Better Buses Action Plan



Message from the Mayor



Dear Friends,

Buses are a critical transportation option for New Yorkers, creating access to employment, education, health care and the City's expansive subway network. The two million bus trips New Yorkers take on New York City Transit and MTA Bus Company buses are a key piece of the mobility mix that allows many New Yorkers to live fulfilling lives without a personal car. In the five years since I took office, we have taken steps to improve the speed and reliability of New York City's buses by redesigning our streets to put buses first. To date, the Department of Transportation has built 111 miles of bus lanes to set aside space on our streets for bus riders. We have also expanded the reach of Select Bus Service (SBS) by launching 18 new SBS routes on 16 corridors. By installing transit signal priority, we have adjusted our traffic lights to keep buses moving. These efforts have outpaced those of other American cities, with a focus on practical improvements that can be implemented quickly and at relatively low cost.

While these efforts have led to faster bus service and increased ridership on the bus routes we have focused on, they have coincided with an overall citywide decline in bus speeds and ridership. In recent years, New Yorkers have been presented with a rapidly expanding menu of mobility options, and while each of them add value for certain situations, there is no option that matches the efficiency of moving large numbers of people through a dense city like buses and subways do. With the commitment to congestion pricing in the most recent State budget, transit will become even more important in moving New Yorkers to jobs and other destinations in Manhattan below 60th Street. We support the MTA's efforts to turn around the subway system; on our streets, both the MTA and the City have a role to play in improving bus transportation.

That's why this plan sets out a bold goal of improving bus speeds for all New Yorkers by 25 percent, rising from their current average speed of eight miles an hour. A performance increase of this magnitude would mean New Yorkers spending nearly 28,000 fewer hours on the bus each day, giving them more time for their families and busy schedules. We aim to achieve this goal through a broad application of the strategies described above, plus targeted bus lane enforcement from NYPD and with cameras, and through collaboration with MTA on Bus Network Redesign, improved bus service management and fare payment innovations.

We will bring these improvements to bus corridors throughout the City, working closely with elected officials and the community through every step of the process. To become the fairest big city in the world, we must empower buses to be engines of social mobility for all New Yorkers.

Bill de Blasio

Bill de Blari

APRIL 2019

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New Yorkers ride the bus over two million times each weekday.

They ride an extensive bus network that puts 94% of City residents within walking distance of a bus stop and connects New Yorkers of all means to opportunity: jobs, schools, shopping, health care, and the vast subway system.

While the bus network is extensive and heavily utilized, buses can be slow and unreliable, leading to rider frustration.

New York City buses are, in fact, the slowest in the United States, averaging 8 miles per hour, but often much slower on individual routes during peak times. The causes are well known and include frequent stops, delays while passengers board, traffic congestion, and waits at red lights. Slow buses mean longer travel times for passengers, and thus limit their ability to effectively travel to destinations around the five boroughs.

Many of the same factors that slow buses also prevent them from consistently maintaining schedules. As a result of congestion or poor service management, buses may bunch, resulting in lengthy gaps in service followed by multiple buses arriving all at once. When riders cannot rely on buses to get them to their destination at about the same time every day, it negatively impacts their work and personal lives.

These challenges make the bus less attractive than other options and bus

ridership has decreased by 13% between 2014 and 2018.

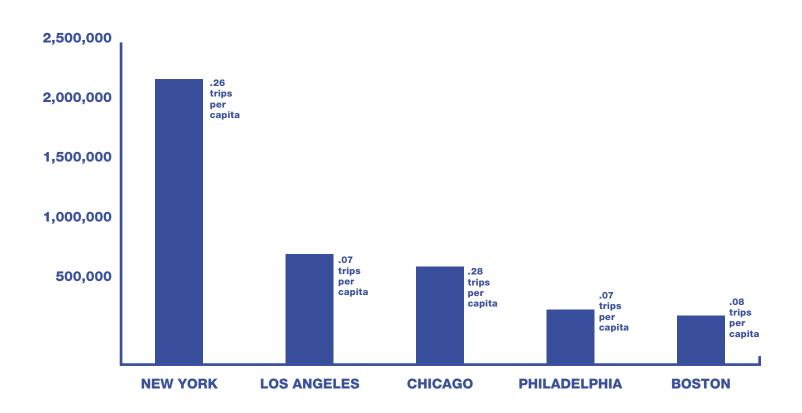
For the seniors, persons of color, and low-income New Yorkers that make up a disproportionate number of bus riders, improving the City's bus system is especially crucial to mobility, health, and economic well-being. An effective bus system, however, should be a viable transportation option for everyone— not just for those with limited alternatives.

New York City gained over 400,000 residents and 600,000 jobs from 2000 to 2017, and continued growth is anticipated. While the subway meets transportation needs for many, it does not extend everywhere and the current system is reaching the limits of its capacity, with significant expansion unlikely anytime soon. The implementation of congestion pricing in early 2021 will only enhance the importance of transit in New York City, as more travelers into Manhattan below 60th Street will seek alternatives to driving. Buses can be part of the transportation solution for current and future New Yorkers, but only if they can provide reasonably fast and reliable service.

New York City is committed to reversing these ridership trends by working with our MTA partners and making investments that result in faster and more reliable service.

