WEBSTER AVENUE SBS

Study Corridor

- Based on the existing Bx41 bus route that carries 20,000 daily riders
- 5.3 miles from The Hub to Williamsbridge
- Within a 10-minute walk of the corridor:
  - 200,000 residents
  - 71% of households do not own a car
  - 61% of residents commute by public transit

Project Goals

1. Speed buses and improve reliability

2. Improve safety for all corridor users

3. Support community needs
**BUS DELAY**

- **Bx41 LTD buses are stopped more than 50% of the time**
- **One-way travel time can vary by up to 20 minutes** (typical times are between 37 and 57 minutes)
- **Travel times are worst in the PM peak**

*Average Bx41 LTD trip = 46 minutes*

### Bus stops
- **The Hub**
- **Fordham Road**

### Red lights
- **Fordham Road**
- **Claremont Avenue**

### Congestion
- **E Gun Hill Road**
- **Cross Bronx Expressway**
**SELECT BUS SERVICE IN NYC**

**Bus Rapid Transit (BRT)**
A cost-effective approach to transit service that cities around the world have used to make riding the bus more like a subway. BRT improves speed, reliability, and passenger comfort/convenience.

**Select Bus Service (SBS)**
New York City’s version of BRT, first used on the Fordham Road-Pelham Parkway Bx12 bus route in the Bronx.

### Bx12 SBS
**Fordham Road / Pelham Parkway**

- **Launched**
  - June 2008

- **Corridor**
  - 207th Street in Upper Manhattan to the Bay Plaza Shopping Center in Co-op City, Bronx via Fordham Road and Pelham Parkway

- **Features**
  - Red-colored curbside 7am-7pm bus lanes on Fordham Road
  - “Delivery windows” in the retail core
  - Fare Pre-Payment
  - Transit Signal Priority
  - Simplified service pattern

- **Results**
  - Speed: 20% reduction in travel time
  - Ridership: 7% increase in first year
  - Customer Satisfaction: 98% satisfied or very satisfied

### M15 SBS
**First Avenue / Second Avenue**

- **Launched**
  - October 2010

- **Corridor**
  - South Ferry to 125th Street in Manhattan via First and Second Avenues

- **Features**
  - Red-colored curbside and offset bus lanes
  - New low-floor, three-door buses
  - Fare Pre-Payment
  - Pedestrian and bicycle safety improvements
  - 2012: Bus bulbs and transit signal priority

- **Results**
  - Speed: 15-18% reduction in travel time
  - Ridership: 9% increase in first year
  - Customer Satisfaction: 99% satisfied or very satisfied
  - Safety: 21% reduction in traffic injuries in sections with full design treatments
SELECT BUS SERVICE FEATURES

Faster Service
- Bus lanes
- Faster fare collection
- Transit signal priority

User-Friendly
- Branding
- Stations
- Passenger information
STEP 1 - Develop three corridor design ideas

Curbside bus lanes  Offset bus lanes  Median bus lanes

STEP 2 - Screening analysis

Community Input

Meetings
- Community Advisory Committee Meeting #2 - May 2, 2012
- Public Open House #1 - May 16, 2012

Top Community Priorities
- Bx41 bus service
- Pedestrian safety
- Curb access and parking
- Accommodate future development

Technical Analysis

Transit operations
- Improves bus speed and reliability
- Benefits SBS and local buses

Traffic Operations
- Maintains appropriate traffic flows/speeds
- Accommodates local circulation

Pedestrian Amenities
- Increases total pedestrian space
- Improves pedestrian safety at intersections

Curb access
- Minimizes loss of on-street parking and delivery space

STEP 3 - Choose a preferred design

Based on the screening analysis, the **Offset Bus Lane** design option most effectively balances the transit and traffic needs along the Webster Avenue Corridor while maintaining on-street parking and supporting pedestrian activity.
Benefits of proposed design

1. Faster bus speeds due to new offset bus lanes
2. High-quality SBS stations constructed at bus bulbs
3. Preservation of parking and delivery space
4. Improved pedestrian safety with curb extensions and medians
5. Reduced speeding and crashes with single travel lane
6. Maintenance of traffic flow and circulation in street design

Typical plan

Bus Bulbs extend the sidewalk out to the bus lane at SBS stations, creating additional space for bus riders and pedestrians.

Parking along the curb except at bus stops.

Pedestrian Amenities - such as curb extensions, pedestrian islands, and medians - make intersections safer.

Dedicated Bus (& Right Turn) Lanes allow buses to move quickly while preserving parking.

