



Metropolitan Transportation Authority

Capital Program Oversight Committee Meeting

February 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

Monday, 2/25/2019

2:00 - 3:30 PM ET

1. PUBLIC COMMENTS PERIOD

2. APPROVAL OF MINUTES JANUARY 22, 2019

- Minutes from January '19 - Page 3

3. COMMITTEE WORK PLAN

- 2019-2020 CPOC Committee Work Plan - Page 5

4. LIRR AND MNR UPDATE ON POSITIVE TRAIN CONTROL (PTC)

- Progress Report on PTC - Page 7

- IEC Project Review on PTC - Page 23

5. B&T CAPITAL PROGRAM UPDATE

- Progress Report on B&T Capital Program - Page 29

- IEC Review on B&T Bridge Program - Page 43

6. CAPITAL PROGRAM STATUS

- Commitments, Completions, and Funding Report - Page 48

MINUTES OF MEETING
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE
January 22, 2019
New York, New York
2:00 P.M.

MTA CPOC members present:

Hon. Fernando Ferrer
Hon. Andrew Albert
Hon. Norman Brown
Hon. Susan Metzger
Hon. Mitchell Pally
Hon. Neal Zuckerman

MTA CPOC members not present:

Hon. Lawrence Schwartz
Hon. Polly Trottenberg
Hon. Peter Ward
Hon. Carl Weisbrod

MTA staff present:

Ronnie Hakim
Don Spero

NYCT staff present:

Andy Byford
John Higgins
John Santamaria

Independent Engineering Consultant staff present:

Joe DeVito
Calvin Gordon

* * *

Acting Chairman Ferrer called the January 22, 2019 meeting of the Capital Program Oversight Committee to order at 2:45 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 December 10, 2018.

Committee Work Plan

Mr. Spero announced that there were no changes to the Work Plan with respect to today's presentations. The proposed 2019 CPOC Work Plan was then formally approved by the Committee.

NYCT Subway Car Program Update

Mr. Santamaria updated the Committee on the NYCT Subway Car Fleet, including an overview and delivery schedule of the R211 Project (with a \$1.75 billion base order budget in the 2015-19 Capital Program) and the R179 Project (with a \$744 million budget). In its oral remarks on the R211 cars, the IEC pointed out that 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, including CBTC, and inspection and testing resources. With respect to the R179 cars, the IEC provided the following remarks: 49% of the cars remain to be delivered, and Bombardier has yet to achieve the one-car-per-day production rate required to meet the scheduled completion; delivery is now scheduled to be complete in September 2019 -- 8 months later than last reported to CPOC; and, resolution of outstanding quality issues makes meeting this date a challenge. 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.

NYCT Bus Procurement Update

Mr. Higgins updated the Committee on NYCT's Bus Procurement Program, including the overall Vision of the Program, including Safety, Environmental Sustainability, Customer Amenities, and Improved Service. He then provided an overview of Fleet Dynamics and Current Bus Deliveries, as well as remaining procurements for the 2015 – 2019 Capital Program. The IEC opened its oral remarks by stating that the overall bus procurement program is within budget, and that the production deliveries are on schedule. The IEC then commented that the project team continues to review the latest schedule for the 251 Nova Clean Diesel buses, where significant progress has been made to bring the deliveries in line with the contractual delivery dates. Acknowledging the project team's efforts in working closely with bus vendors to address the challenges in standardizing new bus charging protocols, the IEC stated that this should deliver positive results in the implementation and operations of the bus program. 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.

MTA Capital Program Commitments & Completions and Funding

Ms. Hakim brought the Committee's attention to the Capital Program Commitments & Completions and MTA Capital Program Funding Reports in the CPOC Agenda and asked if there were any comments or questions with respect thereto, of which there was none.

Adjournment

Upon motion duly made and seconded, Acting Chairman Ferrer adjourned the January 22, 2019 meeting of the MTA Capital Program Oversight Committee at 3:45 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

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

- Jamaica Capacity Improvements
- Mid Suffolk Yard
- Morris Park Locomotive Shop and Employee Facility

MNR Capital Program Update

- Harmon Shop Replacement
- Hudson Line Sandy Restoration
- Customer Information System

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

February

B&T Capital Program Update

February 2019 Joint LIRR/MNR Committee and CPOC PTC Project Update

February 25, 2019



LIRR/MNR Overall PTC Project Status

Item	Comments
Schedule	<ul style="list-style-type: none"><input type="checkbox"/> LIRR/MNR met all 2018 federal compliance requirements to request an Alternative Schedule (extends project to December 31, 2020).<input type="checkbox"/> LIRR/MNR continued to perform Revenue Service Demonstration (RSD) runs on their pilot lines.<input type="checkbox"/> LIRR/MNR have developed aggressive working schedules to achieve full PTC Implementation by December 2020.<ul style="list-style-type: none"><input type="checkbox"/> Contingent upon the Systems Integrator to meet their schedule commitments and mitigate project risks.<input type="checkbox"/> Contingent upon no new quality or equipment reliability issues.
Budget	<p>\$1.037B</p> <p>Based on new project schedule, Estimates At Completion are currently under review</p>



LIRR/MNR Project Risks and Concerns

- Completion of the project depends on all tenant Railroads being interoperable with our wayside and solving boundary issues with Amtrak.
- Given the number of outstanding technical issues, the SI's performance, and the continuous monthly schedule slippages of key project activities, the SI's current CPM schedule is extremely aggressive.
 - Jeopardizes Railroads' working schedules and adds risk to meet the December 2020 deadline.
 - The software development and schedule for LIRR/MNR has diverged and requires dedicated SI resources to simultaneously support both Railroads.
 - Slow resolution of software variances has delayed the completion of RSD and may impact Extended RSD (ERSD) in the non-pilot segments.
 - A design solution for back-to-back interlockings on LIRR may require several additional software releases to enter into ERSD on the non-pilot segments which may jeopardize project completion to meet the December 2020 deadline.



LIRR/MNR Project Risks and Concerns

- PTC equipment reliability and Quality Control concerns.
 - 100% of all Undercar scanner antenna/CTV/harness (4000+ unique units) are being recalled due to several quality issues discovered after equipment was manufactured.
 - A test station in the on-board manufacturing facility was out of calibration since 2016.
 - The recall process has a major impact to the Railroads' working schedule.
 - The SI's plan must be properly managed in order to provide a sufficient number of repaired units to support both full PTC/CSE operations.
 - The SI also issued a recall of 200+ GE PTC Radios (on-board and wayside).
- Unexpected PTC equipment failures will impact train service on the RSD segment and ERSD on non-pilot segments.
- The Systems Integrator (SI) continues to provide inadequate resources to support both LIRR & MNR.
 - The Railroads continue to provide their own technical experts to fill gaps in the SI's staffing.



Full PTC Implementation by December 2020

■ Steps to full PTC implementation:

- Extended Revenue Service Demonstration (ERSD) on all line segments.
 - Complete required number of Revenue Service Demonstration (RSD) runs on pilot line(s) per FRA requirements.
 - Obtain FRA approval to go into ERSD.
 - Complete all required testing on each non-pilot segment for RSD Readiness.
- Interoperability
 - All tenant locomotives must be interoperable with our wayside.
 - Boundaries must be seamless.
- PTC FRA Certification
 - Develop and submit the PTC Safety Plan (PTCSP).
 - FRA has 180 – 360 days to approve PTCSP.



LIRR Project Update as of January 2019

- Met all 2018 federal compliance requirements.
 - Received FRA Approval for an Alternative Schedule in January 2019.
- Actively participated in the System Integrator's (SI's) Pre-Factory Acceptance Testing (Pre-FAT) of new system software baseline 3.4 for RSD. Started Formal FAT in February 2019 with targeted completion in early March 2019.
- In parallel to FAT, started to field test system software baseline 3.4.
 - Encountered several operational/functional issues during RSD which must be corrected in this baseline release to complete the 135 required FRA RSD runs on L2.
- Progressed the development of the LIRR PTC Safety Plan targeted for FRA submission in July 2019.
 - Approximately 70% complete with 5000+ estimated pages of supporting documents and test data.
- Conducted interoperability testing with Amtrak through Harold interlocking to test communications, and finalizing details for the new safety server (STS-STC) interface.
- Continued Site Installation Testing (SIT) on non-pilot segments.



