NACTO BRT Workshop New York, NY April 6, 2010

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D New York City Bus

Bus Rapid Transit in New York City

Bus Rapid Transit

 High capacity, low cost system to improve urban mobility

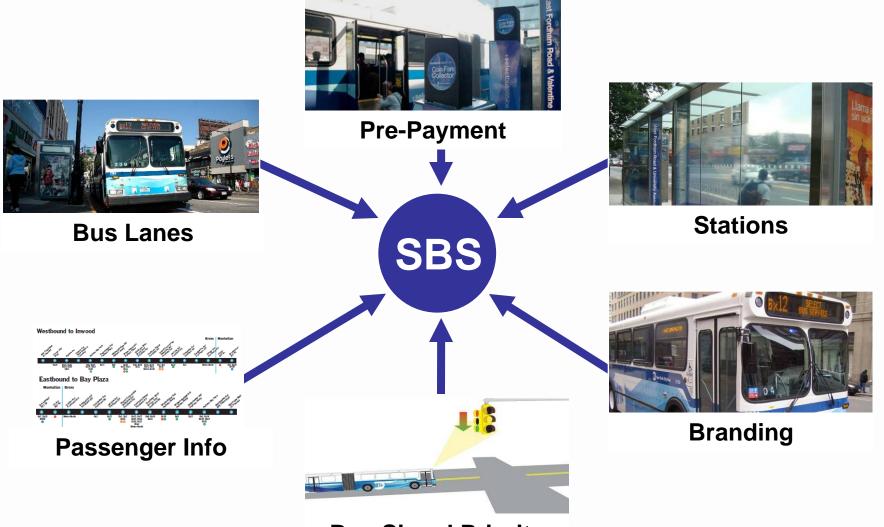
Select Bus Service

- New York City's first phase of BRT
- Improves bus speed, reliability, and attractiveness
- Being implemented on five corridors across NYC





Select Bus Service Features



Bus Signal Priority

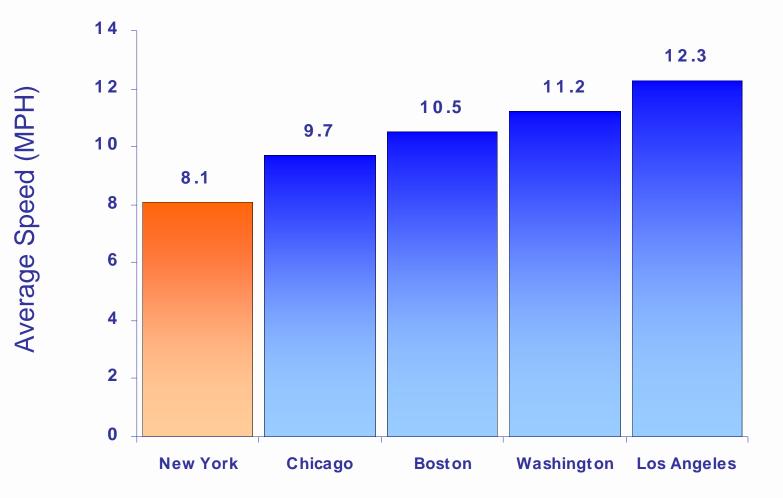


Background

- MTA New York City Transit:
 - Operator of New York City's public transit system
 - Part of Metropolitan Transportation Authority (New York State)
 - Over 5.2 million subway and 2.3 million bus trips per day
- New York City Department of Transportation:
 - Operator of New York City's streets, free bridges, and Staten Island Ferry
 - Maintains street and traffic signal infrastructure
- Agency partnership key to project success