New York has 2.5 times more bus riders than any other U.S. City

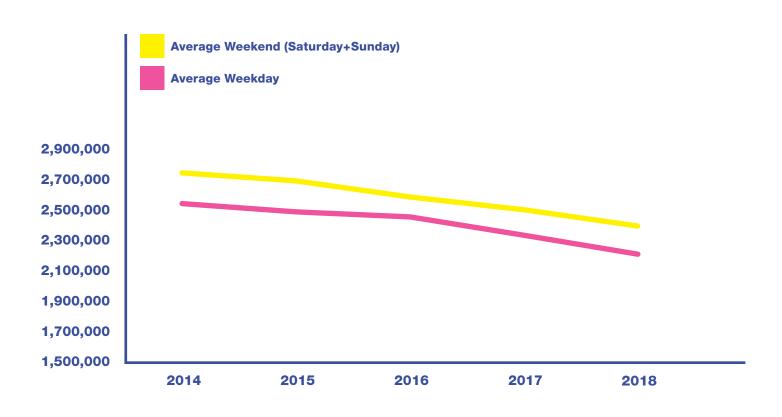
TOP FIVE U.S. CITIES BUS RIDERSHIP (per weekday passenger trips)





Bus Ridership decreased by 13% from 2014–2018

NYC BUS RIDERSHIP TRENDS



+**select**busservice

ON AVERAGE, SBS ROUTES ARE 27% FASTER THAN LOCAL/LIMITED ROUTES

Select Bus Service (SBS) is a ten-year old collaboration between DOT and MTA that implements bus rapid transit on high-demand corridors throughout the City. Since 2008, 18 SBS routes have opened on 16 corridors, and planning and design is currently underway for the M14A and M14D. SBS has demonstrated that a coordinated package of service, infrastructure, and vehicle improvements can result in faster and more reliable service. Most SBS routes include the following components:

- Red bus lanes
- Transit Signal Priority
- Stop spacing longer than limited routes
- Off-board fare collection
- Enhanced bus stops with large shelters, fare payment machines, and Real Time Passenger Information
- High-capacity, low-floor buses
- Unique branding to enhance system recognition and usability



CONGESTION PRICING

Transportation experts have long suggested that charging vehicles entering Manhattan is the most effective way to address the crippling congestion in that borough, and as MTA's financial woes have worsened, the concept of congestion pricing as a key revenue source has gained momentum. The State's enacted 2020 budget includes the implementation of congestion pricing below 60th Street starting in 2021. Tolls collected from congestion pricing, along with other new revenue sources, are earmarked towards MTA capital costs, but the City will also encourage MTA to make increased investments in bus service. For its part, the City's Better Buses Action Plan includes investments that complement congestion pricing by making transit trips within and into the Manhattan congestion pricing zone faster and more reliable. These include bus lanes and other bus priority measures in key locations.

London, which implemented a congestion charge and improved bus service in 2003, saw as an immediate result improved bus speeds and ridership gains in central London both within and outside its zone.



Action Plan Goals

Increase average speeds by 25% by the end of 2020



BUS PRIORITY

- Improve 5 miles of existing bus lanes per year
- Install 10-15 miles of new bus lanes per year
- Pilot up to 2 miles of physically separated bus lanes in 2019
- In 2019, implement DOT street design projects that benefit 600,000 daily riders

TECHNOLOGY

Add 300 Transit Signal Priority (TSP) intersections per year

ENFORCEMENT

- Expand bus lane camera enforcement
- Increased NYPD bus lane enforcement with seven dedicated tow truck teams

BUS STOPS

Evaluate and improve bus stops

WORKING WITH THE MTA

- Support MTA Bus Network Redesign efforts with borough bus priority plans
- Press for all-door boarding, restarting the SBS program, and other improvements to bus operations

HOW WE CALCULATE BUS SPEEDS

The MTA uses Bus Time GPS tracking technology, which measures the location and speed of all buses in passenger service. To calculate average speed, the MTA measures the amount of time required for each bus run to travel from its first stop to its last, divided by the mileage of the route's path between those stops. Each bus run is measured that way each day for the entire City, yielding an average speed measure. This statistic is updated each month at http://busdashboard.mta.info/. 8.0 m.p.h. was the average speed calculated for all buses (weekday peak and off-peak) both over all 12 months of 2018 and in the latest "typical" traffic month - October. The City will use 8.0 m.p.h. as its baseline, and target 10.0 m.p.h. by the end of 2020.

How We Plan to Achieve Goals



PROTECTED BUS LANES

NYC DOT will pilot two miles of physical barriers to further discourage illegal bus lane use at critical locations in 2019. Some lanes have a history of infractions that enforcement alone has not resolved. Potential barrier treatments are concrete "Jersey" barriers, rubber curb, plastic bollards, and concrete median curbs. Regardless of the materials, periodic gaps will be provided for emergency vehicle access and bus overtaking, and intersection controls will be modified where needed to ensure safety and efficiency (e.g., turn bans, bus priority signals).

Bus Priority

2019 Projects DOT has identified citywide locations for bus lane upgrades or new bus lanes that meet plan goals.

Additional Project Planning Starting in the Bronx, DOT will develop borough bus priority plans in conjunction with MTA's borough bus network redesigns, and continue to advance projects citywide.

Technology

Transit Signal Priority (TSP) TSP is a technology to help buses move through intersections faster by holding a traffic light green, or turning the light green sooner. Currently there are nearly 600 intersections with TSP. DOT will expand this program by adding TSP at 300 intersections per year on both SBS and local bus networks.

Enforcement

Camera Enforcement The City currently has legal authority to install bus lane cameras along 16 corridors. We will advocate for authority to expand this enforcement approach to other routes.

On-bus Camera Enforcement MTA tested bus-mounted cameras to identify and ticket bus lane violators and will roll out a larger pilot in summer 2019.

NYPD Enforcement NYPD has already initiated deployment of seven tow truck teams to enforce bus lanes citywide.



Bus Stops

Accessible Bus Stops DOT will improve accessibility at 10 bus stops in 2019. In addition, DOT is currently conducting a citywide survey of all bus stops to identify those with physical accessibility challenges, which will help prioritize more stop upgrades in future years.

Real Time Passenger Information Signs Thanks primarily to City Council funding, nearly 500 bus stops currently have real time bus arrival information, with plans for nearly 200 more. In 2019 DOT has asked the technology community to submit ideas on the next generation of bus time signs which will be tested this year.

Shelters DOT is working closely with the City's franchise operator for bus shelters to expand their installation citywide.