MNR Project Update as of January 2019

- Met all 2018 federal compliance requirements.
 - Submitted PTCIP with revised schedule and *written Notification and Certification of Compliance* in December 2018.
 - MNR expects FRA Approval for an Alternative Schedule March 2019.
- As January 31, 2019 completed **49** RSD successful trips between Tarrytown and Croton-Harmon towards the FRA goal of approved 110 trips.
- Started Site Integration Testing (SIT) on the Danbury Line.
- Completed Antenna Testing on the Port Jervis Line.
- Continues to operate Civil Speed Enforcement (CSE) on all rolling stock.
- Performing interoperability testing with CSX and AMTRAK.
- Metro-North Awarded up to \$2.3M FRA Grant to Enhance PTC Implementation.

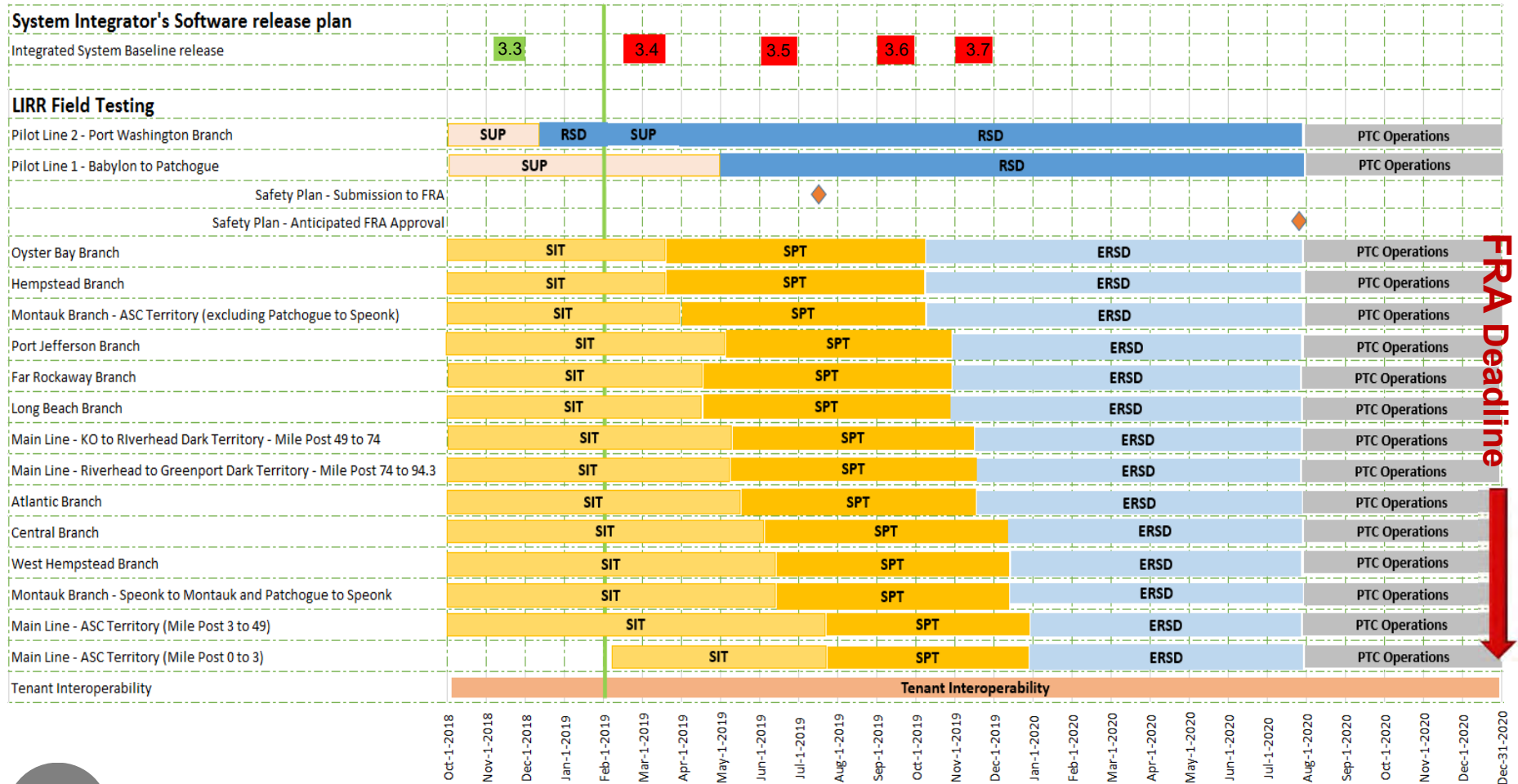


LIRR Working Schedule and Sequence

Start RSD on Babylon to Patchogue pilot segment in May 2019

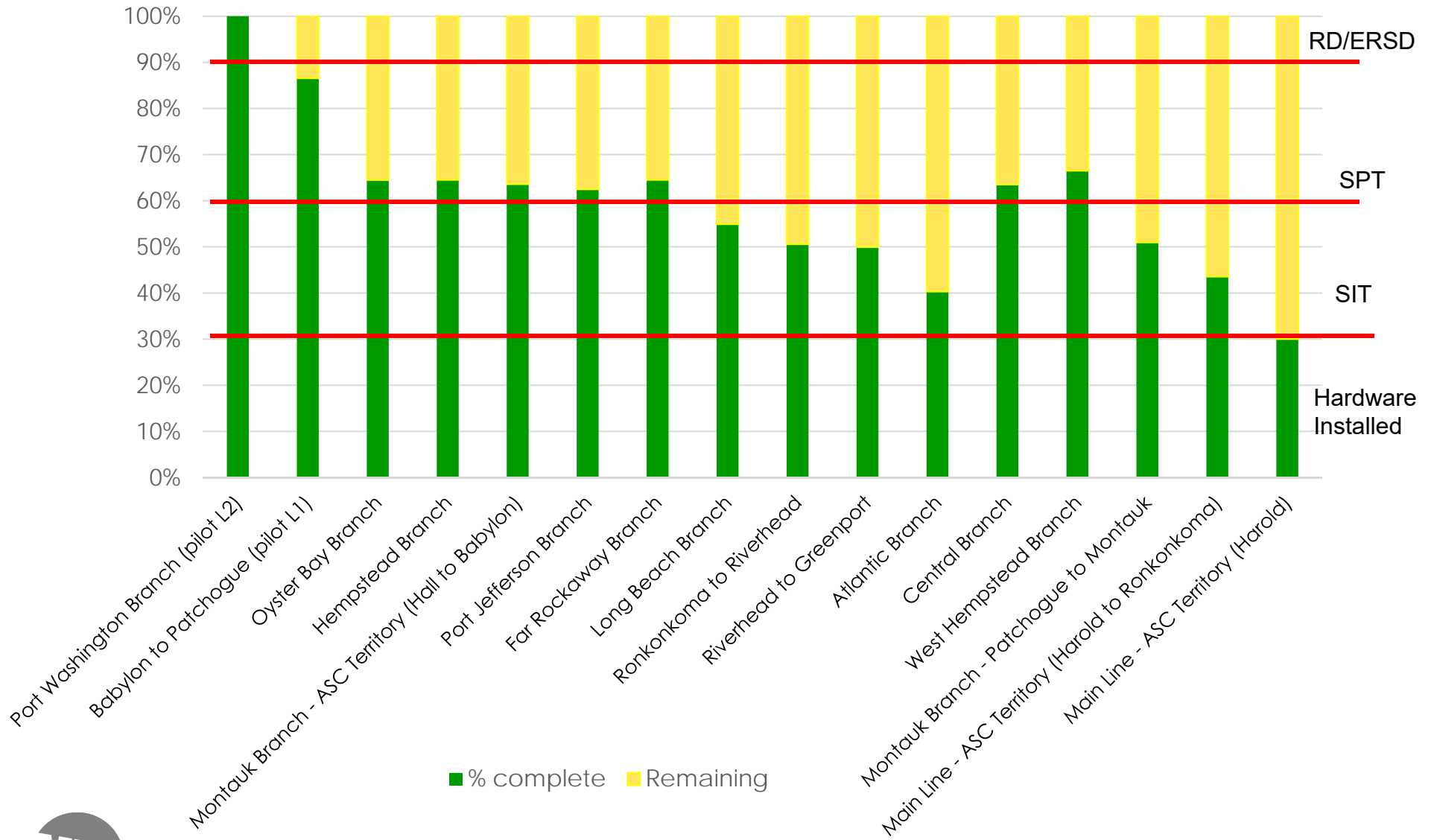
Start ERSD in October 2019

Last non-pilot segment in ERSD in Jan 2020



SIT= Site Installation Tests ; SPT = Site Performance Tests ; SUP = Site Update Period ; RSD = Revenue Service Demonstration; ERSD = Extended RSD

