



Metropolitan Transportation Authority

Capital Program Oversight Committee Meeting

January 2019

Committee Members

F. Ferrer, Acting Chair

A. Albert

N. Brown

S. Metzger

M. Pally

L. Schwartz

P. Trottenberg

P. Ward

C. Weisbrod

N. Zuckerman

Capital Program Oversight Committee Meeting

2 Broadway, 20th Floor Board Room

New York, NY 10004

Tuesday, 1/22/2019

2:00 - 3:30 PM ET

1. PUBLIC COMMENTS PERIOD

2. APPROVAL OF MINUTES DECEMBER 10, 2018

- Minutes from December '18 - Page 3

3. COMMITTEE WORK PLAN

- 2019-2020 CPOC Committee Work Plan - Page 6

4. NYCT CAPITAL PROGRAM UPDATE

- Progress Report on Subway Car Program - Page 8

- IEC Project Review on R211 & R179 Railcar Procurements - Page 26

- Progress Report on Bus Procurement - Page 32

- IEC Project Review on Bus Procurement - Page 53

5. CAPITAL PROGRAM STATUS

- Commitments, Completions, and Funding Report - Page 57

MINUTES OF MEETING
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE
December 10, 2018
New York, New York
1:30 P.M.

MTA CPOC members present:

Hon. Fernando Ferrer
Hon. Andrew Albert
Hon. Norman Brown
Hon. Susan Metzger
Hon. Mitchell Pally
Hon. Polly Trottenberg (Executive Session only)
Hon. Carl Weisbrod
Hon. Neal Zuckerman

MTA CPOC members not present:

Hon. Lawrence Schwartz
Hon. Peter Ward

MTA board member present:

Hon. Ira Greenberg (Executive Session only)

MTA staff present:

Ronnie Hakim
Janno Lieber
Tom Savio

MTACC staff present:

Tim Gianfrancesco
Eve Michel
Mark Roche
Rob Troup

Independent Engineering Consultant staff present:

Joe DeVito
Kent Haggas
Mohammad Mohammadinia
Darlene Rivera

* * *

Acting Chairman Ferrer called the December 10, 2018 meeting of the Capital Program Oversight Committee to order at 2:53 P.M.

Public Comments Period

There were two public speakers in the public comments portion of the meeting: Jason Pineiro and Omar Vera.

Meeting Minutes

Upon motion duly made and seconded, the CPOC members approved the minutes to the previous meeting held on November 13, 2018.

Committee Work Plan

Mr. Savio announced that there were no changes to the Work Plan.

East Side Access Project Update

Mr. Troup provided an overview of the project, which included the following: construction progress; key performance indicators (KPI's) for the project, including financial and schedule performance highlights, as well as KPI's related to Amtrak; 90-day look-ahead; status of operational readiness; key milestones and issues; and an update on the JPMorgan Chase World Headquarters project, whose site straddles the GCT trainshed and the ESA concourse. The presentation concluded with the following points: all major contracts have been awarded; key contract issues need to be resolved; systems test phase is underway; there is an additional focus on operational readiness -- upon turning over the completed project to LIRR; and the project remains on schedule for a December 2022 Revenue Service Date. In its oral remarks, the IEC recognized the project team's effort in obtaining the Systems CS179 contractor's agreement on the schedule, and as cited by the project team, the IEC noted that obtaining the contractor's agreement on cost remains a challenge. In addition, the IEC stated that a resource-loaded schedule for both the contractor and LIRR force account is required to verify that this plan can be supported. The IEC then commented that the current plan reflects the start of incremental integrated system testing (IST) in mid-2019, consisting of the testing of just one system, with all other systems starting at least 17 months later -- which indicates that most of the systems are to be completed within half of the 32-month overall testing duration. The IEC remarked that considering the magnitude and complexity of the ESA systems work, the current plan increases pressure on the available resources, will require additional contract coordination, and if not improved, may result in the reduction of program schedule contingency. Finally, the IEC noted that schedule agreement for the GCT Concourse contract, as well as an increased focus on coordination efforts between the track/third rail, traction power and signal contracts is required to support the incremental IST schedule. Further details of the presentations, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

Penn Station Access Project Update

Ms. Michel highlighted fourth-quarter activities, including: submitting Initial Environmental Assessment chapters to FTA; Congestion Mitigation and Air Quality (CMAQ) Improvement Program application certified complete by NYSDOT; a Station Access Planning Workshop at Parkchester/ Van Nest and Morris Park; freight rail engagement; as well as progress with respect to environmental assessment and funding, and stakeholder coordination. Ms. Michel concluded her presentation by outlining project status and citing the support that the project has garnered from various stakeholders. In its oral remarks, the IEC commented that the Project Team, to its credit, has progressed the Environmental Assessment, station site development, outreach and coordination with CSX, while continuing to negotiate the critical project implementation arrangement with Amtrak. Further details of the presentations, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

MTACC Second Avenue Subway Phase 2 Update

Mr. Gianfrancesco provided an update in the following areas: Environmental Process, including having achieved the National Environmental Policy Act (NEPA) finding goal in November, and the FTA-issued Finding of No Significant Impact (FONSI); the Design Process, including having concluded extended preliminary design efforts, and the advanced works and design-build design documents remaining on target to be completed by the end of the first quarter, 2019; and the FTA New Starts/Federal Funding Process, with the goal of receiving the Full Funding Grant Agreement (FFGA) remaining in the fourth quarter of 2020. He concluded his presentation with an update on the multi-faceted Public Outreach efforts that are underway. In its oral remarks, the IEC complimented the Project Team on successfully navigating the NEPA requirements and getting the FONSI and on maintaining the scheduled goal of achieving the FFGA in 2020. In addition, the IEC observed that the Project Team is continuing to work closely with NYCT to tackle the remaining cost and schedule development challenges for the project. Further details of the presentations, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

LIRR Expansion Project Update

Mr. Roche provided an overview of the project, including the following: a summary of the construction schedule and construction look-ahead; financial status and cost management; risks and opportunities; and the extent to which the project is fulfilling its commitments to communities. He finished his presentation with a status update on the performance of Authorities Having Jurisdiction, as well as that of the Project Management Team. In its oral remarks, the IEC stated that based on its review of the project data, the IEC concurs with MTACC's statement on project cost and schedule. The IEC then concluded its remarks by echoing a concern that had been noted by the Project Team regarding the limited schedule float and the baseline schedule not being resource-loaded. Further details of the presentations, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

Miscellaneous Reports

Ms. Hakim brought the Committee's attention to the following reports in the CPOC Agenda and asked if there were any comments or questions with respect thereto, of which there was none: MTA Capital Program Commitments & Completions and MTA Capital Program Funding Reports; Quarterly Traffic Light Reports; and Quarterly Capital Change Order Report.

Executive Session

Upon motion duly made and seconded, Acting Chairman Ferrer adjourned the public CPOC meeting at 3:37 PM to go into Executive Session.

Adjournment

Upon motion duly made and seconded, Acting Chairman Ferrer adjourned the Executive Session, reconvened the public session and then immediately adjourned the December 10, 2018 meeting of the MTA Capital Program Oversight Committee at 3:59 PM.

Respectfully submitted,
Michael Jew-Geralds
Office of Construction Oversight



2019-2020 CPOC Committee Work Plan

I. Recurring Agenda Items

Approval of the Minutes
Committee Work Plan
Commitments/Completions and Funding Report

II. Specific Agenda Items

February

B&T Capital Program Update
LIRR and MNR Update on Positive Train Control (PTC)

March

NYCT Capital Program Update

- Sandy Recovery and Resiliency Division
- Stations Division

Quarterly Change Order Report
Quarterly Traffic Light Reports

April

MTACC Capital Program Update

- East Side Access
- Second Avenue Subway
- Penn Station Access
- LIRR Expansion Project

Update on Minority, Women and Disadvantaged Business Participation

May

LIRR Capital Program Update
MNR Capital Program Update
Update on New Fare Payment System

June

NYCT Capital Program Update
Quarterly Change Order Report
Quarterly Traffic Light Reports

July

MTACC Capital Program Update
Update on Capital Program Security Projects (in Executive Session)

September

NYCT Capital Program Update
Quarterly Change Order Report
Quarterly Traffic Light Reports

October

LIRR Capital Program Update
MNR Capital Program Update
LIRR and MNR Joint Update on Rolling Stock
LIRR and MNR Update on Positive Train Control (PTC)

November

NYCT Capital Program Update
Update on New Fare Payment System
Update on Minority, Women and Disadvantaged Business Participation
Update on Small Business Development Program

December

MTACC Capital Program Update
Quarterly Change Order Report
Quarterly Traffic Light Reports
Update on Capital Program Security Projects (in Executive Session)

January

NYCT Capital Program Update
NYCT Rolling Stock Procurement Program

NYCT Subway Car Program

Capital Program Oversight Committee

John Santamaria, P.E.

