefore, we will react thoughtfully to what we hear and balance objections with the importance of acting in the best interests of the communities we serve when making project and policy decisions.



Focusing Our Investments

This plan establishes an overall framework for prioritizing transportation investments across the entire city. These priorities are based not only on transportation-related inputs but also broader indicators of neighborhood need. The foundation of this framework is the identification of Priority Investment Areas (PIAs), which act as a tool to focus future investment to where it can have the greatest impact. The PIAs are based on three inputs, which are not specific to a particular transportation mode or NYC DOT program: equity, density, and previous levels of NYC DOT investment.

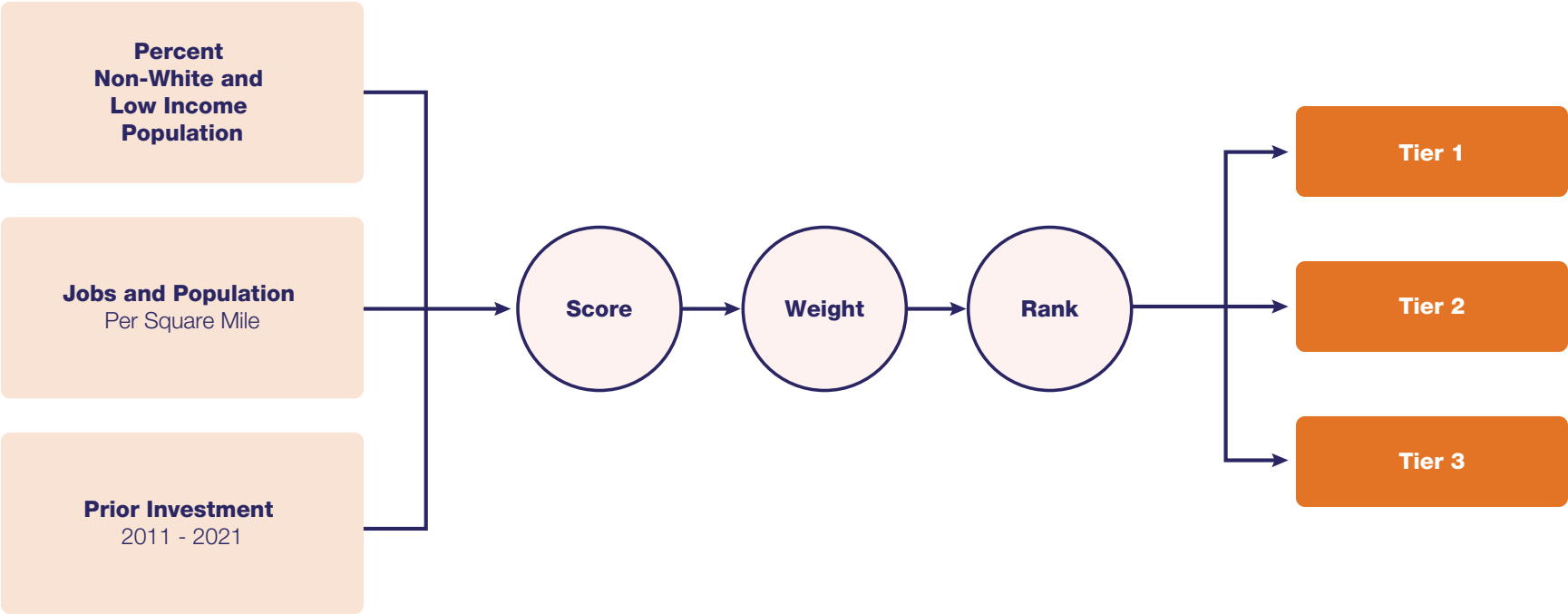


Equity is at the forefront of the prioritization. NYC DOT has been working to further expand on the agency’s commitment to improve transportation for all communities, identifying outcomes and strategies to move forward in supporting equity in all our work. The *Streets Plan’s* prioritization approach builds on these efforts.

Criteria based on specific demographic populations are the primary input to the development of PIAs. Specifically, we used the percentage of the population that is non-white (by race and ethnicity) and the percentage of low-income households to capture historically underserved and vulnerable communities throughout the city.

Density is the second PIA input. The density inputs (population and jobs per square mile) capture intensity of activity — more people traveling on our streets — that can also warrant higher levels of investment.

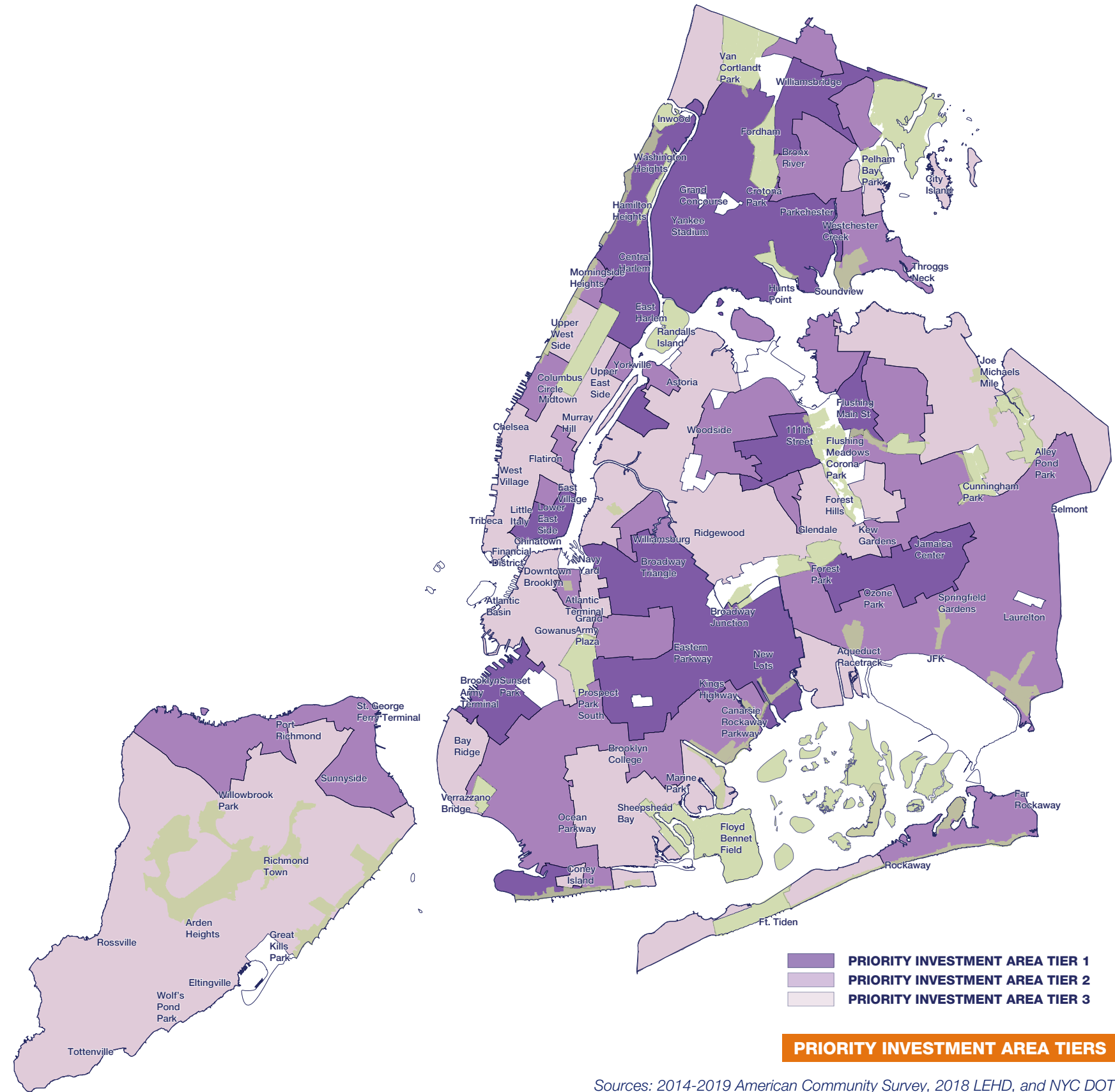
Previous investment levels, the third PIA input, is measured by the level of both in-house (expense-funded) and capital projects from the past 10 years in each neighborhood.



Priority Investment Area Inputs

The three PIA inputs were analyzed by Neighborhood Tabulation Area (NTA). The city’s 195 NTAs are an intermediate geographic unit between United States Census tracts and New York City Community Districts that provide an appropriate level of detail for a citywide plan. The scores for each input were weighted as follows, and combined to result in an overall score for each NTA:

- Higher Non-White Population Share: 25%
- Higher Low-Income Population Share: 25%
- Higher Job Density: 10%
- Higher Population Density: 20%
- Fewer Prior Capital Project Dollars: 10%
- Fewer Prior In-House Improvements: 10%



Sources: 2014-2019 American Community Survey, 2018 LEHD, and NYC DOT

Prioritization Tier	Tier 1 (33%)	Tier 2 (33%)	Tier 3 (33%)
Total Population	3.15M	2.70M	2.56M
Total Jobs	740K	825K	2.5M
Avg % Non-White	90%	74%	38%
Avg % Low Income	27%	14%	10%

Priority Investment Area Statistics

Based on the resulting scores, the NTAs were divided into three priority tiers, which cover the entire populated city. The same number of NTAs are contained within each tier, but as the table above shows, the tiers represent different cross-sections of the city based on overall population, jobs, race, and income. Collectively, Tier 1 has greater population and is lower-income and less white.

NYC DOT will continue to implement transportation projects in communities across the entire city (Tiers 1, 2 and 3), and the priorities identified by individual programs will continue to be shaped by their own unique planning considerations. However, we are committed going forward to rebalancing investments as a whole towards the higher-need neighborhoods as identified through the prioritization tiers.

It is important to note that the incorporation of equity into the PIA framework is only one way that we are working to address equity concerns. NYC DOT will also be working to further improve the way we approach public engagement, project prioritization and development, traffic safety, and sustainability efforts:

Public Engagement: Meaningful and effective public engagement requires a multi-pronged approach to communicate with diverse populations. NYC DOT will cultivate deeper relationships with community organizations and diversity engagement strategies to reach people that may not be connected to community boards or more traditional outreach resources. NYC DOT will explore compensating and accommodating hard to reach populations, to increase public participation from those who might otherwise not be able to participate due to caretaking needs, transportation challenges, or other hardships.

Project Development: In addition to the use of Priority Investment Areas, NYC DOT will invest in capacity building and resource development to center equity in the planning process. Resources include the development of racial equity assessment worksheets, stakeholder mapping template, and community profile toolkit.

Safety: NYC DOT will continue to advocate for and support ongoing efforts to decriminalize non-dangerous, non-motorized behavior such as jaywalking and biking on the sidewalk.

Sustainability: NYC DOT will conduct a study of New Yorkers in Priority Investment Areas to understand the impact of transportation projects on communities' health and environment.

5 The Streets Plan



Public Engagement

The process of developing the *Streets Plan* was shaped by a broad public engagement and input process that included online activities and surveys, ten public workshops with small group discussions, telephone-based surveys targeted to neighborhoods underrepresented in the other engagement activities, and more.



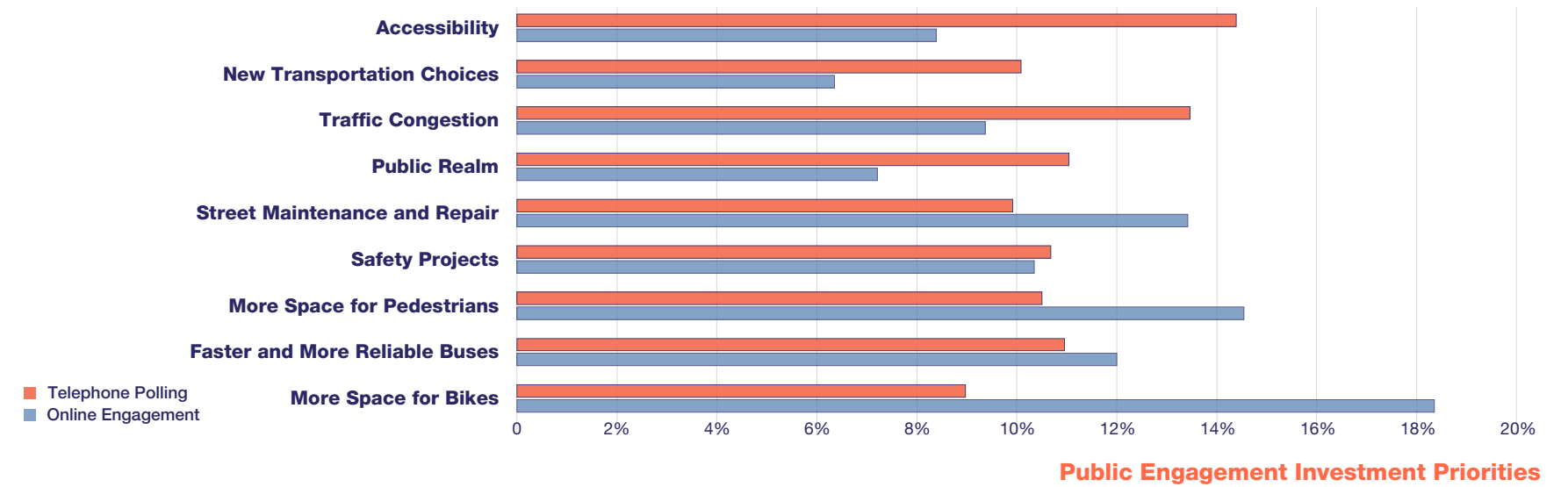
We reached thousands of community members through the outreach and engagement channels: 12,500 people provided input through the online platform, 1,260 people participated in the telephone polling, and over 600 people attended the workshops. A focus group was conducted with representatives and advocates from the community of New Yorkers with disabilities that NYC DOT hosted with the help of the Mayor’s Office for People with Disabilities (MOPD).

Online Engagement and Opinion Polling

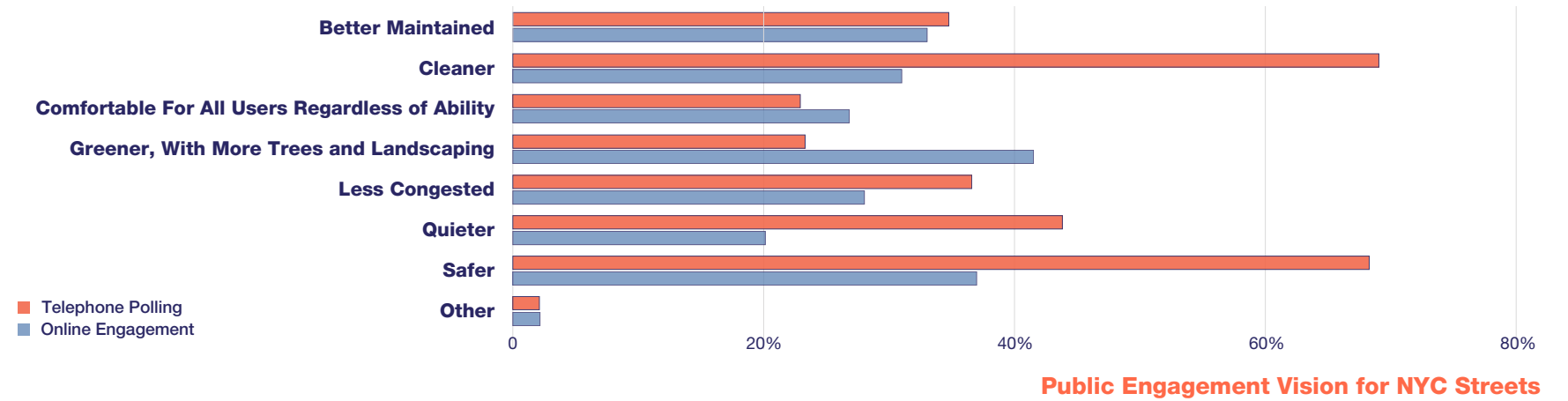
Between May and October 2021, NYC DOT invited the public to submit input to the plan utilizing an online engagement platform (MetroQuest). The activities and survey were available in ten languages. Online activities included a priority-setting exercise where participants could decide how to spend their limited budget; a map to identify specific locations needing improvement; and a survey to gather detailed information on travel preferences, concerns, and desires. Telephone-based surveys were conducted in September 2021, targeting geographies that had lower participation rates with the online engagement platform. The telephone survey questions mirrored those available online.

As part of the engagement activities, we asked for (but did not require) participants’ home ZIP code and demographic data so that we could assess how representative the input was relative to the city as a whole (both geographically and demographically). Overall, wealthier and whiter neighborhoods were overrepresented in the input received online, although our targeted outreach helped to achieve a better balance as time went on.

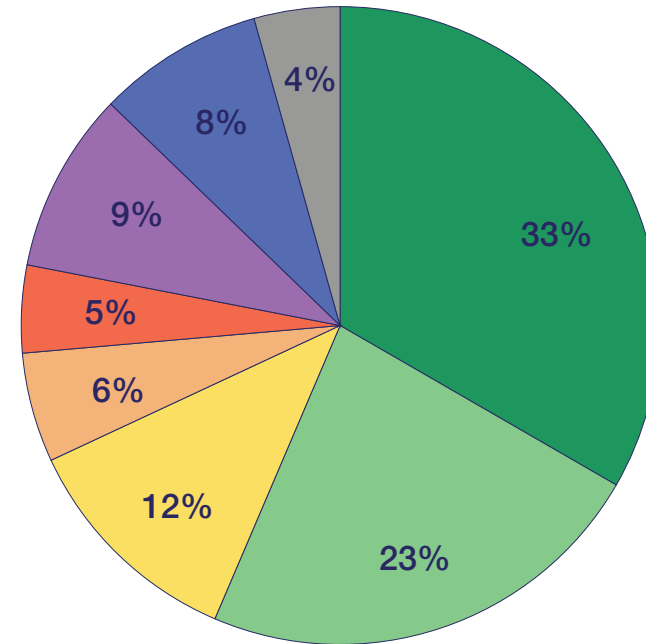
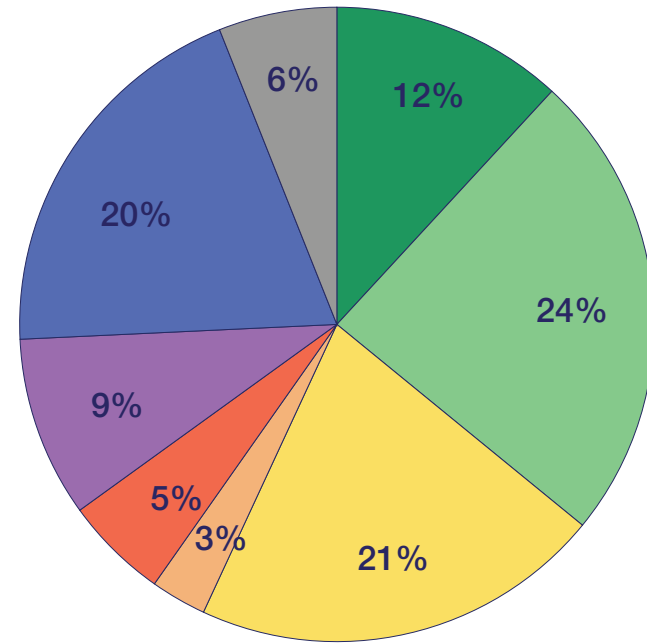
NYC DOT looks forward to continuing to gather feedback that can inform the implementation of the *Streets Plan* as well as future updates to the plan.