LIRR Segment RSD Readiness



■ % complete ■ Remaining

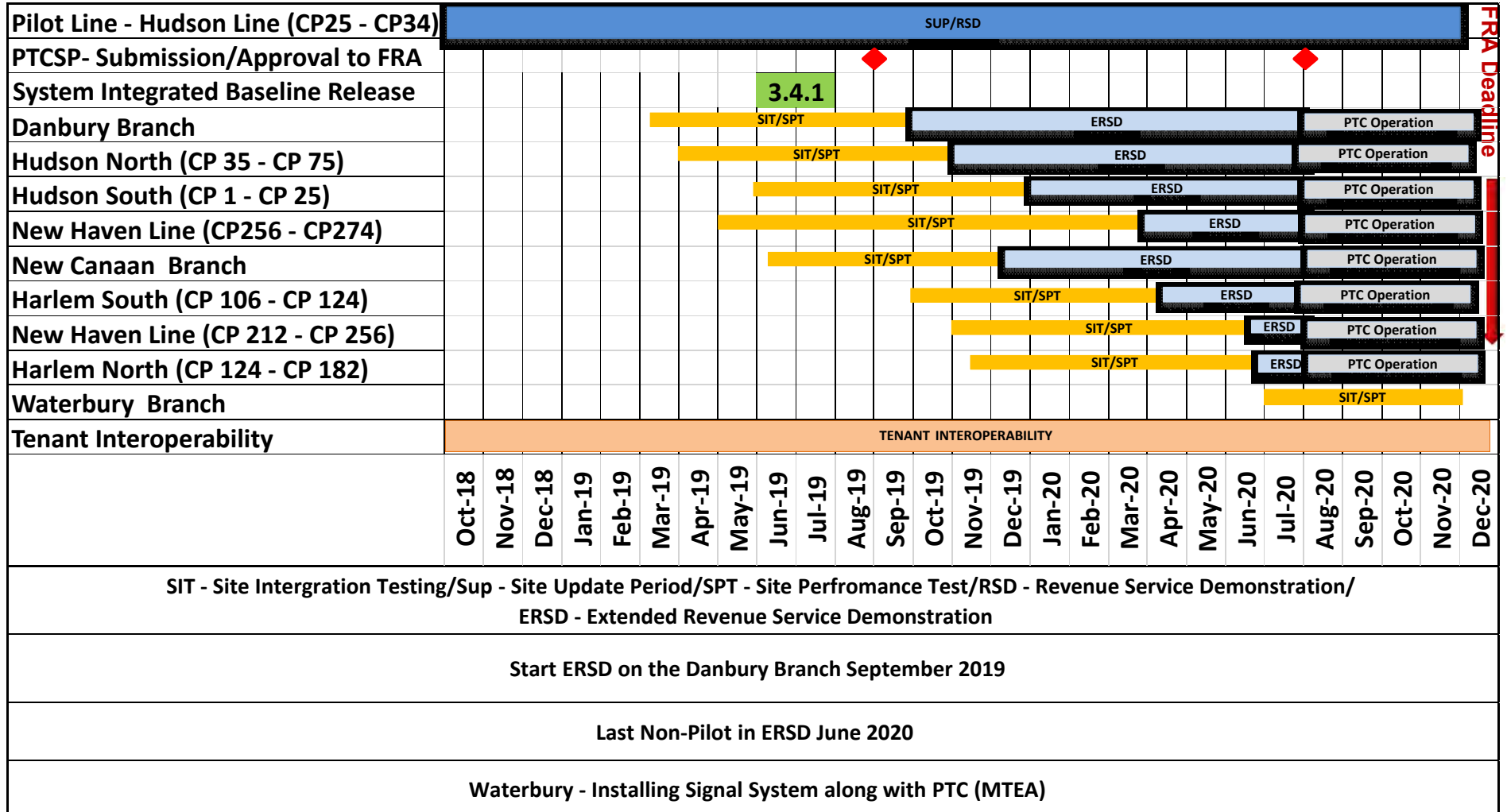


SIT = Site Integration Testing

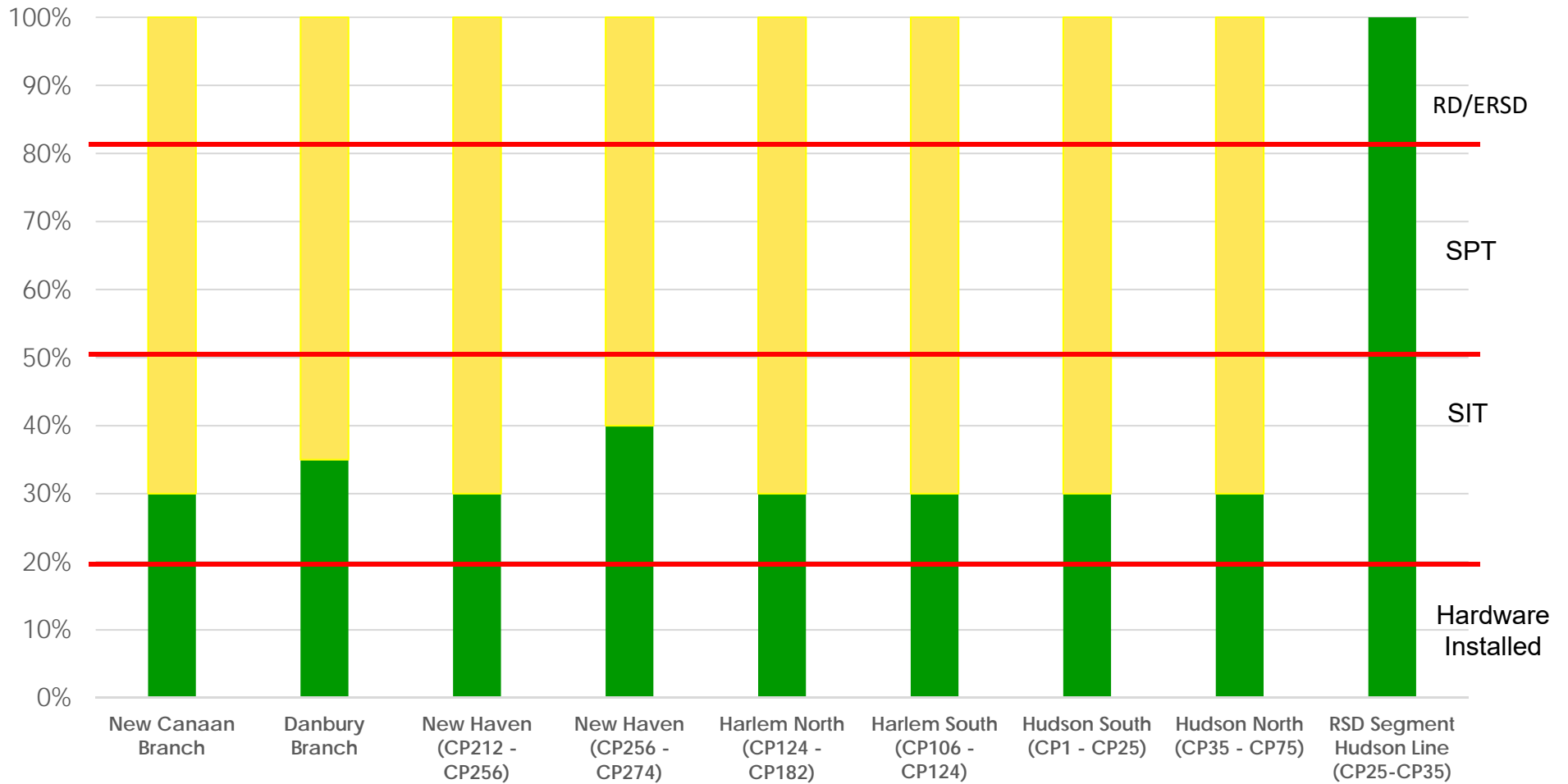
SPT = Site Performance Testing

RD/ERSD = Repeatability Demonstration/Extended Revenue Service Demonstration.