BX6 ON 161ST STREET: A PRECEDENT FOR MAJOR SPEED IMPROVEMENTS

The Bx6 South Bronx Crosstown corridor is a critical bus route connecting 24,000 daily riders to eight subway lines, Metro-North Railroad, and twenty bus routes. 76% of households within a quarter-mile of the route do not own a vehicle and two-thirds of workers rely on transit to get to work. However, the existing route was notoriously slow, averaging 56 minutes to travel just 4.8 miles. Buses were particularly slow in the half-mile segment on 161st St from Yankee Stadium to Morris Avenue due to significant congestion and persistent double-parking issues in front of the court houses.

In 2017, DOT implemented a series of aggressive bus priority improvements focused on the half-mile bottleneck on 161st St to improve speeds in this section and reliability on the full route:

- New York City's first two-way center-running bus lanes
- bus boarding islands
- sidewalk extensions
- repurposing a pre-existing tunnel under a major arterial to bus-only eastbound

These improvements led to significant speed improvements: between 39% and 45% eastbound, the direction in which the tunnel was converted to bus-only. In the westbound direction, where the tunnel remains a mixed-traffic lane, speeds have still improved between 15% and 26% due to center-running bus lanes at the approach.

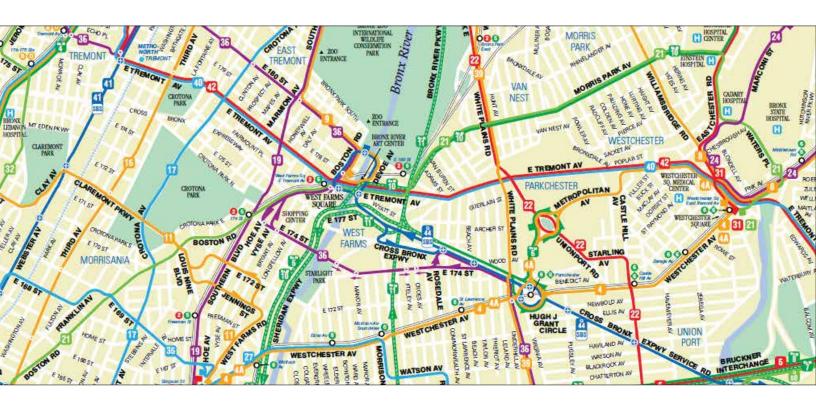
Network Redesign Coordination

MTA has issued its bold **Fast Forward Plan**, which includes **Bus Network Redesigns for all five boroughs**. Bus Network Redesign is a planning approach that takes a holistic, clean-slate look at bus service, evaluating current and future customer needs, as well as existing bus performance and reliability.

Network Redesign has the potential to result in more direct routes, greater frequencies in high-demand corridors, and more efficient bus stop spacing. MTA will remove too-closely spaced bus stops to speed bus service starting in 2019 in the Bronx, and as policy in other boroughs. MTA will redesign bus routes in all boroughs by 2022. NYC DOT's bus priority efforts will be closely coordinated with this initiative.

Faster Boarding

MTA plans to replace the MetroCard with OMNY (One Metro New York), a new electronic fare payment system which will speed up front-door boarding and enable all-door boarding with payment verification. As phased implementation occurs over the next few years, MTA plans to implement all-door boarding as part of its OMNY strategy. In 2019 MTA will introduce tap readers and install them on all buses by the end of 2020. As the MTA implements its OMNY strategy, the City will advocate for on-street fare machines at the busiest bus stops citywide to supplement all-door boarding, so SBS routes are not slowed down by the conversion to OMNY.





Service Management

Targeted improvements to bus operational practices and policies could allow MTA to take advantage of improved street running conditions. As specified in MTA's Fast Forward Plan, MTA is currently improving bus performance through service management. These improvements include:

Mid-route driver changeovers Evaluating the effects of mid-route driver changeovers, which can slow bus trips to accommodate driver shifts. MTA will complete an economic and operational study of select locations to reduce this practice in 2019.

Schedule Updates Re-evaluating bus schedules in areas where bus priority is installed is critical to ensure buses are taking advantage of streets optimized for them. MTA will review 200 schedules in 2019.

Route Management MTA will also focus dispatching resources and bus management technology to help reduce bus bunching, particularly at the beginning of routes. It will establish an ongoing service management initiative on 17 corridors in 2019, and make a new bus command center fully operational in 2021.

Fleet Conversion

DOT will continue to support MTA efforts to add clean vehicles and facilities to its bus operations. MTA plans to buy more than 1,300 buses by 2022, including 60 all-electric buses.

Continuing the SBS Program

Additional high-demand bus corridors can benefit from comprehensive bus priority, custom vehicles and branding that the SBS program offers. The City is committed to making bus priority improvements to these key corridors and will encourage MTA to allocate funding for its part of the program to enable this successful collaboration to continue. MTA and DOT have begun work on launching the M14A and M14D SBS in 2019. MTA will examine the economic and operational effects of launching two new SBS routes in 2020.

Bus Priority Tools





New Bus Lane

Bus Lanes separate buses from general traffic, improving speed and reliability. They are typically located along the curb or "offset" from the curb, allowing the curb lane to be utilized for other purposes. Ensuring that bus lanes are not used by others is a challenge in New York City, so accompanying enforcement strategies are crucial.



Upgraded Bus Lane

DOT sometimes considers improving bus lanes to make them more effective. This could include extending hours, converting unpainted to red painted lanes, changing curbside lanes to offset lanes, and other measures that improve the efficacy of bus lanes and make the street work better for all users.



Potential Protected Bus Lane

Protecting a bus lane with the use of a barrier makes it more difficult for vehicles other than buses to illegally use the lane. This can improve the effectiveness of a bus lane where violations are rampant, but must be accompanied by measures that preserve essential access to the curb (e.g., emergency vehicles).