When asked about how to prioritize investments in transportation projects in New York City, telephone survey participants prioritized projects that support: 1) accessibility, 2) mitigating traffic congestion, and 3) faster and more reliable buses. Online engagement participants prioritized investments in transportation projects that support 1) more space for cycling, 2) more space for pedestrians, 3) and street maintenance and repair.



When asked about what they envision for New York city’s transportation network, telephone survey participants prioritized streets that were: 1) cleaner, 2) safer, and 3) quieter, while online engagement participants prioritized streets that were: 1) greener, 2) safer, and 3) better maintained.



Telephone Polling Activity Comments by Category

Online Engagement Activity Comments by Category

- Challenging Bicycle Conditions
- Concerns About Safety
- Congestion
- Hard to Reach Locations
- Not Accessible for Persons with Disabilities
- Not Enough Pedestrian/Public Space
- Slow and Unreliable Buses
- Other

Public Engagement Comments by Category

When providing input on transportation issues in different neighborhoods, telephone survey participants shared the most concerns about 1) safety, 2) congestion and 3) slow and unreliable buses, while online engagement comments were mostly focused on 1) challenging cycling conditions, 2) concerns about safety, and 3) traffic congestion.

Public Workshops and Focus Group

In July 2021, NYC DOT hosted ten public workshops by geographic zone. Each workshop was 90 minutes long, conducted virtually through Zoom. The public workshops featured breakout room discussions to foster guided discussions about transportation-related issues, values, and tradeoffs. It included two activities: “How should we use our streets?” where participants reacted to street design scenarios and shared their preferences, and “Equity considerations to prioritize transportation projects”.

The following are key overall themes from what we heard:

- Participants strongly supported Open Streets as a COVID-19-safe strategy to build community, increase access to outdoor public space, socialize with others, and to dine outdoors. However, participants also consistently stressed a need for improved management, appropriateness of hours of operation, and improved physical infrastructure to enhance safety. They would like to see a greater level of facilitation and funding from the City to address these issues.
- Participants broadly supported Open Restaurants. Additionally, they presented a variety of concerns regarding the placement and regulations surrounding the program. Often, participants framed these comments or suggestions within a critique of the use of public space by a private business.
- Participants generally supported busways and bus lanes but had a series of concerns regarding their placement in the street network, bus stop accessibility and navigation, and enforcement.
- Participants stressed the need for an expanded network of PBLs with particular emphasis on areas of the city that have limited existing bike lanes.
- Participants saw the added value of incorporating more loading zones on busy streets with a lot of businesses.
- Participants consistently called for improved intra- and inter-borough transportation options.
- Limited access to transportation options and the prevalence of subway deserts contribute to a large number of residents who use cars as their primary means of travel and further disadvantages community members without car access.
- Poor sidewalk infrastructure, unclear division of space on the sidewalk, and unsafe intersection conditions present a safety and accessibility concern for pedestrians and particularly for New Yorkers with disabilities.
- When considering how to prioritize transportation projects from an equity lens, participants de-emphasized geographies “where there are more people and jobs” and favored a focus on “where a higher percentage of the residents are low income and/or people of color,” “fewer beneficial projects have been built in the past,” and “in communities that suffer from negative effects of past transportation projects, such as highways that physically disconnect neighborhoods and/or create air pollution.” Participants consistently asserted that many communities across the city fit into categories 2, 3, and 4 rather than just one category.

The Accessibility Forum was held in September and featured representatives from a variety of advocacy groups for people with disabilities. The forum helped to highlight known locations and issues for these communities and also served as a reminder that people with disabilities go everywhere and do everything. Therefore, it is important that we continue to educate and plan for people with disabilities in all aspects of New York City’s streets. Key issues highlighted included:

- The immense value of the accessibility features of our transportation network (Accessible Pedestrian Signals, Accessible Pedestrian Ramps, and others) and the importance of continuing to educate the public about this value; and
- The significance of ensuring that accessible elements of our streets are clear during extreme weather, such as heavy rain and snow.

We look forward to continued public input in our upcoming listening sessions and future project specific public outreach.

Program Areas

The program area sections provide a series of maps with short term project locations that serve as a vision for the proposed projects to be implemented during the five-year plan.

We will study these locations further and work with the community to finalize project plans that work towards meeting the benchmarks outlined in LL195, which are shown below. Not all of the locations will inevitably become NYC DOT projects, but they are all locations that show some level of need. The *Streets Plan* is just the first step in engaging New Yorkers about the work we will do in the coming years. We are committed to not just building out miles and square feet of projects, but seeking out the most impactful and important improvements, working to consider equity in all that we do, and listening to community stakeholders so that their input shapes our projects.

The *Streets Plan*'s programmatic recommendations are grouped by transportation mode and other functional areas of NYC DOT's work:

- | | |
|---|---|
| 1. Safety and Vision Zero | 7. Accessibility |
| 2. Walking and Pedestrians | 8. Freight |
| 3. Transit | 9. Curbside Management and Parking |
| 4. Cycling | 10. Traffic Management |
| 5. Bike Share and Micromobility | 11. Sustainability and Resilience |
| 6. Public Space and Streetscapes | |

Benchmark Category	2022 Benchmark Targets	2022-26 Average Per Year Benchmark Targets	2022 NYC DOT Capacity
Protected Bus Lanes (Miles)	20	30	20
Protected Bike Lanes (Miles)	30	50	30
Bus Stop Upgrades (Shelters or Benches AND Bus Time Poles)	500	500	500*
Transit Signal Priority (Intersections)	750	1,000	Up to 750
Accessible Pedestrian Signals (Intersections)	500	500	500
Pedestrian Space (Sq. Ft.)	500,000**	N/A**	400,000
Redesign Intersections	400	400	400
Commercial Loading Zones and Truck Routes		Qualitative Benchmark	
Parking Policy Revisions		Qualitative Benchmark	

* Subject to new contract being executed

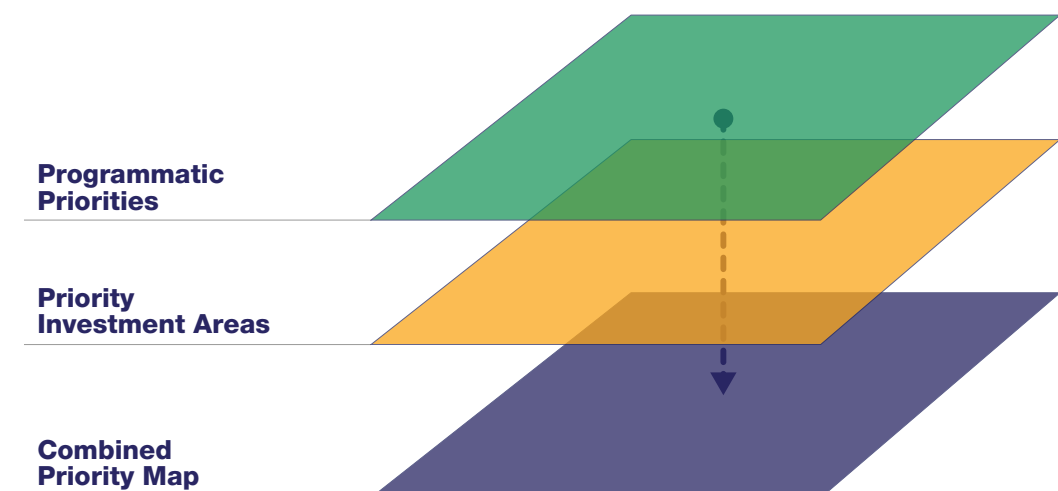
** Local Law 195 calls for an addition of 1,000,000 square feet of pedestrian space by December 31, 2023

Within each Program Area, content is organized as follows:

- **Introduction:** Overview of the program area, what it includes, and why it is important.
- **What We've Done:** The kinds of investments NYC DOT has historically made and where.
- **Recommendations:** NYC DOT's major initiatives and how we will prioritize our investments going forward including priority maps, where applicable. These may include sustaining and/or expanding existing programs or starting up new programs that NYC DOT can initiate without major obstacles other than resource requirements. Upcoming project locations are also shown for many program areas. The recommendations work together to address the *Streets Plan*'s goals.
- **Transformative Ideas:** Major policy and program changes that would have a transformational impact on the streets of New York City. Each would by itself have a major effect on one or more *Streets Plan* goals, but implementation is challenging due to resources, politics, and legal issues, and in many cases will require NYC DOT to work with multiple agencies and layers of government.



Priorities were developed for each of the *Streets Plan*'s program areas by overlaying considerations that are specific to each transportation mode or functional area on top of the PIAs, which considered equity and historically neglected populations citywide.



Program Area Prioritization Methodology

NYC DOT recognizes that deaths and severe injuries in traffic are not inevitable “accidents,” but preventable crashes that can be addressed through engineering, enforcement, and education. Since the launch of Vision Zero in 2014, the City has used every tool at its disposal to improve street safety—with new street designs and safety programs, expanded enforcement against speeding and failure to yield, lower speed limits, broad public outreach, education and communications, and a sweeping legislative agenda to increase penalties for dangerous drivers.

What We’ve Done

Since the start of Vision Zero in 2014, NYC DOT has completed over 730 safety-targeted Street Improvement Projects (SIPs). In addition, as of the 2019 Vision Zero Borough Plan Update:

- 90% of Priority Intersections received safety improvements (SIPs and other safety interventions)
- 86% of the total length of Priority Corridors received safety improvements (Sips and other safety interventions)
- Pedestrian fatalities declined 36% at Vision Zero Priority Locations

NYC DOT has a wide range of existing safety programs, many of which predate Vision Zero. Turn Calming is a citywide program focused on reducing vehicle turn speeds and enforcing safe turning behavior. School Slow Zones lower the speed limit to 15 to 20 mph and are sited on blocks immediately adjacent to K-12 schools. Safe Streets for Seniors studies crash data, conducts outreach, and implements mitigation measures to improve the safety of senior pedestrians. The Speed Reducer program installs speed humps and, more recently, speed cushions, citywide. We deploy speed cameras in 750 school speed zones that are activated on all weekdays between 6 a.m. and 10 p.m. and operate traffic control signal photo violation monitoring devices (“Red Light Cameras”) at 150 intersections citywide. NYC DOT’s safety educators visit approximately 600 schools and 100 senior centers a year, and our public awareness campaigns educate New Yorkers on the most important transportation issues, helping to influence attitudes and shift behaviors. The recently launched Dangerous Vehicle Abatement Program focuses on educating repeat red light and speed camera offenders about the impact of their reckless behaviors. Other existing safety programs include Bus Stops Under the “El,” Raised Crosswalks, School Loading Zones, the Safe Team, and Vision Zero Street Teams.

NYC DOT also improved street lighting at 1,000 intersections as part of an effort to reduce the number of pedestrian injuries that occur in the overnight hours due to poor visibility.

GOALS:

- 1: Improve street safety for all roadway users
- 2: Incorporate equity into NYC DOT’s programs and projects

Recommendations

NYC DOT will continue prioritizing safety improvements based on its primary targeting tools, which are based on crash data and vulnerable populations:

- Vision Zero Priority Corridors, Intersections, and Areas (based on pedestrians killed or severely injured (KSI))
- School Safety Areas (based on concentrations of student pedestrian and cyclist injury)
- Senior Pedestrian Zones (based on senior pedestrian injury and population)

The Vision Zero Priority locations are the chief mechanism used by NYC DOT, guiding where street improvements, traffic signal timing changes, safety education, and targeted street lighting enhancements are deployed. The map on page 57 shows how the locations are further prioritized by the *Streets Plan* PIAs, along with identifying upcoming project locations.

In addition, the School Safety program has developed a neighborhood-based approach, identifying where pedestrian and cyclist injuries are most prevalent. Street improvements, school speed limit reductions, and other student-based interventions will be targeted to those areas. The Senior Pedestrian Zones are also a neighborhood-based approach and will help guide NYC DOT’s efforts in targeting safety improvements, leading pedestrian intervals (LPIs) for traffic signals, turn calming, and other interventions where high percentages of seniors live and where senior pedestrians are injured. All of these investments will be further focused into the PIAs.

Additional recommendations include:

Expand the Use of Proven Safety Treatments: NYC DOT has a proven toolbox of treatments that to improve safety for pedestrians of all ages: road diets, conventional bike lanes, PBLs, pedestrian islands, curb and sidewalk extensions, turn calming (markings, plastic bollards and/or rubber speed bumps that slow and control turns), and LPIs all provided substantial benefits. NYC DOT will continue to deploy these treatments widely moving into the future.

Capital Projects: In 2015, Mayor de Blasio launched the Great Streets program, selecting four major arterial streets—Queens Boulevard in Queens, Atlantic Avenue and 4th Avenue in Brooklyn, and the Grand Concourse in the Bronx—to receive designated City funds as part of the Vision Zero Capital program. In 2018, Northern Boulevard in Queens was also added to the program. Great Streets projects utilize the full range of NYC DOT tools to transform and beautify the streetscape, improving the safety and livability of these critical city corridors. In 2020, the City completed the first phase of Atlantic Avenue in East New York, Brooklyn, featuring safety enhancements—including brighter lighting, new crosswalks, expanded pedestrian refuge space, and shorter crossings—and infrastructure upgrades along 1.2 miles of this Vision Zero priority corridor. Looking ahead, NYC DOT will initiate new capital projects in locations where serious interventions are warranted.

Expand Automated Enforcement: New York City’s school zone speed camera program, launched in 2014, placed automated enforcement cameras in 140 school zones. These cameras issue \$50 tickets to the owners of vehicles observed driving more than 10 mph above the speed limit at particular times. In 2019, the State Legislature not only renewed the program but also expanded it to 750 school zones and removed certain restrictions. NYC DOT strongly calls on the New York State Legislature to expand the hours during which speed cameras are operational to 24 hours a day, seven days a week restrictions relating to cameras placement and times and days of operation. NYC DOT has also released a Request for Expressions of Interest (RFEI) for the development, implementation, and operation of an automated bike lane enforcement program, to discourage vehicles from illegally blocking bike lanes throughout the city.

Dangerous Vehicle Abatement Program: Pursuant to Local Law 36 of 2020 (the Reckless Driver’s Accountability Act), NYC DOT has created a “Dangerous Vehicle Abatement Program” (DVAP) that requires owners of vehicles with more than five red light camera violations or more than 15 speed camera violations within 12 months to take a safe vehicle operation course offered by NYC DOT. If an owner fails to complete the course, their vehicle may be impounded by the New York City Sheriff. The curriculum includes viewing “Drive Like Your Family Lives Here,” a film created as part of the Vision Zero initiative, featuring the families of New Yorkers killed in crashes speaking about how reckless driving has personally impacted them. NYC DOT reports on the number of drivers who completed the course and the number of vehicles impounded. At least three months before the end of the program, NYC DOT will issue a report on the effectiveness of the program and how certain driving behaviors correlate with traffic crashes. The first set of classes began November of this year.

Federal Policy: NYC DOT will advocate for improved federal standards for vehicle design and technology that are most likely to reduce deaths and serious injuries of vulnerable road users. The National Highway Traffic Safety Association (NHTSA) currently crash-tests and rates passenger vehicles using a five-star system known as the New Car Assessment Program (NCAP). While traditionally focusing on the safety of vehicle occupants in front-impact, side-impact, and rollover crashes, NHTSA also recommends driver assistance technologies such as forward collision warnings and automatic emergency braking which have the potential to save thousands more lives. As NHTSA evaluates NCAP for future updates, NYC DOT will submit comments urging greater emphasis on evaluating potential harm to pedestrians and bicyclists in crashes as part of the Program. NYC DOT will also support the adoption of technologies like pedestrian automatic emergency braking as standard in both passenger and heavy commercial vehicles, in line with the Department of Citywide Administrative Services’ (DCAS) Safe Fleet Transition Plan.