Vice President & Chief Mechanical Officer,
Department of Subways



January 2019

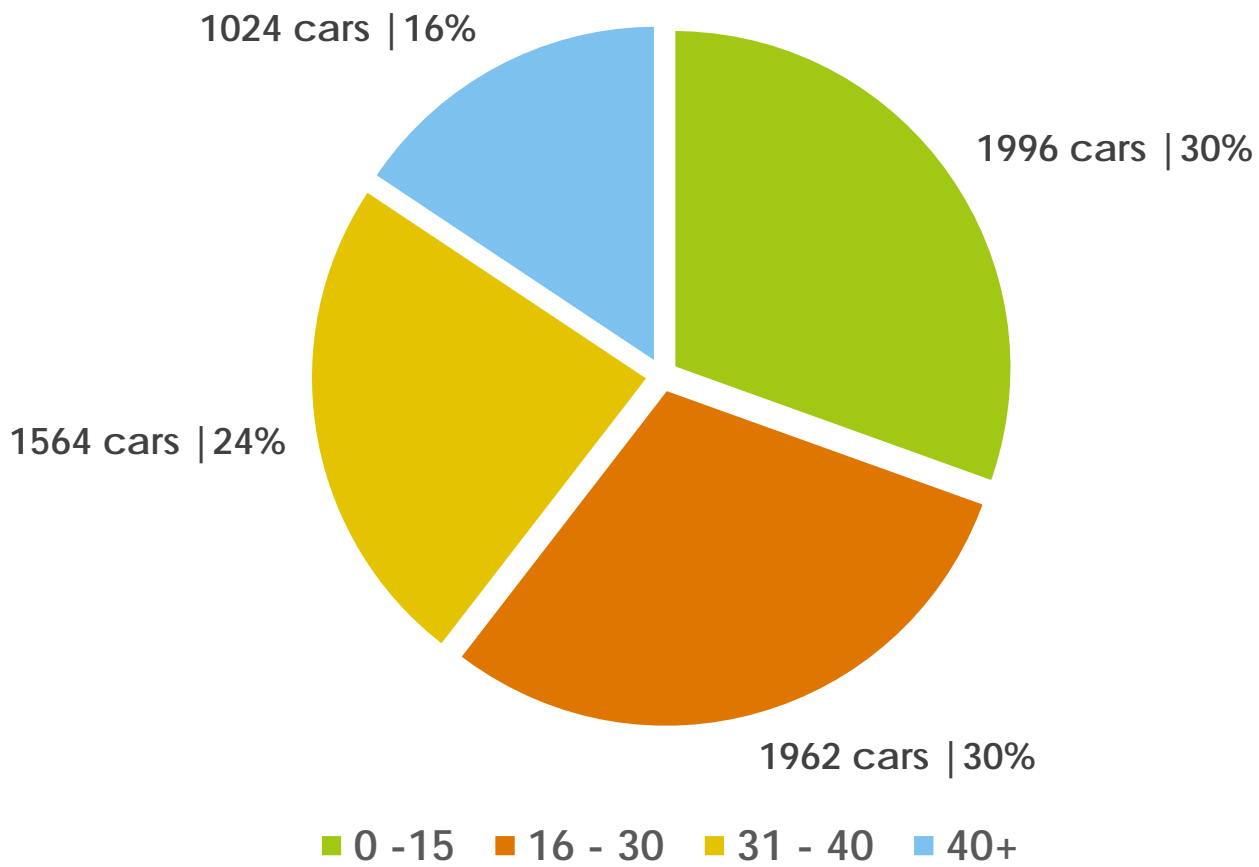
Agenda

- ▣ **R211 Project Update (Up to 1,612 Cars)**
- ▣ **R179 Project Update (300 Cars plus 16 additional)**
- ▣ **Fast Forward Projects (R142, R142A, R262)**



NYCT Subway Car Fleet Age Overview (Number of Cars by Age Group)

Age of Fleet (in years)



R211

New B-Division Subway Cars



R211 | Project Overview

Project Details

Scope	<p>Purchase up to 1,612 'B' Division Subway Cars</p> <ul style="list-style-type: none">• Base Order: 440 Standard NYCT Cars, 20 Open-Gangway, 75 SIR• Option 1: 640 NYCT Cars; Option 2: up to 437 NYCT Cars
Schedule	<ul style="list-style-type: none">• Contract Award: February 16, 2018• Delivery: ramp up to 40 cars/month
Budget	<ul style="list-style-type: none">• Base Order: \$1.75 Billion (2015-19 Capital Program)

R211A

B-Division Standard

- Initial Train (10 cars) – July 2020 (NOA + 30 months)
- Production Trains (430 cars) – Oct. 2021 to Aug. 2023

R211T

Open Gangway
Test Trains

- Test Trains (20 cars) – May 2021 (NOA + 40 months)

R211S

Staten Island Railway

- Initial Train (5 cars) – Dec. 2021 (NOA + 47 months)
- Production Trains (70 cars) – Sept. 2022 to June 2023



R211 | Contract Options

Option #1 640 cars

- Open-Gangway or Standard Car
- Exercise Option by 1st Quarter 2022
- Decision on Open-Gangway or Standard Car by 4th Quarter 2022
- Sept. 2023 to Dec. 2024 delivery

Option #2 Up to 437 cars

- Exercise Option by 4th Quarter 2023
- Jan. 2025 to Nov. 2025 delivery



R211 | Project Status

Highlights

Progress	<ul style="list-style-type: none">• Preliminary Design Reviews on major subsystems completed• Other sub-system reviews progressing as scheduled• Fabrication of the Mock Up Car commenced in July 2018• Vendor Site Quality Assurance Audits under way since August 2018• Component Qualification Testing began December 2018
180-Day Look Ahead	<ul style="list-style-type: none">• Critical Design Reviews scheduled throughout 2019• Continuation of Sub-System Qualification Testing• R211A Car Mock up Review: April 2019



R211 | Full Car Mock-Up

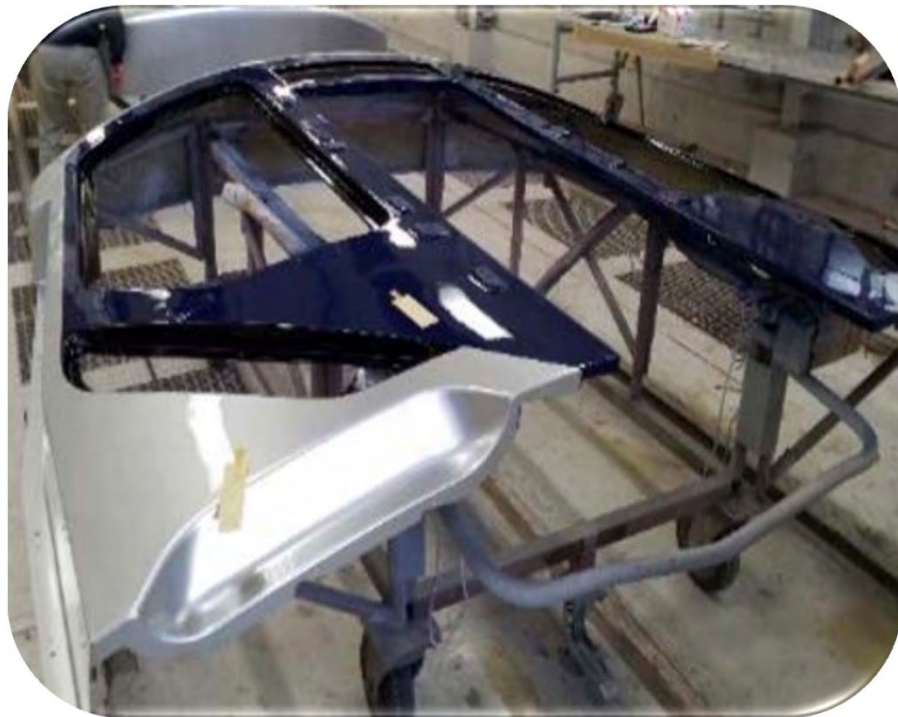


Side Panel



Side Panel with doors installed

R211 | Full Car Mock-Up



Bonnet



Truck Frame Assemblies

R211 | Full Car Mock-Up



Anti-climber

End Under Frame



Car shell



R179 | Project Overview

Project Details

Carbuilder	Bombardier Transportation Corp.
Scope	300 60-foot 'B' Division Cars <ul style="list-style-type: none">• Now 316 Cars due to Settlement (300 original order + 16 additional cars)
Budget	\$744 million
Schedule	<ul style="list-style-type: none">• Award: June 4, 2012• Test Train Delivered: November 2016• Production Car Delivery: Commenced in January 2018• 316th Production Car Delivery Completion (Forecast): September 2019

Highlights

Progress	<ul style="list-style-type: none">• 162 total cars delivered• 128 cars (16 trains in 8-car configuration) in passenger service.• 30-Day passenger service test under way for 10-car configuration train.
180 Day Look Ahead	<ul style="list-style-type: none">• Continue Production Car Delivery and Acceptance



R179 | Project Delivery Status

Highlights

Original Contract Schedule	<ul style="list-style-type: none">• In 2012 (at award): 300 Cars by January 2017
Negotiated Schedule	<ul style="list-style-type: none">• 316 cars by April 2019• Production of 1 car per day to be reached by August 2018
Anticipated Schedule	<ul style="list-style-type: none">• 316 cars by September 2019• Production of 1 car per day yet to be reached (estimate): April 2019
Delay Response	<ul style="list-style-type: none">• Liquidated Damages resulting in 16 additional cars• Full time production and quality monitoring by NYCT• NYCT Executive team regularly reviews with Bombardier's Senior Management



R179 | Production



R179 car being transported from Station 14 (Car Shell Sealing) to Station 15 for water testing.



Final inspection at Station 22 (Bombardier) and Station 23 (NYCT) in Plattsburgh

R179 | In-Service



R179 train operating on the **J** **Z** and **C** lines



R179 interior



Fast Forward Plan

CBTC Equipped A-Division Cars

- **R142A: CBTC Conversion & Upgrades (220 Cars)**
- **R142: CBTC Conversion & Upgrades (1,030 Cars)**
- **R262: New Fleet to Replace R62/62A (1,139 + Growth Cars)**



Fast Forward Plan | R142A

Project Details

Scope	CBTC Conversion & Upgrade of 220 R142A 'A' Division Subway Cars <ul style="list-style-type: none">• Upgrade key subsystems, leveraging lessons learned from R188 upgrades to improve fleet reliability: Doors, HVAC, Brake Controls• Install CBTC in support of Lexington Avenue Line
Schedule	<ul style="list-style-type: none">• Proposed Contract Award: 2019



Fast Forward Plan | R142

Project Details

Scope	CBTC Conversion & Upgrade of 1,030 R142 'A' Division Subway Cars <ul style="list-style-type: none">• System upgrades with implementation of full Ethernet network• Install CBTC in support of Lexington Avenue Line• Replace key subsystems including Communications, Doors, Propulsion/Braking and HVAC• Integration of state-of-the-art Monitoring and Diagnostics System (MDS)
Schedule	<ul style="list-style-type: none">• Proposed Contract Award: 2019



Fast Forward Plan | R262

Project Details

Scope	Purchase of approximately 1,500 'A' Division Subway Cars <ul style="list-style-type: none">• Replacement of 1,139 R62 and R62A fleet, plus fleet expansion• CBTC-equipped trains to support overall acceleration of CBTC• Car design utilizing the latest R211 Technical Specification requirements as a baseline, including open gangway• Full Ethernet network
Schedule	<ul style="list-style-type: none">• Proposed Contract Award: Future Capital Program



January 2019 CPOC IEC Project Review

NYCT R211 & R179 Railcar Procurements



R211 Schedule Review

- The project has maintained the car delivery schedule since last report in January 2018 with first 10 cars planned for arrival July 2020.
- The IEC finds that the R211 project is on schedule and showing significant progress in meeting critical program milestones. Preliminary Design Reviews and In-Process Design Reviews for all major sub-systems have been completed.