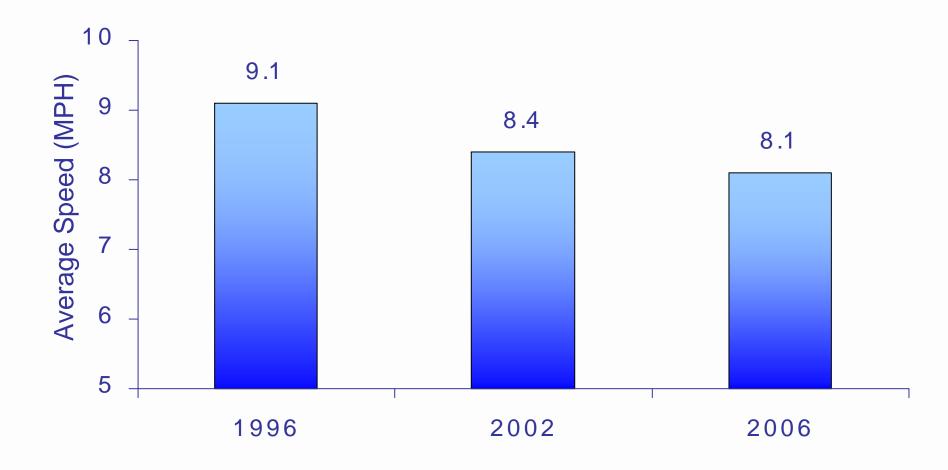


Background: Slow Bus Speed



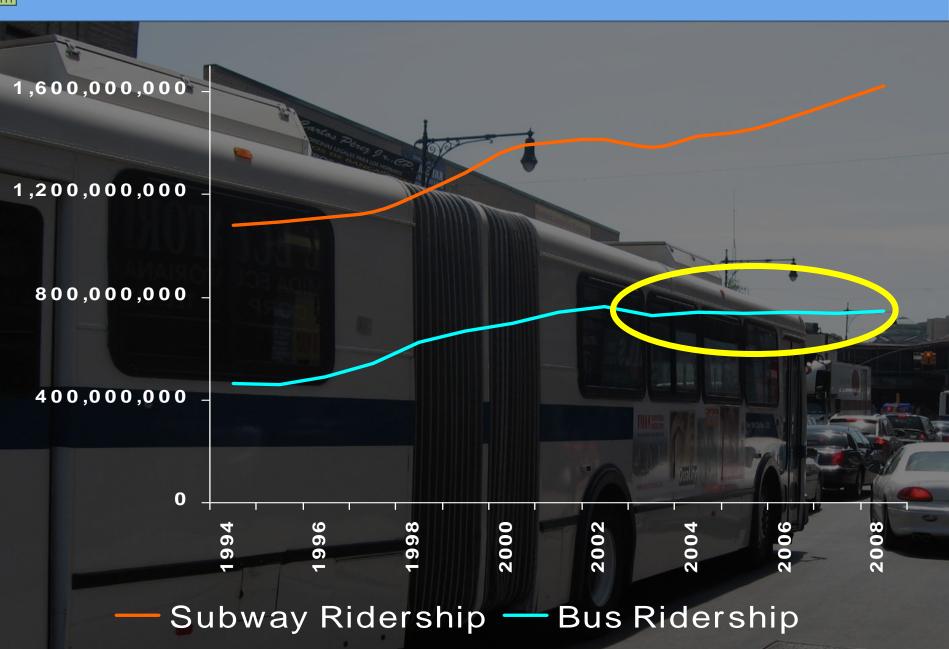


Background: Declining Bus Speed





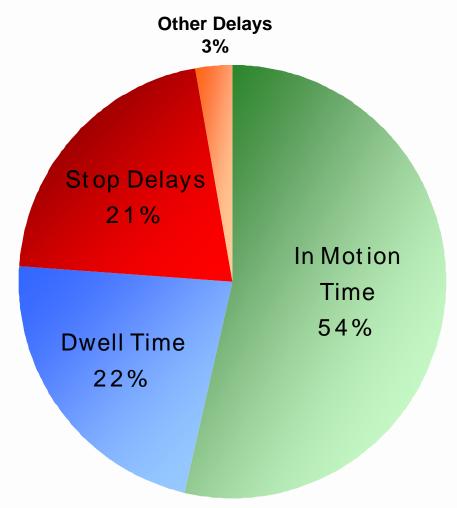






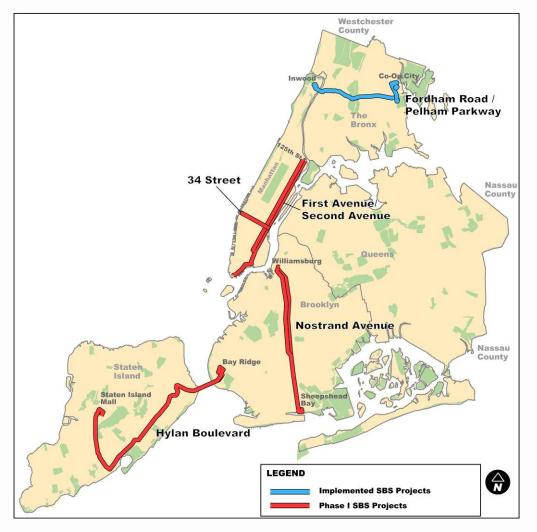
Background: Sources of Bus Delay

New York City Transit





Phase I BRT Corridors





Bx12 Select Bus Service Fordham Road-Pelham Parkway







Corridor Ridership

Bus Route	Weekday Ridership (2009)
Bx12	47,793
Bx17	12,431
Bx9	28,900
Bx22	18,312
W60-61 (Westchester Co.)	6,427
TOTAL:	113,863



Expanded/Improved Bus Lanes

- Expanded:
 - Existing peak period bus lanes expanded to all-day operation
 - Bus lanes extended geographically
- Improved:
 - High visibility red bus lanes
 - Overhead signage
 - Increased NYPD bus lane enforcement

Expanded/Improved Bus Lanes







Fordham Road Delivery Window



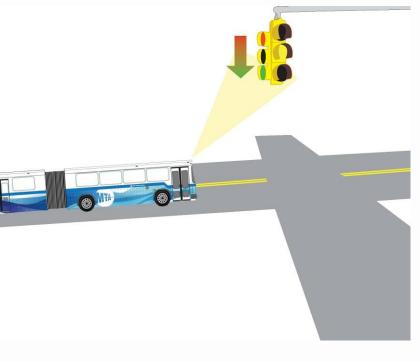


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Transit Signal Priority

- Opticom radio/GPS signal priority system
- Installed at 20 of 35 intersections along the route
- Initially weekday peak periodsexpanded to mid days and weekends