Bus Boarders

Bus bulbs are permanent sidewalk extensions at bus stops that provide more space for waiting passengers and allow buses to pull up to the curb without leaving the travel lane, saving valuable seconds. DOT has recently been employing durable recycled plastic "bus boarders" that serve the same purpose but do not require capital construction.





Bus Queue Jump Signal

In addition to corridor-wide transit signal priority (TSP) treatments, dedicated bus signal phases are another way to use traffic signals to give buses priority through an intersection. These bus queue jump signals provide buses with a dedicated signal phase that allows them to bypass congested general traffic and get a head start.



Traffic Flow Improvement

In some cases improving general traffic flow can in itself benefit buses. This may include a variety of measures such as signal timing adjustments and improved lane markings.



Curb Management

DOT bus priority project planning includes an evaluation of curb regulations. Adequate and appropriate truck loading, passenger dropoff, and parking regulations can benefit bus operations by reducing double parking and the illegal use of bus lanes. Effective enforcement is also critical to curb management success.



Pedestrian Safety

Under Vision Zero, the City uses every tool at its disposal to improve the safety of our streets, and bus priority projects often provide such opportunities. Bus bulbs shorten pedestrian crossings as well as improve bus operations, and new crosswalks and median refuge islands can improve safety for all pedestrians, including bus riders accessing stops.





Bus Stop Accessibility

In addition to creating safe crossing conditions, bus stops need to be accessible to everyone. This means that nearby sidewalks and pedestrian ramps are present and in good condition. DOT ensures this is the case in all its bus priority projects.



Turn Restrictions

Limiting certain turns is another way that the City can increase safety for all users. In certain projects doing so also allows buses to avoid conflicts and move faster. Turn restrictions also benefit traffic flow.

Bus Forward Corridors

The 2017 Bus Forward report incorporated public feedback through workshops, intercept surveys, and online feedback. That planning work resulted in additional recommended SBS corridors, and the identification of excessively slow and unreliable local bus segments in all five boroughs. Our proposed 2019 program focuses on both areas, taking more extensive and aggressive approaches to meet the Better Bus Action Plan goals.



2019 Projects

DOT's bus priority street design projects for 2019 help achieve the Action Plan Goals. These projects play an important role in meeting the outlined bus priority targets: increasing bus speeds, improving bus stop accessibility, and supporting the City's Vision Zero safety goals along bus corridors. For each project, additional public outreach will include getting feedback on detailed proposals with community boards, elected officials, and other stakeholders. Further detail on each project can be found at the end of this report.

- 01. Lexington Ave
- 02. FDR Dr
- 03. Madison Ave
- 04. Allen St
- 05. Battery PI
- 06. 42 St
- 07. 14 St
- 08. 96 St
- 09. Baychester Ave
- 10. Broadway
- 11. Mosholu Pkwy
- 12. Webster Ave
- 13. Woodhaven Blvd
- 14. Broadway
- 15. Main St
- 16. Union Turnpike
- 17. Fresh Pond Rd
- 18. Rockaway Beach Blvd
- 19. Pennsylvania Ave
- 20. Livingston St
- 21. Malcolm X Blvd
- 22. Church Ave
- 23. East New York Ave
- 24. Narrows Rd



2020 and Beyond

Bus priority projects after 2019 will be developed in coordination with MTA's Borough Network Redesigns. Starting in the Bronx, DOT will coordinate public outreach with MTA to learn where riders want to see dedicated lanes and other measures that speed up buses. In addition to and complementing MTA's service change proposals, DOT will create borough-specific Better Buses Action plans that will set the stage for bus priority project implementation in 2020 and beyond. Future bus priority projects will include those that complement the congestion pricing program to be implemented in New York City by early 2021.



Public Outreach

DOT will be talking with New Yorkers as we determine what corridors should be addressed and what specific treatments are needed to achieve our goals. As a first step we will form a Better Buses Advisory Group to both inform program planning and support implementation. The Advisory Group will include City agencies, MTA, elected officials, transit advocates, and others.

We will also soon launch a citywide communications campaign to broadcast the importance of improving bus travel in New York City and the need for measures to accomplish this, similar to the City's successful messaging about traffic safety associated with our Vision Zero program.

We will continue to conduct local outreach on every project that we do in 2019 and subsequent years. As a basis for prioritizing our 2020 Better Buses projects, we will undertake borough-wide planning and outreach efforts, closely coordinated with MTA's bus network redesign process. See Project Outreach below for examples of how DOT engages communities on individual projects.

PROJECT OUTREACH

DOT engages in a wide variety of outreach for bus priority projects. A specific project may include any or all of the following:

Stakeholder Briefings:

Briefings involve discussions and presentations on project details to inform and gather feedback. Examples of stakeholders consulted on projects include elected officials, community boards, civic associations, business improvement districts (BIDs), schools, civic centers, places of worship, and medical centers.

On-Street Outreach: This type of outreach allows staff to have individual conversations with bus riders and other stakeholders in the project

area, pass out project materials, and gather feedback from individuals who may not be able to attend an organized project briefing or event.

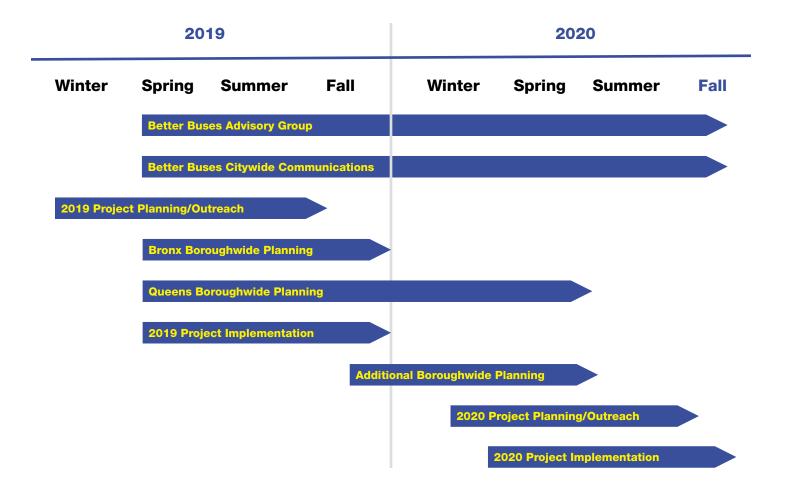
Public Workshops and
Open Houses: These events
are held in the project area,
often in the evening, for
community members to learn
details about a project, speak
directly with project staff,
ask questions, and provide
input on project plans.

