Metropolitan Transportation Authority

Capital Program Committee Meeting

June 2023

Committee Members

J. Lieber, Chair
S. Soliman, Vice Chair
A. Albert
J. Barbas
G. Bringmann
N. Brown
S. Chu
M. Fleischer
R. Glucksman
D. Jones
B. Lopez
D. Mack
H. Mihaltses
J. Samuelsen
V. Tessitore
N. Zuckerman

Capital Program Committee Meeting

2 Broadway, 20th Floor Board Room
New York, NY 10004

Monday, 6/26/2023
12:45 - 2:00 PM ET

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2. PUBLIC COMMENTS PERIOD

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CONSTRUCTION & DEVELOPMENT
COMMITTEE ACTIONS
SUMMARY for JUNE 2023

Responsible Department	Vendor Name	Total Amount	Summary of Action
Contracts	Various	$ 10,118,820.41	Award four publicly advertised and competitively solicited personal services contracts for MTA Bridges & Tunnels' 2023 Biennial Bridge Inspections.
Contracts	L.K. Comstock & Company, Inc.	$ 2,875,000	Award of a modification to Contract S48006 to mitigate a design risk identified by the Independent Safety Assessor.
Contracts	Banton Construction Company	$ 1,879,228.01	Ratification of a modification to Contract 82133 to address changed conditions and an unanticipated method for installing the new fiber optic cable.
Contracts	Parsons Transportation Group of New York, Inc.	$ 2,278,418	Ratification of a modification to Contract CM1236 to provide additional construction phase support services and to extend the contract term by nine months.
Contracts	Parsons Transportation Group of New York, Inc.	$ 6,450,000	Ratification of two modifications to Contract W32366 to design and construct a new radio base station equipment shelter at East New York Train Yard and for additional prototyping work associated with additional bus types.
Contracts	Walsh Construction Company II, LLC	$ 6,920,000	Ratification of four modifications to Contract C34838 to implement redesigned pile foundations and additional floodwall and to reconfigure new wayside equipment.

MINUTES OF MEETING
MTA CAPITAL PROGRAM COMMITTEE
May 22, 2023
New York, New York
12:45 P.M.

CPC members present:

Hon. Janno Lieber
Hon. Andrew Albert
Hon. Jamey Barbas
Hon. Gerard Bringmann
Hon. Randolph Glucksman
Hon. Blanca Lopez
Hon. Haeda Mihaltses
Hon. Sherif Soliman
Hon. Neal Zuckerman

CPC members not present:

Hon. Norman Brown
Hon. Sammy Chu
Hon. Michael Fleischer
Hon. David Jones
Hon. David Mack
Hon. John Samuelsen
Hon. Vinnie Tessitore

MTA staff present:

Mark Bienstock
Daniel Cardoza
Paul Corrigan
Lew Deara
Evan Eisland
Rob Free
Anthony Kamanes
Siu Ling Ko
Tim Mulligan
Steve Plochochi
Joseph Reynolds
Mark Roche
Jamie Torres-Springer
Justin Vonashek
Michele Woods

Independent Engineering Consultant staff present:

Joe DeVito
Elizabeth King

* * *

Chairman Lieber called the May 22, 2023 Capital Program Committee Meeting to order at 1:50 P.M.

Public Comments Period

There were four Public Speakers during the Public Comments Period: Jack Nierenberg; Lisa Daglian; Jason Anthony; and Aleta Dupree.

Meeting Minutes

The minutes of the meeting held on April 24, 2023 were approved.

CPC Work Plan

There were no changes to the CPC Work Plan.

Details of the following presentations, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting, produced by the MTA and maintained in MTA's records.

President's Report

Prior to introducing today's presentation on the MTA Rolling Stock Program, President Torres-Springer cited the following recent Capital Program-related developments: the opening of the Biltmore Room, the latest element to the Grand Central Madison Project; the release of the Fare Evasion Report; and the announcement from the Federal Government that the MTA is able to proceed with the Congestion Pricing Program, which in turn, unlocks the MTA ability to pursue in earnest such projects as Second Avenue Subway, Phase 2, as well as widespread ADA accessibility and signal modernization projects, the rehabilitation of the Broadway Junction Station Complex, and finally, to continue the MTA's focus on bringing system-wide core infrastructure into State of Good Repair (SGR) status.

MTA Rolling Stock Update

Mr. Plochochi provided an overview of the MTA's rolling stock-related initiatives, citing particularly the efforts by personnel across the MTA to work with various rolling stock manufactures to hold to schedules and, importantly, to ensure that the MTA's rolling stock is built with the level of quality and safety necessary to perform well in the MTA's demanding operating environment. He then added that in terms of performance, the MTA's newly delivered rolling stock not only meets but significantly exceeds contractually required Mean Distance Between Failure (MDFB) rates. Citing the sheer scale of the MTA's subway, commuter rail and bus fleets, the 35–40 year useful life of railcars (and 12-year useful life of buses), and the extreme complexity and rigorous specifications of the cars and buses themselves, Mr. Plochochi then drew on his many years of experience with rolling stock procurements in recognizing the challenges faced by the teams at the MTA agencies who provide critical oversight to overcome technical production and quality issues related to rolling stock procurements and the talent and fortitude they bring to bear on behalf of the MTA and its customers. Following Mr. Plochochi's overview, detailed presentations were then provided by Agency personnel, as follows:

- Anthony Kamanes regarding the LIRR M-9 Railcar Project (202 cars; $736M budget; Conditional Acceptance forecast for September 2023)
- Siu Ling Ko regarding the NYCT R-211 Subway Car Program (535 base-order cars; $1.75B base-order budget; base-order Completion forecast for January 2025. Option 1 exercised in November 2022: 640 cars; $3.67B total R-211 budget, including Opti++on 1 cars)
- Joseph Reynolds regarding MNR SC42 Dual Mode Locomotives (27 locomotives, including option; $414M EAC; Acceptance Completion forecast for April 2027)

- Daniel Cardoza regarding the MTA New Bus Program (2020-2024 Capital Program Contracts: nearly 700 buses across 6 fleet types; total budget over $570M; Completion dates ranging from February 2023 to July 2024).

In its Project Review of the Rolling Stock Programs, the IEC reported the following:

- LIRR M-9 Rail Car Program: While the project is reporting the current budget to be $736M and forecasts an Estimate at Completion (EAC) of $731M, it is the IEC's opinion that the project will finish at the budgeted amount of $736 due to risk on remaining work, change orders and time impact on the IEC's forecast of 3 months of additional delay. Regarding schedule, as reported by LIRR, the project is forecasting delivery of the remaining 18 cars at Kawasaki's facilities in July and Acceptance completion of the last of the 202 vehicles in September of this year. However, the IEC finds that Conditional Acceptance has been below plan due to quality issues, with 32 vehicles accepted since our last report. Therefore, it is the IEC's opinion that because of these continued quality issues, risk to the project's September 2023 date still exists and Acceptance will likely be completed by December 2023, a 3-month slip since last report. Importantly, the IEC continues to support the LIRR practice of holding off on vehicle acceptance until all such issues have been addressed, as per contractual requirements. Finally, despite the quality issues experienced on this project, the IEC notes that the Mean Distance Between Failure (MDBF) rate continues to far exceed contract requirements.
- R211 Subway Car Program: With the exercise of the Option 1 order for 640 additional cars in November 2022, the program budget and EAC have increased from $1.75B to $3.67B. As last reported, the R211 program had experienced a 17-to-18-month schedule slip since award. The project schedule currently reflects zero-to-3-month delays to interim milestones, while holding the end date of January 2025 for the base order of 535 cars. The IEC acknowledges that Kawasaki has made significant progress to reduce the duration of the final car assembly stage and the IEC endorses initiatives underway to ensure fleet performance meets requirements. Further improvement is required to achieve the necessary 23-cars-per-month production rate required to maintain the January 2025 Substantial Completion date. Regarding the 300 R211A cars needed for testing by August 2024, per the 8th Ave. CBTC program's mitigation plan, it is the IEC's opinion that this date may not be met, and additional ramp-up time will be required. The CBTC and R211 projects must be closely coordinated and determined if action is necessary to increase the vehicle production rate. Consideration must be given to increasing production through actions such as adding more shifts, increasing production line staff, extending the work shifts, and/or working weekends. The IEC offers the following recommendations: since Kawasaki has not been able to achieve the necessary level of quality at the time of vehicle delivery of LIRR M9s to meet their contractual requirements, the IEC recommends NYCT closely monitor Kawasaki's quality program to ensure it meets acceptance criteria and maintains schedule to avoid these issues and delays from occurring on this project; and in order to improve the production rate, the IEC recommends NYCT review Kawasaki's schedule and take appropriate actions to meet production requirements.
- MNR Dual Mode Locomotive Program: At approximately 35% time elapsed, this project remains on schedule with Acceptance completion of all 27 locomotives due in April 2027. Likewise, the current budget and EAC of $414M remain unchanged since last report and the IEC finds there is sufficient budget to complete the current scope of work. Of note is the IEC's understanding that a Diesel Exhaust Fluid storage and dispensing system, which is required for the diesel fuel additive to achieve the expected 85% emission reduction on the new locomotives, will be included in a separate project.
- MTA New Bus Program: The IEC is monitoring 17 bus contracts, as outlined in the report in the CPC Book. While the 5 completed projects for 1053 buses valued at $778M had incurred delays due to technical and material issues resulting from the COVID pandemic, apart from the Battery Electric Bus (BEB) contracts, the 8 active projects for 489 vehicles valued at $437M have had no further schedule slippage or cost increases since last reported in June 2022. Regarding the active BEB procurements, contracts for 60 buses have been delayed and are now planned to be completed by September 2024, a 10-month slip since last report, due to the longer-than-planned development of an Early Warning Detection System, a key safety initiative. Proposals have been received on 4 contracts for 970 buses currently in procurement, one of which is for 470 BEBs. In addition, while completed bus contracts had experienced performance issues, manufacturers and vendors have identified the root causes for these technical and quality issues and are

working to develop and implement corrective actions on the active contracts. The IEC concurs with the MTA strategy of not accepting buses until all technical and quality issues are resolved and contract requirements are met. Lastly, upon receipt of the Zero-Emissions Fleet Transition study, due in September, the IEC will provide its assessment of the cost, infrastructure requirements, and impact of the transition from Legacy to a Zero-Emissions Bus Fleet.

Update on the Systems Business Unit

Mr. Bienstock provided an overview of the purpose and scope of the Systems BU, which was established in late 2022. The Systems BU currently manages 102 active projects with a total budget of $2.3B, with 34 of these projects currently in construction. In 2022 the Systems BU awarded 25 projects valued at $337M and reached Substantial Completion (SC) on 18 projects valued at $174M. Eighteen projects, valued at nearly $1B are planned for award in 2023; in addition, 25 projects, valued at nearly $300M, are slated for SC this year. Mr. Corrigan then gave a presentation on the work being done to provide resiliency at the Operations Control Center.

Procurement Actions

Evan Eisland, Executive Vice President and General Counsel, Contracts, of MTA Construction & Development Company ("C&D"), reported that C&D had seven procurement actions being brought to the Capital Program Committee this month. Executive Vice President and General Counsel Eisland then presented the items.

Upon a motion duly made and seconded, the Capital Program Committee voted to bring the following procurement actions before the full MTA Board and recommended the following:

1. Approval of a modification to the contract with Henningson, Durham & Richardson, Architectural and Engineering P.C. (Contract No. PSC-16-2991G.4), for the continuation of program and construction management and inspection services for the Central Business Tolling Program and a two and a half year time extension.

2. Approval of a modification to the contract with L3Harris Technologies, Inc. (Contract No. 6155.16) for additional work to address system and cyber security upgrades and upgrades to the Operation and Maintenance plan.

3&4. Approval of two modifications to the contract with TC Electric/J-Track JV (Contract No. P36444.45 & 51) to address deterioration and corrosion of existing electrical systems and equipment for the 53rd Street Tube, as well as a contract time extension and associated impact costs.

5. Approval of a modification to the contract with EJ Electric Installation Company (Contract No. RK-66.9) for the replacement of critical components to the cooling plant at the Robert Moses Building at the Robert F. Kennedy Bridge Facility.

6. Ratification of a modification to the contract with Paul J. Scariano Incorporated (Contract No. CM030.183) for an excusable time extension of 405 calendar days and associated impact costs.

7. Ratification of a modification to the contract with JTTC, JV (Contract No. C-48704.03) to replace an additional forty-two interior steel columns between 161st and 167th Streets.

Refer to the staff summaries and documentation filed with the records of this meeting for the details of these items, and refer to the video recording of the meeting, produced by the MTA and maintained in MTA records, for Board members' and C&D representatives' comments.

Adjournment

Upon motion duly made and seconded, Chairman Lieber adjourned the May 22, 2023 Capital Program Committee Meeting at 3:14 PM.

Respectfully submitted,
Michael Jew-Geralds
Office of Construction Oversight

Metropolitan Transportation Authority

2023-2024 Capital Program Committee Work Plan

I. Recurring Agenda Items

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

II. Specific Agenda Items

July
Overall Capital Program
- Integrated Megaprojects

September
Overall Capital Program
- Stations

Quarterly Traffic Light Report

October
Overall Capital Program
- Railroads
- OMNY

November
Overall Capital Program
- Infrastructure
- Systems
- Security Projects

December
Overall Capital Program
- B&T
- Signals & Train Control
- Small Business Development Program & MWDB Participation

Quarterly Traffic Light Report

January
Overall Capital Program
- Integrated Megaprojects

February
Overall Capital Program
- Stations

March

Overall Capital Program

- Railroads

Quarterly Traffic Light Report

April

Overall Capital Program

- Infrastructure
- OMNY

May

Overall Capital Program

- Rolling Stock
- Systems
- Security Projects

June

Overall Capital Program

- Signals & Train Control
- Minority, Women and Disadvantaged Business Participation

Quarterly Traffic Light Report

MTA Capital Program Committee Update
Signals & Train Control Projects
June 2023

The Signals & Train Control Business Unit (S&TC) includes Communication Based Train Control (CBTC) projects, such as Crosstown, Queens Blvd (QBL) West, QBL East, Culver and 8 Av; car upgrades; interlocking and switch replacements; replacement and enhancement of signal systems' reliability and maintainability; Rail Control Center (RCC) upgrades; technology initiatives; and Superstorm Sandy recovery and resiliency work.

MTA Construction & Development's (C&D) last report to the Capital Program Committee on Signals and Train Control projects was in November 2022. Major accomplishments since our last report include:

- Successfully awarded the design-build contract for Crosstown Line CBTC & 3 Interlockings (Including the Bergen St Solid State Interlocking Replacement) to Crosstown Partners, valued at $368.7M for the base contract ($405M with options).
- Successfully awarded a Project Management Consultant (PMC) Contract to WSP for 3 Design-Build CBTC projects (Crosstown CBTC, Fulton CBTC and 6th Ave/63rd St CBTC), valued at $33.2M.
- Achieved Substantial Completion of two construction projects totaling $150.7 million.