Transformative Ideas

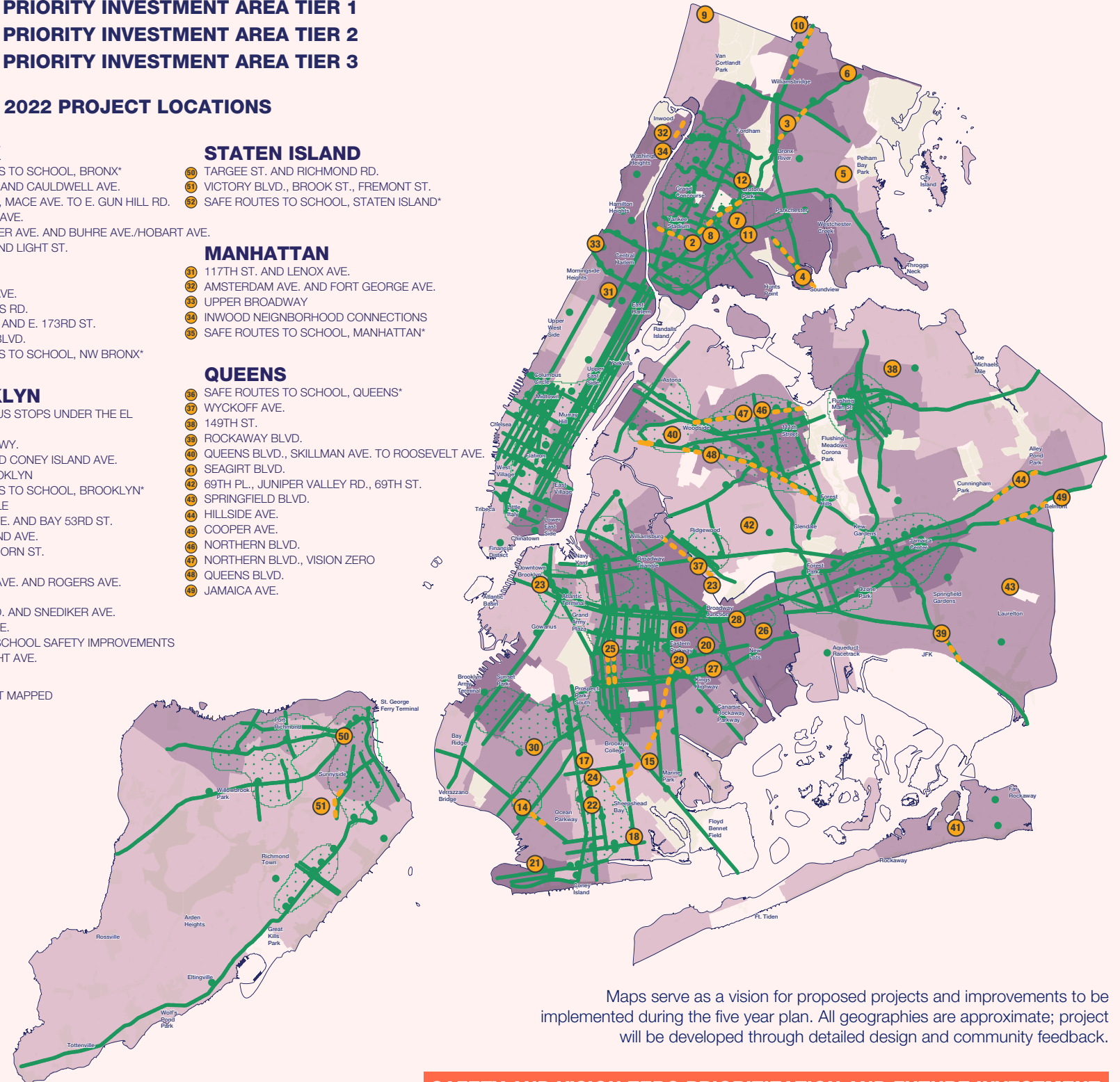
Dramatically Expand Automated Enforcement: NYC DOT will pursue New York State legislation to expand camera enforcement to target safety-critical violations, such as illegal turns, parking in bike lanes, overweight and off-route trucks, and failure to yield. The agency could also request authority to better manage the curb, with automated enforcement of illegal double parking and illegal use of loading zones, and could dramatically expand existing camera-based enforcement of red light running and speeding if allowed by New York State Law.

Enforce Safe Vehicles and Driving: NYC DOT will explore disincentives for very large passenger vehicles (e.g., differential tolls, registration fees) and pursue stricter laws beyond the Dangerous Vehicle Abatement Act to get repeat traffic violators off the streets. Legislation and political support will be required at the state level.



- BRONX**
 - 1 SAFE ROUTES TO SCHOOL, BRONX*
 - 2 E. 158TH ST. AND CAULDWELL AVE.
 - 3 BOSTON RD., MACE AVE. TO E. GUN HILL RD.
 - 4 SOUNDVIEW AVE.
 - 5 WESTCHESTER AVE. AND BUHRE AVE./HOBART AVE.
 - 6 DYRE AVE. AND LIGHT ST.
 - 7 BOONE AVE.
 - 8 BOSTON RD.
 - 9 RIVERDALE AVE.
 - 10 WHITE PLAINS RD.
 - 11 E. 172ND ST. AND E. 173RD ST.
 - 12 SOUTHERN BLVD.
 - 13 SAFE ROUTES TO SCHOOL, NW BRONX*
- STATEN ISLAND**
 - 14 TARGEE ST. AND RICHMOND RD.
 - 15 VICTORY BLVD., BROOK ST., FREMONT ST.
 - 16 SAFE ROUTES TO SCHOOL, STATEN ISLAND*
- MANHATTAN**
 - 17 117TH ST. AND LENOX AVE.
 - 18 AMSTERDAM AVE. AND FORT GEORGE AVE.
 - 19 UPPER BROADWAY
 - 20 INWOOD NEIGHBORHOOD CONNECTIONS
 - 21 SAFE ROUTES TO SCHOOL, MANHATTAN*
- QUEENS**
 - 22 SAFE ROUTES TO SCHOOL, QUEENS*
 - 23 WYCKOFF AVE.
 - 24 149TH ST.
 - 25 ROCKAWAY BLVD.
 - 26 QUEENS BLVD., SKILLMAN AVE. TO ROOSEVELT AVE.
 - 27 SEAGIRT BLVD.
 - 28 69TH PL., JUNIPER VALLEY RD., 69TH ST.
 - 29 SPRINGFIELD BLVD.
 - 30 HILLSIDE AVE.
 - 31 COOPER AVE.
 - 32 NORTHERN BLVD.
 - 33 NORTHERN BLVD., VISION ZERO
 - 34 QUEENS BLVD.
 - 35 JAMAICA AVE.
- BROOKLYN**
 - 36 86TH ST. - BUS STOPS UNDER THE EL
 - 37 KINGS HWY.
 - 38 EASTERN PKWY.
 - 39 ELM AVE. AND CONEY ISLAND AVE.
 - 40 SOUTH BROOKLYN
 - 41 SAFE ROUTES TO SCHOOL, BROOKLYN*
 - 42 BROWNSVILLE
 - 43 CROPSY AVE. AND BAY 53RD ST.
 - 44 CONEY ISLAND AVE.
 - 45 SCHERMERHORN ST.
 - 46 MIDWOOD
 - 47 NOSTRAND AVE. AND ROGERS AVE.
 - 48 EUCLID AVE.
 - 49 LINDEN BLVD. AND SNEDIKER AVE.
 - 50 ATLANTIC AVE.
 - 51 E. 98TH ST. SCHOOL SAFETY IMPROVEMENTS
 - 52 NEW UTRECHT AVE.

*MULTI-SITE, NOT MAPPED



Maps serve as a vision for proposed projects and improvements to be implemented during the five year plan. All geographies are approximate; project will be developed through detailed design and community feedback.

More trips in New York City are made by walking than any other transportation mode. Almost all of our trips—by subway, by bus, even by car—begin or end as a pedestrian. Beyond simple mobility, a high-quality walking environment supports neighborhood and civic vitality and has been shown to support local businesses through increased foot traffic and retail patronage. To accommodate these trips, streets must be designed with pedestrian safety, mobility, and accessibility as a priority. Some of the challenges pedestrians face include insufficient or cluttered sidewalks, a lack of places to cross streets, long crossing distances, a lack of places to sit and rest, insufficient drainage (ponding), and conflicts with turning vehicles.

What We've Done

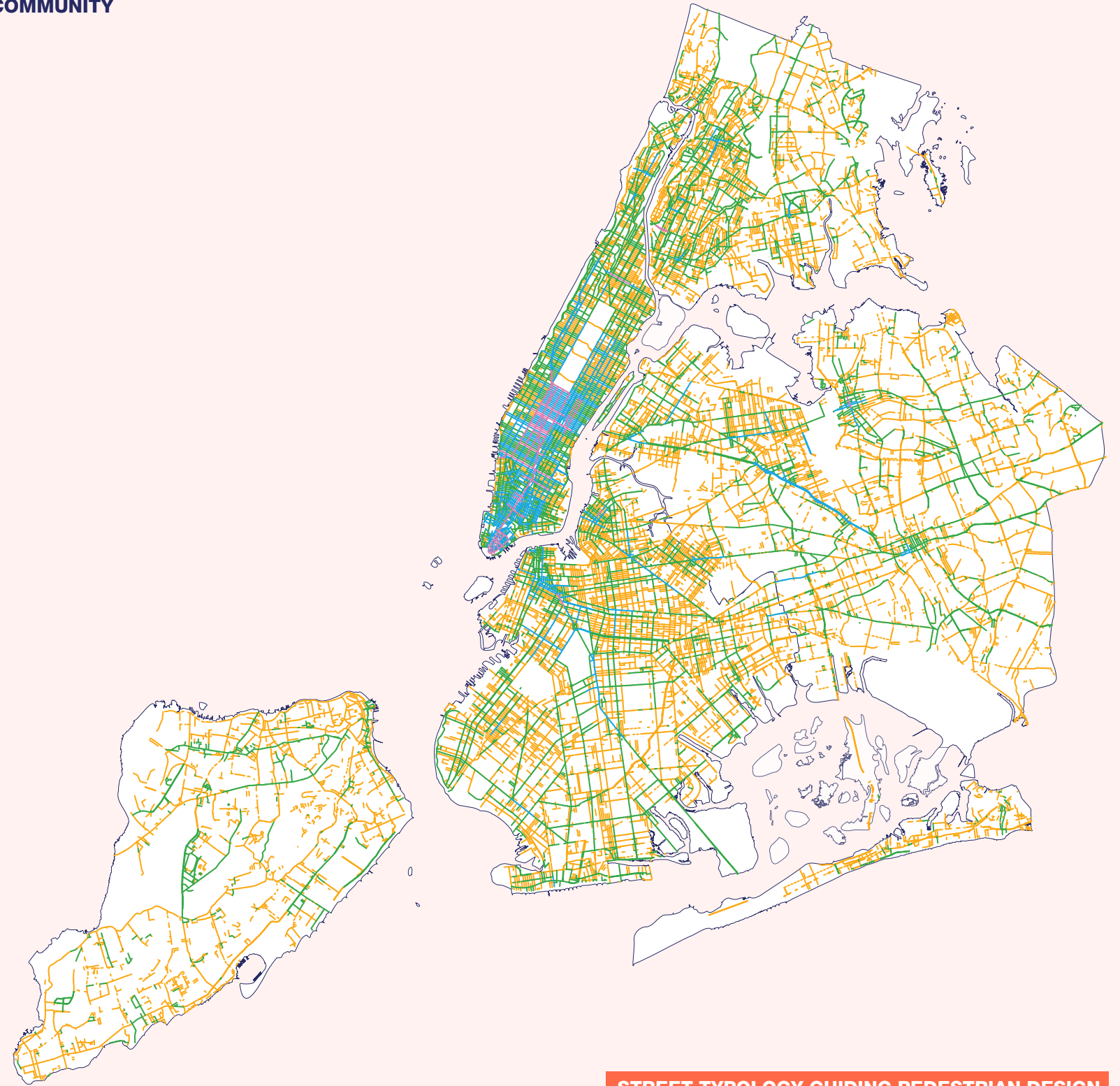
NYC DOT implements projects throughout the city that result in safer, convenient, and comfortable sidewalks and crosswalks. This is done by simplifying and reallocating street space to pedestrians. Some projects can be quickly implemented using road markings and signage, while more complex projects involve concrete construction and signal work. Where possible, projects also include enhancements such as seating and landscaping, with a maintenance partner sometimes being required.

NYC DOT's existing street design projects focus on improving walkability, improving pedestrian safety, and expanding pedestrian space, specifically focusing on the pedestrian network, pedestrian congestion, complex intersections, and midblock crossings. Other NYC DOT programs that improve the pedestrian environment include:

- WalkNYC wayfinding maps help travelers navigate the streets and transit systems.
- CityBenches provide public seating to make New York City's streets more comfortable for all New Yorkers, especially pedestrians and transit riders. Benches also allow seniors and people with disabilities to walk longer distances to and from public transit, by providing rest stops along the way. NYC DOT manages and maintains over 2,100 CityBenches citywide.
- NYC DOT's Sidewalk Program works to prevent injuries to pedestrians caused by defective sidewalks. The program notifies property owners of their responsibility for maintaining the sidewalk next to their properties.

GOALS:

- 1:** Enhance street safety for all street users
- 3:** Increase sustainable travel modes by reconfiguring streets and making more attractive choices available for New Yorkers to support the continued growth of NYC while reducing congestion and emissions
- 5:** Allow all New Yorkers, regardless of ability, to get around the city in multiple ways without encountering barriers to travel



Recommendations

Pedestrian Plan: In the past, pedestrian improvements were often driven by immediate opportunities or community requests. Moving forward, NYC DOT is developing a holistic, data-driven framework for identifying the need for pedestrian improvements and prioritizing the types of design changes. This pedestrian plan will allow us to address pedestrian needs beyond basic safety and accessibility such as comfort and convenience. We are developing walking goals for different neighborhoods based on their existing commuter walking mode share, density, land use, and sociodemographic variables such as age, sex, race, income, and household status. NYC DOT will also modify design guidelines to respond to five broad street typologies: Global Corridor, Regional Corridor, Neighborhood Corridor, Community Connector, and Baseline Streets (see map on page 61).

Sidewalk and Intersection Improvements: NYC DOT will prioritize locations for sidewalk improvements where sidewalks are missing, where they are less than five feet in width, and where commuter mode share indicates the most pedestrian demand. Intersection improvements will be prioritized based on locations with complex geometries, the most incidents of pedestrian crashes, and (like sidewalk improvements) in locations with the most pedestrian demand. The map below shows these priority areas and identifies upcoming project locations.

Street Furniture: NYC DOT will work to prioritize sidewalk space (including the walking zone and furnishing zone), continuing to prioritize existing amenities like wayfinding, seating, and bike racks, and allocating additional space for emerging mobility infrastructure such as EV charging and parking for bike and scooter share. NYC DOT will also explore opportunities to include additional street furniture items in the next Coordinated Street Furniture Franchise contract.

Waste Containerization: To improve pedestrian flow and quality of life, NYC DOT has partnered with the NYC Department of Sanitation (DSNY) to pilot efforts to containerize waste set-out and collection on both the sidewalk and in the curb lane of the street. The Clean Curbs pilot program permits private entities to have sealed, on-street containers for their business trash and recycling storage, which will eliminate the set-out bags of recyclables and garbage on city sidewalks. DSNY and NYC DOT will begin a small residential pilot of the Clean Curbs program in 2022 and will continue to research and test best practices for reducing the volume of waste set out on city sidewalks and improving the cleanliness of the streetscape, with the goal of expanding more broadly if successful.

Pedestrian Crossings: In many places it is difficult for pedestrians to cross the street safely due to a lack of crosswalks. We will expand the implementation of safe pedestrian crossings, including additional signals, stop signs, and other control devices. NYC DOT will update its rules to clarify that vehicles should stop for pedestrians in crosswalks.

CityBenches: The siting of CityBenches is determined through on-the-ground evaluation. However, focus areas at the community district level have been identified based on demographic factors (non-white and low-income populations, population density, population change, population over 65 years old), the history of CityBench installations in that district, and the existing ratio of benches to population. Land use in the district is also a factor: more commercial areas and public institutions mean the need for benches is likely greater. The *Streets Plan* PIAs will further guide how CityBenches will be distributed through the city.



2022 PROJECT LOCATIONS

BRONX

- 1 GRAND CONCOURSE
- 2 DEL VALLE (CRAMES) SQUARE
- 3 BRUNER AVE., ELY AVE.
- 4 HENWOOD PLACE STEP ST.
- 5 LIBRARY LANE
- 6 SOUTHERN BLVD.
- 7 SOUTHERN BRONX MULTI-SITE
- 8 FORT INDEPENDENCE ST. AND HEATH AVE.
- 9 UNIONPORT RD.
- 10 SOUNDVIEW AVE.
- 11 MLK BLVD. AT W. BURNSIDE AVE.
- 12 MOSHOLU PKWY.
- 13 WHITE PLAINS RD. AT BRONXDALE AVE.

BROOKLYN

- 14 AVE. D, BANK ST., DEWITT AVE.
- 15 BROWNSVILLE
- 16 FLATBUSH AVE
- 17 NORTH BROOKLYN
- 18 PARK AVE.
- 19 PARK AVE. - INGERSOLL HOUSES
- 20 SOUTH BROOKLYN
- 21 WASHINGTON AVE.
- 22 FLATBUSH AVE., UTICA AVE., AVENUE S
- 23 BROADWAY
- 24 EASTERN PKWY.

