Select Bus Service

NEW YORK CITY DOT

MTA New York City Transit


S79
+SELECT
BUS SERVIC
141
4246
MTA
+selectbus

Contents


BUS LANE
BUSES ONLY
& RIGHT TURNS
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BUS
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5565
6x41
Mastermind

Overview

Select Bus Service (SBS), New York City's brand of bus rapid transit, offers fast, frequent, and reliable bus service on high-ridership bus routes, forming a citywide bus rapid transit (BRT) network that supplements and complements the existing subway network. NYC's first SBS route was implemented on Fordham Road and Pelham Parkway in the Bronx in 2008, after several years of planning and community outreach. The New York City Department of Transportation (NYCDOT) in partnership with MTA New York City Transit and MTA Bus will have implemented a total of seven new SBS services by Spring 2014.

Since SBS's inception in 2008, SBS services have saved 8 million hours in passenger travel time, and have served over 20,000 additional bus passengers daily. Ridership has grown on SBS routes, even during periods that bus ridership citywide declined.

SBS projects are developed through a community-based planning process that includes extensive public input and feedback from project inception to post-implementation. SBS projects have won plaudits from riders and key stakeholders, who have experienced the benefits in mobility and accessibility.

Implementation of these seven routes represents the most comprehensive BRT program implemented in a similar amount of time in the nation. This has been accomplished through a focus on bus priority elements that can be implemented quickly and with currently available funding. These elements include:

- Off-board fare payment, which reduces time spent at bus stops
- Low-floor, three-door buses with speed boarding
- On-street bus lanes which speed bus travel
- Transit signal priority which reduces the delay at red lights
- Wider stop spacing
- Improved passenger information

FIGURE 1

SBS Projects implemented June 2008-November 2013

*Not branded as SBS

The initial set of BRT corridors were selected as part of the NYC Bus Rapid Transit Study, completed in 2006. These Phase I SBS projects were implemented between June 2008 (Bx12 SBS on Fordham Road) and the introduction of Nostrand Avenue/Rogers Avenue SBS on November 2013.

After the success of Bx12 SBS, DOT and the MTA sought to identify a longer list of corridors for bus priority improvements. The resulting Phase II Plan identified 16 corridors for future BRT development. Two Phase II services have been implemented: Webster Avenue in the Bronx, and service to LaGuardia Airport from Woodside and Jackson Heights. In addition, an SBS service on 125th Street in Manhattan, also serving LaGuardia airport, will be implemented in Spring 2014.

This report profiles each of the SBS projects implemented to date, the benefits that SBS has brought to these communities, and plans for Phase II.

The Phase II planning process recognized that SBS treatments similar to those in the initial corridors would be appropriate on some Phase II corridors, while other corridors would offer opportunities for different bus priority designs that have not been implemented to date. This report surveys additional treatments which can be considered for future SBS corridors, highlighting where and how these approaches have been implemented in other large global cities.

This survey of SBS accomplishments to date and opportunities for future SBS implementations will serve to inform a public dialog over the best way to continue development of a dynamic and effective BRT program in New York City, building on the productive partnership between NYCDOT, the MTA and communities throughout the five boroughs.