Overall S&TC BU summary:

- Twenty-nine (29) active projects in design and construction, valued at approximately $8.6 billion, 13 of which are in construction (including 8 CBTC and car installation projects)
- Two (2) projects are currently in procurement, including the next major design-build CBTC project for the Fulton Line

The Signals and Train Control Business Unit is focused on changes to improve CBTC's Reliability, Availability, and Maintainability (RAM) on existing and future lines by incentivizing maintenance support in contract awards, strengthening internal tracking of performance, and simplifying the design through a CBTC-centric approach. We are also meeting with management of CBTC suppliers on a daily basis to resolve outstanding performance issues and are regularly engaged with executive management at the MTA on the topic. Progress is being made towards improvement of reliability, availability, and maintainability in conjunction with our CBTC suppliers, but more progress is necessary to meet the contractual requirements.

Queens Blvd Line West CBTC (QBL-W)
S48004-1
S48004-2
S48005

The project provides CBTC from Union Turnpike in Queens through 50 St/8 Av on the 53 St Line and 21 St/Queensbridge on the 63 St Line. The project includes equipping 335 R-160 units with CBTC equipment. It also encompasses development and implementation of the technical foundation of the B-Division Automatic Train Supervision (ATS) that will allow centralized operation similar to ATS-A at the RCC. QBL-W is the first interoperable CBTC project implemented for NYCT, allowing trains with CBTC to run on the same line at the same time with carborne and wayside CBTC equipment from different suppliers (Siemens and Thales). This project will also provide the ATS for the B Division (ATS-B). Three separate contracts were awarded to deliver the project.

PROJECT STATUS	Original	Forecast
In Service CBTC	March 2021	February 2022 (actual)
Budget	$663.1M	$742.1M
LK Comstock (installer): 98% complete **Siemens: 98% complete** **Thales: 96% complete**		

The project has already placed CBTC into service on all sections, with the last section having been placed into operation February 2022 ATS-B is in-service, however the completion of some features prevents the transfer of operation to ATS-B at the RCC.

The team continues performance monitoring fleet stability and maintainability which has seen some incremental improvement since the last report. Siemens has deployed several software upgrades to correct this situation with some measured improvement to fleet stability. The performance is still far below contract requirements. Further updates to Siemens software will occur in multiple waves this year to address shortfalls in availability and reliability targets. This situation has been escalated within Siemens management. Daily meetings occur between the MTA and Siemens to monitor the corrective actions. Siemens management from Germany and France meets with MTA executive management monthly and will continue to meet until performance issues have been addressed.

Automatic Train Operation (ATO) is planned to be placed fully in service in Q3 2023. Thales R-160 trains have been put revenue service under close monitoring to investigate any operational issues. The demonstration of R-160 trains by Thales is an important milestone necessary to build confidence in the software of multiple suppliers in an interoperable environment.

8 Av Line CBTC
S48006
S32400
M44436
S48013-1
S48013-2
S48015
S48016
S87055

The project will provide CBTC from 59 St in Manhattan through High St in Brooklyn. The program also includes providing CBTC equipment to the existing R-179 vehicles and CBTC equipment to support the manufacturing of the R-211 vehicles. The 8 Av Line has three services (A, C, E) and carries more than 710,000 daily riders (pre-COVID).

PROJECT STATUS	Original	Revised	Forecast
Substantial Completion	January 2025	January 2025	October 2025
Budget	$735M	$828M	$832.2M
The project is approximately 81% complete *Revised to include additional scope for Flushing Line signal removal work and R-211 option 1 (640 additional cars)			

This project builds on the technology introduced in previous CBTC projects, notably the CBTC interoperability achieved on the QBL-W project, and, for the first time, introduced axle counters, in lieu of track circuits, to improve reliability and reduce maintenance and related life-cycle costs. Axle counters will also allow CBTC testing before the cutovers, reducing the cutover duration and associated risks.

Additional work orders were issued for removing decommissioned signal equipment on the Flushing Line and for CBTC equipment to be installed on the additional R-211 trainsets that have just been ordered under the Kawasaki contract option.

The project is approximately 81% complete, based on payments. The prime contractor (LK Comstock) continues to work diligently with the C&D project team to resolve project issues as they arise.

Current activities include:

- Installation of wayside equipment continues, including radio equipment, fiber optic cable and the messenger wire that the cable hangs on, axle counter heads, transponders, and antennas
- Switch replacement continues
- R-179 - CBTC equipment is being installed on the cars; vehicle testing and acceptance ongoing
- R-211 - CBTC equipment is being installed on cars as they are being manufactured by Kawasaki. Vehicle testing and site acceptance testing is ongoing.
- A detailed axle counter implementation plan has been developed so that axle counters can be placed in service when the Solid-State Interlocking (SSI) is cutover in 2023

Factors that may affect future project performance and schedule:

- The project has experienced concurrent delays linked to COVID, equipment delivery and car availability. Discussions are ongoing with the contractor to negotiate an extension of time.
- The R-211 vehicle production schedule impacts the 8 Av cutover and in-service schedule. The CBTC cutover sequence has been revised with NYCT Department of Subway's (DOS) support to mitigate schedule impact, however, substantial schedule risks remains, as the stability of the R-211 fleet must be demonstrated prior to the cutover taking place.
- Similarly, R179/CBTC interface issues needs to be addressed quickly to demonstrate the stability before the CBTC cutovers.
- Progress has been made regarding the technical dependencies from the QBL-W CBTC project (i.e., Siemens Data Communications System (DCS) radio issues and Thales R-160 in-service testing), though some outstanding issues remain to be resolved.
- Concerns regarding the implementation of the axle counter will require some rework that may delay the first in-service.

Culver Line CBTC
5-47009
S-32398
S-32399
M-44431
S-87055

Culver Line signal modernization will improve reliability and resiliency of service between W 8 St and Church Av in Brooklyn by modernizing signals, upgrading interlocking systems and constructing new equipment facilities within stations. The new signaling system will employ CBTC and add three new signal facilities at Ditmas Av, Bay Pkwy, and Avenue X. This project will improve service along 4.7 route miles of subway track for 12 subway stations. This project includes significant special track work on the elevated structure.

Unlike the QBL project, which includes separate contracts for suppliers and installers, this project adopted a single combined contract for the installer and supplier. Tutor Perini was selected in 2019 as the primary contractor and installer, with Siemens as their CBTC supplier for signaling and CBTC technology.

PROJECT STATUS	Original	Forecast
Substantial Completion	August 2022	August 2024
Budget	$482M	$469.3M
The project is approximately 87% complete		

Recent accomplishments:

- The Ditmas Ave special track work has been substantially completed, following multiple weekends of successful FFU tie installation in May and June 2023
- Breakdown testing at Bay Parkway 470 CIR completed

Ongoing activities:

- Ditmas Avenue Special Work Portion (SWP)
- Track Circuit Testing/Ditmas Avenue SSI Cutover
- West 8th to Kings Highway CBTC In-Service

Queens Blvd Line East CBTC (QBL-E)
S48010
S48017
S87055
S81304

The project will provide CBTC systems from north of Union Turnpike to 179 St Station on the Queens Blvd (Hillside Av) Line (F). The new signal system shall be CBTC with SSI and ATS. Axle Counter Systems (ACS) shall replace track circuits north of Union Turnpike Station to 179 St Station.

Under this project, four interlockings will be modernized: 179 St, 169 St, Parsons Blvd, and Briarwood.

PROJECT STATUS	Original	Forecast
Substantial Completion	Q2 2026	Q2 2026
Budget	$542.6M	$542.6M
Installer (EJ Electric) – 28% complete **CBTC Supplier (Mitsubishi) – 26% complete** **DCS (Siemens) – NTP issued 4/19/2023**		

Three separate contracts have been awarded to deliver the project: installer, CBTC supplier and the DCS. The DCS contract was awarded to Siemens, with Notice to Proceed (NTP) issued

on April 19, 2023. It should be noted that the MTA has sufficient DCS spares to advance the work and mitigate any late long lead items deliveries. In addition, a new PMC contract has been awarded to AECOM to replace the temporary assignment of Parsons. This project will further expand the interoperability demonstration from two to three CBTC suppliers (adding Mitsubishi to Siemens and Thales).

The existing Siemens CBTC system on QBL West and the new Mitsubishi CBTC System on QBL East will interchange at Union Turnpike Interlocking. This interchange is an area of special attention to ensure a smooth transition between the two interoperable systems.

Mitsubishi and EJ Electric continue to advance condition surveys, construct equipment rooms, update trackwork, and prepare a detailed cutover plan, which is a key lesson learned from the previous projects. The baseline integrated schedule, including EJ Electric and Mitsubishi (Siemens to be added) was approved in January.

It is critical to plan the job in detail including software releases and adequately address the coordination between the installer, CBTC supplier, and the DCS radio supplier. As such, ongoing coordination meetings between all parties have been instituted by the PMC.

Crosstown Line CBTC
S-48012
S-32476

This project is the MTA's first Design-Build CBTC contract, providing for the design, installation, testing, and commissioning of a wayside CBTC signal system on the Crosstown Line (G) from Court Square in Queens to Church Avenue in Brooklyn. In addition, this Contract also provides for track replacement work on portions of the Crosstown Line and construction of new/or renovation of existing facilities to serve as train control rooms and house equipment for the new CBTC.

This Train Control System ("TCS") is based on the Interoperable Interface Specifications ("I2S") compliant CBTC solution already deployed on NYCT infrastructure and can operate with CBTC-equipped trains and with the existing NYCT ATS system deployed on the NYCT "B" Division with the following significant changes:

- Replacement of track circuits with an Axle Counter System
- Removal of the requirement for an underlaying Auxiliary Wayside System ("AWS")
- Conversion of '733' typical circuits into software-based interlocking functions integrated with the CBTC
- Introduction of new mode and associated software-based interlocking functions
- Additional flexibility to deliver a TCS without discrete Solid-State Interlocking ("SSI") or Programmable Logic Controllers ("PLC")

The scope of design-build contract includes:

- Wayside Construction and Installation: track modifications, switch machine replacement and CBTC equipment and infrastructure
- Station Work: construction of new rooms and modifications of existing Train Control Rooms ("TCRs"), Battery/UPS, Fire Suppression, MEP, Interface with existing station areas including Electrical Distribution Rooms ("EDR"), communication rooms, and upgrade to the HVAC system as needed

- This contract also contains the following options:
  - **Option 1** - Provides an internet protocol based wayside Data Communication System ("DCS") using 5G technology to allow CBTC equipped trains to communicate with the wayside CBTC system.
  - **Option 3A** – Provides software upgrades and design modifications to enhance MTA's existing integrated CBTC test facility.
  - **Option 4** – Provides a physical train "trip stop" at selected wayside signals.

PROJECT STATUS	Original	Forecast
Substantial Completion	Q3 2027	Q3 2027
Budget	$633.1M	$633.1M
TC Electric/Thales/AECOM (Crosstown Partners) Design-Build Team – awarded 1/3/2023 The project is approximately 8% complete		

Recent accomplishments:

- Completed station survey (Court, Nassau, Beford, Bergen, 4th & Church)
- Completed wayside survey for Track Lubrication
- Confirmed DCS IP based 5G system (Option 1 above)
- Submitted Concept Design and Cutover Strategy (Design Stage Gate A)
- Submitted long lead time items

Ongoing activities:

- Wayside Survey for cable management and clipboards – North Section 90% and South Section 50% complete
- Stage Gate B – 15+ plans have been submitted and continue the review process
- Non-TCS design packages to be submitted in the 2nd quarter 2023
- TCS design – additional workshop will be held in the 2nd quarter 2023

Risks/Challenges:

- Flagging shortage has potential to impact field work
- MTA-provided items, including software from other CBTC projects may have impact on the progress of design
- Dependency with modification required on carborne equipment to interface with the IP 5G radio for which separate procurements have been initiated

June 2023 CPC
Independent Engineering Consultant Project Review

Communications-Based Train Control (CBTC) Projects:

- 8th Avenue CBTC
- Culver Line CBTC
- Queens Boulevard Line East CBTC
- Queens Boulevard Line West CBTC
- Crosstown CBTC

MTACD Signals & Train Control Business Unit

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June 2023 CPC
Independent Engineering Consultant Project Review

8th Ave Communications Based Train Control (CBTC) - Design, Furnish, & Install Project

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8th Ave CBTC

Scope

The project scope consists of supply and installation of a Communication Based Train Control (CBTC) system on the 8th Avenue Line from south of the 59th Street interlockings in Manhattan to High Street Station in Brooklyn.

The new CBTC system ties into the Queens Boulevard Line (QBL).

This project includes replacement of the 30th Street and 42nd Street North interlockings with processor-based (solid state) signals, the decommissioning of the 42nd Street South interlocking, and interfacing with the interlocking at West 4th Street.

It includes the design, supply, and installation of an Axle Counter System (ACS) which will replace the traditional track circuits. The Automated Train Supervision (ATS) system will be enhanced to monitor the ACS.

Also, the project is responsible for the supply, installation, and delivery of carborne systems for the R-179 and supply and delivery of Carborne Computers (CCs) for the R-211A/T subway cars. Installation of the CCs for the R-179s is done by Car Equipment and Siemens. The R-211A/T installation is done by Kawasaki. The supply of Data Communication System (DCS) equipment through NYCT via a separate contract and the installation and testing of the DCS equipment is by L.K. Comstock (LKC) and Siemens.

The purchase for onboard CBTC equipment for the 640 R-211A Option 1 cars has been added to the project scope.

AECOM is the Project Management Consultant (PMC) for this project.

8th Ave CBTC

Schedule

- The contract was awarded to LKC as the prime contractor in January 2020 with Siemens providing the Auxiliary Wayside Systems (AWS) and CBTC Wayside Equipment, with a duration of 60 months, resulting in Substantial Completion (SC) in January 2025.
- The project is 71% complete with 66% of time elapsed since award.
- As of the IEC's last report, the contractor's schedule (Data Date 9/2022) had forecasted an 8-month delay to SC from January to September 2025. Since then, there has been a delay in the forecast to October 2025 due to a safety-related design change to the AWS.
- The in-service for the 42nd Street interlocking is now scheduled for November 2023, which is a slip of 4 months from the last report. This is due to an additional work order that modifies the AWS installation at the 42nd Street interlocking. This is a critical milestone to begin in service evaluation of the ACS operation.
- Remaining software and onboard network communications issues on the R-179 are pending resolution.
- The CBTC contractor's forecast for the start of CBTC commissioning is dependent on the acceptance of 300 R-211A cars by August 2024 and the remaining 140 cars by the end of January 2025.
  - However, Kawasaki has forecasted a two-month delay in the acceptance of these cars, to October 2024 and March 2025, respectively, which may impact the 8th Avenue project similarly.
  - As the IEC reported at the May CPC meeting, the R-211A production rate is insufficient to meet the need dates for the 8th Ave. CBTC project. Production must ramp up to 15-20 cars per month, which has proven to be challenging.