MANHATTAN

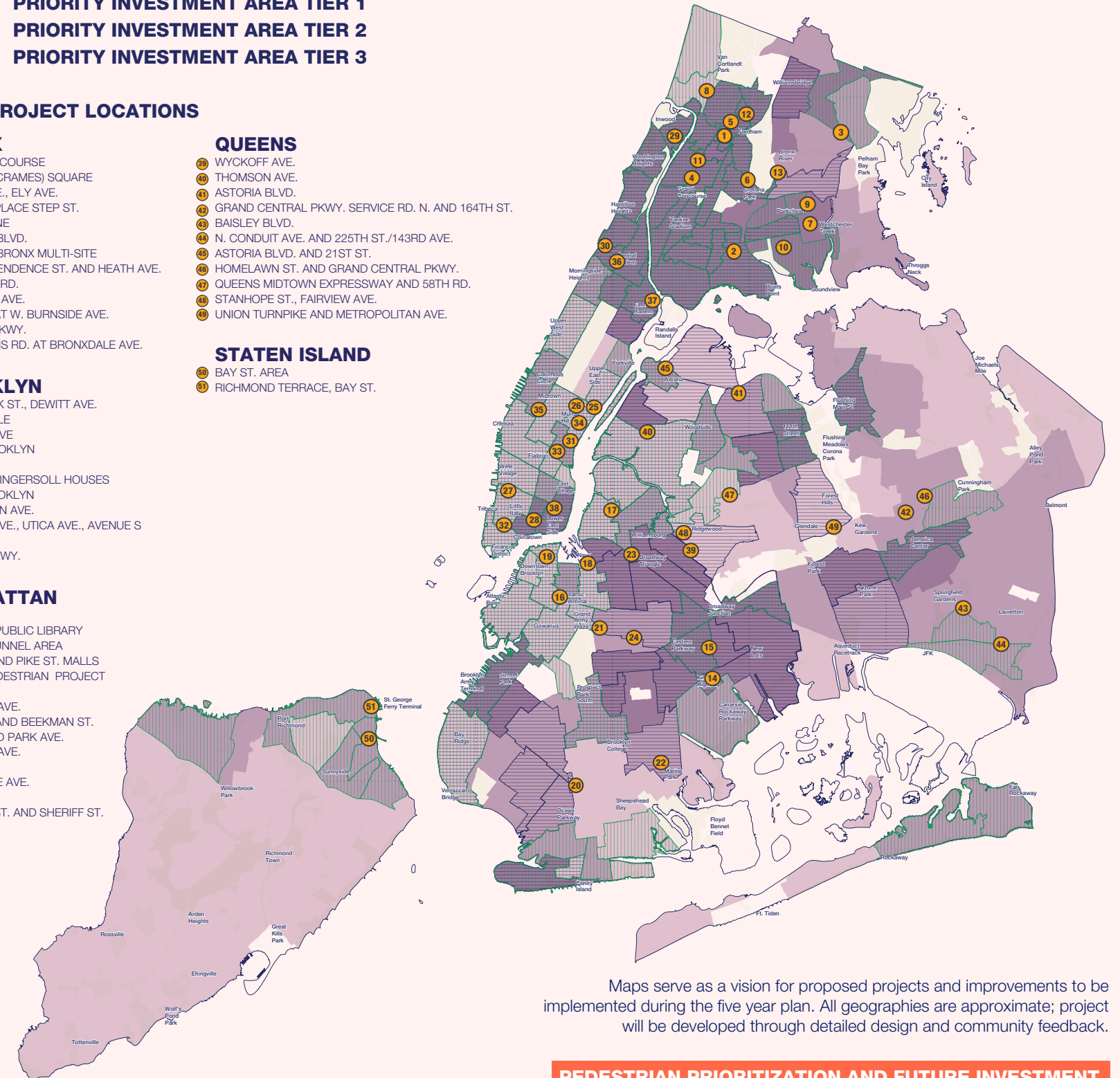
- 25 3RD AVE.
- 26 NEW YORK PUBLIC LIBRARY
- 27 HOLLAND TUNNEL AREA
- 28 ALLEN ST. AND PIKE ST. MALLS
- 29 INWOOD PEDESTRIAN PROJECT
- 30 12TH AVE.
- 31 LEXINGTON AVE.
- 32 PARK ROW AND BEEKMAN ST.
- 33 E. 28 ST. AND PARK AVE.
- 34 LEXINGTON AVE.
- 35 8TH AVE.
- 36 EDGECOMBE AVE.
- 37 E. 117TH ST.
- 38 DELANCEY ST. AND SHERIFF ST.

QUEENS

- 39 WYCKOFF AVE.
- 40 THOMSON AVE.
- 41 ASTORIA BLVD.
- 42 GRAND CENTRAL PKWY. SERVICE RD. N. AND 164TH ST.
- 43 BAISLEY BLVD.
- 44 N. CONDUIT AVE. AND 225TH ST./143RD AVE.
- 45 ASTORIA BLVD. AND 21ST ST.
- 46 HOMELAWN ST. AND GRAND CENTRAL PKWY.
- 47 QUEENS MIDTOWN EXPRESSWAY AND 58TH RD.
- 48 STANHOPE ST., FAIRVIEW AVE.
- 49 UNION TURNPIKE AND METROPOLITAN AVE.

STATEN ISLAND

- 50 BAY ST. AREA
- 51 RICHMOND TERRACE, BAY ST.



Maps serve as a vision for proposed projects and improvements to be implemented during the five year plan. All geographies are approximate; project will be developed through detailed design and community feedback.

Public transit is critical to the functioning of New York City, enabling the city's density and economic activity. In 2018, 32% of trips were made by transit, including 56% of commutes. While the Metropolitan Transportation Authority (MTA) is the primary operator of bus, subway, commuter rail, and paratransit service, the streets and sidewalks controlled by NYC DOT provide a conduit for pedestrians traveling to and from subway stations and bus stops, and for the movement of buses and paratransit vehicles.

Bringing riders back to transit, including the growing network of ferries, after a precipitous ridership decline caused by COVID-19 will be essential in the months and years ahead. Making bus trips faster, more reliable, and more comfortable will be central to that effort, particularly because bus riders experience longer commutes on average. NYC DOT has worked closely with MTA to improve bus service for many years through the Select Bus Service (SBS) program, transit signal priority (TSP), real-time bus arrival signs at bus stops, and the Better Buses program.

What We've Done

Transit improvements include infrastructure, accessibility, and amenities. In addition to building new improvements, there is also a need to maintain and enhance corridors where bus priority projects have already been implemented: monitoring results over time, enhancing bus priority, and collaborating with MTA on operational issues like layover locations.

Bus Priority Projects: NYC DOT's Better Buses program makes changes to New York City streets that make buses faster and more reliable, in coordination with bus service improvements by the MTA. These include dedicated bus lanes and busways that provided dedicated roadway space for buses, and TSP, which reduces bus delay at signalized intersections. NYC DOT also uses other strategies such as bus islands and curbside management to improve bus operations. NYC DOT, with MTA, also monitors 17 SBS routes on 20 corridors in all five boroughs.

GOALS:

3: Increase sustainable travel modes by reconfiguring streets and making more attractive choices available for New Yorkers to support the continued growth of NYC while reducing congestion and emissions

4: Expand access to job opportunities and encourage job creation through faster and more reliable transportation options.

5: Allow all New Yorkers, regardless of ability, to get around the city in multiple ways without encountering barriers to travel

Bus Stop Amenities: Comfortable and functional bus stops, with weather protection, seating, and rider information, are important for serving existing bus riders and attracting new ones. 3,556 bus stop shelters have been implemented in New York City since 2006 through the City's Coordinated Street Furniture Franchise. Where shelters are not present, NYC DOT often installs CityBenches or leaning bars. NYC DOT also installs Bus Time poles that provide real-time arrival information at selected stops. SBS stops often have additional bus stop amenities, including extended shelters, off-board fare payment machines, and enhanced real-time arrival signs.

Bus Stop Accessibility: NYC DOT and MTA are committed to making more bus stops physically accessible to all users. NYC DOT has initiated an evaluation of inaccessible bus stops citywide with the goal of developing a program to build out inaccessible bus stops to accessible standards. This may consist of a variety of interventions from removing grass strips that prevent the safe deployment of wheelchair ramps, to more complex designs that improve the clear path from the bus stop to the nearest intersections. Improving bus stops under elevated structures, which are often located in the roadbed, is also a key part of making the bus system fully accessible.

Recommendations

NYC DOT has identified potential transit corridors for improvements such as bus lanes across the city. Candidate corridors were identified on a borough-by-borough basis for new or enhanced bus priority by starting with a master list of corridors from former studies and input from MTA and then ranking them based on a scoring system within each borough that considered:

- Bus route performance, including bus speeds
- Bus ridership and service frequency
- Street width and traffic levels
- Equity factors such as low-income residents and jobs, and communities of color
- Network considerations, such as overlapping subway service

The map on page 65 shows these transit corridors and the *Streets Plan* PIAs, along with identifying upcoming project locations.

The prioritization of transit corridors creates the foundation for future work, including the following:

Busways: Busways are a valuable tool for limiting vehicular access on the most constrained and busy bus corridors. They typically require vehicles other than buses to turn off the corridor at certain intervals to reduce through traffic and include other transit-priority treatments which sometimes, but do not always, include dedicated bus lanes. Busways do not require a tremendous investment of physical resources to deliver meaningful travel benefits. There is a planned future busway project on 5th Ave and studies to identify other corridors that would benefit from improved bus speeds.

Transit-Priority Corridors: Bus lanes and other transit-priority treatments will be considered on busy corridors, including on or along limited access highways.

Transit Capital Investment: Larger corridors offer opportunities to build more transformative capital projects that benefit bus riders along with all other road users. An example of this kind of critical bus corridor is Woodhaven Boulevard in Queens, where NYC DOT is currently pursuing full funding and construction for a major corridor project building on the existing Q52/Q53 SBS route. NYC DOT will also explore other similar corridors that would be suitable for larger, capital-intensive projects.

Other key recommendations include:

Transit Signal Priority: TSP is a technology to help buses move through intersections faster by holding a traffic light green or turning the light green sooner. NYC DOT will install TSP at at least 300 intersections annually.

Supporting MTA’s Bus Network Redesign Implementation: MTA is working on bus network redesigns in all five boroughs to better serve customer needs and optimize service levels. Plans have been completed in the Bronx, are underway in Queens and Brooklyn, and will begin soon in Staten Island and Manhattan. The Bronx Bus Network Redesign will be implemented in Summer 2022, prioritizing the needs of bus riders as commute patterns adjust post-COVID-19 pandemic, and NYC DOT will work closely with MTA to make the roll-out a success.

Enforcing Bus Lanes and Busways: NYC DOT will add fixed bus lane enforcement cameras on up to 15 corridors in 2022 and support MTA on-bus camera implementation.

Bus Stop Accessibility: NYC DOT will continue to evaluate bus stop locations to maintain a consistent clear path for wheelchair and other physically disabled users, identifying remediations to make bus stops fully accessible for people with mobility challenges. Once NYC DOT completes its assessment of bus stop accessibility, we will work with MTA to incorporate inaccessible bus stops into planning for Borough Bus Network Redesigns and prioritize building out at least 25 bus stops annually with concrete to accessible standards. Locations will be prioritized based on the concentration of people with disabilities, senior citizens, and non-white population.

Bus Stop Amenities: Amenities at bus stops include Bus Time poles, bus shelters, and other seating options. Bus Time poles were historically funded by elected officials who earmarked money for their preferred locations. Moving forward, Bus Time pole locations will be allocated proportionately to *Streets Plan* PIAs, and NYC DOT will develop a new Bus Time pole through an RFP in mid-2022. As part of the next Coordinated Street Furniture Franchise, NYC DOT intends to negotiate a more equitable and rational way of locating additional bus shelters. We will also implement a method for prioritizing new seating (benches and lean bars) at bus stops that lack bus shelters.

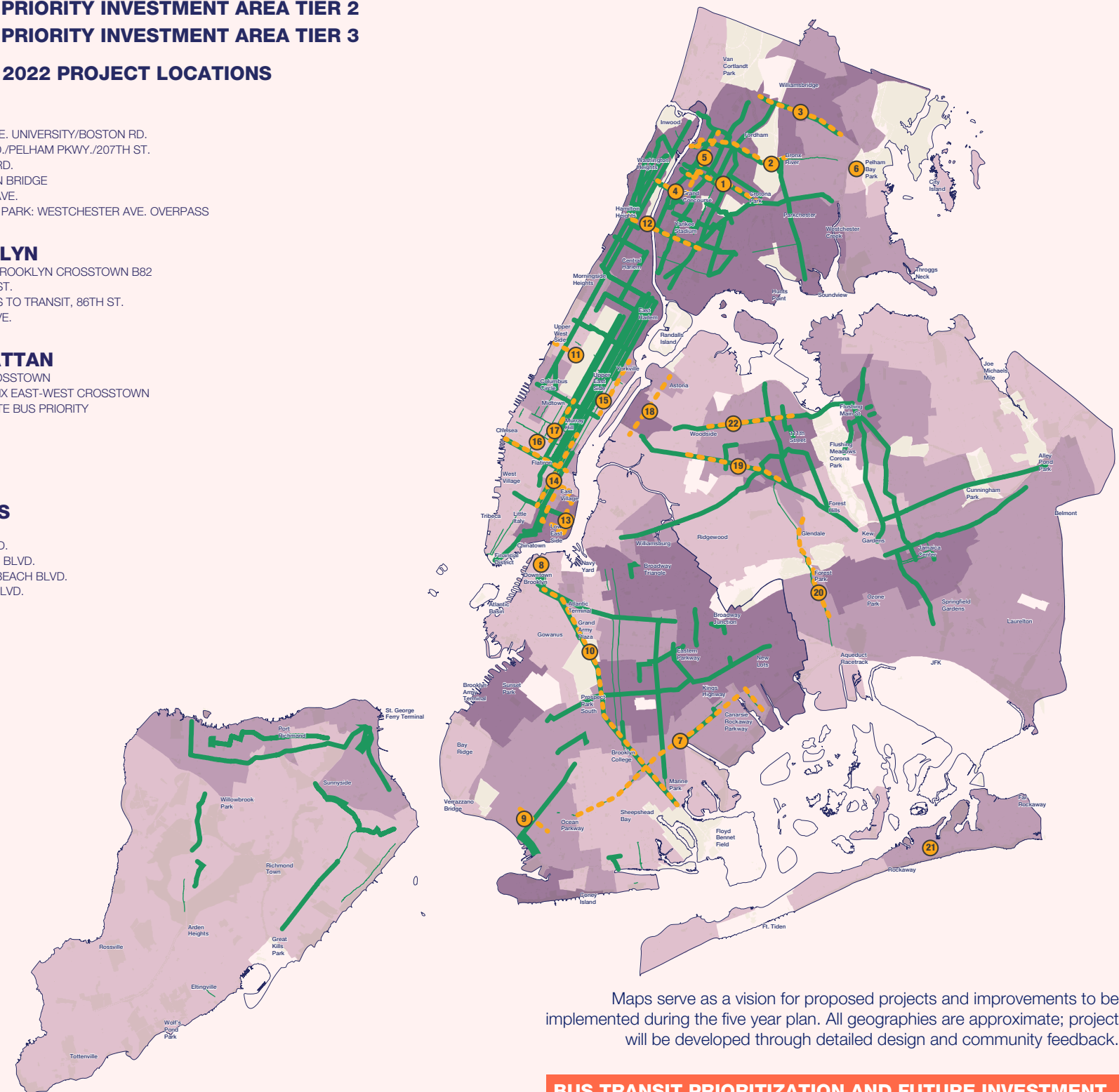
OMNY: MTA’s OMNY, which stands for One Metro New York, will eventually combine fare payments and ticketing across subways, buses, paratransit, and commuter rail. OMNY is in the process of being rolled out between 2019 and 2023, and NYC DOT will support and monitor the transition to all-door bus boarding with OMNY.

Transformative Ideas

Major Transit Capital Investments: In other cities, major reallocations of street space have been accompanied by major investments in public transit capacity. The City could work with the MTA to plan—and fund—the next generation of major transit investments, including subway, rail, and bus rapid transit (BRT). This will need to include a focused review of how to bring New York City’s cost in line with international standards.

- EXISTING BUS LANES
- FUTURE BUS PRIORITY CORRIDORS
- PRIORITY INVESTMENT AREA TIER 1
- PRIORITY INVESTMENT AREA TIER 2
- PRIORITY INVESTMENT AREA TIER 3
- ■ ■ ■ 2022 PROJECT LOCATIONS

- BRONX**
- 1 TREMONT AVE. UNIVERSITY/BOSTON RD.
 - 2 FORDHAM RD./PELHAM PKWY./207TH ST.
 - 3 E. GUN HILL RD.
 - 4 WASHINGTON BRIDGE
 - 5 UNIVERSITY AVE.
 - 6 PELHAM BAY PARK: WESTCHESTER AVE. OVERPASS
- BROOKLYN**
- 7 SOUTHERN BROOKLYN CROSSTOWN B82
 - 8 LIVINGSTON ST.
 - 9 SAFE ROUTES TO TRANSIT, 86TH ST.
 - 10 FLATBUSH AVE.
- MANHATTAN**
- 11 79TH ST. CROSSTOWN
 - 12 SOUTH BRONX EAST-WEST CROSSTOWN
 - 13 M14A/D ROUTE BUS PRIORITY
 - 14 2ND AVE.
 - 15 1ST AVE.
 - 16 23RD ST.
 - 17 5TH AVE.
- QUEENS**
- 18 21ST ST.
 - 19 QUEENS BLVD.
 - 20 WOODHAVEN BLVD.
 - 21 ROCKAWAY BEACH BLVD.
 - 22 NORTHERN BLVD.



Maps serve as a vision for proposed projects and improvements to be implemented during the five year plan. All geographies are approximate; project will be developed through detailed design and community feedback.

Cycling is a healthy, affordable, clean way to get around the city, and ridership has grown dramatically as the City has built out a network of bike lanes and expanded bike share. On a given day, an estimated 530,000 bicycle trips are taken in New York City—more than triple the level 15 years ago. The COVID-19 pandemic has accelerated these growth trends, with a 21% growth in East River weekday bicycle crossings during July to October, comparing 2020 to 2019. And there were 24.7 million Citi Bike rides from September 2020 to September 2021, up from 19 million the previous year. (Note: See Bike Share and Micromobility section for recommendations related to bike share and other micromobility.)

Many factors, including safety concerns, can discourage potential cyclists, but there is a lot we can do to make cycling an attractive, practical option. This includes making it safer and more comfortable through street design, providing safe and convenient bike parking, and expanding access to bike share. Growth in electric-assist bikes also puts cycling within reach of a larger population in terms of age, level of confidence, and physical ability level.

What We've Done

Since the start of Vision Zero in 2014, over 890 miles of dedicated cycling space (conventional and protected lanes), and over 140 miles of on-street protected bike lanes have been installed. NYC DOT's *Green Wave: A Plan for Cycling in New York City* (2019) presented a long-term citywide vision for improving cycling safety and the riding experience for cyclists, in addition to more immediate improvements. Key targets are:

- One out of every 10 trips in New York City will be taken by bicycle by 2050,
- Build 30 miles of protected bike lanes (PBLs) annually, and
- Build 75 miles of bicycle infrastructure in ten Bicycle Priority Districts by 2022.

The plan focused on the citywide PBL network, new design standards, targeted enforcement, legislation, policy, education, and outreach. The plan also included the creation of neighborhood bike lane networks that support local trips and connect to the citywide network. Working with our partners at the New York City Department of Parks and Recreation (NYC Parks), we will also grow and enhance the city's network of

GOALS:

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greenways—on- and off-street bike paths that connect parks, waterfronts, and other recreational destinations while also supporting commute trips. Much of this bike network expansion is coordinated with the expansion of the Citi Bike service area.