MNR Working Schedule and Sequence



MNR Segment RSD Readiness



SIT = Site Integration Testing, SPT = Site Performance Testing, (E)RSD/ERSD = (Extended) Revenue Service Demonstration.



■ % complete ■ Remaining

LIRR PTC Timeline and Look-ahead

Jan 2019

- ✓ Conducted RSD runs on Port Washington pilot line (L2).

Feb 2019

- ❑ Conducting Factory Acceptance Testing (FAT) and Site Update Period (SUP) testing in the field on L2 & L1 with system software baseline 3.4.

Mar 2019

- ❑ Continue Site Update Period (SUP) testing in the field on L2 & L1 with system software baseline 3.4.

Apr 2019

- ❑ Perform required FRA RSD runs on the Port Washington line.
- ❑ SI to complete Office 3.5 Factory Acceptance Test (FAT).
- ❑ SI to deliver OBC S5 software for field testing.
- ❑ Start Site Performance Test on Non-Pilot lines with software baseline 3.4.

May 2019

- ❑ Start RSD runs on Babylon to Patchogue pilot segment (L1).
- ❑ SI to deliver OBC S6 software for field testing.



LIRR PTC Timeline and Look-ahead (cont'd.)

Jul 2019

- ☐ Submit PTC Safety Plan to FRA for approval.

Sep 2019

- ☐ SI to deliver system software baseline 3.6 to LIRR to support ERSD on all lines.

Oct 2019

- ☐ Start to place non-pilot segments into Extended Revenue Service Demonstration (ERSD).

Nov 2019

- ☐ SI to deliver system software baseline 3.7 to correct residual variances/deferred functions.
- ☐ Continue to place non-pilot segments into ERSD.

Dec 2019

- ☐ Continue to place non-pilot segments into ERSD.



MNR PTC Timeline and Look-ahead

Jan 2019

- ✓ Continued RSD runs on pilot lines
- ✓ MNR Submitted RSD Test Report for the month of December 2018
- ✓ MNR Completed M3's Repeatability testing
- ✓ Performing Site Integration Testing on the New Haven Line (CP255 – CP274)
- ✓ Performed Rev 11 engineering testing w/Amtrak

Feb 2019

- Start Radio Case Site Integration Testing (SIT) - Danbury Branch (10 locations)
- Program the Transponders full PTC package - Danbury Branch.
 - Perform civil speed testing for both passenger and freight
 - Test the transponder linking distances, confirm PTS
- Introduce M3's into RSD towards completing the required 110 RSD runs on Hudson line (Tarrytown to Croton-Harmon) for FRA approval.
- Continue Site Integration Testing on the New Haven Line (CP255 – CP274)
- Install and test Cellular connectivity on the Hudson Line
- Submit RSD Test Report for the month of January 2019



MNR PTC Timeline and Look-ahead (cont'd.)

Mar 2019

- ❑ Complete 110 RSD trains on Hudson line (Tarrytown to Croton-Harmon) for FRA approval.
- ❑ Continue to perform Radio Case SIT – Danbury Branch
- ❑ Continue Site Integration Testing on the New Haven Line (CP255 – CP274)
- ❑ Continue Installing and test Cellular connectivity on the Hudson Line
- ❑ Install Office 3.4
- ❑ Start SUP testing on the RSD segment (Office 3.4/OBC S4B/MCM 1.8)
- ❑ Update Transponders on the RSD segment to accommodate Amtrak/CSX interoperability
- ❑ Approval from the FRA to place Amtrak/CSX Rev 10 interoperability into RSD
- ❑ Submit RSD Test Report for the month of February 2019
- ❑ Work with NJT to perform PTC Functionality Testing on the Port Jervis Line

April 2019

- ❑ Place 10-15 trains into post RSD utilizing OBC Sw. S4B
- ❑ Monitor train capacity within the RSD segment
- ❑ Amtrak/CSX running utilizing Rev 10
- ❑ Submit RSD Test Report for the month of March 2019
- ❑ Continue Installing and test Cellular connectivity on the Hudson Line
- ❑ Continue to perform Radio Case SIT – Danbury Branch
- ❑ Continue Site Integration Testing on the New Haven Line (CP255 – CP274)



MNR PTC Timeline and Look-ahead (cont'd.)

May 2019 (MNR)

- Install Office 3.4.1
- Start SUP testing (Office 3.4.1/OBC S5)
- Start Site Performance Testing on the Danbury Line
- Approval from the FRA to move into ERSD
- Continue Site Performance Testing on the Danbury Line
- Start Radio Case Site Integration Testing (SIT) – Hudson Line

June 2019 (MN)

- Continue Site Performance Testing on the Danbury Line
- Continue Site Integration Testing on the New Haven Line (CP255 – CP274)
- Continue Start Radio Case Site Integration Testing (SIT) – Hudson Line
- Program the Transponders full PTC package – Hudson Line/New Canaan Branch
 - Perform civil speed testing for both passenger and freight
 - Test the transponder linking distances, confirm PTS

July – December 2019

- Continue SIT/SPT on different segments
- FRA approval to place Danbury Branch/New Canaan Branch/Hudson Line into full PTC functionality
- Submit PTCSP



February 2019 CPOC IEC Project Review

Positive Train Control



Budget Review

- The current project budget is \$1,037M:
 - The budget is under review by the project in light of the fact that the schedule is extending into 2020, and additional software releases are planned by the System Integrator.



Schedule Review

- Both LIRR & MNR achieved compliance with the provisions of the FRA Mandate in December 2018.
 - Revenue Service Demonstrations (RSD) on Pilot Lines commenced in December (LIRR) and November (MNR).
 - The duration and performance of RSD on Pilot Lines are dependent on the System Integrator's ability to address software variances.
- Resolution of QA hardware issues could have a negative impact on schedule.
- FRA approved LIRR Alternative Schedule on January 25, 2019. MNR expects approval of its Alternative Schedule by the end of March 2019.



IEC Observations

- The Federal Railroad Administration indicated that all critical variances must be resolved in order to successfully complete RSD.
- Metro North is making good progress with RSD testing on Pilot Line.
- Resolution of certain variances is required before start of second LIRR pilot RSD and ERSD.
- Extensive testing activities, including data verification, for non-pilot segments is needed in order to achieve project completion.
- Testing activities will need to take into account annual track maintenance programs and other capital projects that run concurrent with PTC.



Project Risks

- Extended testing schedule may be required to resolve the remaining technical issues with the on-board controller and wayside equipment, and to implement modified algorithms for calculation of Temporary Speed Restriction (TSR) boundaries.
- Lack of adequate SI resources is impacting progress to resolve software variances and complete design tasks, which could prolong the RSD durations. This could also delay submitting the safety plan.
- Additional Railroads resources may be required in order to support and provide coverage for the testing and commissioning of multiple simultaneous non-pilot segments. There is a risk that the needed resources may not be available due to competing projects.



Project Risks

- PTC equipment reliability and Quality Control issues necessitate implementing on-board hardware modifications. This presents logistical challenges for the railroads to perform the required modifications, and could impact the schedule of remaining project activities.