8th Ave CBTC

Budget

- As previously reported, the project's budget is $828M and the Estimate at Completion (EAC) is $791M which includes $125M Risk Reserve.
  - The reduction of $37M in EAC is due to reallocation of the Risk Reserve, and savings in Engineering Force Account (EFA) and Transit Authority Labor (TAL) for the track work.
- Based on our review of remaining work, project expenditures to date, contingency, reserve, soft costs, commercial issues, change orders and time impacts costs the IEC agrees that there are sufficient funds in the budget to complete the project.

8th Ave CBTC

Observations

- There is an interface issue between the Siemens onboard equipment and the Alstom car communications network for the R-179, which is impacting on-board communication between the A and B units on a train. Siemens indicated that a software modification in its Onboard Computer Unit (OBCU) is necessary to resolve this issue. It has requested a change order to proceed with the work.
- The previously reported PICO testing issues for the Thales R-211A OBCUs have been resolved.

8th Ave CBTC

Concerns

- The IEC continues to be concerned about radio interference. It is essential that the radio signal-to-noise ratios be analyzed to avoid communications issues that were found on QBL West. C&D has agreed with this IEC recommendation (April 2022). However, the project has yet to act.
- There is an unresolved Axle Counter System (ACS) hazard that could result in a false vacancy indication. This was exported by the ACS manufacturer and was flagged by the Independent Safety Assessor (ISA) as an unacceptable condition.
  - The contractor initially proposed periodic replacement of an ACS circuit board. This was deemed by the IEC as being insufficient.
  - The contractor submitted multiple alternative solutions to correct this design issue.
  - The IEC agrees with the ISA findings. In the opinion of the IEC resolving this issue could have schedule and budget impact.
- There is a second unresolved ACS issue that causes a miscount in the ACS detection block when the Track Geometry Car (TGC) operates over the block.
  - The Contractor proposed adjusting the sensitivity of axle counter heads.
- The IEC notes:
  - These above solutions need to be carried forward to later CBTC Projects.
  - It would be prudent for the ACS to be tested with all train types (including work trains) to ensure that no additional false axle detection will occur.

8th Ave CBTC

Risks

- This project has the first installation of an ACS on NYCT property. Several issues that affect the operation and/or reliability of the ACS have been identified. It is yet to be determined if these issues will impact service and the project schedule.
  - The project team is conducting ACS shadow mode testing, to detect any other issues.
- Flagging protection and/or diversions to support future construction activities and CBTC testing continue to be a risk to the project.
  - The project team, NYCT Operations Planning, and the contractor meet regularly to coordinate the project needs for NYCT services.

June 2023 CPC
Independent Engineering Consultant Project Review

Culver Communications Based Train Control (CBTC) Design, Furnish & Install Project

MTACD Signals & Train Control Business Unit

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Culver CBTC

Scope

The contract was awarded to Tutor Perini in February 2019, with a duration of 42 months (to August 2022), to provide the Culver Line from Church Avenue station to West 8th Street station with a Communication Based Train Control (CBTC) system.

The project also includes:

- The construction of 3 new relay rooms at Avenue X, Ditmas Avenue, and Bay Parkway as well as modernization and commissioning of the interlockings associated with these relay rooms.
- The support and replacement of track work and certain portions of Church Avenue, Avenue X, and Ditmas Avenue and a CBTC system overlay between West 8th Street and Church Avenue, on the Culver Line.
  - The special track work included the surveys and production of track ties compatible with the contract profile of the tracks in the Avenue X and Ditmas Avenue areas.

Culver CBTC

Schedule

- As of our last report in November 2022, the contractor had forecasted a 26-month delay to Substantial Completion (SC) primarily due to the impact of having to re-fabricate track ties which had failed to meet elevated structure profiles in the Avenue X and Ditmas Avenue areas.
- Current Project forecast is for in-service and SC in June and August 2024 respectively. The 2-month improvement has been achieved by reducing the duration of wayside database development and validation activities.
  - The IEC concurs with the project's forecast. It is dependent upon GOs for weekends 9/22 - 9/24 and 9/29 - 10/1, specifically, to perform CBTC testing between Church Avenue and Avenue X.

Culver CBTC

Budget

- The project's Budget is $482M and remains the same since contract award. The current Estimate at Completion (EAC) is $472M a reduction since our last report, due to a decrease in Transit Authority Labor (TAL) for the Ditmas Avenue relay room construction and the supply and installation of the Solid-State Interlocking (SSI). On average, the third-party construction task orders are 87% complete based on payments to date across 4 contracts as illustrated in the following table:

Contract Description	Construction Budget	Complete
CBTC	$134M	89%
Avenue X	$116M	90%
Ditmas Avenue	$79M	82%
Switch Machines	$31M	74%

- As reported in November 2022, the IEC is of the opinion that the budget (including contingencies and reserves) is sufficient to complete the project as currently planned.
  - However, there are claims in arbitration which may impact the EAC.

Culver CBTC

Observations

- The following is the status of the near critical activities which are being closely monitored:
  - The track and switch work at Ditmas Avenue will be completed in June 2023, followed by completion and testing of wayside signal equipment planned to be cutover beginning in July 2023.
  - Culver CBTC in-service testing and commissioning is scheduled to begin with Avenue X in September 2023.

Concern

- Development of the Automatic Train Supervision (ATS) System for Division B, under the QBL West project, has taken longer than planned. If the ATS software deployment is delayed beyond September 2023, the start of CBTC Culver commissioning could be impacted.

Culver CBTC

Risks

- The current CBTC testing and commissioning schedule is dependent on diversions and General Orders (GOs).
  - As a mitigation, the contractor has established an annual GO schedule that has been approved by NYCT Operations. The Project Team continues to review the GO schedule to ensure that it remains valid.
- C&D has not yet scheduled the Radio Frequency (RF) interference tests. C&D agreed with the IEC recommendation to conduct these tests as a proactive measure to ensure reliable CBTC communication. If the test results show areas where interference is present, mitigation measures will be necessary, which could impact the project schedule and system stability.
  - These RF tests should be conducted as early as possible, to allow the contractor to propose adequate mitigation.

June 2023 CPC
Independent Engineering Consultant Project Review

Queens Blvd. Line (QBL) East Communications Based Train Control (CBTC) Design, Furnish & Install Project

MTACD Signals & Train Control Business Unit

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QBL East CBTC

Scope

This project includes three individual contracts; system integrator and supply and furnish of Communication Based Train Control (CBTC) Wayside equipment contract awarded to Mitsubishi, Auxiliary Wayside System (AWS) furnish and install contract awarded to E-J Electric, which included the installation of a Data Communications System (DCS) supplied by Siemens under a separate task order.

- This is Mitsubishi's first major CBTC project with MTA.
- Hitachi is supplying the AWS under the E-J Electric contract.

The project replaces the existing fixed block relay-based signal system from north of Union Turnpike to the 179th Street Station on the Queens Blvd Line (Hillside Ave. Line (F)) with CBTC system. The new system will also include Solid State Interlockings (SSI) and Automatic Train Supervision (ATS). The CBTC system will be integrated with an AWS installation that will provide signal protection during degraded modes of operation. Axle Counter System (ACS) will replace track circuits north of Union Turnpike Station to 179th Street Station.

- Under this project the following four (4) interlockings will be modernized:
  - 179th Street
  - 169th Street
  - Parsons Blvd. (at Hillside Ave.)
  - Briarwood
- Full CBTC service will be provided from Union Turnpike to 179th Street Busing maybe required to ensure passenger service during diversions required for switch machine replacement and track work.
- As part of the project's scope, ATS, originally provided in the QBL West project, will be reconfigured by Mitsubishi to include the QBL East territory.
- AECOM is the Project Management Consultant (PMC) for the project, replacing Parsons, at the end of May 2023.

QBL East CBTC

Schedule

- Both the supply and installation contracts were awarded in December 2021 with CBTC in-service scheduled for completion in January 2026.
  - The DCS task order was awarded to Siemens in April 2023 with no impact to the schedule to date, since Siemens supported the project during contract negotiations.
- The Integrated Project Schedule (IPS) baseline submitted by the contractor has been approved. Recently-received Update 3 (Data Date 4/1/23) shows the project remains on schedule and the IEC concurs.

QBL East CBTC

Budget

- The project's Budget is $540M with an Estimate at Completion (EAC) of $542M, an increase of $2M since our last report to cover additional environmental consulting costs. The budget has remained the same since contract award. The budget breakdown per contract is as follows:

Project Description	Contractor	Budget	EAC
Installer	E-J Electric	$441M	$443M
CBTC Supplier	Mitsubishi	$89M	$89M
DCS Supplier	Siemens	$10M	$10M

- The IEC concurs with the project's current cost data, above. However, based on operational constraints, the Project Team has indicated additional funds may be needed to cover an increase in scope for Transit Authority (TA) services for the use of buses during certain diversions.

QBL East CBTC

Observations

- Mitsubishi plans a Factory Acceptance Test (FAT) in Japan, in June 2023, and has submitted a draft Requirements Traceability Matrix (RTM) which is being used to identify FAT test cases.
- Mitsubishi has performed well to date, and its technical team has demonstrated a good understanding of the requirements and working in the NYCT environment.
- The Axle Counter System (ACS) provided on this project is the same system used on 8th Avenue CBTC Project. It is the IEC expectation that the ACS issues being experienced on 8th Avenue will be resolved before implementation on this project.

QBL East CBTC

Concern

- The Siemens ATS extension tool (to enable Mitsubishi to include the QBL East territory), with documentation and training, is now scheduled to be provided by November 2023. This is a slip of 10 months from the previously reported schedule due to slow development of the ATS software under the QBL West project.
  - To mitigate this delay, Siemens is working closely with C&D to provide interim deliverables that would enable Mitsubishi to progress its FAT and integration testing.
  - The IEC is concerned that further delay in the availability of the ATS Extension Tool could negatively affect the project schedule.

QBL East CBTC

Risks

- As a follow-up to the last report, the Project Team has recently conducted a Risk Assessment Workshop and plans to provide monthly updates for the risk register.
- At the last CPC meeting, the IEC identified a software development risk that could have an impact on project schedule. During the last 6 months, Mitsubishi made good progress in its software development and mitigated this risk by effective participation in the I2S Working Group Meetings and demonstrating good understanding of requirements.
  - Going forward, there is a need for Mitsubishi to provide a detailed software schedule for later software releases to enable C&D to effectively manage software development, testing, and deployment.
- Although a number of General Orders (GOs) were cancelled, it has had no measurable impact on project schedule. However, there continue to be a risk that high demand for the TA-supplied services to support the projects in the Capital Program may impact the availability of flagging protection and diversions required to maintain this project's schedule.
  - The project team, NYCT Operations Planning, and the contractor are closely monitoring the project GO/diversion plan and will make adjustments as necessary.

June 2023 CPC
Independent Engineering Consultant Project Review

Queens Blvd. Line (QBL) West Communications Based Train Control (CBTC) Design, Furnish & Install Project

MTACD Signals & Train Control Business Unit

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QBL West CBTC

Scope

The QBL West Communications Based Train Control (CBTC) project provides: design, material, and labor for a complete CBTC signal system overlay on the Queens Boulevard Line from north of Union Turnpike to south of 47-50th Street on the 6th Avenue Line (F) and to 50th Street on the 8th Avenue Line (E) and Centralized Traffic Control through an Automatic Train Supervision System (ATS).

The project validates the Interoperability Interface Specifications (I2S) in revenue service operation.

Three contracts were awarded in 2015-2016. Phase 1 is the design, supply, test, and commission of the CBTC system and Phase 2 is the supply and installation of the Auxiliary Wayside Systems (AWS) and CBTC Wayside systems, and removal of existing wayside signal equipment. Siemens and Thales were awarded Phase 1 and L.K. Comstock (LKC) was awarded Phase 2. SYSTRA is the Technical and Engineering Consultant. Parsons was the Project Management Consultant (PMC).

After award, the project scope was expanded to include:

- The supply and installation of CBTC equipment for 13 R-160 trains to be used on the 8th Avenue CBTC Line.
- The design and supply for a software Remote Upload System (RUS) from the Wayside equipment to the on-board Carborne Controllers (CCs).
- Under an Additional Work Order (AWO), ATS covers the entire B-Division and interface to the Large Screen Displays in the Rail Control Center (RCC), initially designed to monitor and control train service in the QBL CBTC territory.

QBL West CBTC

Schedule

- The project began CBTC operation in February 2022, on the entire QBL West line, one year later than the baseline schedule.
- The contractual Substantial Completion (SC) date was March 2021 for Design and Furnish contracts.
  - Thales achieved SC in August 2022. However, work continues to resolve technical issues on the Carborne Controller (CC) subsystems.
  - Siemens has not achieved SC. It is now projected by the Project Team for December 2023, a slip of 6 months from our last report due to slow progress in achieving system stability. The IEC's opinion is that December 2023 is an achievable date.
- LKC (Install Contractor) achieved SC on schedule in July 2022.
- Completing all the ATS functions for the entire B-Division, which is not tied to the Project SC, is now forecasted by the Project Team in first quarter of 2024, 3 months later than in our last report, caused by longer than planned software development.

QBL West CBTC

Budget

- The budget has been increased by $53M to $720M due to an overrun in Transit Authority Labor (TAL) and Engineering Force Account (EFA) costs, since our last report in November 2022. The Estimate at Completion (EAC) is $743M. A budget modification is in progress.
- The EAC of $743M may increase further due to:
  - Costs related to the delay from June to December 2023 in achieving SC:
    - Additional TAL and EFA costs.
    - The Technical and Engineering contract being extended beyond April 2023.

QBL West CBTC

Observations

- As a follow-up to our last report:
  - Recent progress was made regarding onboard issues on the Thales equipped trains which have started operating in revenue service.
    - Additional issues were identified during revenue service and are being addressed.
  - Siemens made hardware/software modifications in its ZC, CC, and DCS subsystems. While these modifications have improved system performance, additional changes are needed to resolve remaining technical issues.
- The two CBTC suppliers successfully completed a coupling between their respective trains. This is a major achievement that completes the validation of interoperability between Thales and Siemens.
- Verification of operational performance contract requirements (throughput, headway, and runtime) has not been observed.

QBL West CBTC

Concerns

- Although the CBTC suppliers have made progress toward achieving stability:
  - There continues to be an unacceptable level of service interruptions.
  - The CBTC suppliers have not yet met the Reliability, Availability, and Maintenance (RAM) requirements. The RAM compliance is important to achieve stability.
- Siemens attempted to deploy updated ATS software in May 2023. That software caused network issues with the ATS remote sites, so it had to be rolled back.
  - Timely solution of these issues is essential to avoid impacting all CBTC projects.
- Automatic Train Operation (ATO), an important CBTC operating mode, has been tested, but deployment is delayed pending a future ATS release.
  - ATO is essential for enhanced service delivery.