Business Survey: Business surveys involve staff going door-to-door to businesses in a project area to interview business owners and/or employees about their curb use habits, needs, and preferences, including deliveries and parking.

Business survey data is used to help determine how curb space is being used, existing issues with curb use, and where curb regulation changes such as loading zones may be helpful to meet curb demands.

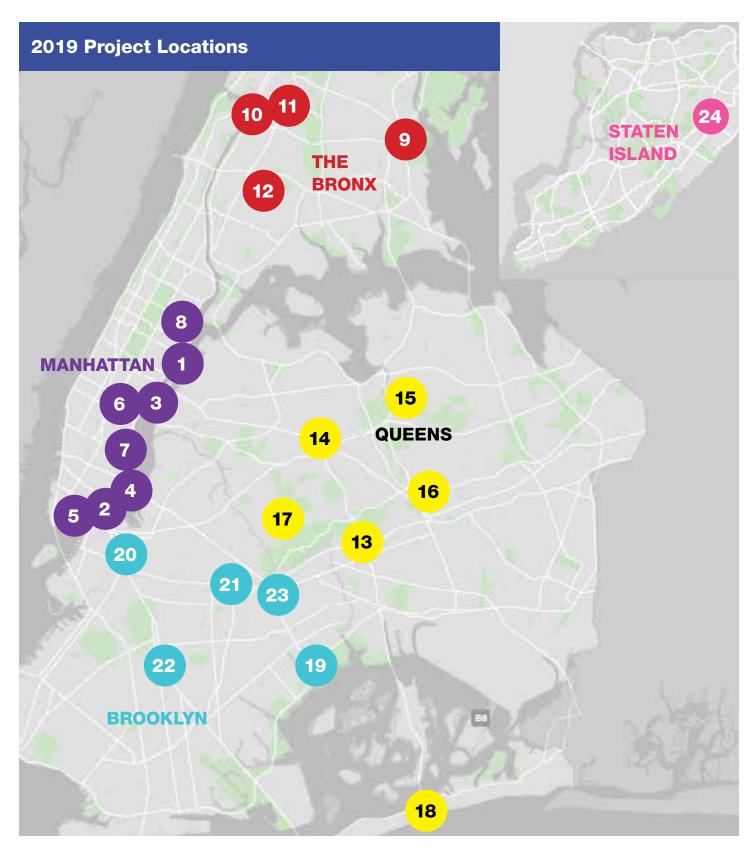
Shoppers Survey: A shoppers survey is an on-street intercept questionnaire to learn how visitors to a commercial corridor are traveling to the area, where they live, and the purpose of their trip. This is useful to help determine travel demand to an area by each mode of transportation and can help to determine where and what type of improvements should be prioritized.

Schedule





2019 Projects



- 1. Lexington Ave
- 2. FDR Dr
- 3. Madison Ave
- 4. Allen St
- 5. Battery Pl
- 6. 42 St
- 7. 14 St
- 8.96 St

- 9. Baychester Ave
- 10. Broadway
- 11. Mosholu Pkwy
- 12. Webster Ave
- 13. Woodhaven Blvd
- 14. Broadway
- 15. Main St
- 16. Union Turnpike
- 17. Fresh Pond Rd
- 18. Rockaway Beach Blvd
- 19. Pennsylvania Ave
- 20. Livingston St
- 21. Malcolm X Blvd
- 22. Church Ave
- 23. East New York Ave
- 24. Narrows Rd

01 Lexington Ave, 96th St to 60th St













Background

In 2017, Lexington Ave was identified as a Bus Forward corridor due to slow bus speeds. The existing curbside bus lane (in effect 7-10 AM) is often blocked due to curb demands, forcing buses into general traffic.

• Corridor length: 1.8 miles

• Routes served: M98, M101, M102, M103

• Total daily ridership: 44,000

Average bus speeds: 5.0 mph (AM) / 3.9 mph (PM)

- Repurpose one travel lane to an offset bus lane
- Extend hours of metered parking and truck loading zones on west curb
- Add turn-bays at major intersections to facilitate traffic movement
- Install bus boarders at the busiest stops

02 FDR Dr, Brooklyn Bridge to Battery Park











Background

Several Staten Island-bound express buses use FDR Dr and are regularly delayed in part by this frequently congested corridor. Transit priority will allow bus passengers to skip long traffic queues to the Battery Park Underpass.

• Corridor length: 0.7 miles

• Routes served: SIM3, SIM6, SIM10, SIM11, SIM31

• Total daily ridership: 7,000

Potential Improvements

 Allow buses to use the southbound shoulder as a bus lane during peak hours, with "Buses May Use Shoulder" signage installed between the Brooklyn Bridge and Battery Park Underpass









Background

The double bus lanes on Madison Ave are part of the busiest bus corridor in the city. Worn markings and lack of red paint have made the lanes difficult to interpret. This project continues 2018 work to upgrade the bus lanes to red-painted lanes.

- Corridor length: 0.9 miles
- Routes served: M1, M2, M3, M4, Q32, SIM4c, SIM6, SIM8, SIM8x, SIM11, SIM22, SIM25, SIM26, SIM30, SIM31, SIM33c
- Total daily ridership: 68,000

- Upgrade existing double bus lanes to red-painted bus lanes
- Update bus lane signage and traffic control signage to reinforce bus lane regulations and increase awareness of the bus lanes for all road users

04 Allen St, Houston St to Grand St









Background

DOT and MTA launched the M15 SBS in 2010, the first SBS route in Manhattan. DOT installed bus lanes on 1st Ave and 2nd Ave, but there are no bus lanes on Allen St, one of the slowest portions of the route.