NYC DOT has also committed to and is in the process of installing 10,000 new bike racks citywide by the end of 2022. Providing parking not only supports cycling but also helps avoid parked bicycles obstructing the path of pedestrians.

Recommendations

Going forward, NYC DOT will be focused on improving overall cycling network coverage and connectivity across the entire city by building out the citywide PBL network, complementing it with safe neighborhood cycling networks, and reenergizing the greenways program. We will also support safer and more comfortable cycling by dramatically expanding bike parking options, improving blocked bike lane enforcement, and reinventing wayfinding signage for cyclists.

Protected Bike Lane Network: We will work to build out the citywide PBL network defined in the Green Wave plan, with a focus on PIAs. This will include typical streets as well as spaces under elevated trains. We will also work to refine our prioritization of bike corridors to account for the broader catchment area of neighborhoods whose riders utilize each corridor (and their respective PIAs), since key cycling routes serve riders from far outside their immediate neighborhood.

Neighborhood Cycling Networks: As part of our 2017 *Safer Cycling* report, NYC DOT identified ten Priority Bicycle Districts, neighborhoods with comparatively high numbers of cyclist Killed or Seriously Injured (KSIs) — suggesting significant cycling ridership — and few dedicated cycling facilities. These districts, seven in Brooklyn and three in Queens, represented 14% of the city's bike lane network and 23% of cyclist KSI. We will continue to address the current districts, while also expanding upon them with updated crash and infrastructure coverage data. NYC DOT is currently working on a selection of new and previously identified neighborhoods to create safe, comfortable local cycling networks. These priority districts will be further prioritized by *Streets Plan* PIAs.

The map on page 69 shows the existing and proposed protected bike lane network and priority community districts where NYC DOT will focus its neighborhood cycling networks as well as the *Streets Plan* PIAs. Also shown are upcoming project locations.

Bike Boulevard Program: NYC DOT will continue to develop a program that identifies potential bike boulevards, working directly with communities with cut-through traffic issues and at existing or new Open Street locations.

Blocked Bike Lane Enforcement: Bike lanes blocked by cars and trucks can severely detract from the safety and mobility benefits provided by bike lanes. NYC DOT will continue to work with NYPD to improve enforcement of blocked bike lanes, but there are limits to what manual enforcement can achieve. We therefore issued an RFEI in September 2021 to begin looking into options for automated bike lane enforcement, if authorized by the State Legislature.

Better Bike Lane Protection: NYC DOT will work to test and install stronger physical separation for bike lanes. NYC DOT and DSNY will continue to collaborate on ways to improve and prioritize snow clearance and sweeping in the city's bike lane network with smaller equipment.

Bicycle Wayfinding: NYC DOT will develop wayfinding signage for cyclists along key on-street and greenway routes around the city. We are reimagining cycling wayfinding in a way that better integrates with our pedestrian wayfinding signage.

Secure Bike Parking: NYC DOT will continue to explore secure (and weather-protected) bike parking solutions, including high-capacity options designed to serve large destinations such as transit hubs and large cultural venues. As part of this we are considering a potential contract or franchise for secure on-street parking. We will also explore the potential for increased bike parking in private buildings with the New York City Department of City Planning (NYC DCP) and the New York City Department of Buildings (NYC DOB), building on the 2009 Bikes in Buildings law.

Measuring the Cycling Network: NYC DOT will develop a metric for cycling network connectivity and refine our prioritization process for network expansions and enhancements based on the results. Network connectivity measures the extent and completeness of the bicycle network, based on the number of choices a cyclist has for turning from one bicycle route onto another, without leaving the overall network. This metric will be incorporated into the *Streets Plan* by 2028 at the latest.

Schools and Under the El: We will focus bike network development around schools (including colleges and universities) and on challenging corridors under elevated structures.

Transformative Ideas

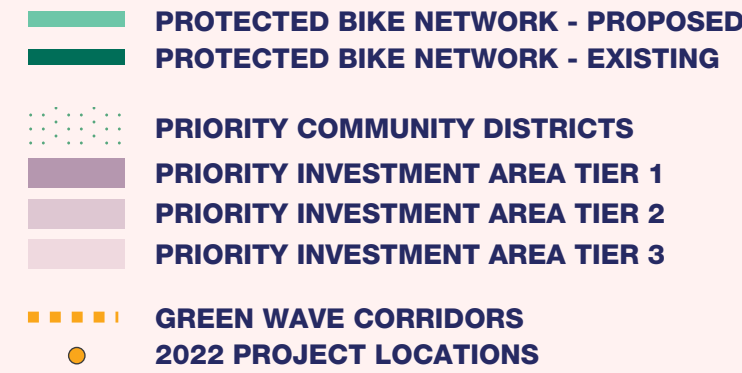
Greenways and High-Capacity Protected Bike Lanes: NYC DOT will develop the next generation of greenways that would become the backbone of a high-capacity, capitably built separated network for both recreational and commuter trips. NYC DOT may also identify key on-street corridors that are currently over-subscribed and initiate plans to widen lanes, install green wave signal timing, improve loading access to minimize double parking, and/or integrate additional cycling-related safety improvements.

New Cycling Connections: NYC DOT could identify locations with significant demand for new cycling/pedestrian bridges that could provide safer, more direct routes, and initiate concept design studies that would be used to solicit funding. Additionally, NYC DOT could introduce more high-capacity bikeways on our bridges building on the Connecting Communities Harlem River Bridges plan, as was implemented on the Brooklyn Bridge, and coordinate with MTA to add or improve pedestrian and cycling accommodation on MTA bridges such as the Verrazzano-Narrows Bridge.



10,000 Bike Racks

In March 2021 NYC DOT announced that the agency would install 10,000 new bike parking racks by the end of 2022 – more than triple the City’s previous commitment. Bike racks come in a variety of designs including large and small hoops, and bike sled corrals. Parking expansion is being prioritized at a community district scale using the following factors: demographics, previous bike parking installed in that district, and the existing ratio of racks to population



STATEN ISLAND

- 1 TRANTOR PL., WILLOW RD. W., LAMBERTS LN.
- 2 BAY ST. AREA
- 3 GOETHALS RD. N., SOUTH AVE., LAMBERTS LN.
- 4 RICHMOND TERRACE AND BAY ST.
- 5 RICHMOND TERRACE
- 6 DIXON AVE., WILLOW RD. W.

BRONX

- 7 EASTCHESTER RD., WATERS PL.
- 8 LAFAYETTE/DEWEY AVE., CROSS BRONX EXPY.
- 9 WESTCHESTER AVE.
- 10 PARK AVE, 173TH ST. TO 188TH ST.
- 11 PARK AVE, 165TH ST. TO 173 ST.
- 12 LAFAYETTE AVE.
- 13 BRONXDALE AVE.
- 14 180TH ST., 179TH ST.
- 15 WESTCHESTER AVE.
- 16 BRONX RIVER GREENWAY, 233 ST
- 17 DEL VALLE (CRAMES) SQUARE
- 18 BROADWAY

BROOKLYN

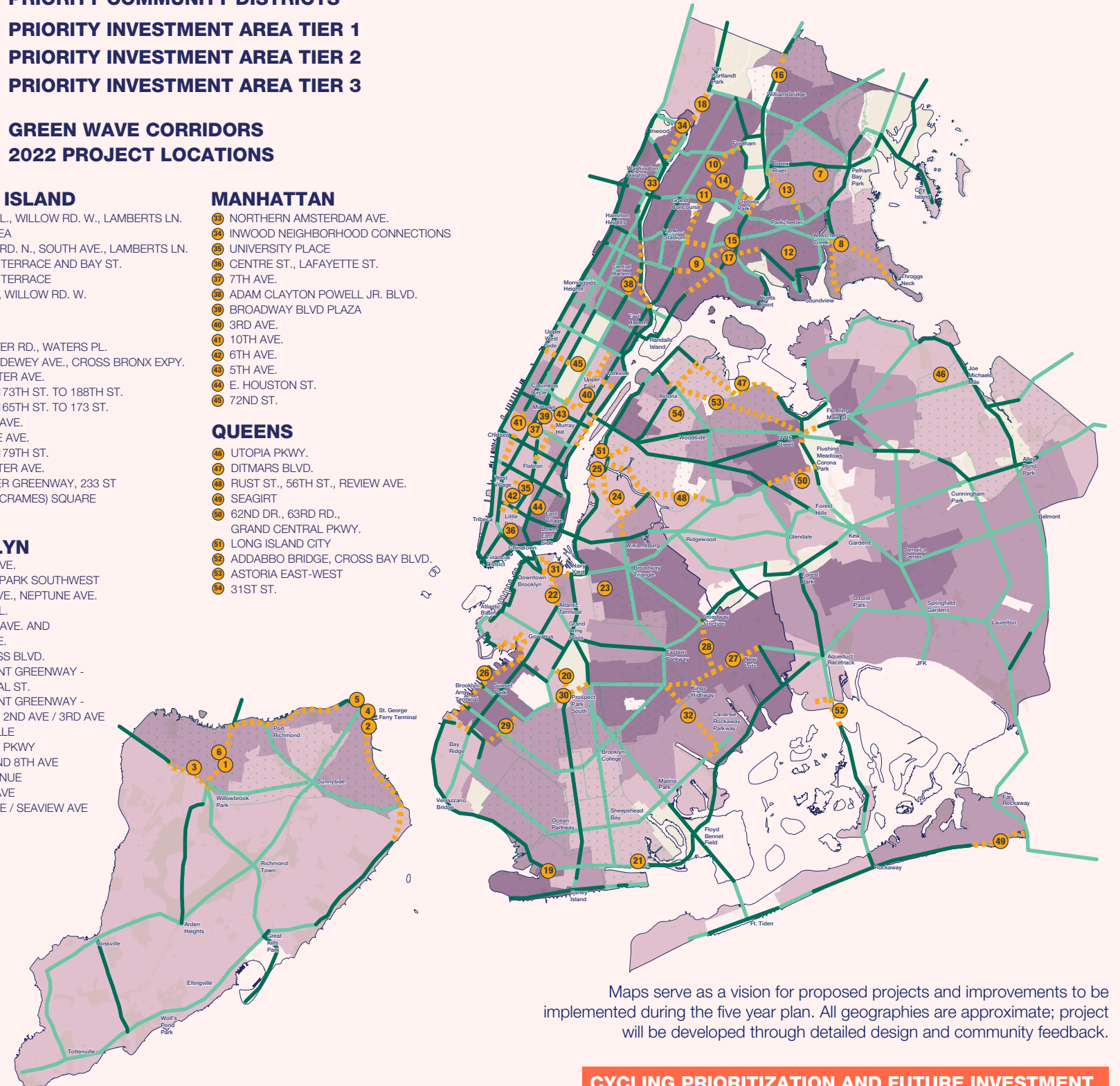
- 19 CROPSY AVE.
- 20 PROSPECT PARK SOUTHWEST
- 21 EMMONS AVE., NEPTUNE AVE.
- 22 ASHLAND PL.
- 23 LAFAYETTE AVE. AND DEKALB AVE.
- 24 MCGUINNESS BLVD.
- 25 WATERFRONT GREENWAY - COMMERCIAL ST.
- 26 WATERFRONT GREENWAY - HAMILTON / 2ND AVE / 3RD AVE
- 27 BROWNSVILLE
- 28 ROCKAWAY PKWY
- 29 7TH AVE. AND 8TH AVE
- 30 OCEAN AVENUE
- 31 FLUSHING AVE
- 32 REMSEN AVE / SEAVIEW AVE

MANHATTAN

- 33 NORTHERN AMSTERDAM AVE.
- 34 INWOOD NEIGHBORHOOD CONNECTIONS
- 35 UNIVERSITY PLACE
- 36 CENTRE ST., LAFAYETTE ST.
- 37 7TH AVE.
- 38 ADAM CLAYTON POWELL JR. BLVD.
- 39 BROADWAY BLVD PLAZA
- 40 3RD AVE.
- 41 10TH AVE.
- 42 6TH AVE.
- 43 5TH AVE.
- 44 E. HOUSTON ST.
- 45 72ND ST.

QUEENS

- 46 UTOPIA PKWY.
- 47 DITMARS BLVD.
- 48 RUST ST., REVIEW AVE.
- 49 SEAGIRT
- 50 62ND DR., 63RD RD., GRAND CENTRAL PKWY.
- 51 LONG ISLAND CITY
- 52 ADDABBO BRIDGE, CROSS BAY BLVD.
- 53 ASTORIA EAST-WEST
- 54 31ST ST.



Maps serve as a vision for proposed projects and improvements to be implemented during the five year plan. All geographies are approximate; project will be developed through detailed design and community feedback.

In just a decade, bike share has gone from a niche mode to a mainstream transportation choice in most major American cities. New York City’s bike share program, Citi Bike, is operated as a public-private partnership between NYC DOT and Lyft. Since its launch in 2013, Citi Bike has grown to become one of the world’s largest bike share systems. As of September 2021, the system has nearly 47,000 docks and over 23,000 bikes at almost 1,500 stations, with over 163,000 total members, and over 13,000 Reduced Fare Bikeshare (RFBS) members. The system sees over 99,000 trips per day on average during peak riding season and set a new daily record for ridership on September 2, 2021, with over 122,000 trips on the day following Tropical Storm Ida.

Recently, other forms of “micromobility” (small, typically electric personal transportation devices) have proliferated, most notably shared electric stand-up scooter services. E-scooter companies operate with varying amounts of municipal oversight in dozens of American cities, and New York City has undertaken its own pilot program to assess their usefulness and viability in the city’s dense and complex street environment.

Bike share and app-based scooter services can provide a more efficient alternative to FHV and taxi trips and can help close the “first and last mile” gap to access public transit in neighborhoods with less transit coverage. These services have the potential to serve a broader range of riders by eliminating the need to worry about where to park your personal bike and by providing electric-assist options that make New York City’s distances, hills, and bridges more manageable. NYC DOT works to thoughtfully evaluate and implement shared-use bike and micromobility programs and support riders through the expansion and improvement of the bike lane network. NYC DOT is continually evaluating the benefits and drawbacks of new mobility options—for example in terms of safety to users and pedestrians—and considering the implications for things like the width and design of bike lanes and on applicable laws.

GOALS:

1: Enhance street safety for all street users

3: Increase sustainable travel modes by reconfiguring streets and making more attractive choices available for New Yorkers to support the continued growth of NYC while reducing congestion and emissions

5: Allow all New Yorkers, regardless of ability, to get around the city in multiple ways without encountering barriers to travel

What We’ve Done

The Citi Bike system launched in 2013 in Manhattan and Downtown Brooklyn with 330 stations and 6,000 bikes (Phase 1). The Phase 2 Expansion (2015–2017) included more of Manhattan, Brooklyn, and Queens, increasing to 750 stations and 12,000 bikes. NYC DOT is almost halfway done with the Phase 3 Expansion, which will grow the system to 70 square miles and over 40,000 bikes, across four boroughs, by 2024. At the end of this expansion phase, over 50% of all New Yorkers will live within a five-minute walk of a Citi Bike station.

In 2019, NYC DOT and Lyft formed the Citi Bike Equity Advisory Board. This 20-person panel advises, evaluates, and promotes Citi Bike’s equity efforts, including programming, affordable membership options, and diverse community partnerships. For example, the Reduced Fare Bike Share program gives New York City Housing Authority (NYCHA) residents or Supplemental Nutritional Assistance Program (SNAP) recipients access to a \$5 per month Citi Bike membership without an annual commitment. Citi Bike also oversaw a handcycle pilot to increase access to the system for persons with disabilities. This initiative took place summer 2019 and brought handcycles to various community-based events throughout the city. Citi Bike and NYC DOT are working with the New York University Ability Project to assess further adaptive bicycle programming.

In addition to Citi Bike, NYC DOT’s e-scooter pilot launched in the East Bronx in August 2021 with three vendors and 3,000 scooters. The future of shared e-scooter services is highly dependent on the state of the industry itself, which has so far been volatile and quickly evolving. NYC DOT will use findings from the East Bronx scooter pilot to evaluate what level of transportation utility shared e-scooters may provide, for whom, and at what cost.

Recommendations

Citi Bike System Expansion: NYC DOT’s primary focus moving forward is on continuing to grow Citi Bike beyond the current Phase 3 Expansion. Operating as public-private partnership since its launch in 2013, Citi Bike is a public transit service that has become an integral part of New York City’s dynamic transit network, with over 130 million trips taken in that time. Unlike other modes, Citi Bike does not receive public funding for its equipment or operating costs—the Phase 3 Expansion is being financed entirely by private-sector funding. At the conclusion of Phase 3, the system will cover nearly 70 square miles, and more than half of the city’s population will live within the Citi Bike service area. Over 4 million New Yorkers will still live outside the Citi Bike service area, however, and increasing access to Citi Bike service for more New Yorkers may require a different financial model that includes government subsidy.

Optimizing Space: NYC DOT and Lyft will continue to explore ways to densify existing bike share station equipment to fit more bikes in the same amount of space as competition grows for curb space in the city’s most dense areas.

E-mobility: In 2021, NYC DOT announced the official launch of the City’s e-scooter pilot in the East Bronx. Bird, Lime and Veo, the three companies participating in the pilot, brought up to 3,000 e-scooters to the East Bronx during Phase 1, with an increase to as many as 6,000 in 2022. NYC DOT is working closely with the three vendors to monitor any safety issues that arise, focusing on behavior such as underage riding, helmet use, and shared riding. Crashes are being tracked via the vendors, NYPD crash data, and emergency room data supplied by St. Barnabas Hospital, who are tracking all e-mobility injuries that are treated on-site. Future plans include bringing more New York City trauma centers on board to do the same.