QBL West CBTC

IEC Recommendations Log

Recommendations	Agency Response / Action	Status
Apr 2022 (Applies to all current CBTC Projects) Based on radio test results, which found a significant level of radio interference and to ensure reliable radio communications, the respective contractors for all CBTC lines should be directed to perform an analysis of signal-to-noise on to establish a basis for reliable radio design, so as not to delay the completion of the projects.	1. We agree that this topic needs to be monitored closely. 2. On the QBL-W project, the recurring sources of interference have been identified (Piper Beacon and TW station Wi-Fi). 3. Siemens does not find any indication of impact on operation from these interferences. 4. However, because of the bugs on the CRE and CRDU boards, Siemens details diagnostics information are not useable and further detail analysis is not possible as long as these issues are not corrected. 5. Siemens should be able to run a test on Culver. 6. A radio survey has been performed for Culver and will allow to correlate the results. 7. A radio survey has been added in the DCS Radio Task for QBL-E. 8. As all this should happen in the next 4 months, we want to gather those results to guide us on the best way to continue to address this question and possibly take remedial preventive actions beyond analysis and surveys.	Closed, C&D needs to follow up on these actions for other CBTC projects.
Nov 2022: As recommended to the project team, given the number of hardware and software failures, the project team and the CBTC suppliers, in consultation with Service Delivery, should define and document acceptable metrics, at the system and subsystem level, that would lead to system stability, and develop a roadmap on how to achieve them.	1. The General Engineering Contractor (GEC) and Siemens are independently verifying availability data and analyzing the failures that cause service disruptions. 2. Siemens has provided a software roadmap that shows how they will achieve stability by the end of 2023. 3. There is not yet an approved RAM demonstration plan/procedure.	In Progress

June 2023 CPC
Independent Engineering Consultant Project Review

Crosstown Communication Based Train Control (CBTC) Design-Build project

MTACD Signals & Train Control Business Unit

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CBTC Crosstown

Scope

- The scope of this project is to replace the existing fixed block signal system with a more reliable Communication Based Train Control (CBTC) centric solution, between Court Square and Church Ave Stations on NYCT's G line, that can reliably operate under MTA's Interoperability Interface Specification (I2S).
  - The base contract work also includes expansion of ATS-B for the Crosstown line project at NYCT's Rail Control Center/Backup Rail Control Center, installation of all necessary software systems to support the CBTC system, performance of all track work at specific locations as detailed in the Project Requirements and Design Criteria (PRDC), construction/fit-out of facilities, and provide supporting systems.
  - Other scope elements include:
    - Furnish and install wayside 5-G technology for CBTC Data Communication System (DCS) within the NYCT operating environment.
    - Provide an Enhanced Integrated Test Facility (EITF).
    - Furnish and Install Wayside-Train Stops.
- The contract was awarded to the Design-Build Team of TC Electric, LLC (TCE) with Thales Ground Transportation Systems USA, Inc. (GTS) ("Crosstown Partners," CP) with Designer AECOM USA, Inc.
- A separate contract was negotiated with Thales GTS for routine maintenance services for a 25-year term. This maintenance contract will be issued a Notice to Proceed (NTP) upon final completion of the project.
- WSP USA, Inc. was awarded the Project Management Consultant (PMC) Services for the MTA C&D CBTC for the Crosstown, Fulton, and 6th Ave. projects in January 2023.

CBTC Crosstown

Schedule

- The Design Build (DB) contractor was given Notice to Proceed (NTP) in January 2023, for a duration of 57 months to the final completion date.
- There are five contractual milestones (MS):

Milestone (MS)	Description	Contractual Completion Date	Forecast Completion Date
MS1	Concept Design Validations	June 2025	June 2025
MS2	Installation of Trackwork, Switch Machines	Aug. 2025	Aug. 2025
MS3	Line Function and Software Stabilization	Jan. 2027	Jan. 2027
MS4	Substantial Completion (SC)	July 2027	July 2027
MS5	Final Completion (FC)	Sept. 2027	Sept. 2027

- The Design Phase, consists of two parts: (1) Train Control System (TCS) and (2) Non-Train Control System (Non-TCS).
- The completion of the design phase (MS1) is scheduled for June 2025 and ends with software simulation and off-site integration testing.
  - Early key design phase activities include completing the conceptual design and defining the system requirements.
  - Signal block design is a critical TCS element that is currently a few months behind plan**.**
- The DB Baseline schedule is under review.
  - The critical path runs through the TCS design, procurement, installation, field testing, pre-operational testing, revenue service, and SC.
- The PMC is developing an Integrated Project Schedule (IPS), that will contain a separate contract to equip the B-Division fleet with new data communications radios needed for the Crosstown CBTC system.

CBTC Crosstown

Budget

- The current project Budget and Estimate at Completion (EAC) is $620M, which does not include Owner Controlled Insurance Program (OCIP).
- The project is 9% complete based on expenditures and with respect to schedule time elapsed.
- The purchase of new communications equipment for the B Division fleet will be done under a separate contract and is being funded through a plan amendment coming before the June MTA Board meeting.

CBTC Crosstown

Observations

- MTA C&D successfully mitigated schedule impacts by utilizing the existing MTA FCC licensed frequency band (from the Help Point Initiative) in lieu of purchasing a band from a third party which should save the project time and money.
- Software development is required to integrate the CBTC, Solid State Interlocking (SSI) and Programmable Logic Controller (PLC) functions into the Integrated Zone Controller (iZC). This software needs to meet NYCT design standards and operating environment, including Interoperability Interface Specification (I2S) and 733 circuit typicals.
- The project risk assessment process is ongoing. For cost, a preliminary assessment has been developed. Once the DB baseline schedule is approved, risk workshops with participation from all stakeholders are planned.

CBTC Crosstown

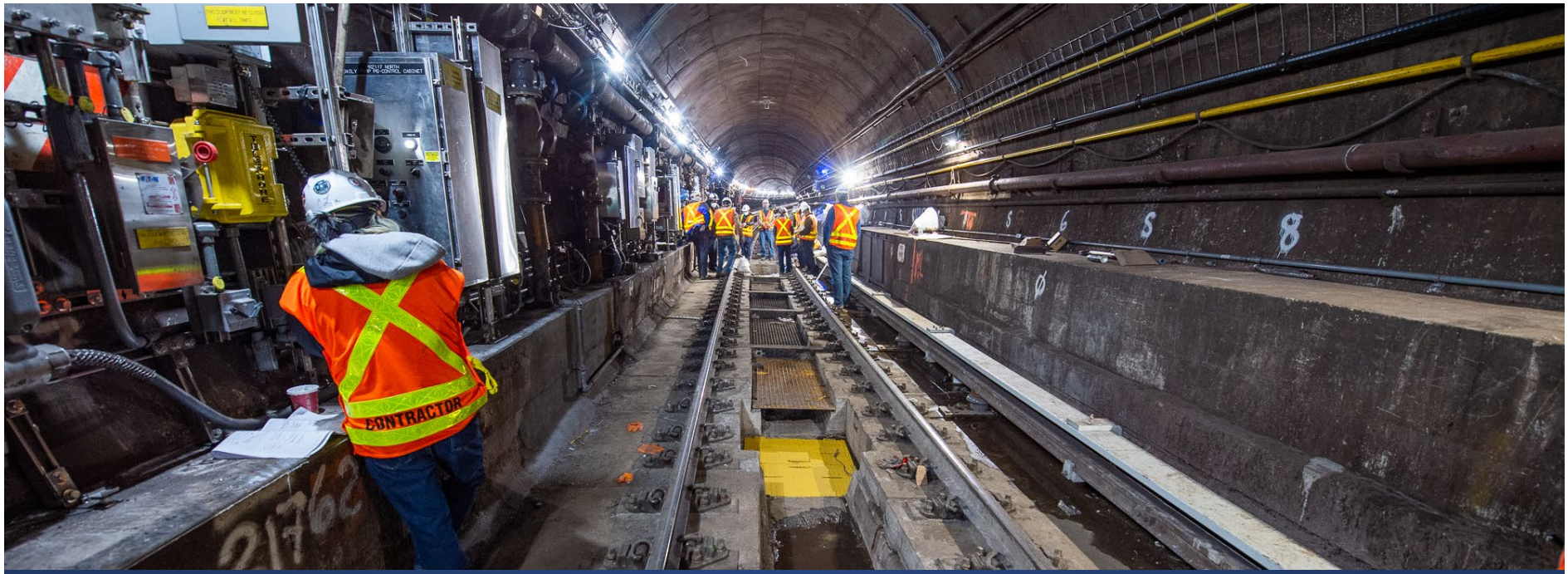
Concern

- Further delay in the development of a signal block design that meets NYCT standards could impact many aspects of project implementation, including surveys, Train Control Room (TCR) sizes, ordering of long lead items, and overall system design.
  - The project is conducting technical workshops to address stakeholder concerns and other issues to ensure the final design meets all NYCT safety and operational requirements.

CBTC Crosstown

Risks

- This is the first use of 5-G technology for CBTC communications for the wayside and trains. There is a risk that implementation issues may impact schedule and cost.
- Availability of Flaggers and Work Trains may limit track access for room/station/wayside surveys and therefore impact schedule.
  - Mitigation: Regular flagging meetings have been established which has improved the track access request process.



Metropolitan Transportation Authority
Department of Diversity and Civil Rights

6.26.2023

MWBE, DBE, and SDVOB Participation on Capital Projects

MWDBE and SDVOB Participation on MTA Capital Projects with Goals*

Federal DBE Participation Goal: 20%

Federal Fiscal Year 2023
(October 2022 to March 2023)

Total Awards: $1.6B	Total Payments: $758M
Total DBE Awards: $200M (13%)	Total DBE Payments: $144M (19%)

New York State MBE Participation Goal: 15%

NYS Fiscal Year 2022-2023
(April 2022- March 2023)

Total Awards: $1B	Total Payments: $1.3B
Total MBE Awards: $169M (17%)	Total MBE Payments: $195M (15%)

New York State WBE Participation Goal: 15%

NYS Fiscal Year 2022-2023
(April 2022- March 2023)

Total Awards: $1B	Total Payments: $1.3B
Total WBE Awards: $60M (6%)	Total WBE Payments: $187M (15%)

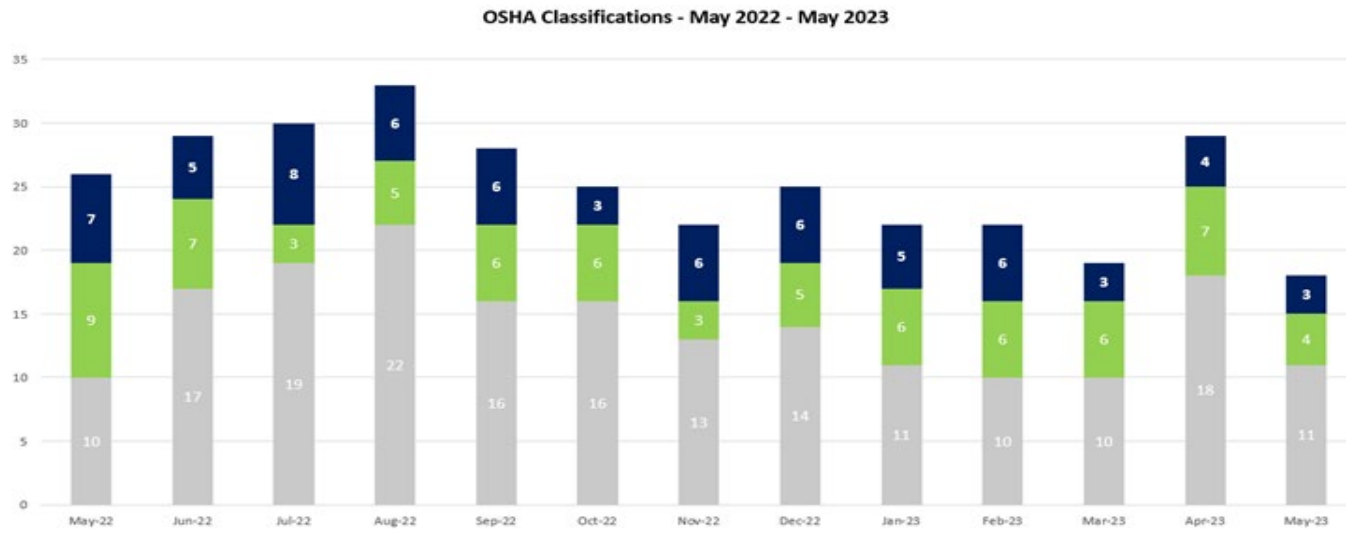
New York State SDVOB Participation Goal: 6%

NYS Fiscal Year 2022-2023
(April 2022- March 2023)

Total Awards: $359M	Total Payments: $518M
Total SDVOB Awards: $8M (2%)	Total SDVOB Payments: $10M (2%)

*Report is based on original contract amount provided by MTA agencies for third party design and construction contracts (excluding rolling stock and signals)

SAFETY SUMMARY



Lost Time – A work-related incident (injury or illness) to an employee that results in a loss of productive work time, and the employee is unable to perform regular job duties.
Recordable - An injury or illness that results in restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness

SAFETY NARRATIVE

MAY UPDATE:

- **18 safety incidents were reported in May 2023, including:**
  - 3 lost time incidents
  - 4 recordable incidents
- **Reported lost time incidents in May 2023 decreased 25% (or 1 incident) vs. April 2023**
- **Leading lost-time and recordable incident types for May 2023 were Slip/Trip/Fall (57%), Struck by/Against (29%), and Debris in Eyes (14%).**
- **No Serious incidents were reported.**

YEAR-TO-DATE TRENDS:

Hazards 2023	Lost Time - Year to Date		Recordable - Year to Date		First Aid - Year to Date		Notification - Year to Date		Grand Total	% to Grand Total
	Count	YTD %	Count	YTD %	Count	YTD %	Count	YTD %		
Struck By/Against	2	10%	10	34%	11	39%	9	28%	32	29%
Slip, Trip, Fall	9	43%	6	21%	6	21%	9	28%	30	27%
Other	4	19%	5	17%	2	7%	7	22%	18	16%
Sprain/Strain	3	14%	2	7%	6	21%	5	16%	16	15%
Caught in Between	2	10%	6	21%	3	11%	2	6%	13	12%
Electrical	1	5%	0	0%	0	0%	0	0%	1	1%
Totals	21	100%	29	100%	28	100%	32	100%	110	100%

- **LOST TIME INCIDENT TRENDS:** 21 Lost Time incidents have been reported YTD (through May 31, 2023), a decrease of 13% (or 3 incidents) vs. the same reporting period in 2022. This year's (through May 31, 2023) top injury type associated with lost time incidents is Slips/Trips/Falls (43%).
- **RECORDABLE INCIDENT TRENDS:** 29 Recordable incidents have been reported YTD (through May 31, 2023), an increase of 26% (or 6 incidents) vs. the same reporting period in 2022. This year's (through May 31, 2023) top injury type associated with recordable incidents is Struck By/Against (34%).
- **SERIOUS INCIDENTS:** 2023 Total – 3
  - **ELECTRICAL SHOCK** - 1
  - **ENVIRONMENTAL –** 1
  - **FALL – 1**

INSPECTIONS & AUDITS:

- **MAY INSPECTIONS:**
  - **INTERNAL – 250**
  - **EXTERNAL – 684** (134 Third-Party Safety Consultants; 550 OCIP Visits)
- **YTD TOTAL # OF INSPECTIONS:**
  - **INTERNAL – 1,171**
  - **EXTERNAL – 2,911** (486 Third-Party Safety Consultants; 2,425 OCIP Visits)
- **MAY NEGATIVE OBSERVATION(S) –** Negative Findings identified through the various inspections include Housekeeping, Fall Protection, Security & Public Protection, Fire Protection/Prevention, and Stairs & Ladders.
- **MAY POSITIVE OBSERVATION(S) –** Positive Findings identified through the various inspections include Supervision/Organization, General Safety/Housekeeping, Tools (Hand & Power), Fire Protection, and Electrical.