MTA Bridges and Tunnels Engineering & Construction

Annual CPOC Capital Program Update

February 25, 2019



Table of Contents

- ▣ Overall Program Status
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- ▣ Verrazzano–Narrows Bridge Program Update
- ▣ Throgs Neck Bridge Program



Status of Capital/Sandy Programs

PROGRAM	TOTAL PROGRAM EXCLUDING UN- ENCUMBERED CONTINGENCIES & RESERVES	COMMITTED TO DATE \$ (%)*	REMAINING PLANNED PROJECT COMMITMENTS	OTHER (Contingencies/ Reserves)	TOTAL PROGRAM
Sandy Restoration & Resiliency	\$705M	\$676M (96%)	\$0	\$61M	\$766M
2010-2014 Capital	\$1.98B	\$1.96B (99%)	\$0	\$43M	\$2.02B
2015-2019 Capital	\$2.55B	\$1.67B (66%)	\$877M	\$389M	\$2.94B

* % = Committed to Date / Total Program excluding un-encumbered contingencies & reserves



Status of Capital/Sandy Program Commitments

■ 2018 Commitments

- Planned: \$800.4M
- Actual: \$730.5M* (91.3% of Planned)

*Includes good bid savings and reprogramming of 2 projects to 2019

■ 2019 Commitments

- Planned: \$877M (including re-programmed 2018 commitments)



Status of Capital/Sandy Program Completions

2010-2014 Program Completions	2018 Completions	2019 Planned Completions
<ul style="list-style-type: none">Capital – \$1.74BSandy – \$726M Total: \$2.46B	<ul style="list-style-type: none">Total (Capital + Sandy)<ul style="list-style-type: none">Planned: \$1.43BActual: \$1.38B	<ul style="list-style-type: none">Capital Program<ul style="list-style-type: none">Planned: \$195M

In 2018, B&T completed 11 projects, an all-time high of \$1.38 billion of work.



Status of Design-Build Program

Completed	In Progress	Planned – 2019
7 Design-Build projects completed since 2010 totaling \$205M	11 Design-Build projects totaling \$549M	3 Design-Build Projects totaling \$164M

Remaining 2019 commitments are composed of 1 Best-Value RFP and 7 A+B (Cost + Time) procurements.

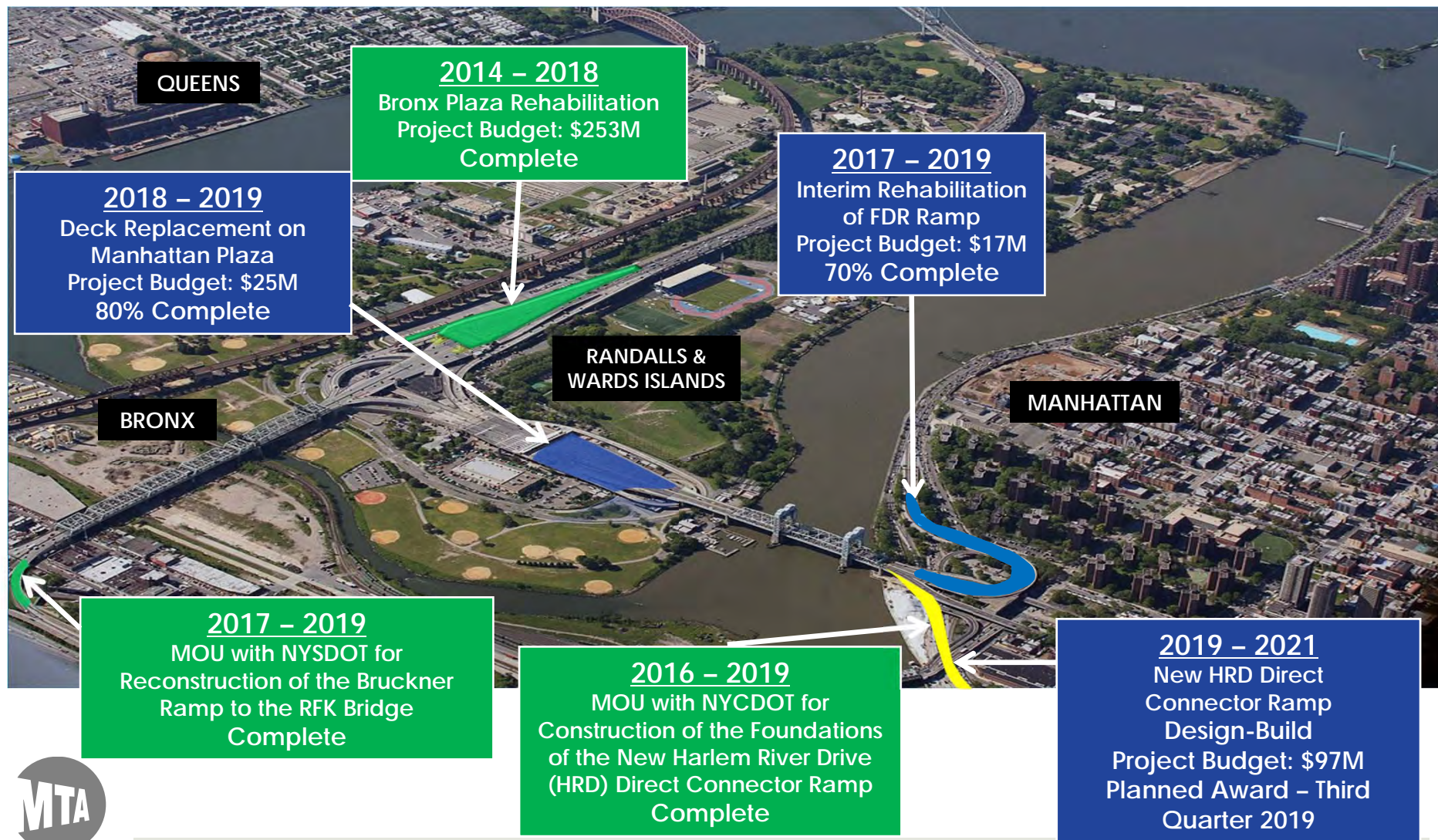


Status of Small Business Mentoring Program (SBMP) & Discretionary Architecture and Engineering Program