- Early green/extended green available based on existing signal parameters
- Signals timings also optimized





Leading Bus Interval / Queue Jump

- Provides 6 second advance green for all buses approaching in the bus lane
- Bus lane operates at all times to provide free path for bus
- Currently activated on every signal phase; may be actuated in the future





Proof-of-Payment Fare Collection

- Customers pay at fare payment machines and obtain a proof-of-payment receipt before boarding
- Customers board the bus at either door and hold receipt for inspection receipt valid for 1 hour
- Two types of machines in use
 - Re-purposed MetroCard "express" machine for customers with MetroCards
 - Re-purposed Parkeon multi-space parking meter for customers with coins

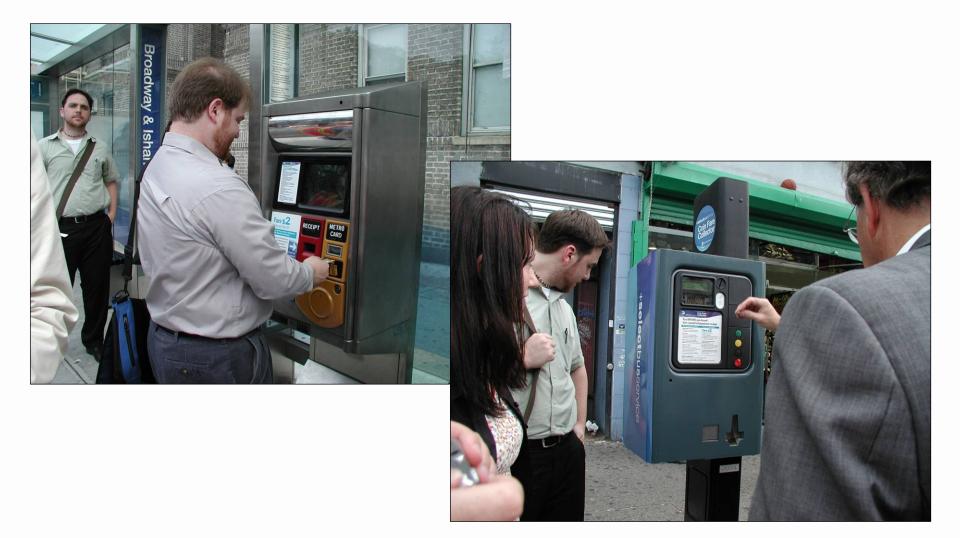


Proof-of-Payment Fare Collection





Proof-of-Payment Fare Collection





Proof-of-Payment Fare Inspection

- Fare inspectors on vehicles and at stations (not police/peace officers)
- On-board cameras to document incidents
- Anyone without receipt is subject to \$100 summons