R211 Budget Review

- IEC is in agreement with NYCT's Estimate at Completion based on our analysis of the post-award budget of \$1.75B and project expenditures to date.



R211 Observations

- The rate of production and acceptance of 30 cars per month for the base order will require a significant level of support from NYCT engineering, inspection and testing resources.
- Close coordination with the CBTC – QBL project, which must provide the on-board equipment, mock-ups, drawings and other technical information for Kawasaki's use, is required in order to insure on time delivery of the Initial Train in July 2020.



R179 Schedule Review

- 154 of the 316 cars remain to be delivered. Bombardier has yet to achieve a one-car-per-day production rate needed to meet the scheduled completion in September 2019. This is 8 months later than last report. Timely correction of outstanding R179 quality issues is important to maintain this date.



R179 Budget Review

- Based on our analysis of the R179 project budget, the IEC is in agreement with NYCT's Estimate at Completion of \$744M, an increase of \$3.2M since last report.



Bus Procurement Update

Capital Program Oversight Committee

John Higgins

Chief Maintenance Officer – Bus Operations

January 2019



Vision

Area	Action
Safety	<ul style="list-style-type: none">• Employ latest safety technology• Improve driver visibility
Environmental Sustainability	<ul style="list-style-type: none">• Continue commitment to CNG & diesel-electric hybrid buses• Continued focus on MPG of new clean diesel buses• Continue with purchase of all-electric buses as part of the transition to a zero-emissions fleet
Customer Amenities	<ul style="list-style-type: none">• Continue to equip all new buses with digital information screens, wi-fi, and USB charging ports
Improved Service	<ul style="list-style-type: none">• Continue to make all new buses Transit Signal Priority (TSP) ready• Continue to install Automatic Passenger Counters (APC) on all new buses• Implement Automated Bus Lane Enforcement (ABLE) on certain SBS routes



Safety Technology



Pedestrian Turn Warning (PTW)

- ▣ Audible announcement outside the bus when the bus makes a turn
- ▣ Included on all new bus deliveries
- ▣ Installed on 617 buses; 600 additional retrofits in 2019



Advanced Camera System

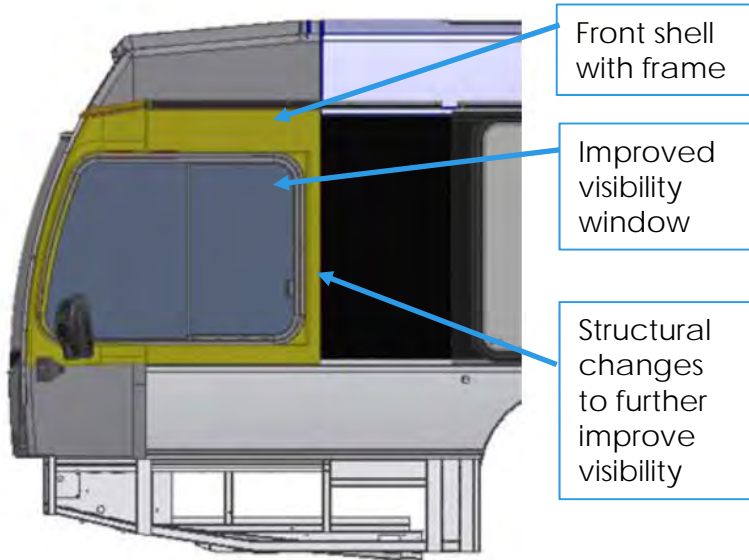
- ▣ Improves situational awareness for incident investigations
- ▣ Interior cameras installed on 3,469 buses; exterior cameras installed on 319 buses

Further Improved Driver Visibility



Smaller A-Pillar

- Reduces obscuration by ~50%
- Included on all new transit bus deliveries
- On 671 buses to date; 341 more in 2019



Relocated B-Pillar

- Expands front left window next to operator
- Included on Nova production buses starting September 2018
- On 17 buses to date; 302 more in 2019



1/3 of all new bus purchases in the 2015-2019 capital plan are CNG, diesel-electric hybrid, or all-electric

- 248 CNG buses (138 standard; 110 articulated)
- 285 diesel-electric hybrid standard buses
- 60 all-electric buses (AEB) (15 articulated; 45 standard)

First Articulated Compressed Natural Gas (CNG) Buses

- Expands service flexibility of CNG fleet
- 105 of 110 buses delivered; remainder to be delivered in Q1 2019



New Diesel-Electric Hybrid Technology

- Eight of the 10 buses in a test fleet of new diesel-electric hybrid standard buses delivered in 2018; two remaining buses are undergoing contractual system testing
- Follow-up purchase of 275 new technology diesel-electric hybrids planned for 2019



North American all-electric bus market is still evolving

- The top 6 transit agencies (based on number of AEBs in service) operate an average of 18 AEBs each, for a total of 110 AEBs in service
- 4 major manufacturers: BYD, New Flyer, Nova, and Proterra
- Largest current AEB fleet in operation is 30 buses at Foothill Transit in California
- Largest committed purchase is 114 buses by LA DOT

Design and technical standards are continuing to develop

- Major manufacturers have committed to charging protocols
- Battery technology is continually evolving
- Cold climate areas are of particular interest, with unique challenges
- Full life-cycle experience is not yet available



Electric Bus Pilot (1/2)

10 leased all-electric bus pilot began service in Winter 2017/2018

- 5 buses from New Flyer operating in Manhattan on the M42
 - On street charging stations at terminal areas at each end of 42nd street
 - Supplemental overnight chargers at MJ Quill Depot
- 5 buses from Proterra operating in Queens and Brooklyn mostly on the B32 and B39
 - Overnight chargers at Grand Ave Depot
 - On street charging station at Williamsburg Bridge Plaza (for longer route testing)



Electric Bus Pilot (2/2)

Technical and operational testing will proceed throughout 2019

- ▣ Charging times and efficiency
- ▣ Battery usage under various conditions
- ▣ Impacts of weather on equipment and battery life



Planned Electric Bus Purchases

Purchase 60 all-electric buses through 2020

- 15 articulated all-electric buses to be delivered in Q4 2019
- 45 standard all-electric bus purchase award planned for Q4 2019 with delivery in Q4 2020



New Customer Amenities



Digital Information Screens (DIS)

- ❑ Provide route and next stop information, as well as service alerts
- ❑ Included on all new bus deliveries beginning with the 377 New Flyer 40' standard order
- ❑ Installed on 1,231 buses; 1,000 additional retrofits in 2019



Free Wi-Fi

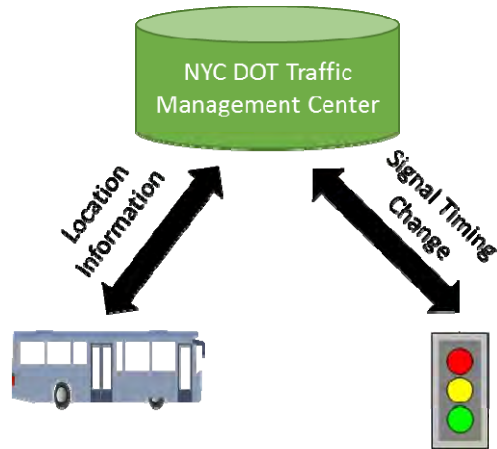
- ❑ Allows riders to stay connected during their trip
- ❑ Included on all new deliveries
- ❑ Installed on 2,774 buses; 81 additional retrofits in 2019



USB Charging Ports

- ❑ Allows riders to charge their devices during their trip
- ❑ Included on all new deliveries
- ❑ Installed on 1,797 buses

Service Improvement Technology

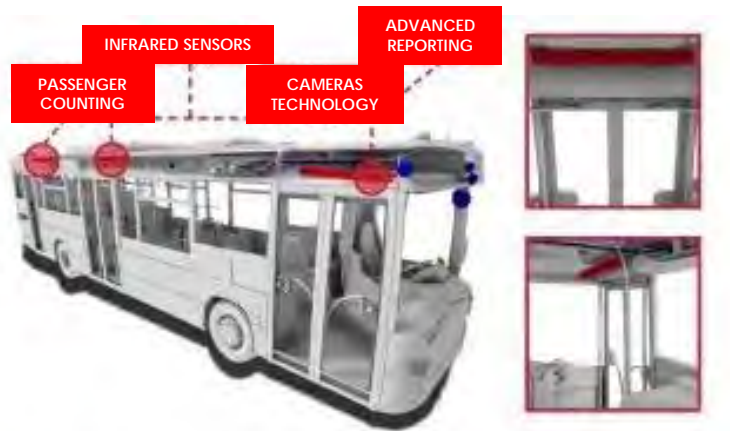


Traffic Signal Priority (TSP)

- Communicates with traffic signal to shorten red lights or extend green lights
- All new bus deliveries are TSP-ready
- Operating on targeted routes
- Installed on 1,074 buses; 150 additional retrofits in 2019

Automatic Passenger Counters (APC)

- Counts all boardings and alightings using sensors at each door
- Better management of service and schedule with real time data
- Included on all new bus deliveries starting in April 2018
- Installed on 1,312 buses; 700 additional retrofits in 2019