• Corridor length: 0.4 miles

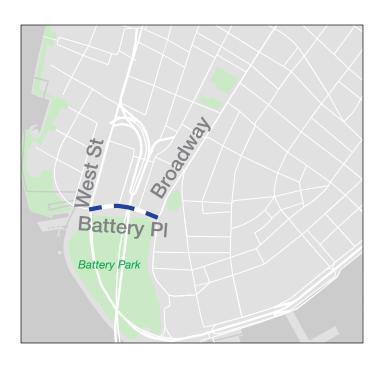
• Routes served: M15 SBS, M15

• Total daily ridership: 43,000

Potential Improvements

• Repurpose right travel lane to offset bus lane

05 Battery PI, West St to Broadway











Background

Battery Place is a major bottleneck point for Staten Island- and Brooklyn-bound express buses and other transit traveling to and from Lower Manhattan and the Hugh Carey Tunnel. This project supports MTA's 2018 Staten Island Express Bus Network Redesign with bus priority elements that will help relieve delays along this important transit connector.

- Corridor length: 0.1 miles
- Routes served: BM1, BM2, BM3, BM4, QM7, QM8, QM11, QM25, SIM1, SIM1c, SIM2, SIM3c, SIM4, SIM4c, SIM4x, SIM5, SIM15, SIM32, SIM33c, SIM34, SIM35, X27, X28
- Total daily ridership: 28,000

- Install curbside bus lanes in both directions
- Adjust bus stops to improve bus operations
- Update travel lanes to minimize conflicts between buses and other traffic
- Adjust signal timing to prioritize bus movements

06 42nd St, 12th Ave to FDR Dr

















Background

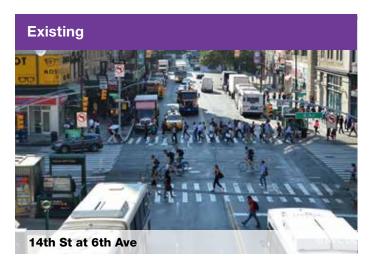
In 2017, 42nd Street was identified as a Bus Forward priority corridor due to its slow bus speeds. This project will investigate potential upgrades and extensions to the existing curbside bus lanes, as well as safety improvements along zthe corridor.

- Corridor length: 2.0 miles
- Routes served: M42, SIM8, SIM8X, SIM22, SIM25, SIM26, SIM30
- Total daily ridership: 16,000
- Average bus speeds: 4.2 mph (AM) / 2.9 mph (PM)

- Upgrade curbside bus lane to offset lane in at least one direction
- Update curb management along the corridor to prioritize transit priority, pedestrian space, and loading needs
- Extend/install turn bays at select locations and install turn bans at select locations to benefit the flow of buses and other traffic
- Adjust signal timing to improve crosstown travel

07 14th St, Ave A, Ave D















Background

14th Street is the busiest crosstown bus corridor in Manhattan. SBS upgrades, including off-board fare payment and bus lanes, will help to more efficiently accommodate the high volume of crosstown riders and provide faster, more reliable service.

• Corridor length: 6.9 miles

• Routes served: M14A, M14D

• Total daily ridership: 28,000

- Upgrade M14A and M14D local service to SBS, including off-board fare payment, bus priority street treatments, additional seating, and real-time passenger information
- Install bus lanes along the M14A and M14D routes
- Update curb regulations to prioritize transit, loading needs, and local access
- Adjust signal timing to prioritize bus operations
- Install bus boarders at bus stops adjacent to offset bus lane

08 96th St, Riverside Dr to FDR Dr











Background

M96 crosstown route is a high ridership route with slow speeds. Local stakeholders have requested that the route be upgraded to SBS.

• Corridor length: 2 miles

• Routes served: M96, M106

• Total daily ridership: 16,000

- Repurpose one travel lane to an offset bus lane where feasible.
- Update curb regulations to match loading needs
- Update signal timing to improve bus operations
- Consolidate bus stops

09 Baychester Ave at Bay Plaza









Bus Stop Accessibility

p Pede ility Sa

Background

The bus stop at this intersection is a popular dropoff stop for people traveling to the Mall at Bay Plaza, Co-op City, and surrounding neighborhoods. However it is currently inaccessible, with no sidewalk to the bus stop or marked crosswalks.

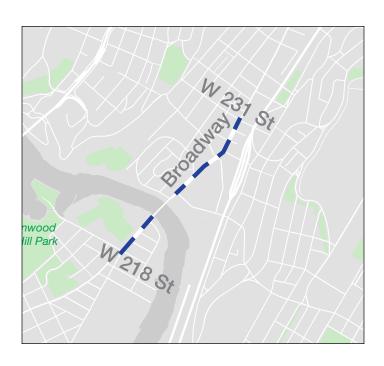
• Corridor length: 1.8 miles

• Routes served: Bx12 SBS, Bx12, Bx5

• Total daily ridership: 56,000

- Construct a sidewalk from the existing bus stop to the southeast corner of the intersection
- Install new pedestrian signals and high-visibility crosswalks
- Upgrade pedestrian ramps
- Provide a clearer, more protected pathway along the west side of Baychester Ave leading to Bartow Ave

10 Broadway, 231st to 218th St













Background

This corridor was identified as a Bus Forward project due to its slow speeds. This project will improve bus speeds, safety, and stop spacing.