INVESTIGATIONS & LESSONS LEARNED:

- **NUMBER OF INVESTIGATIONS for MAY – NONE**

MTA C&D SAFETY STRATEGIC INITIATIVES:

- C&D Safety Oversight continues to support the Business Units (BU) in processing project deliverables and approvals until qualified candidates are identified and onboarded. Safety Oversight assists the BUs in reviewing and selecting qualified candidates to fill these critical roles/positions. The availability of suitable candidates continues to be challenging as Contractors and PMCs also need qualified personnel to staff their projects. Safety Oversight is analyzing the current contract requirements and the market availability to evaluate how safety personnel is prescribed within contracts and allow adjustments to changing trends or project and sub-project bundling.

- AECOM Safety Assessment Initiative – Advance a multiphase project to audit, evaluate, recommend, and implement a new Safety Management System (SMS) with MTA C&D. The primary focus is improving safety at construction sites and capital improvement projects around operating MTA rail transit, bridge, and tunnel facilities, including an IT platform selection and data management application.
  - AECOM continues working on the delivery of training material for the Phase 1 rollout. After C&D approves training materials, "Train the Trainer" sessions will be held with C&D Safety Oversight and BU Safety personnel. AECOM has also been revising the Division 1 Specifications to align the responsibilities and deliverables of the Contractor/Design Builder with the MTA C&D Safety Management System. They are also developing a specification that the PMCs will use to ensure their project responsibilities align with the established MTA C&D Safety Management System.
  - The digital solution for the Safety Management System continues progressing with HQ and has been incorporated into an Agencywide ESS. The specific module for C&D will allow real-time inspections and submissions to be viewed and tracked, with input from all users (e.g., GC/PMC field safety coordinators and C&D Safety Oversight/BU Safety staff). The scope of work (SOW) is being finalized with all stakeholders.

- Independent Third-Party Safety Inspection Consultant – The Independent Safety consultant is tasked with auditing contractor compliance with applicable federal (such as OSHA, EPA), state, and local regulations, approved Construction Health and Safety Plan (CHASP), and the contract's specific requirements.
  - The Consultant continues to perform inspections within the various CD Business Units with a small group of inspectors off a current contract modification. There continue to be some challenges with distributing the completed reports; however, C&D Safety Oversight continues to work with the Consultant to resolve and ensure future consistency. Inspections continue to be closely monitored by C&D Safety Oversight.

- VP Safety Oversight continues outreach initiatives with Contractors and Construction organizations to discuss C&D Safety trends and lessons learned from current projects. The Monthly & Quarterly Outreach meetings with the various PMC/CCM consultant companies are ongoing and include discussions on possible areas for additional collaboration and mitigations for continuing and future projects.

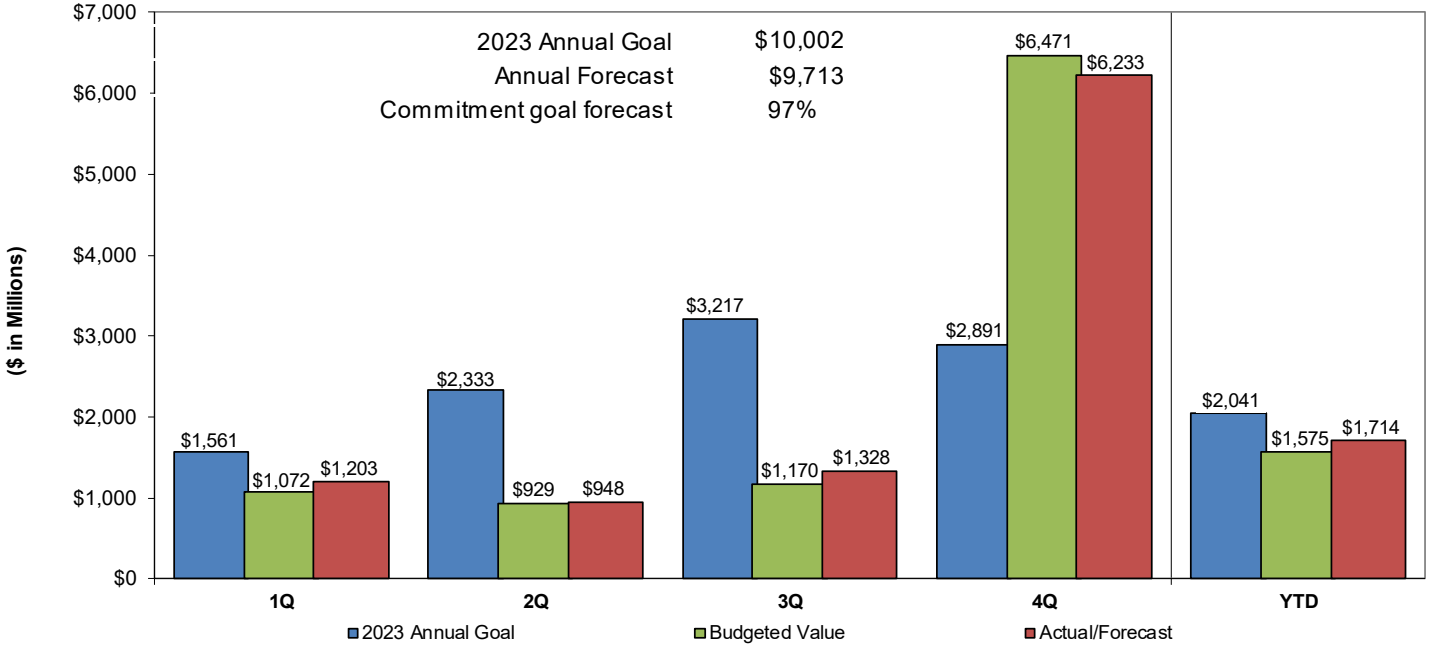
MTA Capital Program
Commitments & Completions

through
May 31, 2023

Metropolitan Transportation Authority

Capital Projects – Commitments – May 2023

MTA-wide 2023 Commitments



Annual Goals: Dollar and time-based programmatic milestones for the commitment of contracts established at the start of each year and which are achievable during the year.
Actuals: The value of the goals and any additional unplanned commitments as they are achieved during the year.
Forecasts: The updated estimates by quarter for remaining goals as well as any unplanned commitments that might occur during the year.
Budget: The budgeted value assumed in the capital program for the Actual and Forecasted commitments being tracked during the year.

Commitments Summary

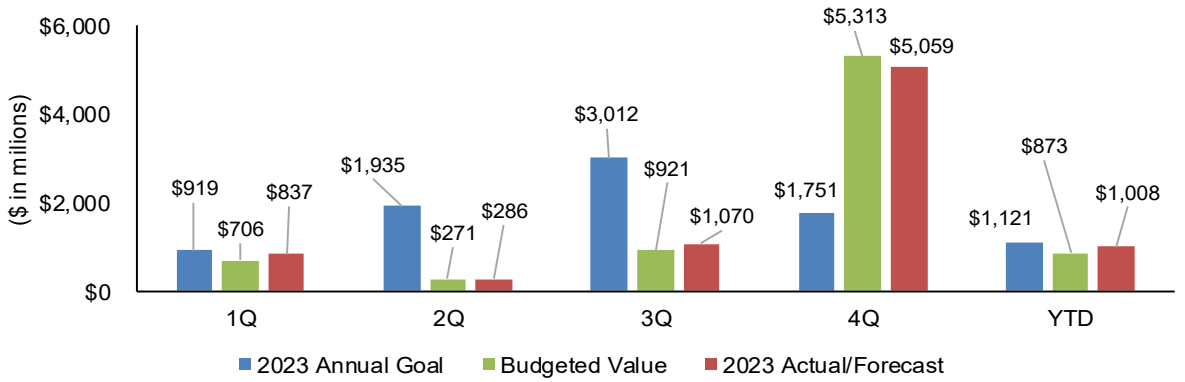
In 2023 the MTA plans to commit $10 billion worth of capital projects. The MTA is tracking 38 "major" commitments across the agencies and business units. At the end of each quarter in 2023 any schedule variances will be reported on the following pages.

Through May, the MTA has committed $1.714 billion versus a $2.041 billion YTD goal and by year end the MTA now expects to make 97% of its $10 billion goal. The year-end shortfall is primarily due to NYCT's ADA 168th/7Ave Bwy ($246 million) slipping to 2024. The ~$327 million shortfall in actual commitment versus the YTD annual goal is a result of several smaller project delays from NYCT, Expansion's Penn Station Reconstruction Design award, and 2 project delays at Metro-North Railroad (Harmon to Poughkeepsie Signal System Support & Pelham Substation Replacement). These are still expected to be committed later in the year.

NYCT/MTA Bus Capital Projects – Commitments – May 2023 – Budget Analysis and Schedule Variances

NYCT and MTA Bus Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$919	$1,935	$3,012	$1,751	$1,121
2023 Actual/Forecast	$837	$286	$1,070	$5,059	$1,008
Budgeted Value	$706	$271	$921	$5,313	$873



Q1 Schedule Variances

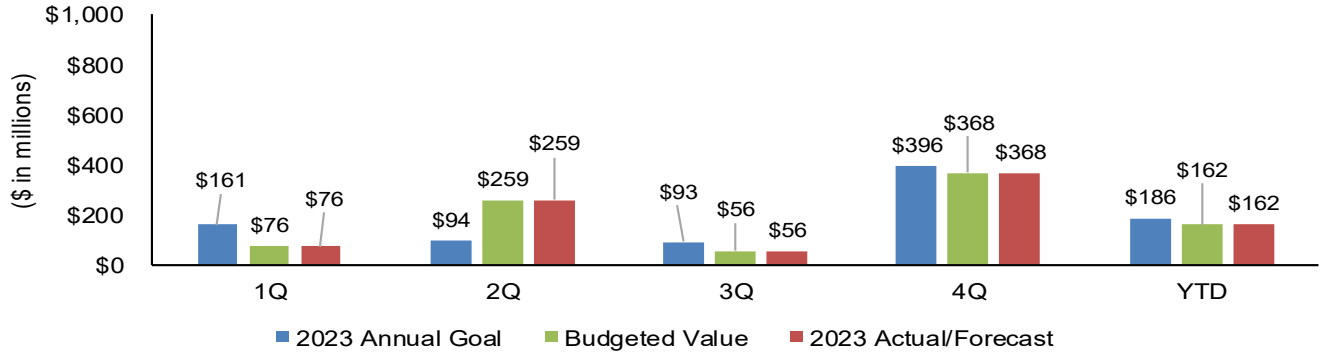
There are no major schedule slippages to report for NYCT and MTA Bus for Q1. Q2 slippages will be reported in July.

Metropolitan Transportation Authority

LIRR Capital Projects – Commitments – May 2023 – Budget Analysis and Schedule Variances

LIRR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$161	$94	$93	$396	$186
2023 Actual/Forecast	$76	$259	$56	$368	$162
Budgeted Value	$76	$259	$56	$368	$162



Q1 Schedule Variances

Project	Commitment	Goal	Act./Forec.

1 LIRR Amber Commitment

Amber delays are within 2 months of goal.

Track

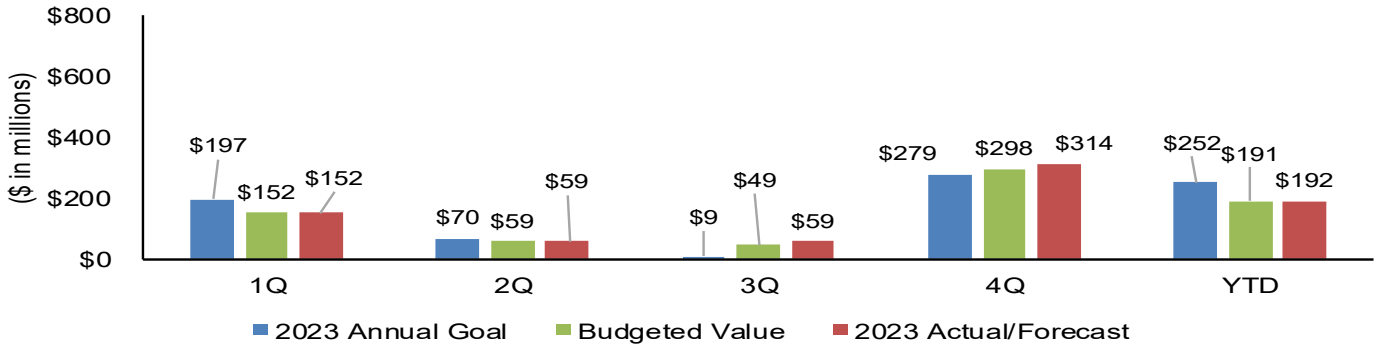
2023 Annual Track Program	Construction	Mar-23	Apr-23 (A)
		$ 62.0	$ 50.0

Delay in commitment was due to additional funding and budget reviews prior to the award which was made in early April. The remaining amount to be committed is scheduled for award later this year for the 3rd party contracts associated with this project.

MNR Capital Projects – Commitments – May 2023 – Budget Analysis and Schedule Variances

MNR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$197	$70	$9	$279	$252
2023 Actual/Forecast	$152	$59	$59	$314	$192
Budgeted Value	$152	$59	$49	$298	$191



Q1 Schedule Variances

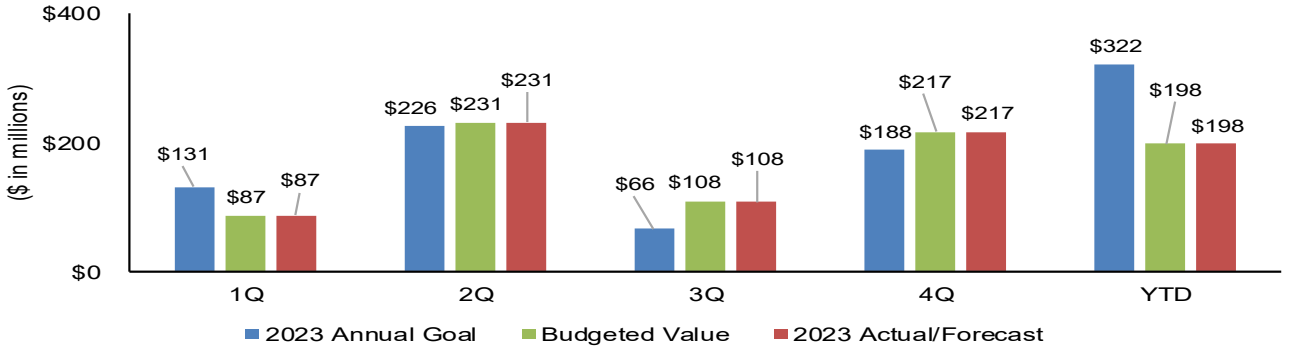
There are no major schedule slippages to report for Metro-North Railroad. Q2 slippages will be reported in July.