Improved Service Plan



New York City Transit

- SBS buses uniformly operate full length of route
- Local buses operate between Sedgwick Avenue and Pelham Bay Park with summer extension to Orchard Beach

Enhanced Stations









Branding









On-Board Cameras

- Currently used for security and liability protection
- Supports off-board fare collection
- Potential future use for bus lane enforcement







Improved Customer Information













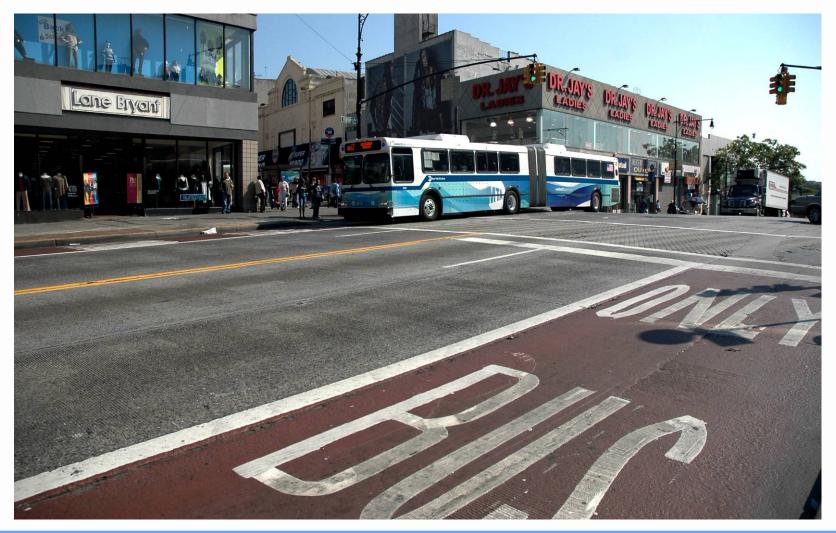
Launch Elements

- Customer
 Ambassadors
- Enforcement blitz
- Operator training

New York City Transit

• On-going refinement











New York City Transit













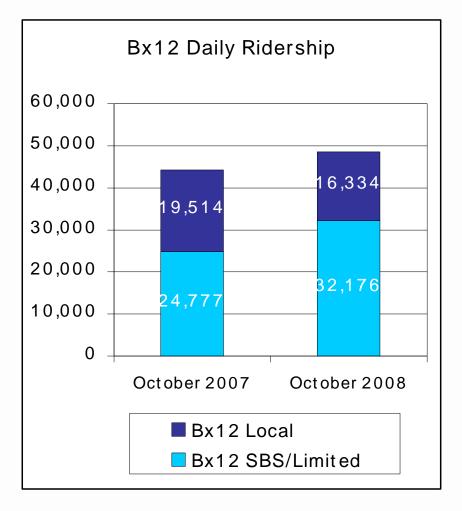
Results – Customer Response

Ridership:

- 30% increase in Limited to Select Bus ridership
- 7% overall route increase
- Overall Bronx bus ridership level

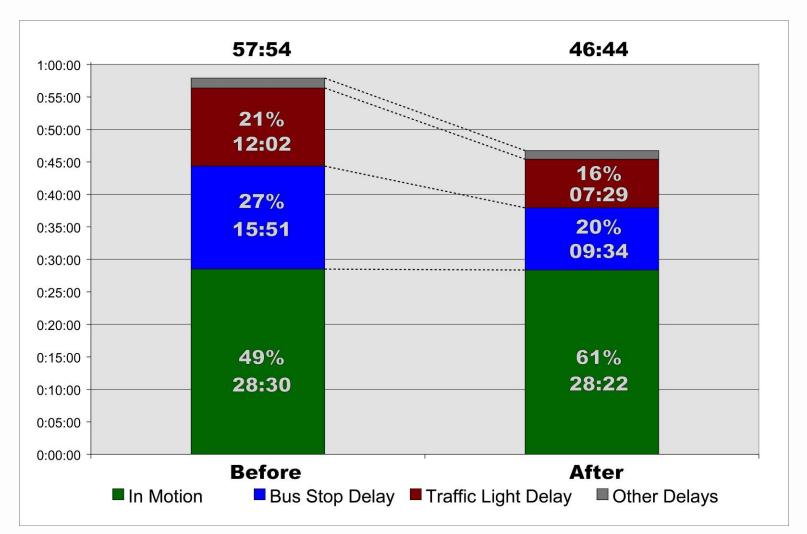
Customer Satisfaction:

- 98% satisfied or very satisfied
- 89% of customers said that SBS service is better than the limited
- 68% of customers said that paying on the street was more convenient





Results – Running Time





Results – Fare Collection

- Both types of machines operating dependably (98% availability)
 - Transaction time for MetroCard machines = 3 sec.
 - Transaction time for Coin machines slower
 - Occasional power issues at stations
- Fare evasion rate comparable to or better than conditions prior to implementation.



Results – Cost

- ~ \$10.5 M for full 9 Mile corridor.
- \$6M in increased annual Operating Costs. This includes additional service, and new staff for maintaining fare equipment, revenue collection and enforcement.
- Red bus lanes and on-street branding wear out over time – replacement cycle TBD



Lessons Learned

- Importance of Partnership
 - Staff level
 - Executive level
 - Commitment to problem solving
- Value of Simple/Cheap Solutions
 - Red-marked bus lanes
 - Off-board fare collection
 - Transit Signal Priority





Lessons Learned

- Training Makes a Difference
 - Bus operators
 - Customer outreach
- Effective Outreach Required
 - Community Boards
 - Business Improvement District



Next Steps

- Bx12 SBS
 - Bus Lanes on Pelham Parkway
 - Three door, low floor articulated buses
 - Improved fare collection machines
- Phase I Routes
 - First Avenue/Second Avenue: Fall 2010
 - Nostrand Avenue: 2012
 - 34th Street: 2012
 - Hylan Boulevard: 2013
- Continue development of additional BRT routes

First Avenue/Second Avenue SBS



8.5 miles from South Ferry to 125th Street

Currently served by M15 bus route

Over 57,000 weekday riders

Bus speeds have been declining

Ridership has been decreasing

Within a 1/4 mile:

537,000 residents

78% of households do not own a car

57% of residents commute by transit



SBS Features

Features	Current M15	M15 SBS (2010)	M15 SBS (2012)
Local service	Yes	Yes	Yes
Limited service	Yes	No	No
Simpler service pattern	No	Yes	
Off-board fare collection	No	Yes	
Regular bus fare	Yes	Yes	
Improved bus lanes	No	Yes	
Low-floor, three-door articulated buses	No	Yes	
Bus bulbs	No	No	Yes
Transit Signal Priority	No	No	Yes (below Houston St)



Public Outreach

Community Advisory Committee

- Composed of:
 - **Elected Officials**
 - **Community Boards**
 - **Major Institutions**

Community Organizations

Business Representatives

Transit Customers

Meetings in May 2009, September 2009, January 2010

Community Board Meetings

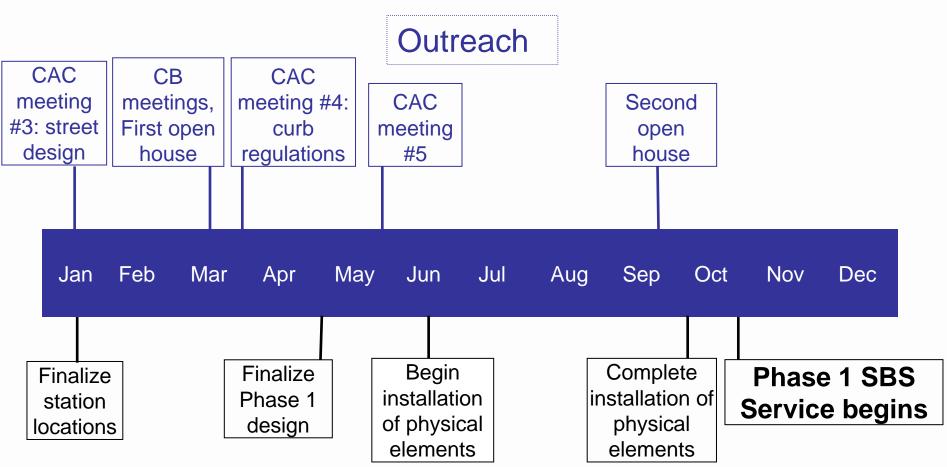
Board 1 meeting: December 2009 Meetings with Boards 3, 6, 8 and 11: February/March 2010