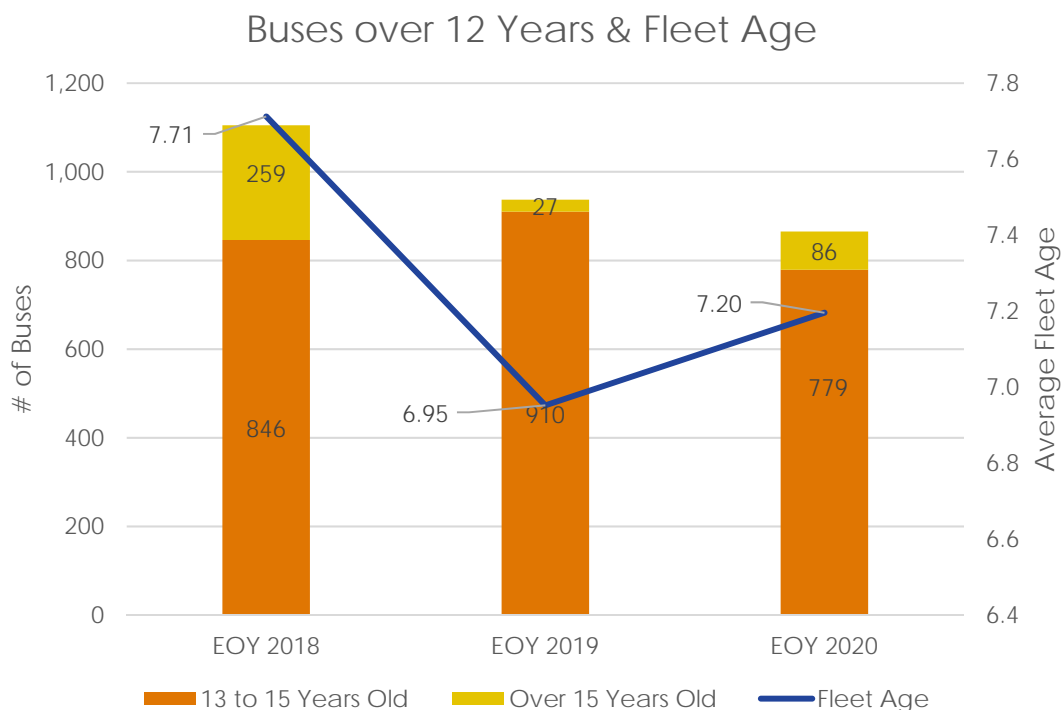
Automatic Passenger Counting and Information Systems

Automatic Bus Lane Enforcement (ABLE)

- Camera system on bus to identify and ticket vehicles that are standing in bus-only SBS lanes
- To be in effect in 2019 on the M15-SBS and B46-SBS routes

Fleet Dynamics

- 2015-2019 bus purchases will reduce the share of the fleet over 15 years old from 4.5% in 2018 to 1.5% in 2020
- Buses over 15 years old have the highest failure rate in the fleet, negatively impacting service



Data is for NYCT DOB & MTA Bus combined.



Current Fleet

	NYCT DOB	MTA Bus	Total
Standard 40'	3,114	666	3,780
Diesel	1,409	44	1,453
CNG	431	213	644
Hybrid	1,264	409	1,673
All Electric*	10	0	10
Articulated 60'	858	115	973
Diesel	753	115	868
CNG	105	0	105
Express 45'	497	517	1,014
TOTAL	4,469	1,298	5,767

Above figures based on Winter 2019 Bus Assignment



* Leased buses

2018/2019 Deliveries

Fleet	Type	Agency	Total Order	Delivered to Date	2019 Expected Deliveries	Status	Capital Program
Proterra All Electric Bus (Lease)	Standard	NYCT	5	5	0	Complete	N/A
Nova LFS-60 Clean Diesel	Articulated	NYCT	92	92	0	Complete	2010-2014
New Flyer XN-60 CNG	Articulated	NYCT	110	105	5	Almost Complete	2015-2019
New Flyer XD-40 Clean Diesel / Hybrid	Standard	NYCT	377	197	180	In Production	2015-2019
Nova LFS-40 Clean Diesel	Standard	NYCT	251	0	251	In Production	2015-2019
Nova LFS-60 Clean Diesel	Articulated	NYCT	72	17	55	In Production	2015-2019
New Flyer XD-60 Clean Diesel	Articulated	NYCT	108	0	108	In Production	2015-2019
New Flyer XD-60 Clean Diesel	Articulated	MTA Bus	53	0	33	Pilot Bus in Construction	2015-2019
New Flyer All Electric Bus	Articulated	NYCT	15	0	15	Awarded	2015-2019
Total			1,083	416	647		



Current Bus Deliveries

110 60-ft CNG Artics (NYCT-DOB)

Item	Comments
Scope	110 buses from New Flyer
Schedule	Awarded April 2017 Deliveries began in June 2018; final bus will be delivered by mid-January 2019
Project Budget	\$106.3 million

Highlights

- First articulated CNG bus.
- Operating in Brooklyn and the Bronx.
- Replaced end-of-life 2004 CNG buses.
- Equipped with USB chargers, Wi-Fi, digital information screens, automatic passenger counters, pedestrian turn warning, advanced camera system, and hi-vis windows.



Current Bus Deliveries

367 Clean Diesel & 10 Hybrid 40-ft Standards (NYCT-DOB)

Item	Comments
Scope	377 buses from New Flyer
Schedule	Awarded June 2017 Diesel deliveries started in May 2018; remaining buses expected by July 2019 Four BAE hybrids and four Allison hybrids delivered and in service; one of each are undergoing contractual testing
Project Budget	\$235.7 million

Highlights

- Replaced end-of-life Nova 1999 diesels and Orion 2004 hybrids.
- Equipped with USB chargers, Wi-Fi, digital information screens, pedestrian turn warning, advanced camera system, automatic passenger counters, and hi-vis windows.



Current Bus Deliveries

251 40-ft Clean Diesel Standards (NYCT-DOB)

Item	Comments
Scope	251 buses from Nova
Schedule	Awarded June 2017 Quality review occurred in November 2018 Deliveries expected between February 2019 and July 2019
Project Budget	\$161.0 million

Highlights

- Will replace end-of-life Nova 1999 diesels and Orion 2004 hybrids.
- Equipped with USB chargers, Wi-Fi, digital information screens, pedestrian turn warning, advanced camera system, automatic passenger counters, and hi-vis windows, phase 2.



Current Bus Deliveries

108 Clean Diesel 60-ft Artics (NYCT-DOB)

Item	Comments
Scope	108 buses from New Flyer
Schedule	Awarded December 2017 Quality audit occurred in October 2018 Deliveries expected between January 2019 and October 2019
Project Budget	\$98.8 million

Highlights

- Will replace 2003 New Flyer artics and other fleets.
- Buses will operate in Manhattan and Brooklyn on SBS routes.
- Equipped with USB chargers, Wi-Fi, digital information screens, pedestrian turn warning, automatic passenger counters, advanced camera system, hi-vis windows, and ABLE.



Current Bus Deliveries

72 Clean Diesel 60-ft Artics (NYCT-DOB)

Item	Comments
Scope	72 buses from Nova
Schedule	Awarded January 2018 Deliveries began in October 2018; remaining buses expected by March 2019
Project Budget	\$65.8 million

Highlights

- Replaced 2003 New Flyer artics.
- Buses will operate in Manhattan and the Bronx on SBS routes.
- Equipped with USB chargers, Wi-Fi, digital information screens, pedestrian turn warning, automatic passenger counters, advanced camera system, and hi-vis windows (Nova, phase 2).



Current Bus Deliveries

53 Clean Diesel 60-ft Artics (MTA Bus)

Item	Comments
Scope	53 buses from New Flyer
Schedule	Awarded June 2018 Configuration audit on pilot bus scheduled for March 2019 Deliveries of production buses expected November 2019 to February 2020
Project Budget	\$50.2 million

Highlights

- To be used in SBS and expanded artic service.
- Equipped with USB chargers, Wi-Fi, digital information screens, pedestrian turn warning, automatic passenger counters, advanced camera system, and hi-vis windows.



Remaining Procurements for 2015-2019 Capital Program

Fleet	Type	Agency	Total Order	Status
45-ft Coach	Express	MTA Bus	257	In solicitation phase; Award projected in October 2019
45-ft Coach	Express	NYCT	50	In solicitation phase; Award projected in October 2019
40-ft Hybrid	Standard	NYCT	275	Authorization to Advertise expected in Q1 2019
40-ft All-Electric Bus	Standard	NYCT	45	Authorization to Advertise expected in Q1 2019
40-ft Clean Diesel	Standard	MTA Bus	25	In development
Total			652	



January 2019 CPOC IEC Project Review

Bus Procurements



Schedule Review

- Contracts in production:
 - 92 Nova 60-ft Articulated Clean Diesel Buses –Final delivery is now Jan 2019, due to retrofits of the initial pilot/test buses.
 - 110 New Flyer 60-ft CNG Articulated Buses - On schedule. Production deliveries began in May 2018 with final delivery expected mid January 2019.
 - 377 New Flyer 40-ft std. Clean Diesel Buses & 10 Hybrid – On schedule. Production deliveries commenced as scheduled in May 2018.
 - 251 Nova 40-ft std. Clean Diesel Buses - The pilot bus was delivered June 2018, a three month slip since last reported. Production deliveries have commenced as of Dec 2018.



Budget Review

- Based on a review of the program documentation, the projects in the bus procurement program are on budget with no significant issues.



Observations

- A recovery schedule, which has not been accepted by NYCT, for the delivery of 251 Nova Clean Diesel standard buses, is under review.
- The IEC notes the challenges with implementing, operating and maintaining new bus technologies and recognizes NYCT's management's effort in working with vendors to help develop a standard for charging protocols in the electric bus vehicle market.



MTA Capital Program Commitments & Completions

through December 31, 2018

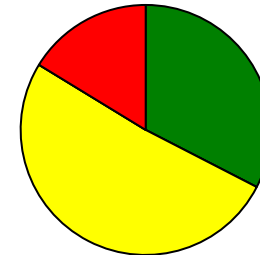
Capital Projects – Major Commitments – December 2018

In 2018, agencies planned for a goal of \$7.3 billion in overall commitments, including 43 major commitments.

Through December, agencies committed \$6.3 billion, or 86% of the overall \$7.3 billion goal. The shortfall was due to delays in the awards of various major commitments including NYCT's Culver Line Interlockings and CBTC (\$424M), Times Square Reconstruction & ADA Phase 3 (\$259M) and MTACC's M-9A Procurement for the LIRR ESA fleet (\$367M), as well as support costs for LIRR Mainline Expansion (\$139M) and East Side Access (\$61M).

Overall, thirty-six major commitments were made within the year and seven major commitments were delayed beyond 2018. The delays are explained on the following pages.