Metropolitan Transportation Authority

MTA Network Expansion Projects – Commitments – May 2023 – Budget Analysis and Schedule Variances

MTA Network Expansion Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$131	$226	$66	$188	$322
2023 Actual/Forecast	$87	$231	$108	$217	$198
Budgeted Value	$87	$231	$108	$217	$198



Q1 Schedule Variances

Project	Commitment	Goal	Act./Forec.

1 Network Expansion Red Commitments (0 new this quarter)

Red delays are beyond 2 months of goal.

Penn Station Access

Penn Reconstruction:	Design	Mar-23	Jun-23
Architectural & Engineering		$ 60.8	$ 60.8
Design Svcs - FXC WSP			

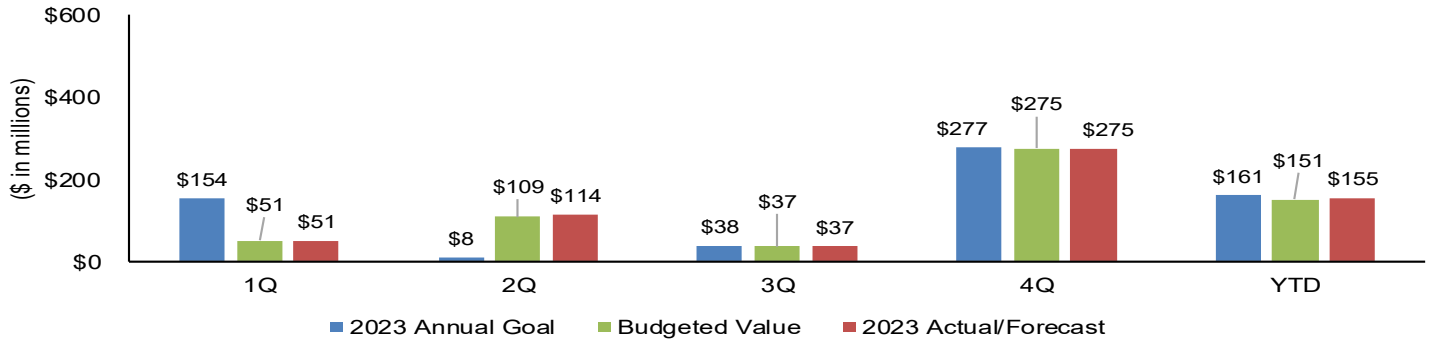
Delays due to ongoing negotiations w ith project partners Amtrak and NJ Transit.

Metropolitan Transportation Authority

B&T Capital Projects – Commitments – May 2023 – Budget Analysis and Schedule Variances

B&T Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$154	$8	$38	$277	$161
2023 Actual/Forecast	$51	$114	$37	$275	$155
Budgeted Value	$51	$109	$37	$275	$151



Q1 Schedule Variances

Project	Commitment	Goal	Act./Forec.
1 B&T Amber Commitments			
Amber delays are within 2 months of goal.			
Bridges			
VN-81 Lower Level Main Span Deck Rehab & Painting of Upper Level Steel	Construction	Feb-23 $ 104.9	Apr-23 (A) $ 104.9
Schedule shifted because of pending approval of third party funding.			

Metropolitan Transportation Authority

Capital Projects – Completions – May 2023

MTA-wide 2023 Major Completions

Goal \ Forecast		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Post 2023
Total	42	4	1	3	4	0	6	1	1	3	4	2	12	1
Jan-23	4	4												
Feb-23	1						1							
Mar-23	6		1	2			1					1	1	
Apr-23	6				2		3						1	
May-23	2			1	1									
Jun-23	2						1				1			
Jul-23	2							1					1	
Aug-23	1								1					
Sep-23	3									3				
Oct-23	3										3			
Nov-23	2											1		1
Dec-23	10				1								9	

BLUE = Actual/Forecast earlier than Goal
GREEN = Actual/Forecast matches Goal
AMBER = Actual/Forecast within 2 months of Goal
RED = Actual/Forecast beyond 2 months of Goal

Completions Summary

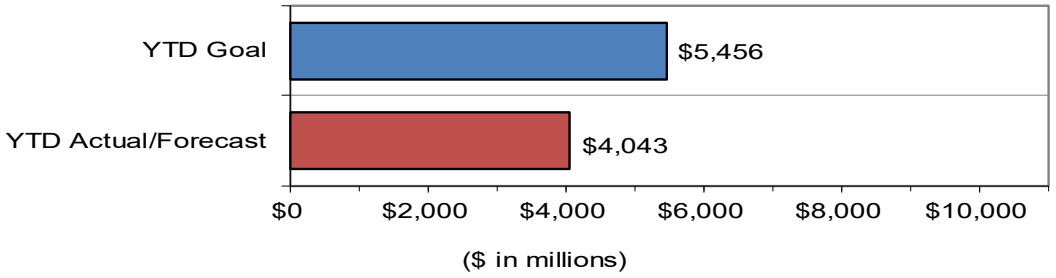
In 2023 the MTA plans to complete $10.4 billion of projects. 42 Major completions are being tracked throughout the year.

Through May, the MTA has completed $4,043 million versus its year-to-date goal of $5,456 million. The shortfall is due mainly to several delays at NYCT and the impact of delayed East Side Access completions which are expected to be achieved later this year. Overall, there are eleven delayed major completions, all but one of which are expected to be achieved later in the year. Each is identified on the following pages.

By year end the MTA forecasts achieving 97% of its $10.4 billion completions goal.

Budget Analysis

2023 Annual Goal	$10,409
Annual Forecast	$10,045
Completion goal forecast	97%

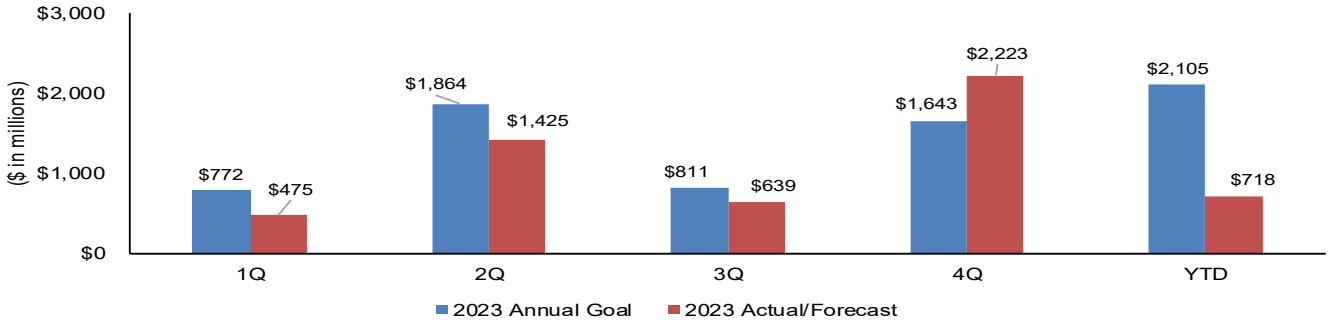


Metropolitan Transportation Authority

NYCT/MTA Bus Capital Projects – Completions – May 2023 – Budget Analysis and Schedule Variances

NYCT and MTA Bus Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$772	$1,864	$811	$1,643	$2,105
2023 Actual/Forecast	$475	$1,425	$639	$2,223	$718
2023 Goal (Rolling Stock)	$276	$249	$0	$96	$525
2023 Actual/Forecast (Rolling Stock)	$276	$249	$0	$964	$384



Schedule Variances

Project	Completion	Goal	Act./Forec.

5 NYCT/MTA Bus Red Completions (0 new this month)

Red delays are beyond 2 months of goal.

Superstorm Sandy

Upgrade Emergency Booth Comm System	Construction	Mar-23 $74.1	Dec-23 $74.1

Change in project schedule reflects ongoing migration/integration work of the communication system and in-service durability testing.

Signals & Communications

CBTC QBL West Ph.1 /Siemens	Construction	Apr-23 $221.7	Dec-23 $221.7

Change in project schedule due to the vendor's software-related reliability issues.

Stations

ADA: 8 Stations - Package A	Construction	Jul-23 $276.2	Dec-23 $276.2

Change in project schedule reflects delays in establishing utility relocation agreements, property access and easement agreements.

NYCT/MTA Bus Red Completions (continued)

Line Equipment

Rehabilitate Forsyth St. Fan Plant	Construction	Nov-23 $87.7	Mar-24 $87.7

Change in project schedule reflects delay due to complexity of excavation work.

MTA Bus

Storeroom Expansion - LaGuardia	Construction	Mar-23 $7.4	Jun-23 $7.4

The project's revised completion date reflects the delivery delay of a cricital disconnect switch.

3 NYCT/MTA Bus Amber Completions (0 new this month)

Amber delays are within 2 months of goal.

Staten Island Railway

ML Track Rehab & Clifton Yard Switches	Construction	Apr-23 $111.8	Jun-23 $111.8

Change in project schedule reflects ongoing impact of track access and bus shuttles.

NYCT/MTA Bus Capital Projects – Completions – May 2023 – Budget Analysis and Schedule Variances

Schedule Variances (Continued)

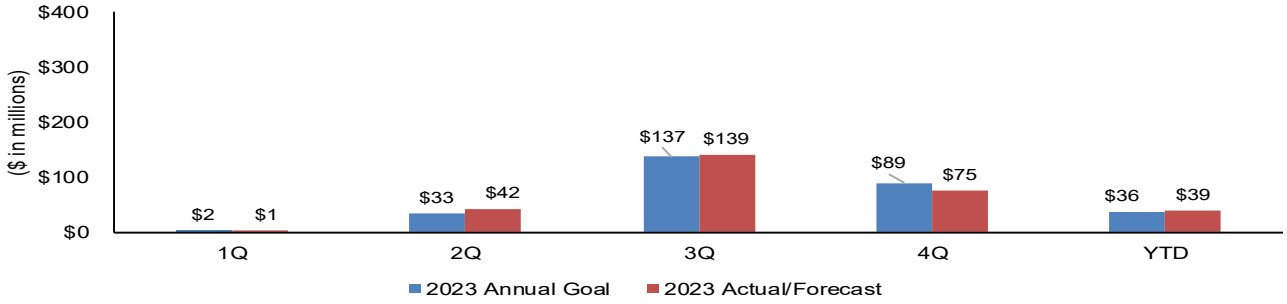
Project	Completion	Goal	Act./Forec.
3 NYCT/MTA Bus Amber Completions (0 new this month)			
Amber delays are within 2 months of goal.			
Superstorm Sandy			
Coney Island Yard: Sandy Repair/Mitigation and CBHs	Construction	Apr-23 $609.0	Jun-23 $609.0
Change in project schedule reflects delay to due to supply chain issues including the pending delivery of lighting panels.			
Buses			
209 Standard Diesel Buses (Nova)	Construction	Apr-23 $141.2	Jun-23 $141.2
Change in project schedule reflects delay due to supply chain issues causing a shortage in bus parts.			

LIRR Capital Projects – Completions – May 2023 – Budget Analysis and Schedule Variances

LIRR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$2	$33	$137	$89	$36
2023 Actual/Forecast	$1	$42	$139	$75	$39

2023 Goal (Rolling Stock)	$0	$0	$115	$0	$0
2023 Actual/Forecast (Rolling Stock)	$0	$0	$115	$0	$0



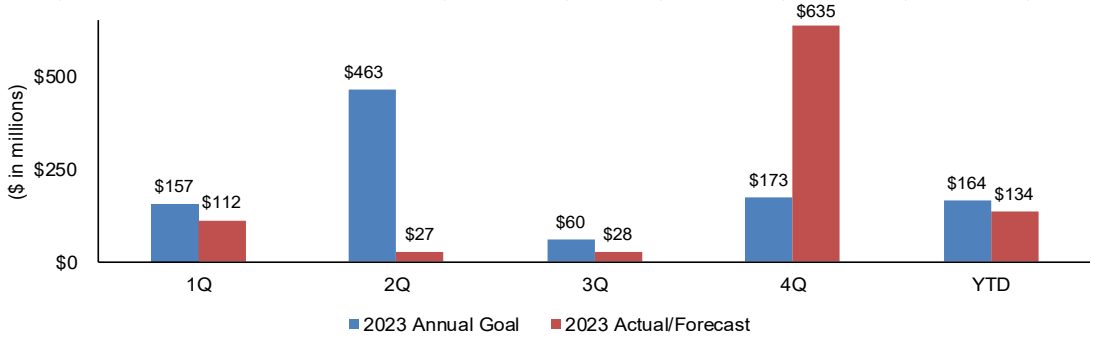
Schedule Variances

There are no major schedule slippages to report for the Long Island Rail Road.

MNR Capital Projects – Completions – May 2023 – Budget Analysis and Schedule Variances

MNR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$157	$463	$60	$173	$164
2023 Actual/Forecast	$112	$27	$28	$635	$134
2023 Goal (Rolling Stock)	$0	$0	$0	$115	$0
2023 Actual/Forecast (Rolling Stock)	$0	$0	$0	$115	$0



Schedule Variances

Project	Completion	Goal	Act./Forec.

1 Metro-North Red Completions (0 new this month)

Red delays are beyond 2 months of goal.

Shops

Harmon Shop Replacement - Phase V	Construction	Jun-23	Oct-23
		$439.6	$439.6

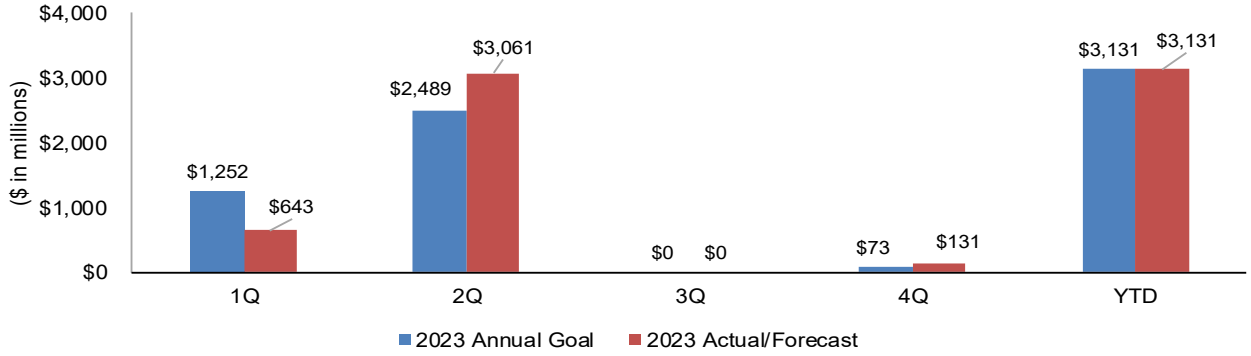
Change in project schedule reflects delays due to track outage delays as well as supply chain issues procuring some electrical components for equipment.