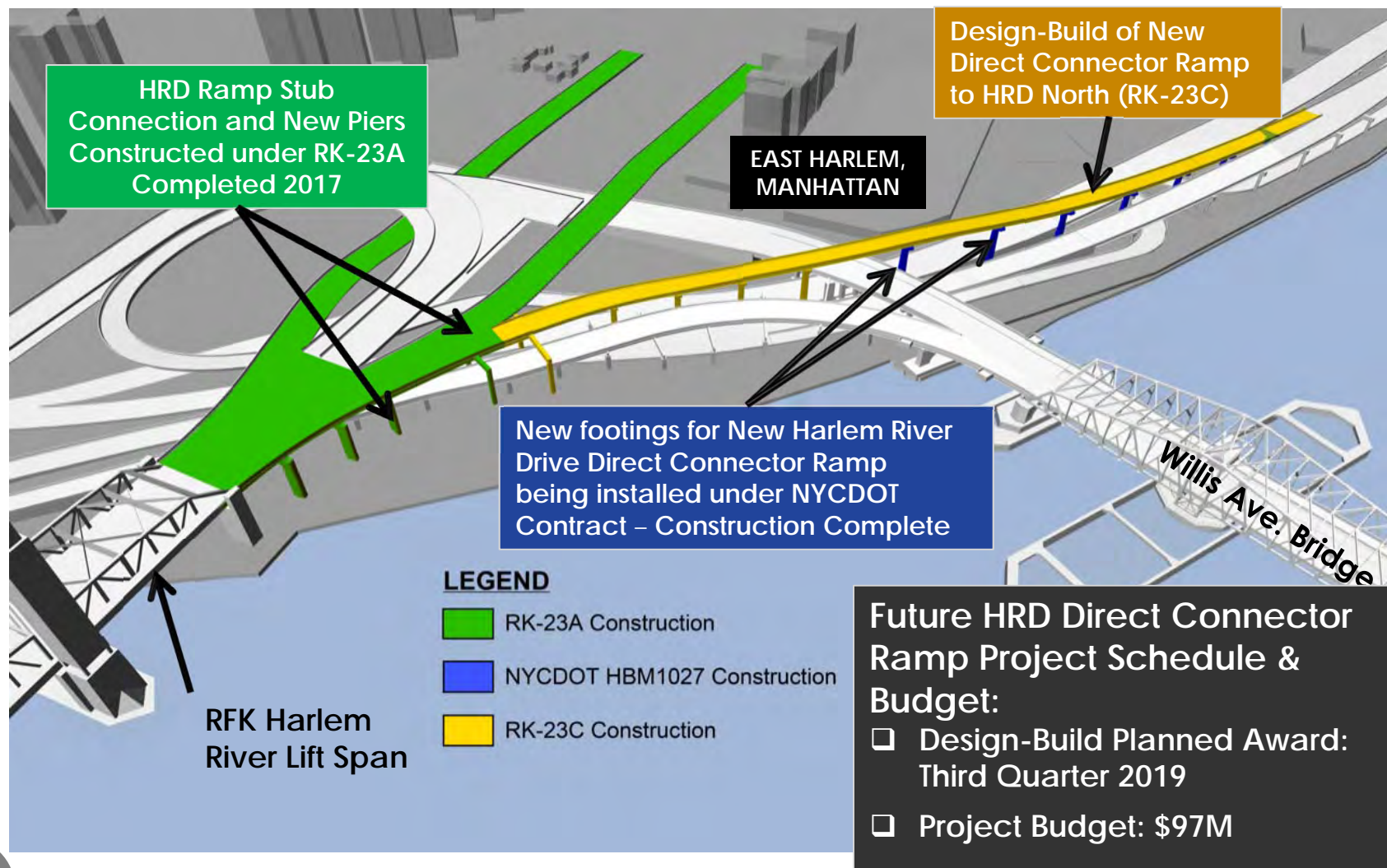
- Goal for Tier 1 to date: \$26M
 - Actual to date: \$31M (119% of goal)
- Goal for Tier 2 to date: \$23M
 - Actual to date: \$27M (117% of goal)
- Discretionary A&E: \$24.7M - 17 tasks awarded to date



Robert F. Kennedy Facility Program Update



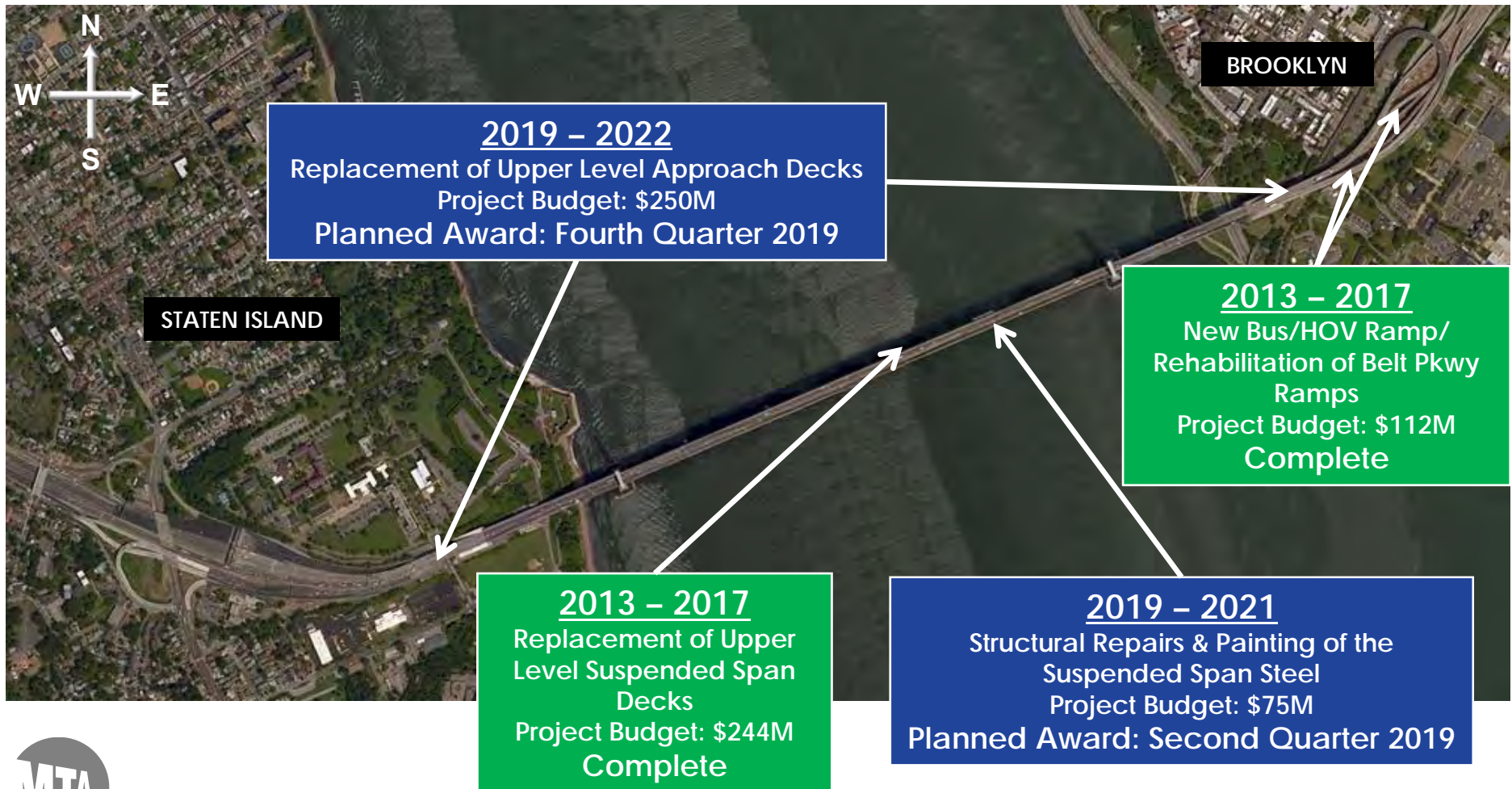
Status of Projects to Construct a New Harlem River Drive (HRD) Direct Connector Ramp at the Robert F. Kennedy Bridge