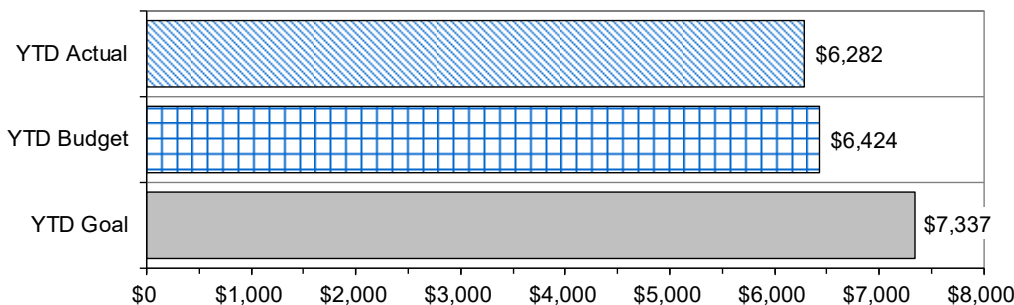
Year-to-Date Major Commitments



	Count	Percent	Change from Prior Month
GREEN = Commitments made/forecast w within Goal	14	33%	↑ 1
YELLOW = Commitments delayed beyond Goal (already achieved)	22	51%	↑ 6
RED = Commitments delayed beyond Goal (not yet achieved)	7	16%	↓ 4
Total	43	100%	↑ 3

Budget Analysis

2018 Annual Goal \$7,337 (\$ in millions)
 2018 Actual 86% of Annual Goal



Year-to-Date Agency Breakdown

2018 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
5 GREEN 9 YELLOW 4 RED	+1 GREEN	+3 YELLOW	-3 RED
Long Island Rail Road			
4 GREEN 1 YELLOW	---	---	---
Metro-North Railroad			
2 GREEN 2 YELLOW	---	---	---
Bridges and Tunnels			
3 GREEN 5 YELLOW 1 RED	---	+3 YELLOW	-3 RED
Capital Construction Company			
2 GREEN 1 RED	---	---	+1 RED
MTA Bus Company			
2 GREEN 1 RED	---	---	+1 RED
MTA Police Department			
1 GREEN	---	---	---

Capital Projects – Major Commitments – December 2018 – Schedule Variances

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
7 All-Agency Red Commitments (2 new this month)							
NYCT				B&T			
<i>Passenger Stations</i>				Verrazano-Narrows Bridge			
Times Square Reconstruction & ADA, Phase 3 - Shuttle	Construction Award	Jun- 18	Jan- 19	Steel Repair & Concrete Rehabilitation/Paint Suspended Span Upper & Lower Level Steel	Construction Award	Oct- 18	Jun- 19
		\$259.3	\$203.4			\$55.3	\$55.3
Award re- scheduled due to additional time needed to review and approve final design estimate. Project cost decreased due to favorable bid.				Bids were received and rejected for this contract as they were not within a reasonable range of the Engineer's estimate. Contract will be rebid.			
<i>Track</i>							
Mainline Track & Switch Program (6 Projects) - 3rd Qtr	Construction Award	Aug- 18	Apr- 19				
		\$44.0	\$54.3				
Five of the six projects remain uncommitted at this time. Award of the Flushing line Switches re-scheduled to April 2019 due to track access issues.							
<i>Signal Modernization</i>							
Culver Line Interlockings & CBTC	Construction Award	Sep- 18	Jan- 19				
		\$424.0	\$470.3				
Project award re- scheduled due to addenda added to the contract bidders' questions. Project Cost increased slightly reflecting estimate at advertisement.							
<i>Sandy</i>							
Sandy Mitigation: St. George	Construction Award	Nov- 18	Jan- 19				
		\$70.1	\$62.2				
Due to a delay in advertisement, bid opening has been postponed to early December, and award is forecasted for January 2019. Project cost decreased reflecting estimate at advertisement.							
MTA BUS							
HVAC - College Point (New Item)	Construction Award	Dec- 18	Aug- 19				
		\$8.5	\$8.5				
Cost increases required a scope revision, which resulted in the delay in schedule.							
MTA Capital Construction							
M9- A Procurement (New Item)	Procurement	Dec- 18	Jun- 19				
		\$366.9	\$367.0				
In order to maximize competition, the RFP was modified after the initial issuance, resulting in a delay in the procurement process.							

Capital Projects – Major Commitments – December 2018 – Schedule Variances

Project	Commitment	Goal	Actual	Project	Commitment	Goal	Actual
22 All-Agency Yellow Commitments (6 new this month)							
NYCT							
<i>Passenger Stations</i>							
ADA: Eastern Parkway-Brooklyn Museum / EPK	Construction Award	May- 18	Aug- 18 (A)	Replace High Tension Switchgear at 7 Substations (New Item) Project cost decreased as a result of the reduction in the number of substations in the scope. Project award delayed due to an additional Circuit Breaker Housing scope added to the project.	Construction Award	Oct- 18	Dec- 18 (A)
Project award re- scheduled due to delay in advertisement.		\$39.3	\$39.2		\$51.9	\$26.4	
ADA: Gun Hill Rd / Dyre	Construction Award	Mar- 18	Apr- 18 (A)	<i>Shops & Yards</i> 207 St Maintenance & Overhaul Shop Roof & Component Repair (New Item) Project award delayed due to several bid postponements. Project cost decreased reflecting favorable bids received.	Construction Award	Sep- 18	Dec- 18 (A)
Delayed due to final procurement activities. Project cost increased reflecting unfavorable bids received as well as additional scope items.		\$37.8	\$52.0		\$66.3	\$57.6	
ADA: Bedford Park Boulevard / Concourse	Construction Award	Mar- 18	Apr- 18 (A)	LIRR <i>Power</i> Substation Components Project delayed for rebid due to vendor disqualification. A new advertisement was progressed in July 2018.	Construction Award	Jun- 18	Oct- 18 (A)
Delayed due to several bid extensions and final procurement activities. Project cost reflects favorable bids received.		\$37.8	\$29.7		\$13.6	\$12.4	
Replace 12 Traction Elevators / Broadway- 7th Avenue	Construction Award	Mar- 18	Apr- 18 (A)	MNR <i>Signals & Communications</i> Harlem Cable Installation The delay in award was due to pre- award activities required to comply with the contract's diversity compliance goals.	Construction Award	Feb- 18	Mar- 18 (A)
Delayed due to final procurement activities. Project cost increased due to scope changes and unfavorable bids.		\$88.1	\$97.9		\$47.7	\$47.7	
ADA: 59 Street / 4th Avenue	Construction Award	Jul- 18	Nov- 18 (A)	<i>Shops & Yards</i> Harmon Shop Replacement - Phase V (New Item) Due to the transitioning from the Harmon Shop Replacement Stage 1 completion to an immediate Stage 2 commencement the start date was pushed back to October 2018.	Construction Award	Jul- 18	Oct- 18 (A)
Design completion was delayed to secure NYCDOT approval of Maintenance and Protection of Traffic scheme. Contract was awarded in November.		\$44.9	\$55.3		\$388.4	\$376.1	
<i>Line Equipment</i>							
Rehabilitate Forsyth St. Fan Plant (new item)	Construction Award	Oct- 18	Dec- 18 (A)				
Bid opening delayed due to an addendum issued which resulted in prospective bidders requesting additional time to prepare bids. Budget reduction reflects favorable bids.		\$92.8	\$84.4				
<i>Signals and Communication</i>							
Low- Resistance Contact Rail & Negative Cables / QBL (New Item)	Construction Award	Jun- 18	Oct- 18 (A)				
Project schedule delayed due to a budget modification staff summary required to fund budget shortfall. Project cost reflects latest estimates at advertisement with increases to the bid estimate and support costs.		\$25.5	\$63.2				

Capital Projects – Major Commitments – December 2018 – Schedule Variances

Project	Commitment	Goal	Actual	Project	Commitment	Goal	Actual
MTA Bus Company				Rehabilitation of HCT Ventilation Systems (New Item)			
<i>Bus Company Projects</i>				Construction Award Oct- 18 Dec- 18 (A)			
53 Articulated Buses	Fleet Procurement	Apr- 18	Jun- 18 (A)				
		\$53.2	\$50.2		\$66.9	\$74.3	
Award was revised due to an audit for Buy America adherence.				The commitment date was extended to clarify scope and address questions from interested bidders.			
Bus Digital Information Screens (DIS)	Construction Award	Apr- 18	Jun- 18 (A)	CB Scour Protect/Repair/Rpl CB/MP Pier Fender Sys (New Item)			
		\$11.7	\$7.5	Construction Award Nov- 18 Dec- 18 (A)			
Schedule was pushed out 2 months due to a lengthy award process.				\$35.1 \$55.2			
				Additional time was requested by contractors to review bid documents and ask questions.			
MTACC				Rehab of Tunnel Controls & Communication Systems (New Item)			
<i>East Side Access</i>				Construction Award Nov- 18 Dec- 18 (A)			
Harold Structures - Trackwork (CH057D)	Construction Award	Mar- 18	Apr- 18 (A)		\$31.5	\$30.3	
		\$48.5	\$36.4	Additional time was needed for submission of a plan to meet MTA goals to maximize participation by minority contractors.			
Award was delayed due to the contractor's delay in finalizing administrative elements required by procurement to award the contract. Award value reflects good bid savings.				MTA Police			
Harold Structures - Part 3A: B/C Approach (CH058A)	Construction Award	Jul- 18	Oct- 18 (A)	SI County District Office	Construction Award	Aug- 18	Oct- 18 (A)
		\$100.2	\$73.5			\$9.0	\$9.0
Advertisement was delayed to align contract with LIRR and Amtrak resource availability, and as a result, award date was impacted.				The commitment delay was due to contractors' requests for additional time to review the project. In order to maximize vendor interest these accommodations were made and the bid opening was rescheduled to September.			
B&T							
<i>Roadways and Decks</i>							
Reconstruct Manhattan Toll Plaza Structure & Ramps	Construction Award	Jul- 18	Aug- 18 (A)				
		\$21.0	\$21.0				
Delay due to advertisement date being extended for final design approval.							
Tower Pier Rehab/Construct Mooring Platform/Elevator Rehabilitation	Construction Award	Jul- 18	Oct- 18 (A)				
		\$27.2	\$27.2				
Technical proposals were not ready for the July Board meeting and was presented at the September Board meeting.							