Metropolitan Transportation Authority

MTA Network Expansion Projects – Completions – May 2023 – Budget Analysis and Schedule Variances

MTA Network Expansion Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$1,252	$2,489	$0	$73	$3,131
2023 Actual/Forecast	$643	$3,061	$0	$131	$3,131



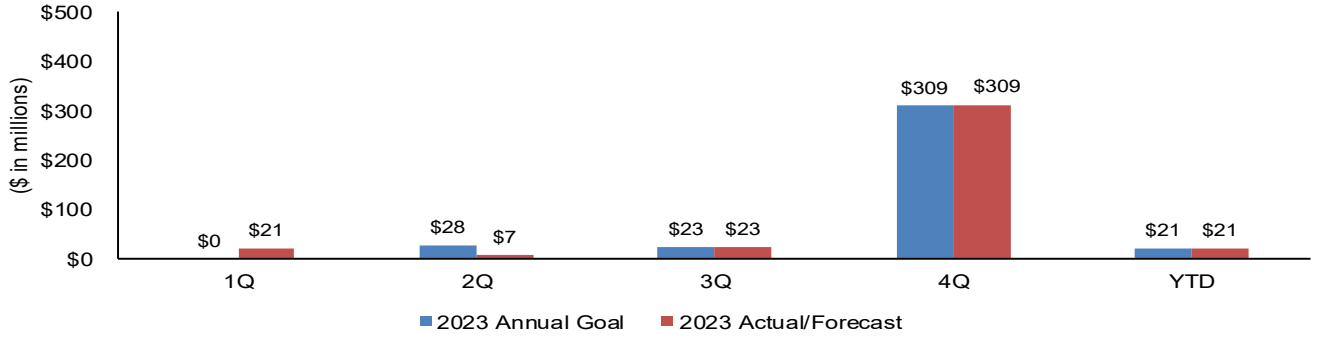
Schedule Variances

Project	Completion	Goal	Act./Forec.
2 Network Expansion Completion (1 new this month)			
Red delays are delayed more than 2 months of goal.			
East Side Access			
GCT Concourse & Facilities	Construction	Feb-23 $572.0	Jun-23 $572.0
Prior delay to CM014B is driven by the completion and testing of a freight elevator followed by ceiling/flooring finishes. Further delay is driven by seismic bracing of mechanical installations, such as ducts and pipes.			
Concourse, Cavern & Facility Detailing Services CM030 *(New Item)*	Construction	Mar-23 $37.1	Nov-23 $58.0
The CM030 contract which focuses on passenger facing and retail environment scope in the GCT Madison Ave concourse is delayed as additional contract change orders are being addressed, and were brought to MTA Board in May. Higher cost reflects additional work			

B&T Capital Projects – Completions – May 2023 – Budget Analysis and Schedule Variances

B&T Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	$0	$28	$23	$309	$21
2023 Actual/Forecast	$21	$7	$23	$309	$21



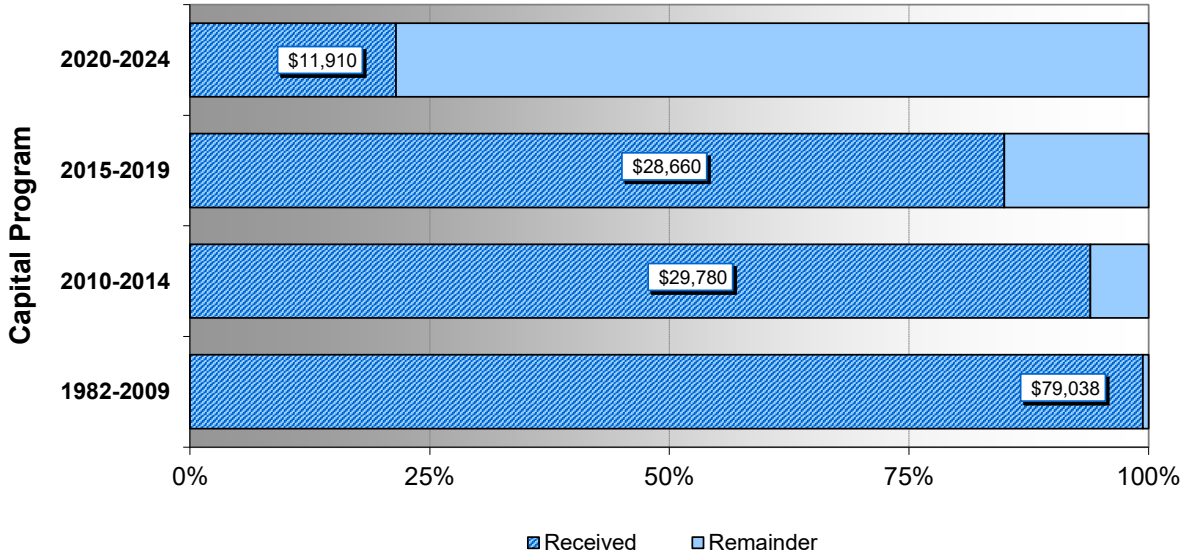
Schedule Variances

There are no major schedule slippages to report for MTA Bridges and Tunnels.

Status of MTA Capital Program Funding

Capital Funding (May 2023)

$ in millions



Capital Funding Detail (May 2023)

$ in millions

2010-2014 Program	Funding Plan Current	Receipts Thru April	Receipts May	Receipts Received to date
Federal Formula, Flexible, Misc	$5,794	$5,790	$ -	$5,790
Federal High Speed Rail	173	173	-	173
Federal New Start	1,271	1,271	-	1,271
Federal Security	89	89	-	89
Federal RRIF Loan				
City Capital Funds	628	608	-	608
State Assistance	770	770	-	770
MTA Bus Federal and City Match	132	113	-	113
MTA Bonds (Payroll Mobility Tax)	11,701	10,698	-	10,698
Other (Including Operating to Capital)**	1,361	1,288	-	1,288
B&T Bonds	2,025	1,864	-	1,864
Hurricane Sandy Recovery				
Insurance Proceeds/Federal Reimbursement	6,698	6,697	-	6,697
PAYGO	171	171	-	171
Sandy Recovery MTA Bonds	658	225	-	225
Sandy Recovery B&T Bonds	229	23	-	23
Total	**31,701**	**29,780**	**-**	**29,780**

2015-2019 Program	Funding Plan Current	Receipts Thru April	Receipts May	Receipts Received to date
Federal Formula, Flexible, Misc	$6,898	$5,724	$ -	$5,724
Federal High Speed Rail	122	122	-	$122
Federal Core Capacity	100	-	-	$ -
Federal New Start	500	-	-	$ -
Federal Security	18	15	-	$15
State Assistance	9,196	8,164	-	$8,164
City Capital Funds	2,669	2,060	-	$2,060
MTA Bonds	8,398	8,308	-	$8,308
Asset Sales/Leases	806	315	-	$315
Pay-as-you-go (PAYGO)**	2,156	1,961	-	$1,961
Other	163	68	-	$68
B&T Bonds & PAYGO/Asset Sale	2,717	1,925	-	$1,925
Total	**33,744**	**28,660**	**-**	**28,660**

2020-2024 Program	Funding Plan Current	Receipts Thru April	Receipts May	Receipts Received to date
Capital from Central Business District Tolling	$15,000	$ -	$ -	$ -
Capial from New Revenue Sources	10,000	1,648	1,311	$2,959
MTA Bonds and PAYGO	8,006	449	-	$449
Other Contribution	542	-	-	$ -
Federal Formula	8,865	6,226	-	$6,226
State of New York	3,101	511	-	$511
City of New York	3,007	1,323	-	$1,323
Federal New Start (SAS Ph2)	2,905	-	-	$ -
Federal Flexible	581	128	-	$128
Federal Other	78	58	-	$58
Federal Security	30	10	-	$10
B&T Bonds	3,327	248	-	$248
Total	**55,442**	**10,600**	**1,311**	**11,910**

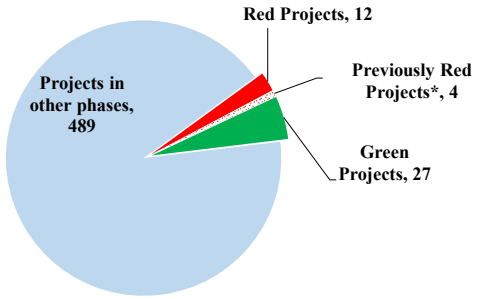
Metropolitan Transportation Authority

1st Quarter 2023 Traffic Light Report on the MTA Capital Program

A total of 532 Projects were Reviewed for the 1st Quarter 2023

The 532 active projects include 43 projects in Design, 3 in Post-Design to Construction Award, 486 in Construction

43 of 532 Projects in Design



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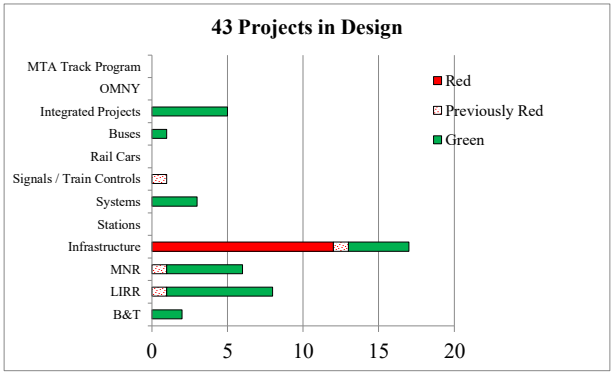
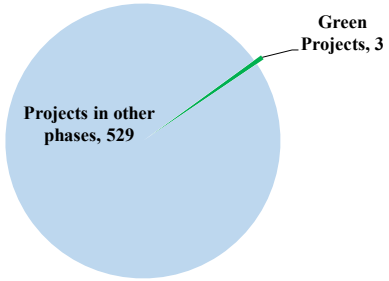


First Quarter 2023: 43 projects were reviewed in this phase with 27 designated green, 4 as previously red, and 12 red. The root causes of the 12 red projects were design changes, MTA resource support and bundling of contracts.

Fourth Quarter 2022: 41 projects were reviewed in this phase with 35 designated green, 4 as previously red, and 2 red.

3 of 532 Projects in Post-Design to Construction Award



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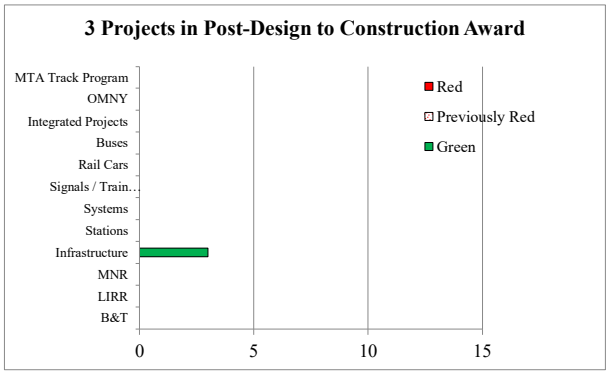
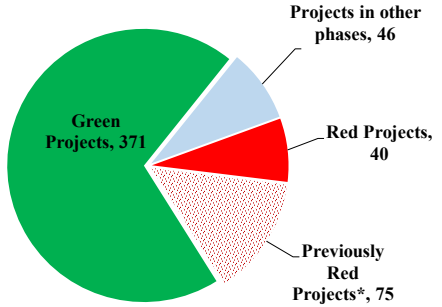


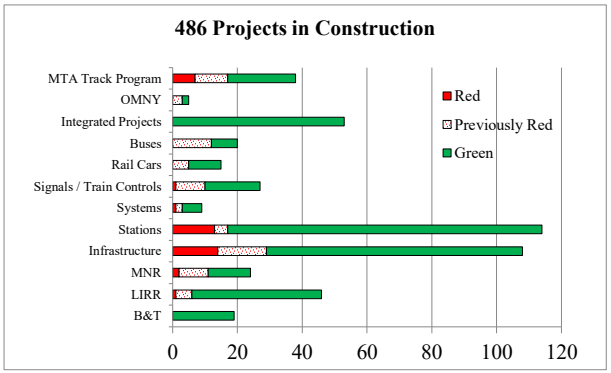
First Quarter 2023: 3 projects were reviewed in this phase with all 3 designated green.

Fourth Quarter 2022: None of the projects in this phase met the TLR criteria this quarter.

486 of 532 Projects in Construction



* see Terms and Definitions page



First Quarter 2023: 486 projects were reviewed in this phase with 371 designated green, 75 previously red, and 40 red. The 40 red projects had root causes of unforeseen site conditions, contractor performance, testing and commissioning, material availability, track access, and coordination with outside agencies.

Fourth Quarter 2022: 487 projects were reviewed in this phase with 373 designated green, 74 previously red, and 40 red.

Project Terms and Definitions
1st Quarter 2023 Traffic Light Report

The following Terms and Definitions are used to identify a project's Traffic Light color designation using variances from quarter to quarter and are based on two performance indicators: cost and schedule. A project is designated a "***green light project***" when no performance indicator has exceeded the Traffic Light Report thresholds. A project is designated a "***red light project***" when one or more of the two indicators exceed a specified threshold. Variance reports are required for all qualified red light projects. Included in these reports are project summaries of issues associated with each project showing a **red** indicator and how the issues are being resolved. *A project is designated a "***previous red project***" after one or more performance indicators had triggered a red in a previous quarter(s). A "***previous red project***" may revert back to green after two consecutive quarters if the performance indicator(s) have not worsened.

Project Terms and Definitions

Projects in Design: 43
Green: Indices less than 110% and index movement of less than 10%.
Red: Cost Index - An EAC increase of 10% (or index movement of 10% or more since the last Traffic Light Report).
Red: Schedule Variance - An increase of 3 months or more to substantial completion since the last Traffic Light Report.
Previous Red: Previously indicated as **red** with no new substantial change since the last TLR / A project in design that has been designated as Previous Red may be returned to Green when it has been in compliance with the two performance indicators for two consecutive quarters.

Projects in Post Design to Construction Award Phase: 3
Green: Phase Duration less than either the default of 128 calendar days for all agencies or the agency entered duration.
Red: Phase Duration is greater than either the default 128 calendar days or the agency entered duration.
Previous Red: Previously indicated as red with no new substantial change since the last TLR. Project may be returned to Green when it has been in compliance with two performance indicators for two consecutive quarters.

Projects in Construction: 486
Green: Indices less than 110% and index movement of less than 10%. Other indices not exceeding those criteria specified in index formulas and criteria.
Red: Cost Index - An increase of 10% (or index movement of 10% or more since the last TLR).
Red: Schedule Variance - An increase of 3 months or more to substantial completion since the last TLR.
Previous Red: Previously indicated as **red** with no new substantial change since the last TLR / A project in construction that has been designated as Previous Red may be returned to Green when it has been in compliance with the two performance indicators for two consecutive quarters.