The SBS Process

1 Identifying community issues

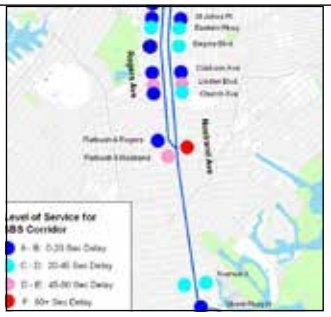
Public Workshops

Transit and Traffic Observations

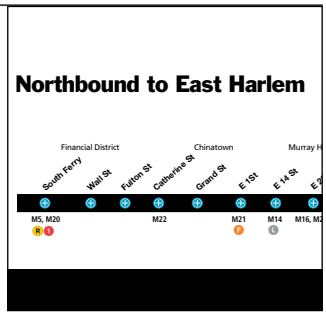
Community Surveys

2 Shaping SBS

Community Advisory Committee meetings



Traffic Analysis



Service Planning

3 Implementing SBS

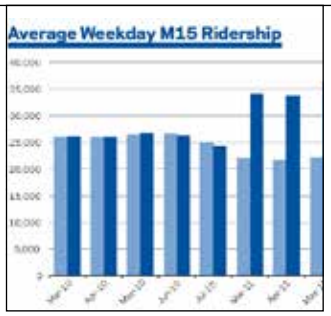
Public Open Houses

On-Street Implementation

Customer Ambassadors

4 Post-Implementation

Community Advisory Committee meetings



Project Monitoring

SBS: Comprehensive Corridor Planning

NYCDOT and NYCT aim to improve conditions for all street users. SBS projects create an opportunity for a comprehensive look at traffic congestion, pedestrian safety and parking and delivery needs.

Some of the non-transit benefits that have resulted from SBS projects include:

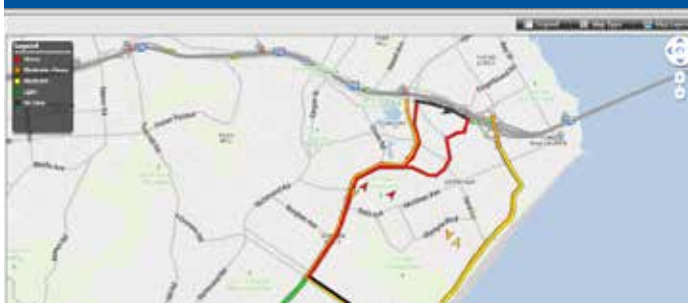
- Pedestrian Safety Islands
- Bicycle Paths and Lanes
- Delivery Windows
- Increased Metered Parking
- Additional Sidewalk Space
- Roadway Resurfacing
- Traffic Signal Optimization
- Real-time Traffic Information

PEDESTRIAN REFUGE ISLANDS

BIKE LANES

PEDESTRIAN AMENITIES

REAL-TIME TRAFFIC INFORMATION



ROADWAY RESURFACING

MORE EFFECIENT CURB REGULATIONS

Select Bus Service on First Avenue, Manhattan

Select Bus Service: The First Five Years

Key elements of SBS development and implementation are:

- Six new SBS services were implemented since 2008 (along with M60 SBS coming in Spring 2014), bringing project benefits to riders as quickly as possible.
- The chief goal of the SBS program is to make the buses faster, more reliable and easily identified as a premium service.
- SBS serves all five boroughs of the city, focusing on high-ridership bus routes.
- SBS routes are complementary to the city's extensive subway system; duplicating subway service would be inefficient and ineffective.
- Each SBS project has included an extensive public engagement process involving community boards, business improvement districts, merchant associations, civic groups as well as state and local elected officials.
- Dedicated bus lanes, off-board fare payment, transit signal priority and branding are the key elements.
- NYCDOT and NYCT have focused on fast implementation to bring benefits quickly and show results quickly within constrained rights-of-way and without lengthy capital construction. This has been crucial to program sucess; New Yorkers could see what SBS is, see how it worked, and evaluate suitability for the next corridor being planned.
- These projects have led to up to 20% faster bus service, and 10-20% increases in corridor ridership in the first year of service.

Since June 2008:

100 million SBS trips citywide

8 million person-hours saved

38+ miles of SBS bus lanes

SBS Routes in Operation

Bx12

FORDHAM ROAD/PELHAM PARKWAY

IMPLEMENTED JUNE 2008

OVERALL PROJECT COST ~$10 MILLION

Bx12 SBS provides a key crosstown transit connection in the Bronx.

PROJECT ELEMENTS/COSTS

- Curbside bus lanes ($4M)
- Transit Signal Priority ($2M)
- Off-Board Fare Payment ($4M)
- New Bus Shelters ($0M)*

TRAVEL TIME SAVINGS

20% IN FIRST YEAR

RIDERSHIP GROWTH

10% IN FIRST YEAR

** New bus shelters are installed under franchise agreement.*

M15

FIRST AVENUE/ SECOND AVENUE

IMPLEMENTED OCTOBER 2010

OVERALL PROJECT COST ~$17.5 MILLION

M15 SBS is the highest ridership bus route in NYC.