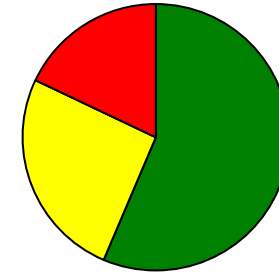
Capital Projects – Major Completions – December 2018

In 2018, agencies planned for a goal of \$6.3 billion in overall completions, including 39 major completions.

Through December, agencies completed \$4.8 billion, or 77% of the overall \$6.3 billion goal. The shortfall was partly due to delays with completion of MNR Harmon Shops Improvements (\$316M), two NYCT Sea Beach stations projects (\$393M), NYCT acceptance of 106 B-Division R179 Cars (\$262M), assorted NYCT Mainline Track and Switch projects (\$262M), and the purchase of 110 CNG Articulated Buses (\$104M).

Overall, thirty-two major completions were made within the year, and seven major completions were delayed beyond 2018. The delays are explained on the following pages.

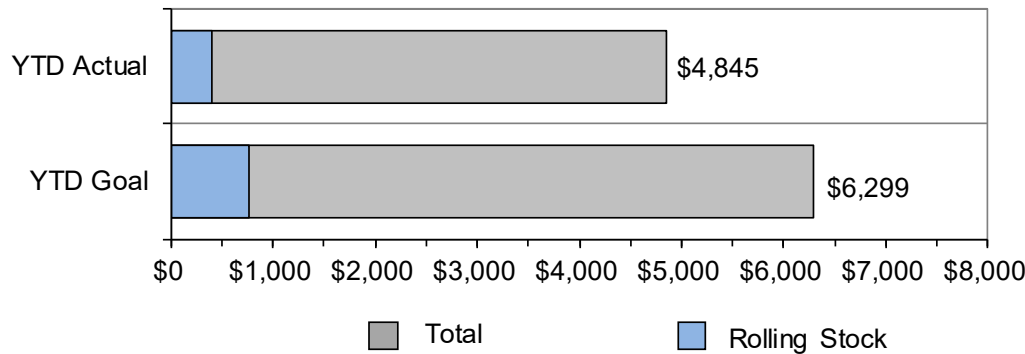
Year-to-Date Major Completions



	Count	Percent	Change from Prior Month
GREEN = Completions made/forecast w ithin Goal	22	56%	↑ 7
YELLOW = Completions delayed beyond Goal (already achieved)	10	26%	↑ 2
RED = Completions delayed beyond Goal (not yet achieved)	7	18%	↑ 2
Total	39	100%	↑ 11

Budget Analysis

2018 Annual Goal \$6,299 (\$ in millions)
 2018 Actual 77% of Annual Goal



Year-to-Date Agency Breakdown

2018 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
3 GREEN, 5 YELLOW, 4 RED	+2 GREEN	+1 YELLOW	+3 RED
Long Island Rail Road			
6 GREEN, 3 YELLOW, 1 RED	+2 GREEN	----	----
Metro-North Railroad			
2 GREEN, 1 RED	+1 GREEN	----	----
Bridges and Tunnels			
9 GREEN, 1 RED	+2 GREEN	----	----
Capital Construction Company			
2 YELLOW	----	+1 YELLOW	-1 RED
MTA Bus Company			
1 GREEN	----	----	----
MTA Police Department			
1 GREEN	----	----	----

Capital Projects – Major Completions – December 2018 – Schedule Variances

Project	Completion	Goal	Forecast
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7 All-Agency Red Completions (4 new this month)

NYCT

Rolling Stock

Purchase 300 B Division R179 Cars - (234 Cars) (New Item)	Procurement	Dec- 18	Sep- 19
		\$577.3	\$577.3

As of December 128 cars were accepted and placed in service. Delays are due to contractor production issues, primarily attributed to welding problems.

Buses

Purchase 110 CNG Articulated Buses (New Item)	Procurement	Dec- 18	Jan- 19
		\$104.2	\$107.3

A total of 106 of the 110 buses have been received. The remaining 4 buses are expected to be placed in service in January.

Passenger Stations

Sea Beach Contract at 6 Stations (New Item)	Construction	Dec- 18	Dec- 19
		\$278.7	\$284.9

Project cost increased due to contract modification for additional scope. The completion will be delayed further to December 2019 due to the addition of southbound elevator at 8th Ave station to the contract.

Sea Beach Contract at 3 Stations (New Item)	Construction	Dec- 18	Feb- 19
		\$114.1	\$122.1

Completion is delayed to February 2019 due to delays with fabrication of windows for the control houses. Project cost increased due to contract modification for additional scope.

LIRR

Track

Mainline Double Track (Switch Equipment)	Construction	Oct- 18	Mar- 19
		\$33.0	\$24.7

Due to lack of availability of track outages for remainder of 2018, completion moved to March 2019 to include switches. Reduction in budget reflects change to to F/A Labor requirements.

Project	Completion	Goal	Forecast
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MNR

Shops and Yards

Harmon Shop Improvements	Construction	Jun- 18	Feb- 19
		\$315.6	\$315.6

Metro- North will begin moving into select areas of the Consist Shop and EMU Annex by year end. On-going delays related to the acceptance of an axle lathe and the commissioning of the new electric service for the Consist Shop Facility have caused the completion date to slip. Both issues are resolved and completion is forecasted in February 2019.

B&T

Tunnels

Queens Midtown Tunnel - Vent Building Electrical Upgrades/Flood Mitigation - Equipment Relocation	Construction	Jul- 18	Apr- 19
		\$57.4	\$57.4

Additional time required for motor modification. Extension to substantial Completion required to provide additional factory acceptance testing and additional field installation verification/testing. Additional factory acceptance testing on the motors revealed a flaw that will be corrected at no cost to the Authority.

Capital Projects – Major Completions – December 2018 – Schedule Variances

Project	Completion	Goal	Actual
10 All-Agency Yellow Completions (2 new this month)			
NYCT			
<i>Line Equipment</i>			
Vent Plant: 46th Street- Northern Blvd / Queens Blvd Line	Construction	May- 18 \$80.9	Aug- 18 (A) \$78.9
Project completion schedule was extended by three months due to testing issues.			
<i>Signals and Communications</i>			
2 Interlockings: Union Turnpike & 71 Av	Construction	May- 18 \$297.8	Jun- 18 (A) \$305.5
Delay due to new scope added to the project. An additional work order was issued for the installation of a communication component.			
34th St Interlocking / 6th Avenue	Construction	Sep- 18 \$164.8	Nov- 18 (A) \$168.3
Project schedule delay due to unfinished work involving the decommissioning of the old tower and the in-service of the new dispatcher's office. Project cost includes higher costs for additional TA Labor and engineering services			
West 4 St Interlocking / 6th Avenue (New Item)	Construction	Sep- 18 \$153.7	Dec- 18 (A) \$188.2
Project schedule delays were due to unfinished work involving the decommissioning of the old tower and the placing in-service of the new dispatcher's office. Project cost increase includes reserves for additional TA Labor and engineering services.			
<i>Buses</i>			
Purchase 92 Articulated Buses (Nova)	Fleet Procurement	Mar- 18 \$83.9	Sep- 18 (A) \$84.2
All buses delivered except one single pilot bus were retrofitted. Additional technical requirements, processed post-award, resulted in a longer turn-around time for Nova's overall production of each bus.			

Project	Completion	Goal	Actual
LIRR			
<i>Stations</i>			
New Elevators - Flushing - Main St	Construction	Jun- 18 \$14.9	Jul- 18 (A) \$14.9
Delay due to vandalism at elevator site. Repairs are complete.			
<i>Track Improvement</i>			
Main Line Double Track Ph 2 (Signal Equipment)	Construction	Apr- 18 \$30.0	Sep- 18 (A) \$30.1
Delay due to additional signal modifications required of the manufacturer.			
Main Line Double Track Ph 2 (Track and Systems)	Construction	Jun- 18 \$71.0	Sep- 18 (A) \$73.3
Budget increase due to 3rd party construction change orders.			
MTA CC			
<i>East Side Access</i>			
Harold Tunnel A Cut and Cover Structures (CH061A)	Construction	May- 18 \$42.0	Aug- 18 (A) \$42.0
Contractor productivity was less than expected. Resource shortages limited ability to mitigate delays.			
MTACC			
<i>7 Line Extension</i>			
Construction: (Site P) Core & Shell (New Item)	Construction	Sep- 18 \$102.2	Nov- 18 (A) \$102.2
Although the secondary entrance opened on September 1, 2018, construction completion was delayed due to additional time required to complete administrative items, such as As-Built submittals for all critical systems.			

MTA Capital Program Commitments & Completions Quarterly Report of Prior Years' Delays

Prior Years' Major Commitments – Quarterly Update: December 2018

The status of 2014 through 2017 major commitments delayed beyond 2017 are tracked until committed and reported to CPOC quarterly.

In 2014, agencies set an overall MTA commitments goal of \$6.5 billion including 54 major commitments. In 2014, \$5.8 billion was committed, including 39 major commitments. NYCT's Rutgers Tube restoration has been rescheduled until 2022 and is no longer being tracked by this report. To date, \$7.2 billion has been committed against the original \$6.5 billion goal.

In 2015, agencies set an overall MTA commitments goal of \$3.2 billion including 34 major commitments. In 2015, 25 major commitments and a total of \$2.9 billion were made. The final two projects were committed this year. To date, \$3.6 billion has been committed against the original \$3.2 billion goal.

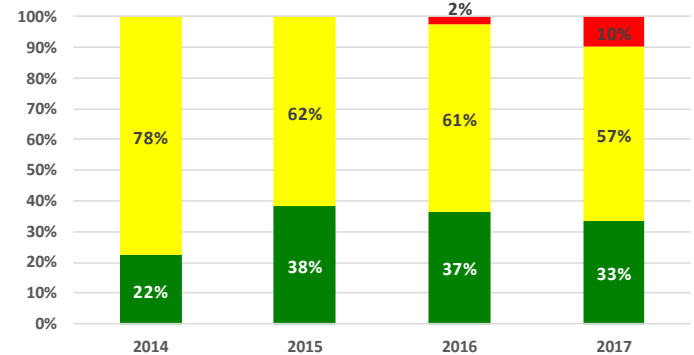
In 2016, agencies set an overall MTA commitments goal of \$6.6 billion including 41 major commitments. In 2016, 27 major commitments and a total of \$5.0 billion were made. Of the remaining projects, two remain delayed. One project was awarded in 2018 and one project is forecast for award in 2019. To date, \$6.9 billion has now been committed.