NYC DOT implements programs to help make New York City’s streets more accessible, including for people with low vision, hearing or cognitive disabilities, or limited mobility. Accessibility is a legal imperative, and NYC DOT must comply with applicable local and federal laws like ADA and the Rehabilitation Act of 1973. This includes the installation of pedestrian ramps and accessible pedestrian signals, and coordination with MTA on the siting of new subway station elevators and escalators. But accessibility is also a reflection of NYC DOT’s commitment to equity, and it dovetails with the concept of “universal design,” in which the environment is designed to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

What We’ve Done

Pedestrian Ramps: Pedestrian ramps are a critical component in providing for safe and accessible means of travel throughout New York City. Pedestrian ramps provide access on and off our streets and sidewalks and are an essential tool for all pedestrians, especially older adults and persons with disabilities. NYC DOT’s current pedestrian ramp program is responsible for the maintenance and construction of pedestrian ramps citywide to provide for safe and accessible corners compliant with the ADA. NYC DOT also surveyed pedestrian ramps located throughout the city at approximately 185,000 corners, as well as mid-block crossings and medians, and will use this information to program ramps for construction where required. New and upgraded pedestrian ramps include a red (or white in special districts) detectable warning surface to help guide those with vision impairments, and those who use wheelchairs or other mobility devices. Pedestrian ramps have been installed at over 1,800 corners and upgraded at over 26,000 corners since July 2017.

Construction Type/Origin	Corners Constructed July 2020 - June 2021	Total Corners Constructed July 2017 - June 2021
1. Installations	408	1,800
2. Upgrades	7,725	26,052
3. Resurfacing	6,394	21,400
4. Complaints	153	273
5. Priority Based	N/A	N/A

Pedestrian Ramp Installation
Source: NYC Pedestrian Ramp Program

GOALS:

- 1:** Enhance street safety for all street users
- 2:** Incorporate equity into NYC DOT’s programs and projects
- 5:** Allow all New Yorkers, regardless of ability, to get around the city in multiple ways without encountering barriers to travel

Accessible Pedestrian Signals (APS): New York City has the largest program in the nation providing access to traffic signals for blind and visually impaired pedestrians. Accessible Pedestrian Signal (APSs) are devices affixed to pedestrian signal poles to assist blind or low vision pedestrians in crossing the street. APSs are wired to a pedestrian signal and send audible and vibrotactile indications when pedestrians push a button installed at the crosswalk. Since New York City launched its Accessible Pedestrian Signal (APS) program in 2004, more than 920 intersections have been outfitted with APS, more intersections than any other city in the US. NYC DOT installed APSs at over 200 intersections in 2020. New York City has benefitted from an unusually strong and productive relationship between NYC DOT and the blind and visually impaired community both through MOPD and Pedestrians for Accessible and Safe Streets (PASS). This partnership has helped NYC DOT to develop what are among the most exacting design practices in the country, providing unparalleled access and functionality to the pedestrians who rely upon them.

Mobility Management Program: In 2012, NYC DOT launched its Mobility Management Program (MMP) to expand outreach efforts and improve mobility of people with disabilities, older adults, low income, and limited English proficient populations. MMP partners with community organizations to distribute information and solicit input on new initiatives. MMP also develops resources, like the Mobility Management Resource Guide, so that New Yorkers can learn about programs and services available to them, and conducts training and develops resources for NYC DOT staff to support inclusive and accessible engagement. In addition, the program conducts research such as travel surveys and focus groups to understand transportation habits, barriers, priorities, and perceptions of these communities.

Recommendations

NYC DOT will continue to install and upgrade pedestrian ramps and APS utilizing the prioritization and implementation practices currently in place.

Pedestrian Ramps: NYC DOT will continue to perform pedestrian ramp work in various ways: during the resurfacing of city streets; when a complaint is received through 311 or other correspondence; when implementing Street Improvement Projects and capital projects; and when addressing sidewalk defects. Additionally, NYC DOT is currently undergoing an ADA self-evaluation, which includes identifying existing obstacles that limit accessibility and proposing methods to address those obstacles. Once this process is completed, NYC DOT will update its ADA Transition Plan, which will be made available for public comment.

Accessible Pedestrian Signals: NYC DOT is currently ramping up the APS program, already the most robust in the nation, to address 500 intersections per year. APSs are installed with every newly signalized intersection as well as retrofit to existing signals prioritized based on community requests, and the relative complexity of the intersection as determined by the National Cooperative Highway Research Program APS prioritization tool as modified for use in NYC.

Mobility Management Program: NYC DOT will maintain and expand its MMP to expand outreach efforts and improve the mobility of target populations. This will include expanding capacity-building on digital accessibility to ensure people with disabilities are able to easily navigate and use NYC DOT’s web content, mobile applications, and electronic documents; expanding the use of surveys and other tools to understand the needs and attitudes of New Yorkers towards potential changes; updating the Mobility Management Resource Guide every five years to ensure New Yorkers can easily learn about programs and services available to them; and expanding engagement efforts with community organizations and the public to raise awareness of NYC DOT’s work and build relationships with our communities.

Other: NYC DOT will also work to address missing sidewalks (covered under Walking/Pedestrians) and bus stop accessibility (covered under Transit).

NYC DOT maintains and manages a large portion of New York City’s public space, as streets make up 27% of the city’s total land area. We are committed to making our streets inviting places for people of all ages and abilities in support of safety, economic, equity, cultural, and other goals by improving the public realm experience. As demand for pedestrian space increases, NYC DOT is responding by expanding car-free or “car-light” streets that prioritize pedestrians at the block, corridor, or district-wide scale. Our efforts also include enhancing the quality of the streetscape for all New Yorkers, with features like public seating, landscaping and green infrastructure, public art, and high-quality paving and lighting. Because our public space and streetscape programs not only build improvements, but also actively manage and program them, building partnerships with community groups and other local stakeholders is a central element of our approach.

What We’ve Done

Historically, NYC DOT has worked on creating and expanding public space within the pedestrian realm, for example through the New York City Plaza Program, which has created over 80 pedestrian plazas across all five boroughs since 2007 through a community-driven process. More recently, NYC DOT has also been approaching the full street—including the roadway—as flexible public space in the form of shared streets and Open Streets (temporary traffic restrictions to allow pedestrians the use of the street) and exploring larger-scale pedestrian-only and pedestrian-priority networks. NYC DOT not only redesigns streets to create, expand, or improve public spaces, but also works on programming, beautification efforts, maintenance, building partnerships with community organizations, and management of public spaces. NYC DOT has long run the Plaza Equity program, which provides funding, active support, and capacity building experience to plaza partners in higher need areas. Beginning in 2021, NYC DOT expanded this concept to Open Streets partners, and directly managed some Open Streets where they were needed but no partner was available.

GOAL:

6: Allow all New Yorkers to have access to safe, welcoming and attractive public spaces close to where they live.

Our Activations program brings free activities to public spaces and works to connect public spaces citywide with local organizations that can provide programming that is free and open to New Yorkers of all ages and abilities. Activations include theater, dance, and musical performances and workshops, pop-up reading rooms, community information sessions, and more. NYC DOT also invests in vibrant streets through temporary and permanent public artwork installations, including permitting over 350 temporary artworks throughout the five boroughs and doubling NYC DOT’s permanent art collection from 11 to 22 pieces since 2008.

Recommendations

Going forward, NYC DOT will prioritize the creation of new public space—both full-time and flexible—in neighborhoods that lack access to open space and in areas with proximity to high-frequency transit and commercial corridors, incorporating equity and safety criteria as well.

The map on page 77 shows public space priority areas, as well as the *Streets Plan* PIAs. Also shown are upcoming project locations.

Open Streets: New York City’s Open Streets program allows communities to embrace streets as public space, supports local economies, and prioritizes pedestrians and cyclists. When a street is transformed into an Open Street, it allows for a range of activities, such as outdoor dining, learning, programming, and more. NYC DOT will continue to work with local community organizations and neighbors to execute Open Streets citywide, and will use staff or contractors to manage Open Streets where needed. The program was launched during the COVID-19 pandemic, but the agency has a long history of temporary street closure programs that preceded this global crisis. Looking towards the future, Open Streets is uniquely positioned as a planning tool to transform streets into programmable public space and further promote pedestrian and cyclist infrastructure across New York City.

Open Restaurants: In partnership with City Council, NYC DOT will create a permanent Open Restaurants program. This program will allow restaurants to use the sidewalk adjacent and curbside roadway space in front of their businesses for outdoor dining.

Plaza Program: NYC DOT will continue its request-based NYC Plaza Program, with both interim applications and permanent plazas build out through capital projects.

Pedestrianization: NYC DOT will work to expand pedestrian-only and pedestrian-priority districts. Pedestrian-priority spaces, are areas with restricted vehicle access to multiple contiguous blocks. They can support a more walkable, accessible, and enjoyable city in



both commercial and residential neighborhoods, offering opportunities for social interaction, active recreation, socializing, and tourism. NYC DOT has been developing pedestrian-priority district plans for the Financial District, Chinatown, the Broadway corridor, and Downtown Brooklyn. Moving forward, NYC DOT will explore opportunities for equitably distributed pedestrianization in a range of neighborhoods.

Public Art: NYC DOT will continue to explore ways to maximize site-specific beautification efforts as part of street improvement projects, establish meaningful partnerships with new community stakeholders and provide paid opportunities and equitable resources to the creative arts sector of New York City. Public art is also developed as a tool to enhance agency priority safety initiatives, pedestrian spaces, and bike lanes. We are exploring options to expand maintenance capacity for public art and offer support from NYC DOT operating units to facilitate implementation, especially in lower-resourced neighborhoods.



2022 PROJECT LOCATIONS

BRONX

- 1 DEL VALLE (CRAMES) SQUARE
- 2 ALEXANDER AVE.
- 3 WILLIS AVE.
- 4 GERARD PUBLIC REALM
- 5 WESTCHESTER SQUARE PLAZA

BROOKLYN

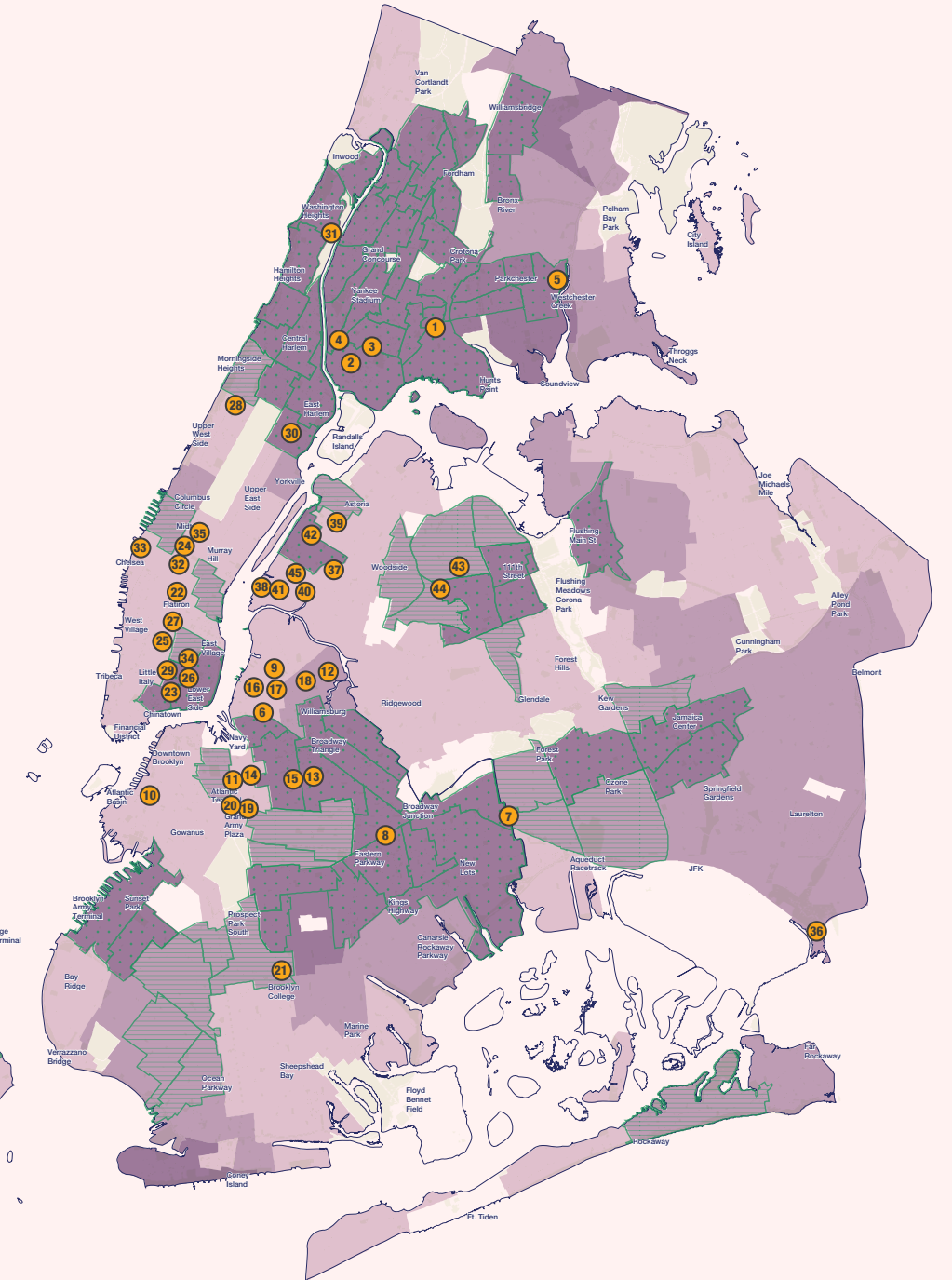
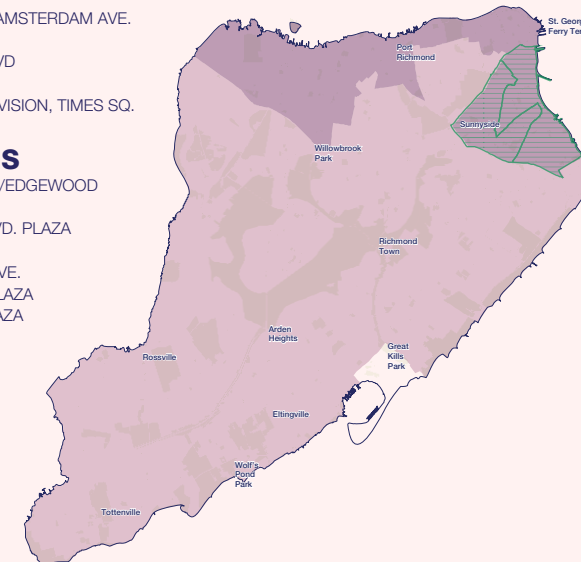
- 6 BQ GREEN
- 7 LIBERTY AVE. PLAZA
- 8 OSBORN ST. PLAZA
- 9 NORTH BROOKLYN PUBLIC REALM
- 10 WATERFRONT GREENWAY, ATLANTIC AVE. CONNECTOR
- 11 S. PORTLAND ST.
- 12 SHARON ST.
- 13 TOMPKINS AVE.
- 14 WILLOUGHBY AVE.
- 15 MARCY PLAZA
- 16 BERRY ST.
- 17 DRIGGS PUBLIC REALM
- 18 SHARON ST. OPEN SPACE
- 19 UNDERHILL AVE.
- 20 VANDERBILT AVE.
- 21 HILLEL PLAZA

MANHATTAN

- 22 BROADWAY VISION, FLATIRON
- 23 ALLEN ST. AND PIKE ST. MALLS
- 24 BROADWAY VISION, GARMENT DISTRICT
- 25 BROADWAY VISION, UNIVERSITY PLACE
- 26 LOWER EAST SIDE PUBLIC REALM
- 27 BROADWAY VISION, UNION SQUARE
- 28 W. 103RD ST.
- 29 CHINATOWN SHARED STREETS
- 30 E. 101ST ST.
- 31 NORTHERN AMSTERDAM AVE.
- 32 32ND ST.
- 33 HUDSON BLVD
- 34 AVENUE B
- 35 BROADWAY VISION, TIMES SQ.

QUEENS

- 36 BROOKVILLE/EDGEWOOD
- 37 29TH ST.
- 38 VERNON BLVD. PLAZA
- 39 31ST AVE.
- 40 THOMSON AVE.
- 41 46TH AVE. PLAZA
- 42 12TH ST. PLAZA
- 43 34TH AVE.
- 44 80TH ST.
- 45 HUNTER ST.



Maps serve as a vision for proposed projects and improvements to be implemented during the five year plan. All geographies are approximate; project will be developed through detailed design and community feedback.

The movement of goods—the products and materials that sustain our lives, our businesses, our homes—is essential to the City’s economy and our quality-of-life as communities, families, and individuals. NYC DOT recognizes the critical role of freight movement in the city, particularly with the outsized role of truck movement on the city’s streets due to limited use of rail and waterborne capacity.

The City is committed to bold action to make our freight system more sustainable and efficient. We are committed to encouraging greener and more efficient truck deliveries, increasing the share of goods moved by water, rail, and cargo bicycles, and supporting innovation and new technologies to make freight movement more efficient.

The rise of e-commerce has led to unprecedented freight activity in residential locations across New York City. With home deliveries projected to increase in the coming years, it will be necessary to implement more comprehensive freight strategies across a finite number of city streets. NYC DOT spearheads multi-year programs and initiatives to improve the safety, efficiency, and sustainable movement of goods in New York City, implementing key priorities anchored in the May 2021 Delivering New York Freight Plan. NYC DOT’s freight programs work closely with our alternative fuels programs to increase adoption of clean vehicles and fuels. We also collaborate closely with city and regional partners such as New York City Economic Development Corporation (NYCEDC), New York Metropolitan Transportation Council (NYMTC), and the Port Authority of New York and New Jersey (PANYNJ) on freight initiatives.

What We’ve Done

NYC DOT works to improve freight movement and safety through several programs. This includes designating a truck route network and truck priority safety corridors. For the latter, NYC DOT analyzed truck fatalities and severe injuries to identify 70 truck safety corridors with concentrations of severe truck-involved pedestrian and cyclist crashes citywide. NYC DOT is committed to implementing ten safety improvements on truck priority safety corridors each year. NYC DOT is also better understanding how overweight trucks damage roadways and bridges by installing and upgrading Weigh-in-Motion (WIM) machines at key locations.

Other NYC DOT freight programs include:

Neighborhood Loading Zones (NLZs): NLZs help reduce double parking in residential areas, which can be a hazard for vulnerable road users. They are prioritized for narrow residential streets with bike lanes and bus routes that experience excessive double parking by both commercial and personal vehicles. The public can directly suggest locations for NLZs through NYC DOT’s Projects and Initiatives portal.