PROJECT ELEMENTS/COSTS

- Offset and curbside bus lanes ($5M)
- Transit Signal Priority ($1M)
- Off-Board Fare Payment ($4M)
- Bus bulbs ($7.5M)

TRAVEL TIME SAVINGS

18% IN FIRST YEAR

RIDERSHIP GROWTH

10% IN FIRST YEAR

M34/34A

34TH STREET

IMPLEMENTED NOVEMBER 2011

OVERALL PROJECT COST ~$27 MILLION

Ridership on M34 SBS has grown even as ridership on other Manhattan crosstown routes has declined.

PROJECT ELEMENTS/COSTS

- Offset and curbside bus lanes ($4M)
- Off-Board Fare Payment ($4M)
- Bus bulbs ($15M)

TRAVEL TIME SAVINGS

23% IN FIRST YEAR

RIDERSHIP GROWTH

12% SINCE 2011

SBS Routes in Operation

S79
HYLAN BOULEVARD

IMPLEMENTED SEPTEMBER 2012

OVERALL PROJECT COST ~$7 MILLION

Bus lanes serve a large number of express and local bus routes in addition to S79 SBS.

PROJECT ELEMENTS/COSTS
- Curbside bus lanes ($3M)
- Transit Signal Priority ($2M)
- Real-time travel information for drivers ($0.5M)
- Simplified route path

TRAVEL TIME SAVINGS
13-19% SIX MONTHS AFTER LAUNCH

RIDERSHIP GROWTH
5-10%

Bx41
WEBSTER AVENUE

IMPLEMENTED JUNE 2013

OVERALL PROJECT COST ~$9 MILLION

Bx41 SBS was planned and implemented more quickly than any other SBS project to date.

PROJECT ELEMENTS
- Offset and curbside bus lanes ($4M)
- Transit Signal Priority ($1M)
- Off-Board Fare Payment ($2M)
- Bus bulbs (in development)

TRAVEL TIME SAVINGS*
More than 15% since launch

**Preliminary results*

B44
NOSTRAND AVENUE/ ROGERS AVENUE

IMPLEMENTED: NOVEMBER 2013

OVERALL PROJECT COST ~$15 MILLION

Improvements to Williamsburg Bridge Plaza provide passenger amenities for several other bus routes.

PROJECT ELEMENTS (SINGLE CAPITAL PROJECT)
- Offset and curbside bus lanes
- Transit Signal Priority
- Off-Board Fare Payment
- Bus bulbs

Results will be available in 2014.


M34
M34A
BM5
East Side
Waterside
Spring Creek
Pay With Coins Only
Get Ticket Here
Before You Board Bus

SBS Performance

The SBS program has been very successful in bringing significantly faster bus service to key New York City corridors quickly, and at a relatively low cost.

As Table 1 illustrates, the SBS program has achieved comparable or better travel time savings relative to other BRT projects around the United States. This objective has been achieved at lower cost than most of the peer cities' projects. Furthermore, some of the peer cities have derived much of their BRT travel time improvements from limited-stop service, which New York City Transit has operated on dozens of routes for many years, and which is not branded as SBS.

New York City's streets serve a wide array of users that streets in some other American cities do not necessarily need to accommodate, including not only other traffic, but also the needs of curbside deliveries, as well as heavy usage by pedestrians. SBS projects have been successful in prioritizing bus movement on these streets while still serving the needs of other users. This balanced approach has led to numerous benefits for pedestrian safety, bicycle access and traffic management on SBS corridors, as well as in maintaining a favorable public view of the program.