In 2017, agencies set an overall MTA commitments goal of \$7.3 billion including 51 major commitments. In 2017, the MTA achieved 100% of its \$7.3 billion commitments goal, including 39 major commitments. One project will no longer be progressed at this time, and will not be tracked by this report. Of the remaining projects, seven were awarded to date in 2018, and five projects are forecast for award beyond 2018.

Actual		MTA-Wide Prior Years' Major Commitments													Post 2018	
Goal	Total	On Time	Achieved Late	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	
	180															
2014	54	12	42													
2015	34	13	19				1		1							
2016	41	15	23									1			1	1
2017	51	17	22		2		2	1		1		1				5

This chart tracks when all major commitments are forecast/achieved versus original goal, starting with those that were committed within 2014, 2015, 2016 and 2017, followed by those that slipped beyond 2017. Green represents projects that were achieved on-time, yellow represents projects that were delayed but have since been committed, and red represents projects that are still delayed. Projects that are red will become yellow when they are committed.

% of Project Status by Year



GREEN = Commitments made/forecast within Goal **YELLOW** = Commitments delayed beyond Goal (already achieved) **RED** = Commitments delayed beyond Goal (not yet achieved)

Prior Year Major Commitments – December 2018 – Schedule Variances
Actual Results Shaded

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
6 All-Agency Red Commitments				MTA CC			
NYCT				Penn Station Access			
<i>Passenger Stations</i>				GEC Design			
ADA: 68 St- Hunter College / Lexington	Construction Award	Sep-16 \$66.8M	Jun-19 \$116.3M	Construction Award	Dec- 17 \$37.0M	Jun- 19 \$33.5M	
Award Schedule delayed to 2019 due to pending resolution of real estate issues at adjacent properties. Project cost increased because of added architectural , structural, electrical and utility relocation work. The complexity of the utility relocation under the street work with limited space constraints requires multiple construction phasing to keep the street open to both vehicular and pedestrian traffic throughout construction.				Delay due to change in procurement strategy. Award is delayed due to the need to obtain Amtrak agreement.			
<hr/>				<hr/>			
Access Improvements: Grand Central: Phase 2	Construction Award	Jul- 17 \$66.7M	Jul- 19 \$66.7M	Procurement will be done through multiple phases reflecting the various activities in the project.			
<i>Service Vehicle</i>				<hr/>			
Purchase Locomotives	Purchase Award	Dec- 17 \$128.3M	Mar- 19 \$128.3M	Responses to NYCT's industry outreach necessitated changes to the technical specifications in order to comply with New York State Department of Labor requirements regarding workers' exposure to diesel exhaust emissions.			
<hr/>				<hr/>			
<i>Misc.</i>				<hr/>			
Livingston Plaza Electrical and Mechanical System Improvements	Construction Award	Dec- 17 \$62.7M	Jan-20 \$62.6M	The project is split into 2 parts (Contract A, the redundant Dry Coolant System for the 4th Floor Data Center and Contract B for the remainder scope). Contract A was awarded in July, 2018 while design for contract B started in July as well. Award of contract B is not expected until early 2020.			
<hr/>				<hr/>			
MNR				<hr/>			
<i>Sandy</i>				<hr/>			
Power and Signal Mitigation	Construction Award	Nov- 17 \$20.6M	Nov- 19 \$20.6M	Due to procurement challenges, contract was readvertised in February 2018 and is scheduled to be awarded in October 2018.			
<hr/>				<hr/>			

Prior Year Major Commitments – December 2018 – Schedule Variances
Actual Results Shaded

Project	Commitment	Goal	Actual
11 All-Agency Yellow Commitments (1 new this quarter)			
NYCT			
<i>Subway Cars</i>			
Purchase 525 R211 Cars & 10 Open Gangway	Construction Award	Jun-17 \$1534.5M	Feb-18 \$1735.9M
Contract awarded in February, but Board approved in 12/2017. Bids were higher than goal, but lower than the July 2017 Capital Program Amendment's revised budget.			
<i>Signals and Communications</i>			
ISIM-B Module 3: Rail Traffic Systems	Construction Award	Aug-17 \$91.7M	Jul-18 \$98.5M
Project award extended further due to protracted negotiations for this RFP contract			
<i>Sandy</i>			
Sandy: 148th Yard Long-Term Perimeter Protection & Power Cable	Construction Award	Nov-15 \$135.1M	Apr-18 \$88.8M
Delayed from August 2017 to April 2018 due to delay in obtaining the necessary easement agreement with an adjacent property owner. Project cost reflects favorable bids received.			
Sandy Mitigation: Upgrade Emergency Booth Comm System	Construction Award	Nov-17 \$67.1M	Apr-18 \$75.3M
Project awarded in April 2018. Award was delayed due to protracted RFP procurement process. Project cost increased reflecting negotiated amount.			
Sandy: 207th Yard Perimeter Protection & Power Cable	Construction Award	Oct-16 \$222.7M	Sep-18 \$199.0M
Delayed to September 2018 due to rescheduling of bid opening to accommodate bidders' requests. Lower estimate for perimeter protection scope reduces the overall cost. Scope for yard signals, track and switches is included in 2018 goals for NYCT.			
<i>Work Equipment</i>			
Work Train & Special Equipment: 54 Flat Cars	Purchase Award	Dec-15 \$33.5M	Jun-18 \$45.2M
Awarded in June 2018. Project cost increased reflecting final negotiated price and the increased quantity from 54 to 65 flat cars			

Project	Commitment	Goal	Actual
B&T			
Electrical/Mechanical Rehab of HR Lift Span	Construction Award	Nov-17 \$17.0M	May-18 \$30.9M
Design/Build teams requested additional time to review RFP documents. The Design-Build contract was awarded May 2, 2018.			
MTA PD			
<i>Communications</i>			
Public Radio Phase 3	Construction Award	Feb-17 \$5.7M	Apr-18 \$5.4M
Motorola Radio Equipment originally assumed for purchase in 2017 was delayed to align the purchase with overall PD radio system upgrade progress.			
Penn Station / Atlantic Tunnel Radio Upgrade (New Item)	Construction Award	Dec-16 \$25.0M	Dec-18 \$25.0M
The continuing schedule delay is due to ongoing MOU negotiations between users of the radio system as well as for considerations of other construction work at Penn Station external to this project.			
MTA Bus Company			
<i>Depot Projects</i>			
Security: JFK and Spring Creek	Construction Award	Sep-17 \$9.2M	Feb-18 \$8.5M
Award slipped due to a protracted procurement and a longer than expected award process following bidding.			
MTA CC			
<i>East Side Access</i>			
Systems Package 2 : Installation of Signals	Construction Award	Jun-17 \$44.9M	Sep-18 \$60.9M
Additional time required for extended review and negotiation process.			

Prior Years' Major Completions – Quarterly Update: December 2018

The status of 2014 through 2017 major completions delayed beyond 2017 are tracked until achieved and are reported to CPOC quarterly.

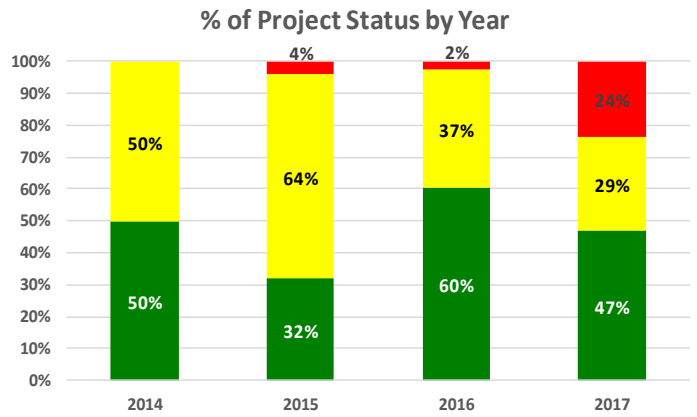
In 2014, agencies set an overall MTA completions goal of \$5.7 billion including 46 major completions. In 2014, \$4.5 billion was completed, including 28 major completions. Of the remaining projects, one has been deferred and another is no longer being tracked. The final project was completed in June 2018. To date, \$6.5 billion has been completed against the original \$5.7 billion goal.

In 2015, agencies set an overall MTA completions goal of \$2.6 billion including 25 major completions. In 2015, 19 major completions totaling \$2.1 billion were made. Of the remaining projects, one was completion in 2018 and one is delayed beyond 2018. To date, \$2.3 billion has been completed against the original \$2.6 billion goal.

In 2016, agencies set an overall MTA completions goal of \$4.6 billion including 43 major completions. In 2016, 36 major completions were made including several MTACC contracts associated with 2nd Ave Subway Phase 1 which achieved beneficial use in December 2016. One remaining project is delayed beyond 2018. To date, over \$4.5 billion has been completed.

In 2017, agencies set an overall MTA completions goal of \$5.0 billion including 34 major completions. In 2017, twenty-four major completions were achieved. Two projects were completed in the first quarter and eight are delayed beyond 2018.

Actual Goal	MTA-Wide Prior Years' Major Completions														Post 2018	
	On Time	Achieved Late	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18		
Total	148															
2014	46	23	22					1								
2015	25	8	15											1		1
2016	43	26	15								1					1
2017	34	16	8	1		1										8



This chart tracks when all major completions are forecast/achieved versus original goal, starting with those that were completed within 2014, 2015, 2016, and 2017 followed by those that slipped beyond 2017. Green represents projects that were achieved on-time, yellow represents projects that were delayed but have since been completed, and red represents projects that are still delayed. Projects that are red will become yellow when completed.