Henry Hudson Bridge (HHB) Program



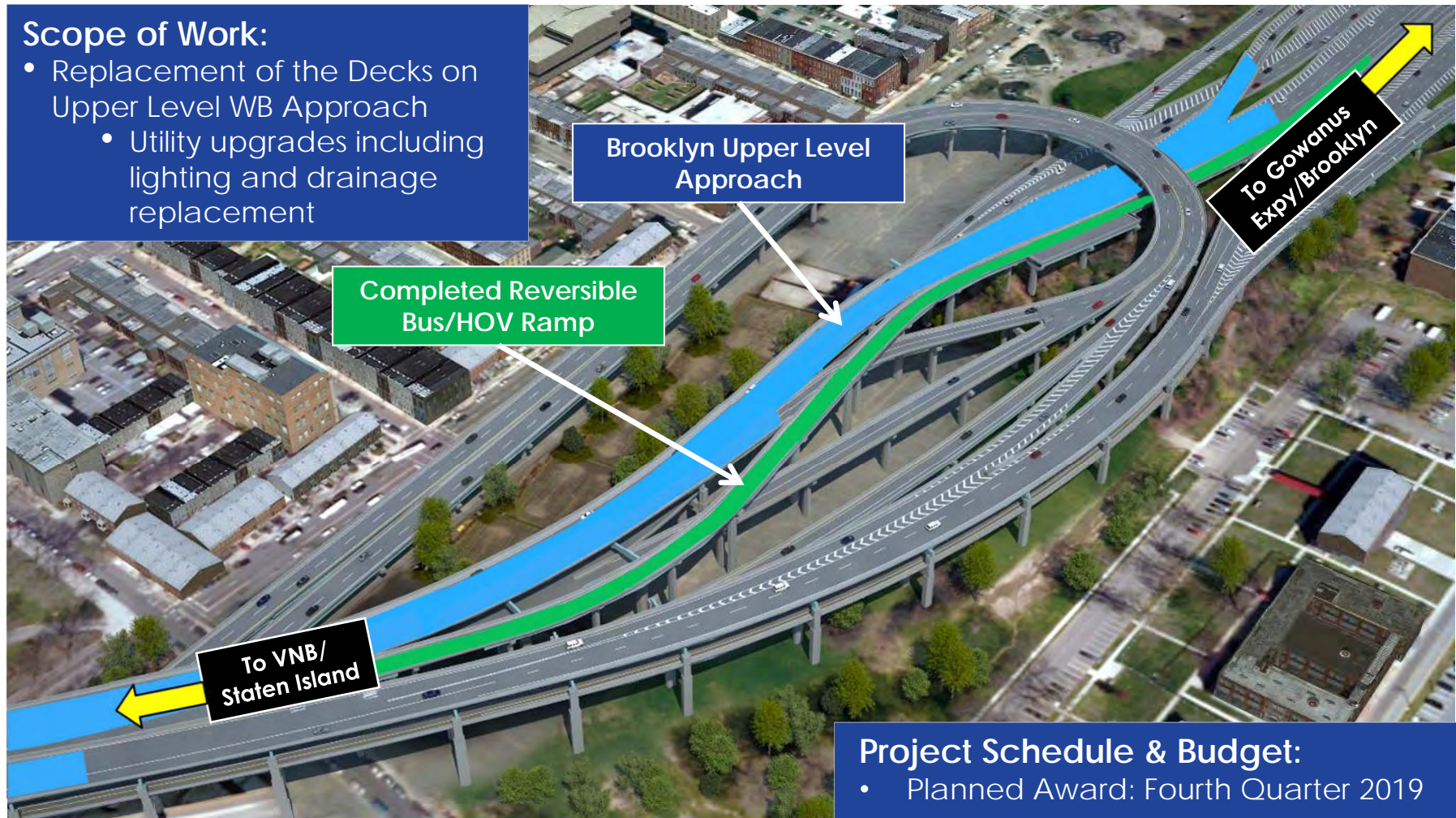
Verrazzano-Narrows Bridge (VNB) Program Update



Replacement of Upper Level Approach Decks at the VNB

Scope of Work:

- Replacement of the Decks on Upper Level WB Approach
 - Utility upgrades including lighting and drainage replacement



Project Schedule & Budget:

- Planned Award: Fourth Quarter 2019
- Project Budget: \$250M



Throgs Neck Bridge (TNB) Program

2019-2023

Approach Viaducts
Structural Rehabilitation
Project Budget: \$200M
Planned Award: Fourth
Quarter 2019

Bronx

2018-2022

Replacement of Suspended
Span Deck
Project Budget: \$335M
Awarded November 2018

Queens



Ongoing Projects at the TNB: Replacement of the Suspended Span Deck

Scope of Work:

- Deck Replacement
- New LED roadway lighting, sign structures, and fire standpipe system
- Painting of suspended span steel
- Traffic will be maintained using a movable barrier similar to construction on the recently completed VNB and the BWB

Project Schedule & Budget:

- Awarded November 2018
- \$335M budget with 15 months of staged deck replacement duration (incentives included to reduce duration of staged deck replacement)
- Project is in the early stages of construction



Maintain 3 lanes of traffic in peak traffic direction during staged construction using movable barrier

February 2019 CPOC IEC Project Review

B&T Bridge Program
Robert F. Kennedy Bridge
&
Throgs Neck Bridge



Robert F. Kennedy Bridge RK-65A Bronx Plaza Rehabilitation

■ Schedule

- The project was declared substantially complete eight months ahead of the original planned completion date of June 2019. The agency accelerated the construction and, as a result, the team was able to overcome the following challenges to the schedule:
 - Implementation of Open Road Tolling (ORT) resulted in significant scope changes.
 - Last summer's Amtrak Penn Station emergency work resulted in a 2-month order to stop work on the mainline roadway.

■ Budget

- The project was completed under budget.



Robert F. Kennedy Bridge RK-65A Bronx Plaza Rehabilitation

■ Risk Management

- The following is a comparison of the risk assessment (80% confidence - mitigated) and actual project results:
 - **Notice to Proceed:** A potential 4-month delay in Notice to Proceed was reduced by 2.5 months.
 - **Construction Duration:** A potential 5-month increase in duration was not realized due to scope changes and an acceleration as substantial completion was achieved 8 months early.
 - **Cost:** A potential increase in total project cost of approximately \$30M was not realized due to scope changes and mitigations resulting in a budget reduction of approximately \$7M.



Throgs Neck Bridge TN-49 Replacement of the Suspended Span Deck

■ Schedule

- The project was awarded on November 21, 2018.
- The contract duration includes a maximum of 15 months of staged construction (permanent lane closure).
- The contract includes incentives/disincentives for permanent lane closure durations and early safety work.

■ Budget

- The low bid price was below the engineer's estimate.



Throgs Neck Bridge TN-49 Replacement of the Suspended Span Deck

■ Top Project Risks

- **Preproduction:** Orthotropic deck panel projects typically experience delays during preproduction, when test panels are fabricated and tested until they meet project requirements. Full panel production cannot start until this is completed.
- **Production:** After completing preproduction, there is a risk of delay in the orthotropic deck panel fabrication, shipping and installation.
- **Mitigations:** The agency successfully mitigated the above risks on their previous orthotropic deck projects and maintains that strategy here. During both of the above phases, the agency requires a quality inspection team on site so that any issues in workmanship are found early and corrected. During installation, a welding testing program has been established to ensure quality.



MTA Capital Program Commitments & Completions

through January 31, 2019

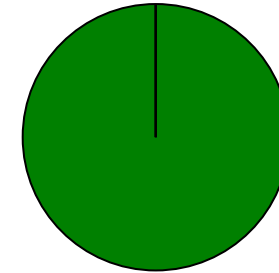


Capital Projects – Major Commitments – January 2019

In 2019, agencies plan for a goal of \$5.6 billion in overall commitments. 37 major commitments are planned, including 19 for NYCT, two for LIRR, four for MNR, six for B&T, one for MTACC, two for MTA Bus and three for MTA Police Department.

Through January, agencies have committed \$73 million versus a \$57 million YTD goal. There were no planned major commitments in January. By year-end, the MTA forecasts meeting or exceeding its overall \$5.6 billion goal.

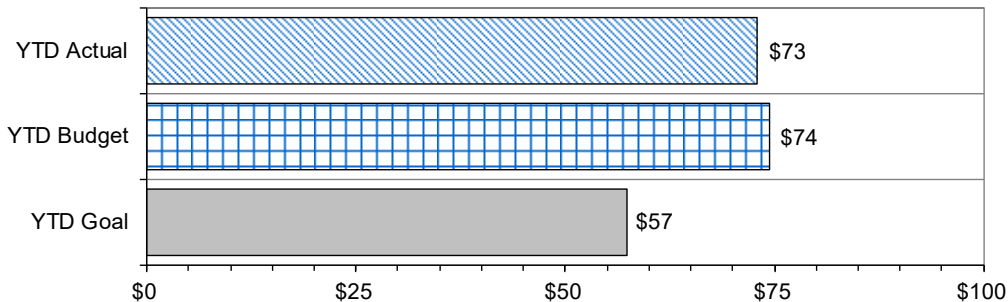
Year-to-Date Major Commitments



	Count	Percent	Change from Prior Month
GREEN = Commitments made/forecast w within Goal	0	-	-
YELLOW = Commitments delayed beyond Goal (already achieved)	0	-	-
RED = Commitments delayed beyond Goal (not yet achieved)	0	-	-
	0	0%	-

Budget Analysis

2019 Annual Goal	\$5,613	(\$ in millions)
2019 Forecast	106%	of Annual Goal
Forecast Left to commit	99%	(\$5,903)



Year-to-Date Agency Breakdown

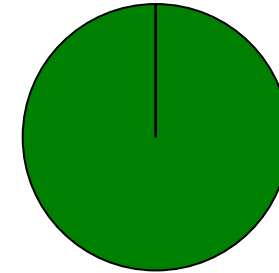
2019 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit	----	----	----
Long Island Rail Road	----	----	----
Metro-North Railroad	----	----	----
Bridges and Tunnels	----	----	----
Capital Construction Company	----	----	----
MTA Bus Company	----	----	----
MTA Police Department	----	----	----

Capital Projects – Major Completions – January 2019

In 2019, agencies plan for a goal of \$3.4 billion in overall completions. 24 major completions are planned, including 14 for NYCT, four for LIRR, three for MNR, one for B&T, one for MTACC, and one for MTA Bus.