- GOALS:**
- 8:** Ensure that curb access is allocated in a rational manner to a diversity of users and uses.
 - 9:** Encourage more efficient and sustainable goods movement and decrease the negative effects of truck traffic

Commercial Cargo Bike Pilot Program: NYC DOT will advance rule changes to make the Cargo Bike program permanent, including a new operating permit structure for expanded adoption, and grow enrollment of operating cargo bikes and expand program enrollment to a fleet of over 2,500 operating cargo bikes by 2026. We will develop “Cargo Bike Only” curb regulations, and implement any feasible recommendations received from the Cargo Bike & Related Projects RFEI, which closed in Fall 2021. NYC DOT will support allowing all state-compliant e-cargo bikes, consistent with local safety protocols, and advocate to update state law to allow more types of cargo bikes to be used in other cities.

Off-Hour Deliveries Program (OHD): Launched in April 2019, this program encourages goods delivery from 7 p.m. to 6 a.m. to decrease congestion and truck emissions, improve bus speeds, and reduce conflicts with pedestrians and cyclists.

Green Loading Zones / NYC Clean Trucks Program: NYC DOT is encouraging the adoption of low and zero emission commercial vehicles by creating dedicated curb space for those vehicle types (in progress for Spring 2022). It is also working to expand the Hunts Point Clean Trucks Program to additional Industrial Business Zones (IBZs); this program offers rebate incentives for truck owners for the purchase of advanced transportation technologies and alternative fuels trucks, as well as exhaust retrofit technologies.

Recommendations

NYC DOT will advance implementation of the Delivering New York plan with the key goals of enhancing safety, efficiency, and sustainability of deliveries, while also fostering a culture of compliance and establishing public-private partnerships. NYC DOT will also work with NYCEDC and the Port Authority to encourage the use of rail and water to transport freight into and around the city. These efforts will make a transformative shift in the way freight moves through New York City, putting the city on a path towards less reliance on trucks to make deliveries, increased use of alternative modes, and greater use of innovative delivery methods and curb management.

Future initiatives include the following:

Truck Safety: The 70 Truck Priority Safety Corridors will be further prioritized with the *Streets Plan* PIAs. NYC DOT is committed to implementing safety improvements on at least 10 truck priority corridors each year.

Neighborhood Loading Zones: NYC DOT will expand the NLZ Program to accommodate the growing market share of residential e-commerce deliveries by doubling the number of NLZs by the end of 2021, implementing a total of 800 NLZs by end of 2026, while expanding the number of zones to 1-2 additional neighborhoods per year in each borough based on community input.

Off-Hour Deliveries: We will expand the OHD program to 2,500 participating locations by 2026 including City-owned facilities south of 59th Street, and other congested areas, further prioritized by PIA.

Prioritize Freight and Transit: We will study the prioritization of goods movement along with transit movement in dense commercial corridors.

Expand Commercial Access: We will conduct a feasibility study for allowing safe movement of small commercial vehicles on parkways such as the Belt Parkway.

Commercial Cargo Bike Program: NYC DOT will advance rule changes to make the Cargo Bike program permanent, including a new operating permit structure for expanded adoption, and grow enrollment of operating cargo bikes and expand program enrollment to over 2,500 operating cargo bike fleet by 2026. We will develop “Cargo Bike Only” curb regulations, release a Cargo Bike and Related Projects RFEI, and allow all State-compliant e-cargo bikes (not just pedal-assist systems).

Green Loading Zones Pilot Program: NYC DOT will implement a Green Loading Zones pilot program to allocate curb space for exclusive use by green vehicles for loading and unloading activities.

NYC Clean Trucks: The NYC Clean Trucks Program will be expanded to eligible industrial business zones citywide, replacing 500 older polluting trucks with cleaner, low and/or zero emission vehicles by 2026.

Truck Electrification: NYC DOT will develop a truck electrification strategy and install the first 100 fast truck charging stations along key truck routes and facilities citywide and replace 25% of all stationary truck refrigeration units by 2026. NYC DOT will enter into public-private partnerships to install DC fast charging for medium-sized trucks on streets or municipal properties.

Shift Freight To Rail and Water: NYCEDC, PANYNJ, and NYC DOT are transforming how freight enters New York City by investing in maritime and rail solutions. By shifting freight to local waterways, rail, and developing freight hubs, NYCEDC and NYC DOT will create multimodal freight networks to support urban distribution and manufacturing businesses. As part of this, NYC DOT and NYCEDC will operationalize our waterways for cargo bike-barge delivery by developing a pilot framework to test barge and cargo bike intermodal freight operations at underutilized NYC DOT ferry landings and identifying businesses who may benefit from this service.

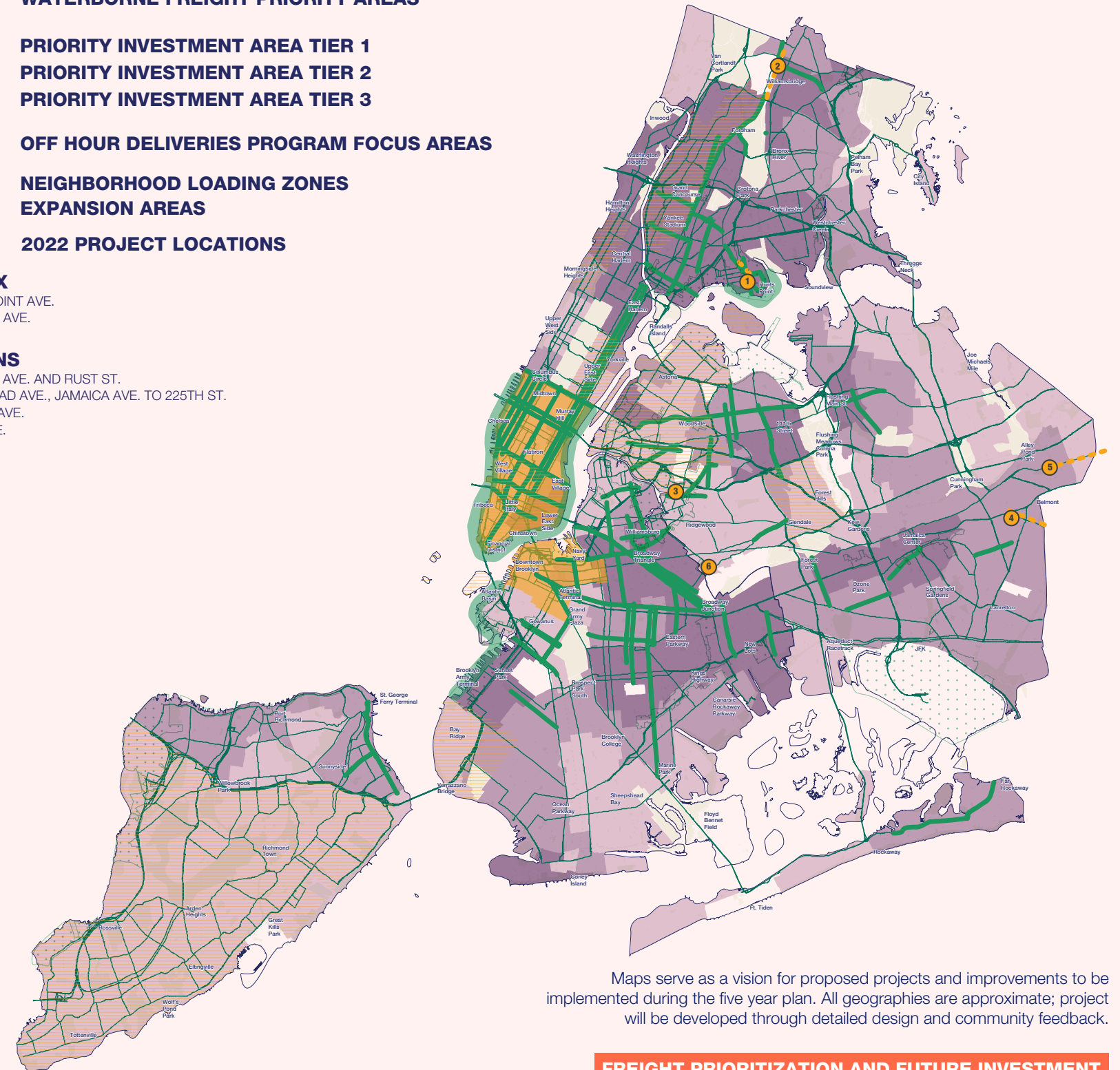
Freight Micro-Consolidation/Distribution Hubs: NYC DOT will create a pilot program to support micro-distribution centers for distributing goods via sustainable modes of transportation. We will partner with BIDs and private sector partners to launch these consolidation hubs, promote vendor procurement consolidation programs, and deploy shared use locker technologies to improve freight distribution efficiency and service effectiveness.

Truck Route Network Redesign: The existing Truck Route Network, established in the 1970s with only minor revisions since then, is in the process of being updated to reflect the needs in residential and commercial land use patterns, the transportation network, address inefficiencies, and adapt to changing delivery patterns from e-commerce and local distribution. NYC DOT will implement a truck route network redesign, which will identify appropriate changes to enhance safety, compliance, and reduce traffic.

Enforcement Technology: NYC DOT will expand WIM sensor network and other technology solutions to improve enforcement of truck and commercial vehicle movement citywide. NYC DOT will seek State legislative authorization to use sensor and camera technology to enforce truck route rules and promote a culture of compliance with truck routes, loading regulations, and truck size and weight rules to provide safe and efficient movement of goods.

Bridge Strike Mitigation: Trucks striking low clearance bridges is a major safety hazard, leading to increased congestion and costly repairs. We will implement signage, marking, and technology-based solutions at frequently-hit bridge strike locations, especially along the FDR Drive, Hutchinson River Parkway, and/or Belt Parkway.

Urban Freight Data Collection Program: NYC DOT will leverage private sector partnerships and university researchers to test and evaluate innovative last-mile freight strategies like freight mobility hubs and off-street consolidation zones in underutilized parking lots. These partnerships would support evidence-based research, cultivate industry engagement, and foster innovation and excellence in freight mobility (target launch of Summer 2022).



Maps serve as a vision for proposed projects and improvements to be implemented during the five year plan. All geographies are approximate; project will be developed through detailed design and community feedback.

The curbside is where many of New York City’s daily activities take place: space for parking, loading, bike lanes, bus lanes, outdoor dining, bike parking, bike share docks, food trucks, and more. In a city as dense and with such a mix of uses as New York, curbside space can be some of the most valuable and most in-demand real estate. Recognizing this, New York City and its peer cities are transitioning from an approach focused on long term private vehicle storage to seeing the curbside as a complex space with many competing demands (and opportunities) that must be planned and managed in a holistic way, across many different functions and at different times of day. More dynamic and data-driven approaches are becoming available to manage curbside space, allowing cities the flexibility to allocate different curbside uses in real-time. In line with these trends, NYC DOT is approaching curbside management in a more comprehensive manner, working to best utilize this valuable space to accommodate the wide variety of needs of residents, businesses, and visitors. This includes prioritizing sidewalk space adjacent to curbs, which must balance a variety of needs including wayfinding, public seating, electric vehicle charging, and more.

As demand increases at the curb, encouraging parking turnover is critical for accommodating different users and needs. Metered parking has evolved to better encourage turnover for traditional parking. The original coin-only, single-space meters were converted to multi-space “Muni-Meters” accepting credit cards, and now mobile options allow payment from virtually anywhere. However, curbside regulations are only as useful as the enforcement backing them up. Illegal parking and abuse of authorized parking placards can negate the power of curb regulations to effectively keep curbside users moving and minimize street disruptions. New technology-based enforcement solutions like automated video enforcement and License Plate Recognition (LPR) hold potential to minimize the abuse of curb space, allowing the same space to serve more users over time.

What We’ve Done

NYC DOT uses multiple programs to manage curbside space throughout the city:

- Traditional metered parking
- Metered commercial vehicle parking
- Authorized parking
- Street cleaning regulations
- Bus lanes
- Bike lanes
- Shared-use vehicle regulations
- No standing regulations (bus stops, fire hydrants, plazas, daylighting, etc.)

Recommendations

NYC DOT will be working on multiple fronts to modernize our approach to curbside management and parking:

Modernize Parking Regulations: Many of New York City’s parking regulations that govern how vehicles can use city streets have not been re-examined in decades. These regulations, originally put in place to match the demands of the city, do not always reflect the current needs in many retail and commercial areas. NYC DOT will revisit parking regulations in fast-changing commercial areas to improve curb access, maintenance, and management.

Expand Curb Management Strategies: In response to changing demands on the curb, NYC DOT will create and expand our curb management tools, including dedicated space for short-term parking and loading, prioritization of cleaner vehicles and car share, and adequate space for bike parking and bike share stations. Policies that prioritize short-term parking and loading can be used as a tool to discourage double parking by keeping curb space readily available. The installation of dedicated zones for green vehicles and cargo bikes can help the city achieve more efficient deliveries and climate goals. The increasing availability of location-based data provides an opportunity to gain near real-time insight into what kinds of curbside activities are happening when and where.

Expand Paid On-Street Parking: Paid on-street parking is only found in some areas of the city. Curbs that do not have paid parking often have vehicles that occupy the curb longer, meaning that fewer users are able to access the same space. Adding more metered parking and expanding the hours of paid parking discourages drivers from occupying the curb for longer than necessary and allows the curb to serve more users. NYC DOT will explore adding more metered areas and/or expanding the hours of paid parking to improve curbside management.

Align On- and Off-Street Parking Rates: NYC DOT will work to adjust on-street parking rates to be more in line with off-street prices to encourage improved turnover and parking supply citywide. Balancing parking rates has been shown to substantially decrease drivers “cruising” for cheaper parking spots, which make up a large portion of citywide traffic at any given time.

GOAL:

8: Ensure that curb access is allocated in a rational manner to a diversity of users and uses.

Transformative Ideas

Prioritize Parking Efficiency: The impact of free parking in some of the densest parts of the city needs to be considered given all of the demands for curb space. Reducing unregulated on-street parking creates more space for sustainable modes and deliveries. NYC DOT plans to increase meter parking in the densest parts of the city, with the potential for differential prices for vehicles as warranted to further policy goals, such as higher prices for larger or more dangerous vehicles. Enforcement should be automated wherever possible.

Major Placard Parking Reform: Vehicles parked with authorized parking placards, fake placards, or even official-looking paraphernalia take up significant curb space in certain neighborhoods, leading to double-parking and congestion, and creating antipathy towards government. NYC DOT will implement meaningful placard reform, with a specific process for identifying those who really need them. Some form of automated enforcement may be necessary to achieve compliance.



Traffic congestion can be an outcome of a busy, economically thriving city, but that doesn't mean that we must accept it as a necessary part of life. Traffic congestion has a variety of undesirable outcomes including wasted time for motor vehicles (including buses) and their passengers, and increased vehicle emissions. It also leads to additional driving as drivers seek alternate routes to avoid congestion, unsafe behavior by frustrated drivers seeking to escape congested roadways, and noise from honking. Traffic congestion occurs as a result of both more predictable, recurring events such as peak period commuting patterns and double-parking for deliveries, as well as less predictable events such as crashes and poor weather. In a worst case, traffic can spill back and block other intersections, leading to widespread gridlock.

NYC DOT works to alleviate congestion by disincentivizing single-occupancy vehicle trips, by making other travel choices more attractive and competitive, and by helping traffic move more efficiently and reducing the impact of traffic incidents. Because double-parking is a major contributor to congestion in busier areas of the city, curbside management strategies are another key tool for reducing traffic.

Moving vehicles is not the same as moving people—some transportation modes can move more people in less space than others. And some modes emit less pollution and GHGs even when they are stuck in traffic. NYC DOT evaluates traffic congestion with an eye towards moving the greatest number of people (and goods) on a given street. With traffic volumes back to pre-COVID-19 pandemic levels and transit ridership remaining depressed, working to avoid unnecessary car trips is more important now than ever.

GOALS:

- 4:** Expand access to job opportunities and encourage job creation through faster and more reliable transportation options.
- 8:** Ensure that curb access is allocated in a rational manner to a diversity of users and uses.



Person Capacity Per Lane By Mode

Source: NACTO

What We've Done

NYC DOT works to manage traffic congestion using a range of strategies in both the short- and long-term, including:

- Dynamically managing traffic flow on critical roadways citywide via NYC DOT's centralized Traffic Management Center (TMC)
- Implementing "Midtown-In-Motion" (MIM), a traffic-responsive congestion management system within the Midtown Core, and similar strategies in other busy areas like downtown Flushing
- Optimizing and refining traffic signal timing plans throughout the city so that they remain consistent with prevailing travel demand patterns
- Coordinating traffic signals along arterials and other major roadways to minimize delays and streamline traffic flow between intersections
- Restricting turns at key locations due to traffic safety or operational considerations
- Undertaking smart curb management techniques to reduce double-parking
- Partnering with NYPD to focus traffic control staff and enforcement efforts at key congestion hot spots
- Utilizing intelligent transportation system technologies (e.g., electronic Variable Message Signs) to help traffic move more efficiently and reduce impacts when traffic incidents occur
- Analyzing existing and projected future traffic patterns to inform roadway designs that balance competing multi-modal travel demands
- Managing the location and design of curb cuts/driveways along the city's roadways to provide access to abutting properties in a safe, efficient, and rational manner

- Implementing dedicated left-turn and right-turn lanes, where feasible, to provide safe refuge for turning vehicles outside of through-traffic lanes and help reduce delays at intersections
- Undertaking long-range area-wide transportation planning studies to project future multi-modal travel needs, and to identify mobility and safety improvements for all roadway users to support the city’s growth over time in a sustainable manner
- Reviewing and refining transportation design/operations elements of property development proposals to proactively identify potential congestion-related issues and mitigate them through the integration of both on-site and off-site improvement measures that safely accommodate future growth
- Identifying bottlenecks and developing capacity enhancement measures
- Transportation Demand Management (TDM) programs (Go Smart NYC): Since 2014, Go Smart NYC has used a targeted, neighborhood approach to providing information and encouragement to residents in particular sections of the city about their travel choices to reduce vehicle trip making. NYC DOT has administered programs in Middle Village, Queens; Stapleton, Staten Island; and Coney Island, Brooklyn

Recommendations

Central Business District Tolling Program (CBDTP): NYC DOT will continue supporting the MTA’s implementation of the CBDTP (also known as congestion pricing), including adjustments to our streets to take advantage of reduction of motor vehicle traffic and support mode shift. The program will help reduce traffic in and around the Manhattan CBD; improve air quality; provide a regular funding source to improve and modernize the MTA’s subway, bus, and commuter railroads; and promote equity by providing expanded access to the transit system.