Public Open Houses

March 18 and 24, 2010



Project Schedule



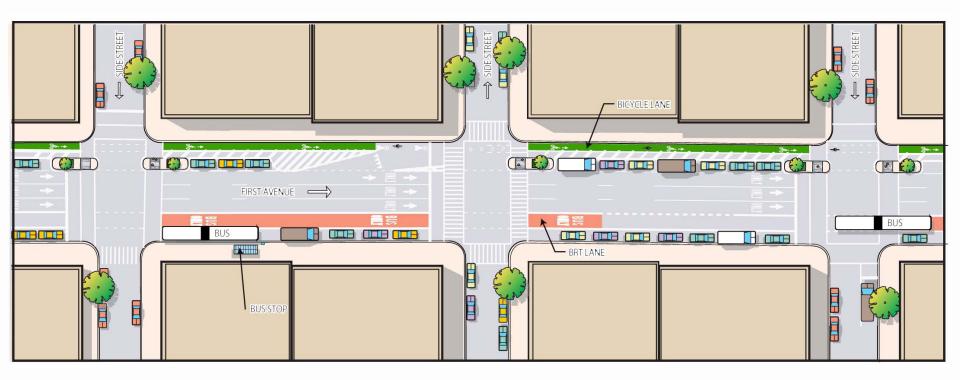
Project Milestones







Design A

















Design B



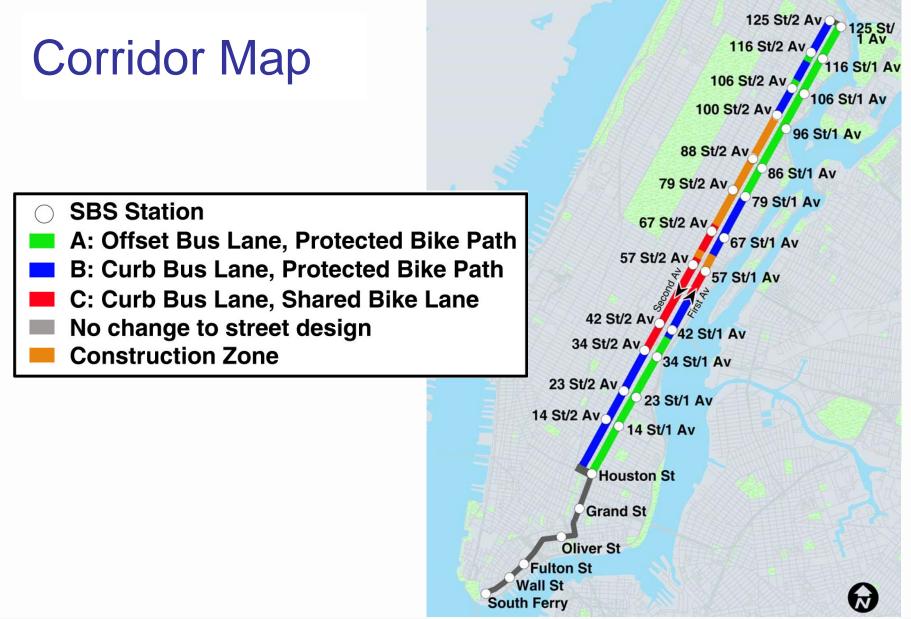




Design C

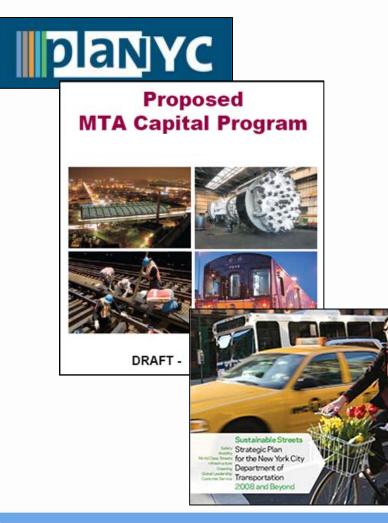








Overall Lesson: Agency Support



- Agency principals provided strong plan support
- Bus improvement program featured in:
 - PlaNYC
 - MTA Capital Plan
 - Sustainable Streets (DOT Strategic Plan)
- Congestion pricing provided planning context



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