• Corridor length: 0.5 miles

• Routes served: Bx7, Bx9, Bx20

• Total daily ridership: 40,000

Average bus speeds: 5.2 mph (AM) / 3.3 mph (PM)

- Coordinate bus improvements with the upcoming Broadway Bridge capital construction project
- Explore bus lane segments to provide bus priority on approaches to the Broadway Bridge and the 230th St intersection
- Install northbound bus queue jump signal at Exterior St
- Consolidate bus stops to improve stop spacing
- Investigate loading zones for the west curb

11 Mosholu Pkwy at Paul Ave











Bus Stop Accessibility

Background

Skewed intersection with complicated turning movements and numerous intersecting bus routes. Existing parking configuration makes it difficult for eastbound Bx10 and Bx28 buses to pull into stop.

- Routes served: Bx1, Bx2, Bx10, Bx28
- Total daily ridership: 59,000

- Add bus boarding island and painted pedestrian space to better align bus stop with bus movements
- Lengthen bus stop to accommodate multiple buses arriving simultaneously
- Improve bus stop accessibility
- Improve pedestrian safety and access around bus stops

12 Webster Ave, 176th St to 174th St











Background

Southbound traffic on Webster Avenue approaching the Cross Bronx Expressway entrance blocks buses and through traffic. Currently the southbound bus lane stops at E Tremont Av and does not return until E 174th St.

• Corridor length: 0.25 miles

• Routes served: Bx41 SBS, Bx41

• Total daily ridership: 21,000

- Add southbound offset bus lane between E 176th St and E 174th St
- Add physical barrier to separate bus and right turning movements
- Adjust signal timing to improve safety and vehicle flow

13 Woodhaven Blvd, Union Tpke to 101st Ave











Background

Continues previous planned work for the full Woodhaven SBS plan, where SBS was launched in 2017 and further improvements were implemented in 2018.

• Corridor length: 1.7 miles

• Routes served: Q11, Q21, Q23, Q52/53 SBS

• Total daily ridership: 38,000

- Construct five median tip extensions at Union Tpke, Myrtle Ave, and 101st Ave
- Reconstruct median on south leg of Myrtle Ave to lengthen northbound left-turn bay
- Study signal timing along corridor to extend pedestrian crossing time and improve bus speeds

14 Broadway, 75th St to Queens Blvd











Background

DOT and MTA launched the Q52/Q53 SBS service in November 2017. A bulk of the street design improvements occurred on Woodhaven Blvd, yet Broadway in Elmhurst is the slowest section of the Q53 SBS route.

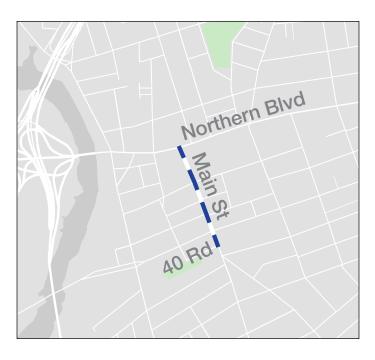
• Corridor length: 1.1 miles

• Routes served: Q53 SBS, Q58

• Total daily ridership: 49,000

- Add signalized queue jumps at nearside bus stops
- Add bus lane queue jumps on most congested parts of route

15 Main St, Northern Blvd to 40th Rd













Background

This segment of Main St in Flushing was converted to Bus and Truck Only southbound in March 2017, resulting in a 23% improvement in bus speeds. Additional changes will help to clarify and reinforce the Bus and Truck Only regulation.

- Corridor length: 0.2 miles
- Routes served: Q17, Q19, Q20A, Q20B, Q25, Q27, Q34, Q44 SBS, Q50, Q65, Q66
- Total daily ridership: 150,000

- Add pavement markings at 37th Ave intersection to reinforce southbound Bus and Truck Only decision point
- Extend northbound curbside bus lane to Northern Blvd
- Adjust signal timings around the Bus and Truck Only corridor to support key turning movements for redirected traffic
- Install additional signage for Bus and Truck Only and for redirected traffic as needed

16 Main St at Union Turnpike













Background

Q44 SBS launched in November 2015 with no bus lanes or signal timing improvements in the middle portion of the corridor. Main St at Union Turnpike is a consitent source of delay for the Q44 SBS.

- Routes served: Q20A, Q20B, Q44 SBS
- Total daily ridership: 42,000

- Restrict southbound left, and replace turn bay with median tip extension
- Convert northbound/southbound left-turn phase into northbound through-left phase with leading pedestrian interval (LPI)
- Add offset bus queue jump lane on northbound approach to intersection

17 Fresh Pond Rd, Metropolitan Ave to Putnam Ave















Background

This section of Fresh Pond Rd was identified in 2017 as a Bus Forward segment due to slow bus speeds, especially southbound in the PM. There is also heavy off-route bus traffic heading to the Fresh Pond depot at Fresh Pond Rd and 67th Ave.

• Corridor length: 0.5 miles

• Routes served: Q58, QM24, QM25, QM34

• Total daily ridership: 30,000

Average bus speeds: 5.9 mph (AM) / 3.0 mph (PM)

- Install curbside southbound bus lane for buses and right-turns, in effect weekdays for part of the day
- Consolidate Q58 local bus stops to improve stop spacing
- Install loading zones on east curb where warranted
- Install loading zones and meters on western spur streets
- Study northbound bus queue jump signal at Putnam Ave

18 Rockaway Beach Blvd, Beach 116th St to Beach 73rd St













Background

Q52/Q53 SBS launched in November 2017 with some bus stop improvements in the Rockaways. Additional pedestrian safety and bus stop accessibility improvements are needed for the entire corridor.

• Corridor length: 3.7 miles

• Routes served: Q22, Q52/53 SBS, QM16

• Total daily ridership: 36,000

- Implement pedestrian safety improvements at intersections along the corridor
- Construct sidewalks to make bus stops at Beach 73rd St and Beach 67th St accessible
- Install offset and curbside bus lanes on portions of the corridor

19 Pennsylvania Ave at Delmar Loop and Hornell Loop









Background

As part of Southern Brooklyn SBS, Pennsylvania Ave was studied for additional crosswalks to help bus riders and pedestrians safely cross this wide, Vision Zero Priority Corridor.