TABLE 1
Major Bus Rapid Transit projects in the United States

PROJECT	CITY	COST ($M) *Excluding buses*	TRAVEL TIME CHANGE	WEEKDAY RIDERSHIP *First year*
M15 SBS	New York, NY	$18M	18%	55,900
Bx12 SBS	New York, NY	$10M	20%	45,400
34th Street SBS	New York, NY	$5M	22%	19,800
S79 SBS	New York, NY	$6M	16%	9,200
Average SBS	**New York, NY**	**$10M**	**19%**	**32,600**
Silver Line (Washington Street)	Boston, MA	$14M	17%	14,000
Health Line	Cleveland, OH	$164M	7%	21,200
EmX	Eugene, OR	$19M	4%	5,400
MAX	Las Vegas	$8M	35%	7,000
Orange Line	Los Angeles, CA	$324M	6%	20,000
Wilshire Metro Rapid	Los Angeles, CA	$5M	29%	90,300
Ventura Metro Rapid	Los Angeles, CA	$3M	23%	13,500
South Miami-Dade Busway	Miami, FL	$43M	0%	7,200
Lymmo	Orlando, FL	$21M	0%	4,200
Average other U.S. BRT		**$67M**	**13%**	**20,300**

FIGURE 2
Phase I and II BRT Corridors

Phase II SBS Corridors

NYCDOT and NYCT's *NYC BRT Study*, released in 2006, identified five corridors for initial BRT implementation. As early SBS implementation progressed, the two agencies engaged in a citywide planning process on where future BRT services are needed. The planning process included workshops throughout the city that gathered public feedback. Based on this feedback, the agencies developed a second plan for BRT implementation entitled *Bus Rapid Transit Phase II*, released in 2010. This study focused on four factors in identifying future corridors:

- Underserved neighborhoods
- Difficult trips
- Areas facing subway crowding
- Growth areas

Resulting from this effort, sixteen corridors were identified for future BRT planning and implementation.

Since the completion of the Phase II study, two Phase II corridors have been implemented: Webster Avenue and Jackson Heights to LaGuardia Airport, with the 125th Street/Astoria Boulevard route scheduled for Spring 2014 implementation. Planning is underway for improvements along Woodhaven Boulevard and Utica Avenue as well.

As the agencies plan these routes in partership with the communities that they serve, SBS designs used in new projects will often be effective templates, but where appropriate the agencies will look to a larger toolbox of transit priority elements. Ideas for consideration could include physically-separated bus lanes, center-running (as opposed to curb-running) bus lanes, and use of rail and highway rights-of-way. While these treatments are potentially higher cost and require more time-consuming capital construction than the SBS program has incurred to date, the potential benefits merit attention from the agencies and communities that would be served.

Since these are new treatments in a New York City context, this report highlights where and how these approaches have been implemented in other large global cities.

PHASE II CANDIDATE CORRIDOR LIST

COMPLETE 2013-SPRING 2014

- Webster Avenue
- Jackson Heights to LGA
- 125th Street/Astoria Boulevard

FUTURE PLANNING

- Woodhaven Boulevard
- Utica Avenue
- Flushing to Jamaica
- Upper West Side/Upper East Side Crosstown
- Southern Brooklyn East-West
- Hillside Avenue
- South Bronx East-West
- Bushwick to Downtown Brooklyn
- Flatbush Avenue
- 14th Street Crosstown
- Manhattan West Side
- Southeast Queens
- Manhattan-Northern Boulevard-Flushing


Reseda Bl
M
Reseda Park
ORANGE LINE
16

Case Studies

1. Paris Mobilien
2. San Francisco Muni Van Ness Avenue BRT
3. Cleveland RTA HealthLine BRT
4. Los Angeles MTA Orange Line
5. Istanbul Metrobus

Paris Mobilien

Physically Separated Urban Bus Lanes

The Paris Transport Authority (RATP) embarked on an Urban Development Plan in 2000 that led to the creation of the Mobilien bus network. Mobilien is comprised of a network of physically separated or contraflow bus lanes, made possible by extensive restrictions on street parking and very limited delivery zones. Mobilien has brought about speed increases of 10 to 20% on routes in operation as well as reliability improvements. RATP envisions expanding Mobilien to eventually serve 150 bus routes.