Access Management: Delays and traffic congestion due to poorly located curb cuts and driveways that provide access to abutting properties increase travel times and undermine the safety and efficiency of the city’s streets. The proper planning, design, and coordination of property access (i.e., access management) help minimize such delays. NYC DOT will continue to collaborate with NYC DOB and NYC DCP—and with property owners, developers, and their consultants—to refine and enhance site plans in accordance with access management principles such as limiting direct access to major streets and limiting the number of curb cuts.

Enhanced TDM Efforts: NYC DOT will strengthen TDM programs by supporting incentives for public transit and users of other sustainable modes and through GO Smart advertising. Go Smart NYC will build off of the City’s micromobility efforts and target areas with new transportation options for education and encouragement programming, including the e-scooter pilot zone(s) in the Bronx and the Citi Bike expansion areas of Brooklyn and Queens.

Enhanced Transportation System Management (TSM) Efforts: NYC DOT will identify bottleneck locations in the city that can be mitigated with signal timing changes, parking regulations, and lane reconfigurations to support TSM.

Pick-up and Drop-off Zones: The City is piloting retail taxi/FHV pick-up and drop-off zones near large retail sites aiming to curb double parking, enhance safety, and decrease congestion, and will expand these efforts going forward.

Central Business District Tolling Program

The MTA implementation of the CBDTP would be the first congestion pricing program in the United States. The Environmental Assessment, which the United States Department of Transportation’s Federal Highway Administration (FHWA) has said must be undertaken, will look at the environmental effects of the CBDTP program. Congestion pricing has helped other cities around the world, and we believe it would also help the people who visit, live, or work in the New York City metropolitan region. By reducing traffic and helping improve public transit, the CBDTP would also make it faster to travel and would improve air quality. The CBD Tolling Zone would cover 60th Street in Manhattan and all the roadways south of 60th Street, except for FDR Drive, the West Side Highway/Route 9A, the Battery Park Underpass, and any surface roadway portions of the Hugh L. Carey Tunnel connecting to West Street.

Before COVID-19, over 700,000 vehicles entered the Manhattan CBD each day. That was more than 255 million vehicles each year. Average traffic speeds were only 7 mph in the CBD, and even slower in Midtown Manhattan. While traffic dropped to 30% of normal levels in April 2020, by summer 2021 it was close to where it was before COVID-19 began. This congestion is bad for the economy, the environment, and the quality of life for people who live in the CBD, as well as for commuters, business owners, and visitors. Congestion makes travel slow and unreliable. Traffic increases the time it takes to get somewhere, reduces bus service quality, and costs businesses, since workers cannot do as much when they spend a lot of time in traffic.

Additionally, public transit is important to the New York City metropolitan region. Before COVID-19, more than 75% of trips into the area south of 60th Street in Manhattan were made by bus, subway, commuter railroad, or ferry. The millions of people living in the New York City metropolitan region need easy transit options. Problems in the system cause people to be late to work; miss medical appointments, school, and other important activities; and spend more time away from family. MTA ridership had increased nearly 50% in the 20 years before COVID-19. At the same time, the money invested in the MTA for public transit improvements fell by 8%. The MTA needs a regular source of money for its \$54.1 billion 2020–2024 Capital Plan. These funds will help maintain and modernize the existing transportation system, and help provide more capacity, reliability, and accessibility. It will also help low-income and non-white communities.

If the CBD Tolling Program Environmental Assessment is approved by the FHWA, vehicles that enter or remain in the CBD would be tolled. The toll would be paid using an E-ZPass. If you do not have an E-ZPass, toll bills would be mailed to the address of the registered vehicle owner, and they would pay the bill through Tolls by Mail. To identify vehicles, sensors and cameras would be located above the roadway on poles that look like those used for sidewalk lights or traffic lights. After paying the cost of running the CBDTP, 80% of the money will be used to improve and modernize New York City Transit, which runs the subway system and buses; 10% will go to Long Island Rail Road, and 10% to Metro-North Railroad. CBDTP will provide a regular source of money that can be used only for subway, bus, and commuter railroad projects and will help make them all faster, more accessible, and more reliable for everyone. It is anticipated that the CBDTP could deliver many benefits for New York City, including:

- Reduced traffic in and around the Manhattan CBD
- A regular funding source to improve and modernize the MTA’s subway, bus, and commuter railroads
- Better air quality
- Promoting equity by providing expanded access to the transit system
- Reduced travel times

The planet faces a climate crisis and New York City is rising to the challenge on multiple fronts—buildings, transportation, infrastructure, and energy generation, among other sectors. The City is working to sustainably reduce emissions and achieve carbon neutrality by 2050 and make sure that our neighborhoods, economy, and public services are more resilient and adaptable to the impacts of climate change. In the transportation sector, this requires both significant mode shift away from single-occupancy vehicle trips (in a city that already has the highest trip share for sustainable transportation modes in the country) and greener automobiles, primarily through electrification. However successful New York City is in reducing green house gases (GHGs), it still needs to build up resiliency in the face of climate change impacts that have already begun to arrive. The City must simultaneously protect communities and infrastructure from the effects of climate change. Along with the challenge of climate change, improving the environmental health of the city and region remains vitally important, and NYC DOT continues to work to achieve cleaner water and cleaner air, reduce the urban heat island effect, and increase our use of recycled materials.

What We’ve Done

OneNYC, the City’s plan for sustainable and equitable development, lays out a plan to dramatically reduce GHG emissions and achieve carbon neutrality by 2050, as well as a range of actions to continue cleaning up our natural environment. With OneNYC serving as a foundation, NYC DOT has several programs aimed at sustainability and resiliency:

Sustainability

NYC Clean Trucks Program: To help improve local air quality, reduce GHG emissions that contribute to climate change, and promote investment in cleaner, advanced trucks and transportation technologies, the City has introduced the NYC Clean Trucks Program (see also Freight section) that provides \$9.8 million to replace older, dirtier diesel-powered trucks in New York City with newer, less polluting trucks. By providing incentive funds through point-of-sale rebates, the program reduces the cost for commercial fleets that want to purchase new trucks with advanced and clean fuel technologies and accelerates the deployment of medium- and heavy-duty Battery Electric Vehicles (BEVs), Plug-In Electric Vehicles (PEV), Hybrid Electric Vehicles (HEVs), and Compressed Natural Gas (CNG) or diesel-fueled trucks.

Electric Vehicle (EV) Charging: With transportation currently accounting for 30% of the city’s emissions, EVs are an important part of the City’s effort to fight climate change by achieving carbon neutrality by 2050. The Electrifying New York plan set a goal of growing the city-operated fast charging network to over 80 plugs by 2025. In 2021, NYC DOT began installation of 120 level 2 curbside charging plugs in partnership with Con Edison and opened its first two DC fast-charging stations. Moving forward, the agency plans to install 1,000 curbside chargers and more than 15 additional fast-charging stations by 2025.

EVs are becoming much more affordable, battery range is increasing, and more models are hitting the market. To help EV owners easily charge their vehicles, the City is creating PlugNYC, a comprehensive network of publicly accessible Level 2 chargers and direct current (DC) fast chargers. Level 2 charging stations allow EV owners to charge their vehicles while parked near their homes, workplaces, or other destinations. DC fast chargers offer a charging experience comparable to a gas station.

Recycled Asphalt: NYC DOT is a national leader in the use of recycled asphalt pavement (RAP). By reusing material, the City saves on costs associated with new material, transport, and landfill fees. The use of RAP reduces annual truck trips by two million miles for carrying milled asphalt to landfills—reducing congestion, pollution and wear and tear on our streets. The City currently paves our streets with 40% recycled content asphalt and will increase recycled content to 50% by 2025.

LED Streetlights and Traffic Lights: NYC DOT currently maintains over 350,000 streetlights throughout New York City and is a national leader in using sustainable street lighting. In the largest such project in the country, NYC DOT continues to retrofit all of New York City’s streetlights with energy-efficient LEDs.

Resiliency

Resilient Design: Local Law 41 (LL41) of 2021, which provides climate resiliency design guidelines and which began its pilot program in August 2021, requires that capital infrastructure projects must be evaluated on resiliency metrics including risk of flooding, heat mitigation, efficient energy resilience, resilient building materials and more. That law will come into full effect in five years (December 2026) and requires that capital projects meet a minimum score in order to be approved. NYC DOT is currently integrating the requirements of LL41 into our capital project scoping and design processes.

Coastal Protection: Since the devastating damages of Hurricane Sandy, the City has embarked on new flood protection projects designed to protect Lower Manhattan, Red Hook, Broad Channel, the Rockaways, Jamaica Bay, the East Shore of Staten Island, and other vulnerable coastal areas. NYC DOT will own and operate this new network of floodwalls and gates that are largely located on the

GOALS:

3: Increase sustainable travel modes by reconfiguring streets and making more attractive choices available for New Yorkers to support the continued growth of NYC while reducing congestion and emissions

7: Rebuild old and build new infrastructure in a way that is sustainable, future-proof, and resilient to the impacts of climate change

9: Encourage more efficient and sustainable goods movement and decrease the negative effects of truck traffic

City’s right-of-way. NYC DOT’s responsibilities for this new type of coastal infrastructure will include activation of flood gates in advance of an impending storm, as well as routine maintenance and testing of the flood protection systems to confirm that they are functioning properly.

Green Infrastructure: NYC DOT supports the City’s Green Infrastructure program, which helps prevent the rainwater or “stormwater” that falls on our city’s streets and sidewalks from entering and overwhelming the city’s sewer system, by coordinating with NYC DEP and other agencies on the planning, design, implementation, and maintenance of green infrastructure within the public right-of-way. This includes rain gardens and permeable paving.

Recommendations

NYC DOT will continue working with partners to adopt the actions in OneNYC and transform the city’s climate impact, investing in projects related to sustainable fuels, cutting emissions, reducing energy consumption, and climate impact mitigation.

Future initiatives include the following:

Sustainability

Electrifying New York Vision Plan: The next few years represent a critical opportunity to accelerate EV adoption. New York City can fill this need by providing and incentivizing EV charging infrastructure. NYC DOT will create 1,000 curbside charge points by 2025, increasing to 10,000 by 2030; will equip 20% of all spaces in municipal lots with fast chargers, increasing to 40% by 2030; and will develop a citywide plan for first 100 truck charging stations citywide (also see Freight program area).

Connected Street Light Program: Currently, Street Lighting is unable to respond as quickly as it could to maintenance needs because these interventions require field surveys. Remote monitoring of street lights could eliminate the requirement for field surveys before intervention, and streamline their maintenance.

Recycled Pavement: We will increase recycled content in our asphalt from 40% to 50% by 2025. We are currently testing recycled concrete for use in sidewalks and are exploring other low-carbon concrete solutions such as the use of ground glass to replace cement.

Resiliency

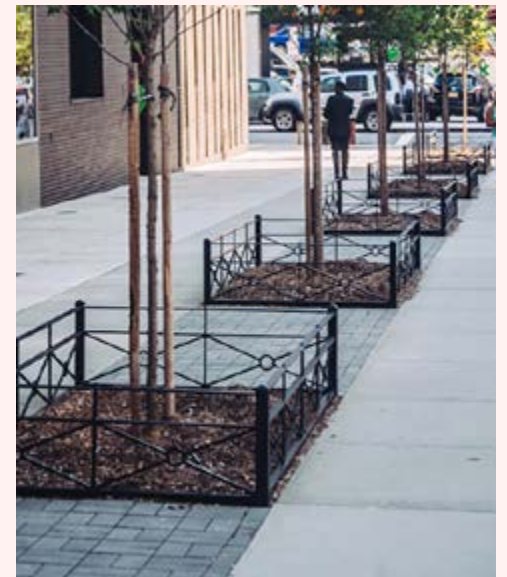
Cool Corridors/Heat Resiliency: Extreme heat is the leading cause of mortality from extreme weather in New York City. Heat-related impacts take a significant toll on the health of New Yorkers, resulting in 450 emergency room visits, 150 hospitalizations, 115 excess deaths, and 13 direct heat-stroke deaths each year on average. The COVID-19 pandemic that unfolded in 2020 underscored the importance of leveraging outdoor public spaces that can provide co-benefits. As part of the Cool Neighborhoods NYC strategy, NYC DOT strives to utilize light colored pavements and incorporate street trees into street reconstruction projects whenever possible. NYC DOT is also partnering with the Mayor’s Office of Climate Resiliency (MOCR) and the Mayor’s Office of the Chief Technology Officer (MOCTO) on heat sensors in high-heat vulnerable neighborhoods to collect better real-time temperature and humidity data that can inform future streetscape design and programming.

Flash Flooding: NYC DOT is integral to emergency response operations to keep New Yorkers safe during flash flooding. In addition to notifying travelers about anticipated heavy rains, NYC DOT also helps to clear catch basins and to provide proper drainage. NYC DOT is also working with NYC DEP to make capital investments to improve stormwater resiliency from heavy rains and cloudbursts. The City is investing over \$2B in drainage system improvements in Southeast Queens, including a significant contribution from NYC DOT. We are also advancing recommendations from the recently released NYC Stormwater Resiliency Plan using \$110M in newly allocated funding.

Resilient Capital Planning and Design: NYC DOT is committed to creating a more resilient city by incorporating multi-hazard climate risk assessments and resilient design into its capital program. Using NYC’s Climate Resiliency Design Guidelines, the agency aims to mitigate risks of coastal inundation, sea level rise, heavy precipitation, and increased heat in street reconstruction, bridges, facilities, and other capital projects. This process supports NYC DOT infrastructure that is designed and built to withstand the changing climate conditions over the course of a project’s entire useful life.

Transformative Ideas

Mitigating Urban Highways: Limited-access highways have harmed the health and economic prospects of many neighborhoods. Working through a lens of environmental and economic equity, NYC DOT could prioritize for community visioning and mitigations select sections of New York City’s highway system that are underutilized and/or have negatively impacted the health of surrounding neighborhoods. These measures may include capping below-grade highways, adding noise reducing features, or, in limited circumstances, conversion to at-grade boulevards similar to the Sheridan Expressway project in the Bronx.



Implementation Strategies

There is no shortage of challenges associated with implementing all the recommendations contained in this Plan and meeting the benchmark targets set out in Local Law 195. Although securing adequate resources and having community and political support will be important prerequisites, there are also things that NYC DOT as an agency can do to improve our internal project delivery practices.

Some of the ways we are updating how we work to better deliver the *Streets Plan*'s goals include:

- » **Ensuring better prioritization/allocation of internal implementation resources** – We will optimize the staff resources we do have to focus on projects that deliver the greatest gains.
- » **More closely integrating capital projects with in-house planning and design processes** – We will better use available capital resources to permanently build out street improvements where appropriate.
- » **Increasing the scale and complexity of what NYC DOT can deliver in-house** – We will continue to innovate in what our in-house personnel can deliver in a much shorter time frame than required for capital projects, especially concrete infrastructure.
- » **Bolstering NYC DOT's neighborhood planning capacity** – We will conduct more community-focused studies and turn recommendations into projects
- » **Solving implementation process bottlenecks** – We will identify areas where projects get held up due to inefficient practices or lack of resources, and then address these bottlenecks. This can include expansion of in-house staff and facilities and/or new contracts or other ways to expand capacity.
- » **Increasing community participation in our public engagement** – We will continue to expand proactive project outreach and experiment with different ways of engaging communities
- » **Better aligning state-of-good-repair work with safety** – We will work to obtain more resources for maintaining our streets (e.g., re-paving, pavement markings) and prioritize where maintenance can have the greatest safety benefit.

Next Steps

Benchmark Category	2022 Benchmark Targets	2022-26 Average Per Year Benchmark Targets	2022 NYC DOT Capacity
Protected Bus Lanes (Miles)	20	30	20
Protected Bike Lanes (Miles)	30	50	30
Bus Stop Upgrades (Shelters or Benches AND Bus Time Poles)	500	500	500*
Transit Signal Priority (Intersections)	750	1,000	Up to 750
Accessible Pedestrian Signals (Intersections)	500	500	500
Pedestrian Space (Sq. Ft.)	500,000**	N/A**	400,000
Redesign Intersections	400	400	400
Commercial Loading Zones and Truck Routes		Qualitative Benchmark	
Parking Policy Revisions		Qualitative Benchmark	

* Subject to new contract being executed
 ** Local Law 195 calls for an addition of 1,000,000 square feet of pedestrian space by December 31, 2023

The Streets Plan is a living document. After this report is issued, NYC DOT will hold listening sessions open to all to hear what New Yorkers think about the Plan. But that will just be a first step in engaging New Yorkers about this plan. As we begin planning for specific projects in the short term project areas identified in this plan, we will be conducting outreach in relevant communities. We may also update the Plan report itself during its five year life to ensure that it remains relevant to conditions in our streets. In addition, we will be monitoring the progress of the Plan on an annual basis and reporting how we are doing. Our monitoring and reporting will be based on the benchmarks established in LL 195, but we will also look to develop additional key performance indicators that track output in other programs as well as outcomes consistent with the plan goals.

As the table above shows, we believe we can meet most if not all of the benchmark targets in 2022, but ramping up further will require additional headcount and financial resources as well as community support and political will. As an agency we will also need to further improve our project delivery performance by integrating implementation strategy recommendations described in the previous section. We are committed to not just building out miles and square feet of projects, but seeking out the most impactful and important improvements, which may be small in surface area but large in the numbers of New Yorkers they benefit. We will also consider equity in all that we do, which will include engaging communities where improvements can mean the most, such as the Tier One Priority Investment Areas identified in this Plan. Though it may take more time, we will listen to community stakeholders and use their input to shape our projects.