• Corridor length: 0.3 miles

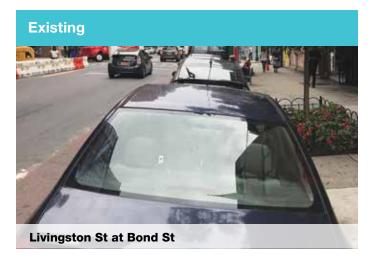
• Routes served: B82 SBS, B82, B83, BM2, BM5

• Total daily ridership: 36,000

- Install two new traffic signals at intersections of Delmar Loop and Hornell Loop
- Add new signalized crossings with pedestrian signals and high-visibility crosswalks
- Install painted medians and curb extensions

20 Livingston St, Boerum PI to Flatbush Ave









Background

This key east-west transit connector in downtown Brooklyn serves 6 bus routes and is regularly congested. Bus lanes are often blocked by illegally parked and standing vehicles.

- Corridor length: 0.5 miles
- Routes served: B41, B45, B57, B62, B67, B103
- Total daily ridership: 63,000

- Add dedicated westbound right turn arrow and signal phase to help buses turning right from westbound Livingston St onto Boerum Pl
- Refresh existing bus lanes and extend bus lane hours
- Upgrade bus lanes to protected bus lanes with physical barriers to prevent illegal parking and standing

21 Malcolm X Blvd / Utica Ave, Chauncey St to Atlantic Ave









Background

The B46, Brooklyn's busiest bus route, received Select Bus Service upgrades in 2016, but this major bottleneck remains. It was identified as a Bus Forward priority corridor due to long trips at slow speeds.

• Corridor length: 0.2 miles

• Routes served: B46 SBS, B46

• Total daily ridership: 42,000

Average bus speeds: 5.2 mph (AM) / 3.5 mph (PM)

- Install curbside southbound bus lane from Chauncey St to Atlantic Ave
- Install queue jump signal phase for northbound and southbound B46 buses at Utica Ave and Atlantic Ave

22 Church Ave, E 7th St to Flatbush Ave

















Background

Church Ave was identified as part of the Bus Forward program due to its slow bus speeds. This narrow corridor carries high volumes of bus and truck traffic, with delays regularly caused by double parking, truck loading, and long traffic queues.

• Corridor length: 0.8 miles

• Routes served: B35, B103, BM3, BM4

• Total daily ridership: 45,000

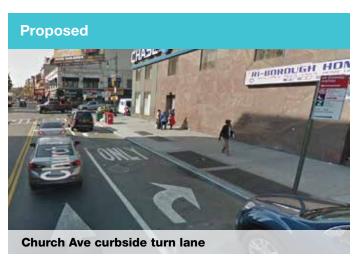
Average bus speeds: 4.9 mph (AM) / 3.6 mph (PM)

- Install curbside bus lanes to improve bus speeds and reliability along this narrow and congested corridor
- Update curb regulations to accommodate truck loading and short-term metered parking needs
- Investigate turn bans or turn bays to improve traffic flow along Church Ave for buses, trucks, and other vehicles
- Adjust bus stops to improve bus operations

23 East New York Ave, Herkimer St to Fulton St













Background

This area of East New York Ave, Herkimer St, and Fulton St near Broadway Junction was identified as a Bus Forward project due to slow bus speeds, illegal parking, lack of lane markings, traffic queues, and irregular intersections that make this a bottleneck for bus operations.

• Corridor length: 0.2 miles

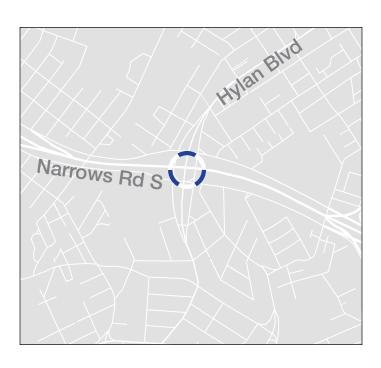
• Routes served: B20, B25, B83, Q24, Q56

• Total daily ridership: 40,000

Average bus speeds: 5.9 mph (AM) / 3.3 mph (PM)

- Clarify travel lanes and turning movements with new markings
- Modify signal timings and investigate turn restrictions to simplify intersections and improve bus speeds and traffic flow
- Investigate upgrades to signage and markings in "No Standing" areas to minimize illegal parking
- Remove parking near intersections to improve visibility and simplify turns for buses

24 Narrows Rd at Hylan Blvd













Background

Narrows Rd South at Hylan Blvd is the intersection of two busy bus corridors leading to the Staten Island Expressway and the Verrazzano-Narrows Bridge, with several routes stopping at the intersection. This project involves shifting the locations of some bus stops to remove conflicts between buses turning and traveling through the intersection, thereby improving bus operations and safety. Pedestrian safety and bus stop accessibility improvements will also be made to better connect bus riders to bus stops.

- Routes served: Routes served, S78, S79 SBS, S79, S93, SIM1, SIM3c, SIM7, SIM10, SIM15, SIM35
- Total daily ridership: 33,000

- Relocate the northbound S78 bus stop from the south side of Narrows Rd S to the north side to improve bus operations and safety
- Reverse direction of Hylan Blvd (east leg) from northbound to southbound, from Narrows Rd S to Olga Pl, to reduce congestion and make it easier for buses and other traffic on Narrows Rd S to merge onto the Staten Island Expressway on-ramp
- Investigate a leading pedestrian signal (LPI) for the east crosswalk to give pedestrians a head start on crossing the street to reach the S78 bus stop
- Coordinate with NYSDOT to move the existing bus stop on the south side of Narrows Rd S/Hylan Blvd one block to the west to improve safety, to better position buses to merge onto the Staten Island Expy and alleviate traffic congestion