GREEN = Completions made/forecast within Goal **YELLOW** = Completions delayed beyond Goal (already completed) **RED** = Completions delayed beyond Goal (not yet achieved)

Prior Year Major Completions – December 2018 – Schedule Variances

Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
10 All-Agency Red Completions							
NYCT				MNR			
<i>Communications</i>				<i>Sandy</i>			
CBTC Flushing Line	Construction	Nov-17	Jan-19	Power Infrastructure Restoration - Substations	Construction	Aug-17	Apr-19
		\$505.2M	\$563.6M			\$43.8M	\$44.4M
<p>Project is delayed due to hardware and software issues that need to be addressed to achieve system stability and system performance. The project cost was increased due to higher force account costs, car equipment installation, increased costs for 3rd rail power removal, and additional cost for Consultant Construction Administration & Independent Safety Assessor (ISA).</p>				<p>Due to additional time needed for acceptance testing and coordination with utility company for power cutover the completion date has been moved to April 2019.</p>			
<i>Subway Cars</i>				<i>Power</i>			
Accept 62 R179 Rail Cars	Fleet Purchase	Dec-17	Mar-19	Substation Bridge 23 - Construction	Construction	Oct-17	Mar-19
		\$162.8M	\$162.8M			\$41.7M	\$41.7M
<p>No cars were accepted in 2017. 236 cars are now scheduled to be accepted throughout 2018, while the remaining 64 cars (including these 62 cars) are scheduled in 1st Qtr 2019.</p>				<p>Delay due to fabrication of the substation equipment taking longer than expected. Additional time was required for system integration to ensure all equipment were compatible.</p>			
<i>Depots</i>				MTACC			
Bus Command Center Construction	Construction	Nov-17	Apr-19	<i>East Side Access</i>			
		\$51.4M	\$57.2M	Plaza Substation and Structures (CQ032)	Construction Completion	Aug-16	Mar-19
<p>Substantial Completion is delayed to August 2018 due to delay in installing components for building enclosure, interference of sprinkler heads with other components in the operating theater, delay in the installation of elevator, fabrication of shaft glass curtain wall, energizing Switch Gear and Panels, and obtaining gas service</p>				<p>Completion of final work items has taken longer than expected. Resolution of leaks and duct bench issues have taken longer than expected.</p>			
LIRR				Manhattan Northern Structures (CM006)			
<i>Signals and Communications</i>				Construction			
Centralized Traffic Control	Construction Completion	Jun-15	Mar-19			Jun-17	Jan-19
		\$12.9M	\$12.9M			\$361.6M	\$361.6M
<p>Due to an extended design schedule, add'l time was needed for the procurement process and legal review.</p>				<p>Completion of final work items has taken longer than expected. Additionally, need to resolve remaining commercial issues.</p>			
<i>Track</i>				BUS COMPANY			
Massapequa Pocket Track	Construction	Nov-17	Apr-19	<i>Bus Company Projects</i>			
		\$19.6M	\$19.6M	Bus Command Center - MTA Bus	Construction	Dec-17	Apr-19
<p>Delay due to lack of available force account resources in the signals area.</p>				<p>Substantial Completion is delayed to August 2018 due to delay in installing components for building enclosure, interference of sprinkler heads with other components in the operating theater, delay in the installation of elevator, fabrication of shaft glass curtain wall, energizing Switch Gear and Panels, and obtaining gas service</p>			
						\$17.1M	\$17.3M

Prior Year Major Completions – December 2018 – Schedule Variances

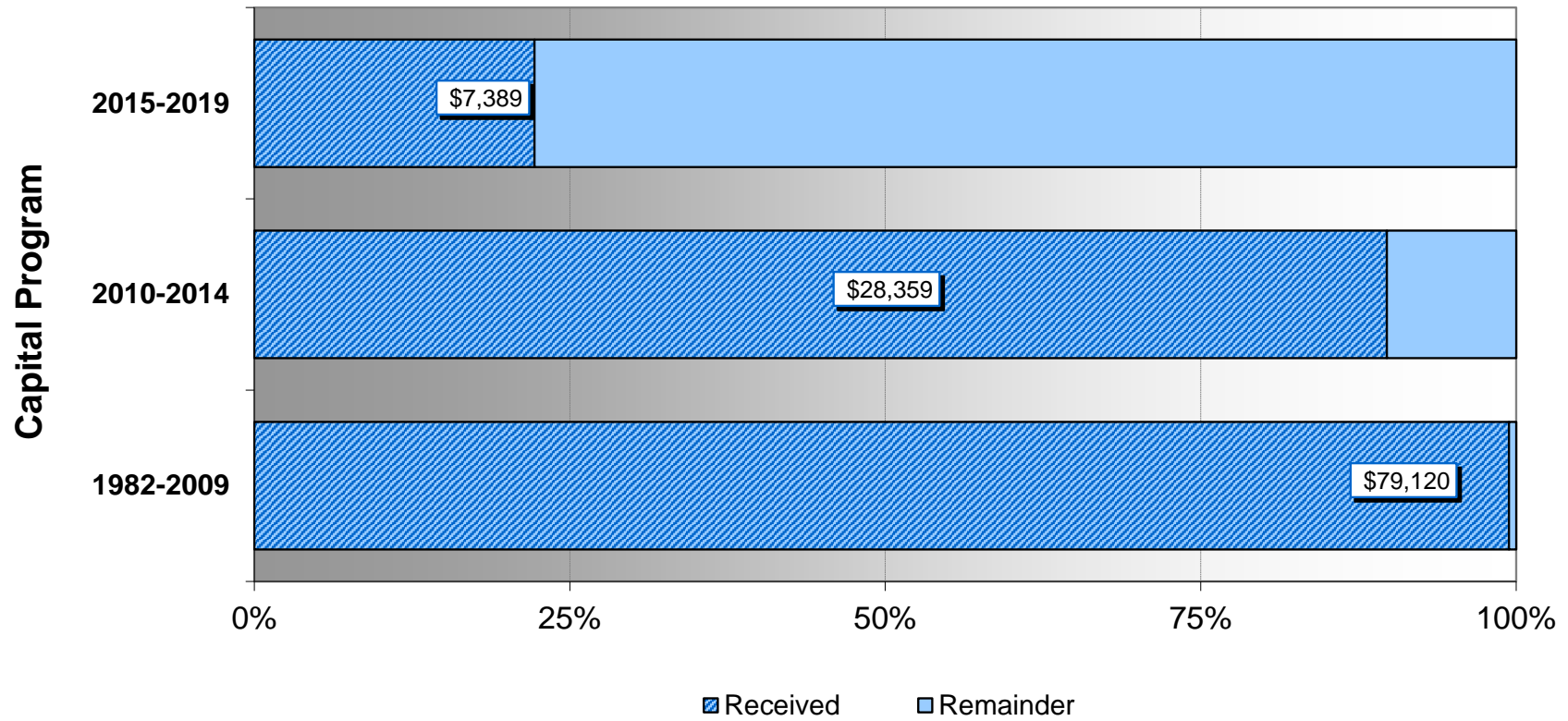
Actual Results Shaded

Project	Completion	Goal	Actual
5 All-Agency Yellow Completions (1 new this quarter)			
NYCT			
<i>Bus Replacement</i>			
Purchase 139 Articulated Buses	Fleet Purchase	Nov-17 \$120.3M	Jan-18 \$120.2M
The delay was due to required testing for the fleet's braking systems.			
<i>Signals and Communications</i>			
PA/CIS at 45 Stations - Install Cable (New Item)	Construction	Dec-15 \$56.1M	Dec-18 \$56.0M
Project delayed to 2018 due to slow progress of work. In-house forces were diverted to address other safety sensitive projects.			
MNR			
<i>Stations</i>			
GCT Leaks Remediation Phase II (New Item)	Construction	Dec-16 \$18.6M	Sep-18 \$18.6M
Substantial completion was achieved in September 2018.			
B&T			
MPB / CBB Master Plan & Resiliency Needs	Construction	Dec-17 \$10.0M	Mar-18 \$10.0M
Additional time required for structural data collection and traffic analysis			
MTACC			
<i>East Side Access</i>			
GCT Councourse Finishes Early Work	Construction	Apr-14 \$56.7M	Jun-18 \$60.0M
Completion of final work items has taken longer than expected. Final agreement is being negotiated and substantial completion has been issued. Budget value is being aligned with final costs.			

Status of MTA Capital Program Funding

Capital Funding (December 2018)

\$ in millions



Capital Funding Detail (December 31, 2018)

\$ in millions

	Funding Plan	Receipts		
	Current	November	This month	Received to date
1992-1999 Program	18,099	18,099	-	18,099
2000-2004 Program	21,682	21,691	(9)	21,682
2005-2009 Program	24,401	23,947	1	23,948

	Funding Plan	Receipts		
	Current	November	This month	Received to date
2010-2014 Program				
Federal Formula, Flexible, Misc	\$5,853	\$5,839	\$ -	\$5,839
Federal High Speed Rail	295	295	-	295
Federal New Start	1,257	1,257	-	1,257
Federal Security	189	100	-	100
Federal RIFF Loan	-	-	-	-
City Capital Funds	719	608	-	608
State Assistance	770	400	-	400
MTA Bus Federal and City Match	132	108	-	108
MTA Bonds (Payroll Mobility Tax)	11,483	11,480	-	11,480
Other (Including Operating to Capital)	1,322	1,205	9	1,213
B&T Bonds	2,025	2,025	-	2,025
Hurricane Sandy Recovery				
<i>Insurance Proceeds/Federal Reimbursement</i>	6,329	4,800	-	4,800
<i>PAYGO</i>	235	81	-	81
<i>Sandy Recovery MTA Bonds</i>	758	28	-	28
<i>Sandy Recovery B&T Bonds</i>	230	124	-	124
Total	31,597	28,351	9	28,359

	Funding Plan	Receipts		
	Current	November	This month	Received to date
2015-2019 Program				
Federal Formula, Flexible, Misc	\$6,704	\$3,084	\$ -	\$3,084
Federal Core Capacity	100	-	-	-
Federal New Start	500	-	-	-
Federal Security	3	3	-	3
State Assistance	8,640	560	33	593
City Capital Funds	2,666	667	-	667
MTA Bonds	7,968	541	-	541
Asset Sales/Leases	1,018	297	-	297
Pay-as-you-go (PAYGO)	2,145	1,691	39	1,730
Other	592	-	-	-
B&T Bonds & PAYGO	2,936	475	-	475
Total	33,273	7,317	72	7,389