General Travel Lane

Design of typical conditions on Webster Avenue
Business Survey
Over 150 businesses along the Webster Avenue SBS corridor were surveyed using a standard set of questions focusing on delivery needs and curb access. Example results:

Most businesses receive deliveries daily and the most common delivery time is between 7am and noon.

Parking utilization
10 sample blocks were analyzed between 7am and 7pm to further understand curb usage along the corridor. Example results:

47% of the time there was at least one double-parked vehicle on the east side of Webster Av between E 170 St and E 171 St

58% of vehicles parked for less than 15 minutes on the west side of Webster Av between E 189 St and Fordham Rd

Improvement options
Curb regulation changes will be developed with the help of local Community Boards. Possible improvements include:

Delivery Windows
- Truck loading zones can help keep the curb clear for store deliveries
- Reduces double parking
- Time-of-day and location determined with help of local businesses

Metered Parking
- Encourages more parking turnover in retail areas
- Reduces double parking
- Time-of-day, duration, and location designed to meet needs of the area
Offset bus lanes replace one general travel lane in each direction.

Lengthening left-turn bays creates more storage space.

Right-turn bays reduce blockages at busy intersections.

More signal time for key left-turn and through movements.

Banning left turns reduces turning conflicts and keeps through traffic moving better.

Updated curb regulations and offset bus lanes reduce double parking.
Traffic Analysis Process

The project team studied 10 intersections along the portion of Webster Avenue with proposed bus lanes, focusing on the busiest intersections during the busiest times of days (AM and PM rush hour).

Intersection design and signal timing determine the capacity of the street. **Level of Service (LOS)** is a grade based on the average delay per vehicle; it is used to describe the traffic conditions at each intersection.

- **LOS A-B**
  - Light traffic
  - Car clears intersection quickly

- **LOS C-D**
  - Moderate traffic
  - Typical amount of delay for New York City

- **LOS E-F**
  - Heavy traffic
  - Cars may wait more than one green light to clear intersection

**Existing**

**Proposed**

**Level of service - Webster Avenue**

- A-B: less than 20s delay
- C-D: 20-44s delay
- D-E: 45-79s delay
- F: 80s or more delay

**Project design**

- SBS in Bus Lane
- SBS in Mixed Traffic

**Level of service - Webster Avenue**

- A-B: less than 20s delay
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**Project design**

- SBS in Bus Lane
- SBS in Mixed Traffic
Two LTD stops at E Fordham Rd

Two LTD stops at The Hub

Two part-time LTD services on Webster Ave (Bx41 and Bx55) north of Fordham Rd
PROPOSED SERVICE

Option to have stop at E 183 St instead of E180 St

Bx15 LTD replaces the Bx55

LEGEND

Webster Av Routes
- Bx41 Local
- Bx41 SBS
- SBS to LGA

Third Av Routes
- Bx15 LTD
- Bx15 Local

Other
- SBS Station
- LTD Bus Stop

Proposed SBS Service to LaGuardia Airport

New York City Transit
+selectbusservice
Webster Avenue

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Webster Avenue
**SERVICE CHANGES**

**Webster Avenue**

**Bx41 SBS**
- Replaces the Bx41 LTD
- 1/2-mile stop spacing
- Frequent service all day
- Off-board fare collection (like the Bx12 SBS on Fordham Road)
- Standard bus fare

**Bx41 Local**
- No change to stop spacing
- Service every ~10 minutes

**Third Avenue**

**Bx15 Local**
- Local stops between The Hub and Fordham Plaza

**Bx15 LTD**
- Local stops between Harlem 125th Street and The Hub
- Limited stops between The Hub and Fordham Plaza
- All Third Avenue service ends at Fordham Plaza
Project Timeline

### Roadway markings and transit service

- **Finalize street markings and curb regulation plan**
- **Install bus lanes, fare machines, and priority treatments**
- **Start of Service**

### Bus bulbs and other capital construction

- **Engineering design of bus bulbs and other capital elements**
- **Construction**

### Community involvement

- **Meetings with Community Boards and Community Advisory Committee to discuss final roadway markings plan, including parking regulation changes and loading zones.**
- **Public Open House to present final implementation plans before start of service.**
- **Community meetings to discuss construction schedules.**

### Next Steps

- Present corridor designs and discuss curb regulations with Community Boards
- Finalize roadway markings plan
- Install bus lanes, place fare machinery, and prepare buses in Spring 2013
- Start of service in Summer 2013