Through January, agencies have completed \$374 million versus a \$339 million YTD goal. Two major completions, NYCT's Enhanced Stations Initiative Package #8 and the Sandy Clark Street Tube project, were achieved in January. By year-end, the MTA forecasts achieving 100% of its overall \$3.4 billion goal.

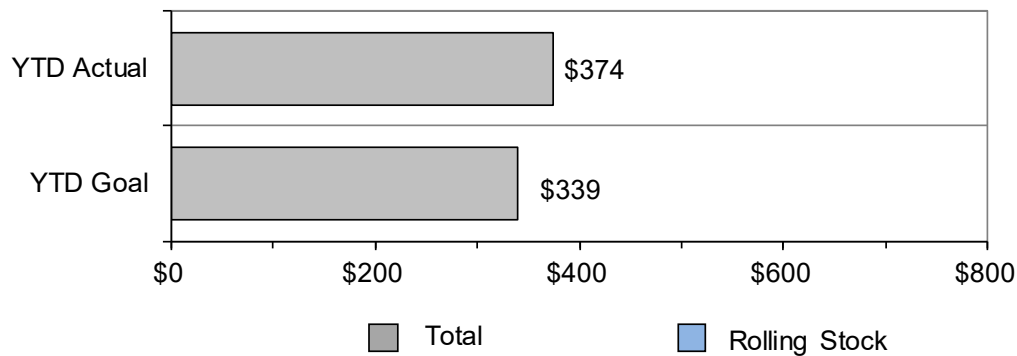
Year-to-Date Major Completions



	Count	Percent	Change from Prior Month
GREEN = Completions made/forecast within Goal	2	100%	↑ 2
YELLOW = Completions delayed beyond Goal (already achieved)	0	-	-
RED = Completions delayed beyond Goal (not yet achieved)	0	-	-
	2	100%	↑ 2

Budget Analysis

2019 Annual Goal	\$3,428	(\$ in millions)
2019 Forecast	100%	of Annual Goal
Forecast left to Complete	89%	(\$3,064)



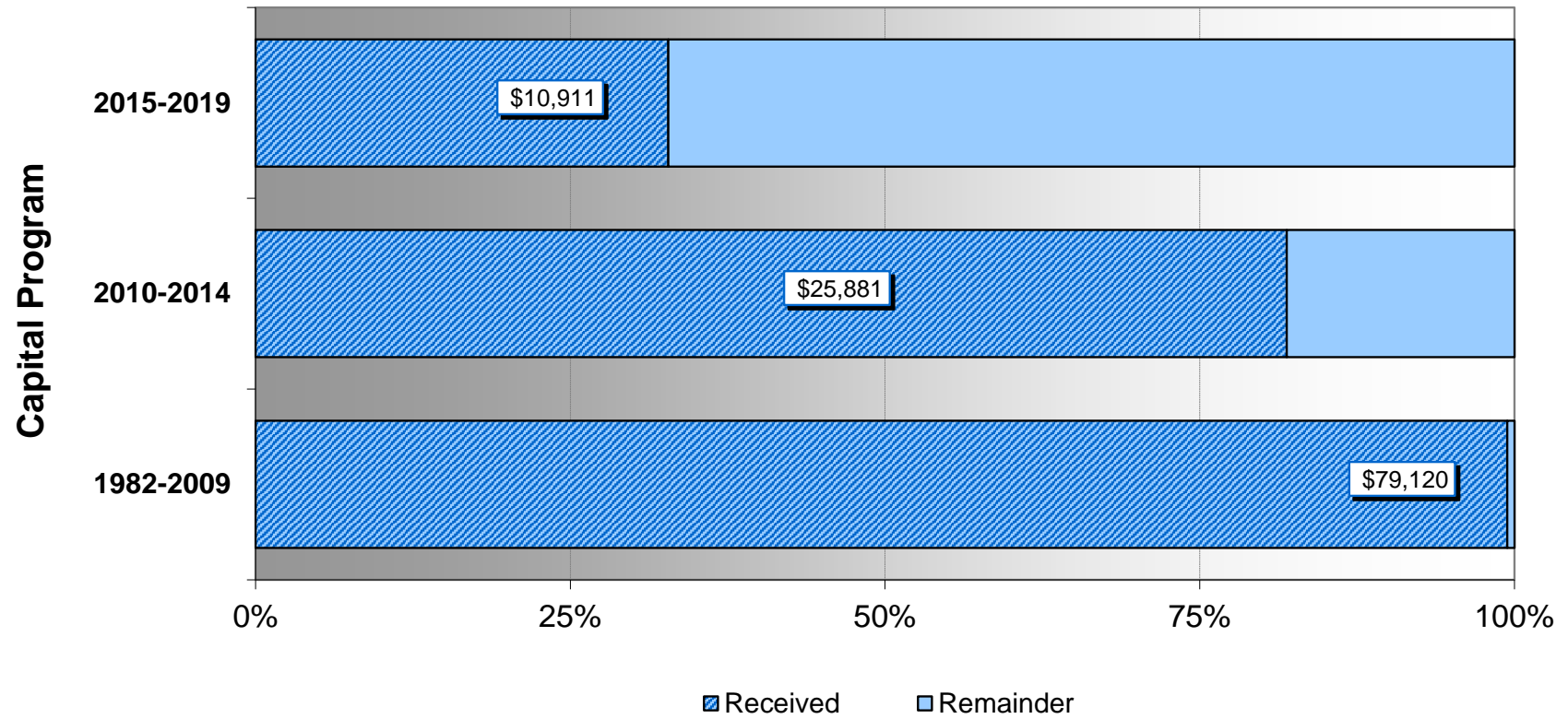
Year-to-Date Agency Breakdown

2019 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
2	+2 GREEN	----	----
Long Island Rail Road			
	----	----	----
Metro-North Railroad			
	----	----	----
Bridges and Tunnels			
	----	----	----
Capital Construction Company			
	----	----	----
MTA Bus Company			
	----	----	----
MTA Police Department			
	----	----	----

Status of MTA Capital Program Funding

Capital Funding (January 2019)

\$ in millions



Capital Funding Detail (January 31, 2019)

\$ in millions

	Funding Plan	Receipts		
	<u>Current</u>	<u>December</u>	<u>This month</u>	<u>Received to date</u>
1992-1999 Program	18,099	18,099	-	18,099
2000-2004 Program	21,682	21,682	-	21,682
2005-2009 Program	24,401	23,948	-	23,948

	Funding Plan	Receipts		
	<u>Current</u>	<u>December</u>	<u>This month</u>	<u>Received to date</u>
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	9,320	-	9,320
Other (Including Operating to Capital)	1,322	1,213	-	1,213
B&T Bonds	2,025	1,812	-	1,812
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	18	-	18
Total	31,597	25,881	-	25,881

	Funding Plan	Receipts		
	<u>Current</u>	<u>December</u>	<u>This month</u>	<u>Received to date</u>
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	593	211	805
City Capital Funds	2,666	667	-	667
MTA Bonds	7,968	3,773	-	3,773
Asset Sales/Leases	1,018	297	-	297
Pay-as-you-go (PAYGO)	2,145	1,730	-	1,730
Other	592	-	-	-
B&T Bonds & PAYGO	2,936	553	-	553
Total	33,273	10,700	211	10,911