POTENTIAL APPLICABILITY IN NYC:
COMMERCIAL COORIDORS WITH POTENTIAL FOR ALTERNATE DELIVERY ACCESS

Features

- Physically separated bus lanes
- Traffic signal optimization
- Bicycle and taxi access
- Bus arrival information

Planning

2001-2004 (FIRST CORRIDOR)

Opened

13 CORRIDORS 2004-2013

Project Cost

N/A

Cost per mile

N/A

San Francisco Muni Van Ness Avenue BRT:

Center Median Busway on an Urban Commercial Street

The San Francisco County Transportation Authority completed the Van Ness BRT feasibility study in 2006. Subsequent planning documents call for a center median busway for roughly two miles of Van Ness Avenue from Lombard Street to Mission Street. Muni local routes and Golden Gate Transit express routes currently carry over 43,000 daily passengers, with over 16,000 boardings within the Van Ness corridor. SFCTA projects a ridership increase of 25 percent with the conversion to BRT, but has run into numerous delays on the road to implementation.

POTENTIAL APPLICABILITY IN NYC:
WIDE TWO-WAY COMMERCIAL BOULEVARDS

RENDERING OF BRT PLAN

RENDERING OF BRT PLAN

Features

- Center median busway
- Off-board fare payment
- Transit signal oriority
- Left-turn restrictions
- Pedestrian safety improvements
- Bus arrival information

Planning
2008-PRESENT

Opening
2018 (PROJECTED)

Project Cost
$126 MILLION (ESTIMATED)

Cost per mile
$63 MILLION/MILE

Current condition.

Cleveland RTA HealthLine BRT

Center Median Busway on an Urban Commercial Street

HealthLine BRT has been serving the Euclid Avenue corridor of Cleveland since October 2008. HealthLine buses operate in dedicated median bus lanes, serving stations that offer level boarding and off-board fare payment. Speeds have risen by 34% since the inception of service, and ridership has increased by nearly 60%. It is estimated that the HealthLine has spurred $4.3 billion in real-estate investment along the corridor.

POTENTIAL APPLICABILITY IN NYC:
WIDE TWO-WAY BOULEVARDS

Features

- Center Median Busway
- Off-board Fare Payment
- Transit Signal Priority
- Pedestrian Safety Improvements
- Bus Arrival Information

Planning
2002 TO 2008

Opened
2008

Project Cost
$164 MILLION

Cost per mile
$7 MILLION/MILE

Los Angeles MTA Orange Line

Repurposing An Abandoned Rail Corridor

The Orange Line busway operated by the Los Angeles Metropolitan Transportation Authority provides bus rapid transit service at stops roughly one mile apart. On this corridor, articulated buses take advantage of the disused Southern Pacific Railroad Burbank Branch right-of-way to operate unencumbered by general vehicle traffic. Passengers pay their fare by purchasing tickets at machines in every station.

Community resistance to at-grade rail service on this corridor led to the busway concept, which has proven popular, with daily ridership of over 30,000 passengers in an otherwise car-oriented area of Los Angeles. The Metro Orange Line Bicycle Route also follows part of this route, enhancing multimodal access.

POTENTIAL APPLICABILITY IN NYC:
STATEN ISLAND NORTH SHORE RAIL RIGHT-OF-WAY

Features

- Dedicated Busway
- Off-board Fare Payment
- Transit Signal Priority
- Park-and-Ride Stations
- Bus Arrival Information

Planning

2002 TO 2005

Opened

2005

Project Cost

$324 MILLION

Cost per mile

$23 MILLION/MILE

Istanbul Metrobus

High-Volume BRT on an Arterial Highway

Istanbul's Metrobus system covers 31 miles with 45 stations, almost entirely in the center of a limited-access arterial highway. Metrobus serves over 800,000 passengers daily, using articulated and bi-articulated buses to achieve passenger throughput similar to that of heavy rail transit. Accessing Metrobus stations frequent pedestrian overpasses, which often leave stations far from nearby destinations.

Metrobus has proven so popular in part because of very heavy vehicular congestion on the adjoining ring road, particular at choke points such as the Bosporus Bridge.

POTENTIAL APPLICABILITY IN NYC:
LONG ISLAND EXPRESSWAY, OTHER HIGH-VOLUME HIGHWAYS

Features

- Center Median Busway
- Off-board Fare Payment (most stations)

Implementation Timeframe

2005 TO 2007

Project Cost

$600 MILLION (INCLUDING BUSES)

Cost per mile

$7.5 MILLION/MILE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