Project Terms and Definitions
1st Quarter 2023 Traffic Light Report

Projects in Planning:

- Projects in Planning are reviewed but not displayed in the TLR until the project reaches the design phase but continue to be maintained in the TLR project database for reporting purposes.

Completed Projects:

- Completed projects are removed from the TLR the quarter AFTER Substantial Completion is achieved.

Report Index Formulas and Criteria:

- Cost Index = Total Project EAC / Current Approved Budget.
  (Note: Current Budget is not Budget at Award)
- Cumulative Cost Variance = 3 consecutive quarters with a total cost index increase that cumulatively exceeds the TLR threshold of 10% over 3 quarters.

- Schedule Variance = Number of months of change in schedule since the last TLR.
- Cumulative Schedule Variance = 3 consecutive quarters with a total change in schedule that cumulatively exceeds the TLR threshold of 3 months or more.

- The TLR includes projects in CPOC's Risk-Based Monitoring Program which are listed at the end of the report.

- Only projects with budgets of $7M or greater are included in the current quarter's TLR. Projects with budgets below $7M are not displayed in the current report but will be maintained in the TLR database. If the current budget increases above the $7M minimum threshold, the projects will return to an active status.

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ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
Construction & Development									
Stations									
Stations - ADA Accessibility Program - Projects in Construction									
ADA Borough Hall Station Bundle									
T8041224	Renewal: Borough Hall LEX	Construction	$125,056,592	3	1.00	▬	0	▬	G
T8041311	ADA: Borough Hall LEX	Construction	$39,980,570	3	.93	▬	0	▬	G
ADA 14th St Complex									
T7041251	Platform Components: 5 Locs CNR	Construction	$3,781,498	23	1.00	▬	0	▬	G
T70412F4	Subway Street Stairs: 14th Street 6AV	Construction	$3,649,384	23	1.04	▬	0	▬	G
T70412L2	Platform Components: 14 St 6 AV	Construction	$8,055,574	23	.99	▬	0	▬	G
T7041330	ADA: 14th St 6th Av/7th Av Complex DES	Construction	$4,274,978	23	.99	▼	0	▬	G
T7041346	ADA: 6 Av CNR	Construction	$54,762,315	23	.99	▬	0	▬	G
T7041347	ADA: 14 St 6AV	Construction	$28,339,956	23	1.00	▬	0	▬	G
T7041348	ADA: 14 St BW7	Construction	$51,188,817	23	.99	▬	0	▬	G
T8041221	Station Ventilators CNR	Construction	$2,107,462	23	1.00	▬	0	▬	G
T8041229	Platform Components: 6 Avenue / Canarsie	Construction	$32,806,122	23	1.00	▬	0	▬	G
T8041230	Platform Components: 14th Street / 6 Ave	Construction	$5,042,631	23	1.00	▬	0	▬	G
T8041304	ADA: 6 Ave / Canarsie	Construction	$33,373,926	23	1.00	▬	0	▬	G
T8041305	ADA: 14 St / Broadway/ 7th Ave	Construction	$29,873,986	23	1.00	▬	0	▬	G
T8070312	LSCRP 8th Ave CNR	Construction	$34,975,533	23	1.00	▬	0	▬	G
ADA 149th Street									
T7041315	ADA: 149 Street-Grand Concourse Complex	Construction	$110,353,809	46	1.00	▬	0	▬	R
T7041338	ADA: Tremont Ave - Concourse Line	Construction	$52,469,753	74	1.00	▬	0	▬	R
ADA 68th St-Hunter College									
T7041324	ADA: 68 St-Hunter College LEX	Construction	$145,243,219	35	1.00	▬	0	▬	G

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Construction & Development									
Stations									
Stations - ADA Accessibility Program - Projects in Construction									
ADA 68th St-Hunter College - cont'd									
T8041225	Platform Components: 68 St. - Hunter College LEX	Construction	$6,231,878	5	1.00	▬	0	▬	G
T8050244	Mainline Track Replacement 2021 / Hunter College	Construction	$4,014,497	19	1.00	▬	0	▬	G
ADA Package A									
S8070101	Station Components: New Dorp / SIR	Construction	$2,316,923	74	1.00	▬	5	▲	R
S8070108	ADA: New Dorp SIR	Construction	$34,715,249	74	1.00	▬	5	▲	R
S8070110	Components: New Dorp SIR	Construction	$1,361,809	74	.97	▬	5	▲	R
T8041215	Station Components: Metropolitan Ave XTN	Construction	$3,872,158	74	1.00	▼	5	▲	R
T8041231	Station Components: Metropolitan Ave XTN	Construction	$3,059,485	74	1.00	▲	5	▲	R
T8041303	ADA: Dyckman St (NB) BW7	Construction	$20,283,883	74	1.00	▬	5	▲	R
T8041317	ADA: Grand St CNR	Construction	$27,221,551	74	1.00	▬	5	▲	R
T8041319	ADA: 7th Ave CUL	Construction	$44,727,413	74	1.00	▬	5	▲	R
T8041327	ADA: Lorimer St CNR	Construction	$59,131,049	74	1.00	▬	5	▲	R
T8041328	ADA: Metropolitan Ave XTN	Construction	$47,004,005	74	1.00	▬	5	▲	R
T8041332	ADA: East 149th St PEL	Construction	$38,676,891	74	1.00	▬	5	▲	R
T8041337	ADA: Beach 67th St FAR	Construction	$41,662,144	74	1.00	▬	5	▲	R
ADA Package 2									
T6041323	ADA: 8th Ave/Sea Beach (Southbnd Ph2)	Construction	$9,535,210	80	.95	▬	0	▬	G
T7041213	Renewal: Woodhaven Blvd JAM	Construction	$57,052,565	14	1.00	▬	0	▬	G
T7041314	ADA: Court Square XTN (Elevator Phase)	Construction	$23,954,114	85	.97	▼	0	▬	G
T7041316	ADA: Woodhaven Boulevard JAM	Construction	$38,901,702	32	.99	▬	0	▬	G
T7041327	ADA & Station Improvements: Westchester Sq PEL	Construction	$90,409,470	28	1.00	▬	0	▬	G

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Construction & Development									
Stations									
Stations - ADA Accessibility Program - Projects in Construction									
ADA Package 2 - cont'd									
T7041335	ADA: Queensboro Plaza FLS	Construction	$72,445,466	27	.97	▬	0	▬	G
T8040708	Replace 5 Elevators at 2 Locations JAM	Construction	$37,063,104	27	.93	▬	0	▬	G
T8041232	Station Renewal: Woodhaven Boulevard/PEL	Construction	$21,823,945	14	.89	▼	0	▬	G
T8041329	ADA: Woodhaven Blvd/JAM	Construction	$28,283,513	32	1.02	▬	0	▬	G
T8041330	ADA & Station Improvements: Westchester Sq/PEL	Construction	$28,156,171	28	.86	▼	0	▬	G
T8041345	ADA: 181 St 8AV	Construction	$45,526,532	40	.97	▬	0	▬	G
T8050246	ML Track Replacement: Westchester Square /Pelham	Construction	$1,106,698	28	.92	▼	0	▬	G
ADA Package 4									
T7041322	ADA: 95 St 4AV	Construction	$35,943,807	3	1.02	▬	0	▬	G
T8040718	Replace 1 Escalator at Parkchester/PEL	Construction	$13,840,841	3	1.00	▬	0	▬	G
T8041227	Platform Components: 137th St/Bwy7	Construction	$8,188,332	3	1.00	▬	0	▬	G
T8041331	ADA Parkchester E.177 St PEL	Construction	$77,384,672	3	.96	▬	0	▬	G
T8041347	ADA: Northern Blvd/QBL	Construction	$39,646,509	3	.96	▬	0	▬	G
T8041371	ADA: 137 St BW7	Construction	$39,222,993	3	1.00	▬	0	▬	G
T8041375	ADA: 95th St / 4th Ave (Additional Support)	Construction	$13,931,258	3	.88	▬	0	▬	G
ADA Package 3									
T8040715	Replace 14 Elevators: 5 Stations	Construction	$74,874,726	95	1.00	▬	0	▬	G
T8041209	Livonia Av-Junius St Station Connector	Construction	$28,699,079	95	.99	▬	0	▬	G
T8041312	ADA: Junius St / NLT	Construction	$89,251,681	95	1.00	▬	0	▬	G
T8041314	ADA: Sheepshead Bay/ BRT	Construction	$49,238,743	95	1.00	▬	0	▬	G
T8041321	ADA: Kings Hwy / Culver	Construction	$63,847,491	95	1.00	▬	0	▬	G

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Construction & Development									
Stations									
Stations - ADA Accessibility Program - Projects in Construction									
ADA Package 3 - cont'd									
T8041333	ADA: Mosholu Pk/Jerome	Construction	$53,210,562	95	1.00	▬	0	▬	G
T8041336	ADA: Rockaway Blvd / Liberty Ave	Construction	$60,185,049	95	1.00	▬	0	▬	G
T8041338	Woodhaven Blvd/Queens	Construction	$73,241,565	95	1.00	▬	0	▬	G
T8041339	ADA: Steinway St/ Queens	Construction	$119,385,816	95	1.00	▬	0	▬	G
T8041348	ADA: Church Avenue Brighton	Construction	$53,108,015	95	1.00	▬	0	▬	G
All Other Stations Projects									
Component Repairs - 8th Ave Line									
T8060518	Tunnel Lighting, 8 Ave	Construction	$18,399,742	27	1.00	▬	0	▬	G
T8060519	Fan Fiber, 8 Ave	Construction	$17,378,521	27	1.00	▬	0	▬	G
T8070329	Line Structure Repairs, 8 Ave	Construction	$86,679,080	27	1.11	▬	0	▬	G
Replacement of 8 Escalators									
T7040708	Replace 2 Escalators: Pelham Pkwy WPR	Construction	$15,529,875	95	1.00	▬	0	▬	G
T7040709	Replace 6 Escalators / Various	Construction	$46,485,326	95	1.00	▬	0	▬	G
Station Renewal - Flushing Line - Bundle 1									
T7041218	Renewal: 61 St-Woodside FLS	Construction	$48,858,147	15	1.00	▬	0	▬	G
T7070343	Struct Repair: 61st-Woodside FLS DES	Construction	$3,065,122	4	.95	▬	0	▬	G
T8040709	Replace 4 Escalators at 2 Locations FLS	Construction	$42,530,808	4	1.00	▬	0	▬	G
T8041258	Station Renewal: Woodside 61st Station	Construction	$78,972,236	15	.99	▬	0	▬	G
T8070317	Overcoat Painting: 48 St - 72 St FLS	Construction	$15,579,565	4	1.00	▬	0	▬	G
T8070331	Repair Track/Structure Supporting Steel 61st-Woodside FLS	Construction	$129,137,701	4	1.00	▬	0	▬	G

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Construction & Development									
Stations									
All Other Stations Projects									
Escalator Replacement Bundle									
T7040707	Replace 6 Escalators / Various (Bx/M)	Construction	$47,744,503	37	.99	▬	0	▬	G
T7040707	Replace 1 Escalator at Intervale / WPR	Construction	$7,484,500	4	1.00	▬	0	▬	G
T7040713	Replace 5 Escalators / Various (Bk/M)	Construction	$33,788,248	35	1.00	▬	0	▬	G
Station Renewal - Jamaica Line									
T7041214	Renewal: 85 St-Forest Parkway JAM	Construction	$45,783,641	8	1.00	▬	0	▬	G
T7041215	Renewal: 75 St-Elderts Lane JAM	Construction	$45,021,572	0	1.00	▬	0	▬	G
T7041216	Renewal: Cypress Hills JAM	Construction	$49,984,641	0	1.00	▬	0	▬	G
T8041249	Platform Edges Wrap-Up: 104St & 121St /JAM	Construction	$242,529	0	1.00	▬	0	▬	G
T8041250	Station Renewal at 85 St - Forest Pkwy / JAM	Construction	$11,002,525	8	1.00	▬	0	▬	G
T8041251	Station Renewal at 75 St Elderts Lane / JAM	Construction	$10,748,186	0	1.00	▲	0	▬	G
T8041252	Station Renewal at Cypress Hills / JAM	Construction	$12,045,438	0	1.00	▬	0	▬	G
T8070342	Demolition of Abandoned Structures: 97th CBH/JAM	Construction	$265,315	0	1.00	▬	0	▬	G
T8080649	PSLAN: Expand Partial to Full at 75 St / JAM	Construction	$655,672	0	1.00	▬	0	▬	G
Grand Central Bundle									
T7041402	Access Improvements: Grand Central, Phase 2	Construction	$22,877,745	20	.99	▲	0	▬	G
T8040713	Replace 8 Escalators: Grand Central - 42 St / FLS	Construction	$86,543,005	19	1.00	▬	0	▬	G
T8041226	Station Ventilators: Grand Central / FLS	Construction	$17,617,057	20	1.00	▬	0	▬	G
Station Renewal - Flushing Line - Bundle 2									
T7041210	Renewal: 111 St FLS	Construction	$51,256,599	4	1.01	▬	0	▬	G
T7041211	Renewal: 103 St-Corona Plaza FLS	Construction	$43,731,043	1	1.00	▬	0	▬	G
T7041212	Renewal: 82 St-Jackson Heights FLS	Construction	$39,552,578	1	1.00	▬	0	▬	G

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Construction & Development									
Stations									
All Other Stations Projects									
Station Renewal - Flushing Line - Bundle 2 - cont'd									
T7041217	Renewal: 69 St FLS	Construction	$42,977,984	1	.99	▬	0	▬	G
T7041219	Renewal: 52 St FLS	Construction	$49,314,525	1	1.00	▬	0	▬	G
T8041243	Station Renewal: 111 St / FLS	Construction	$14,403,140	4	1.00	▬	0	▬	G
T8041244	Station Renewal: 103 St-Corona Plaza / FLS	Construction	$13,827,711	1	1.00	▬	0	▬	G
T8041245	Station Renewal: 82 St-Jackson Heights / FLS	Construction	$12,355,852	1	1.00	▬	0	▬	G
T8041246	Station Renewal: 69 St / FLS	Construction	$13,383,988	1	1.00	▼	0	▬	G
T8041247	Station Renewal: 52 St / FLS	Construction	$15,894,371	1	1.00	▬	0	▬	G
T8041262	Platform Components: 111 St / FLS	Construction	$6,277,620	1	1.00	▬	0	▬	G
Circulation Enhancements - Flushing-Main St									
T7041422	Station Capacity Enhancements: Main St FLS	Construction	$54,568,753	56	1.00	▬	0	▬	G
T8041213	Station Components: Main St / FLS	Construction	$3,782,957	56	1.00	▬	0	▬	G
Grand Central Circulation Improvements									
T8041239	Grand Central: Center Core East / Flushing	Construction	$108,055,441	2	.99	▬	0	▬	G
T8041240	Grand Central: Widening Stairs U2/U6 / Lexington	Construction	$3,468,971	2	1.00	▬	0	▬	G
Platform Components - Broadway-7th Ave Line									
T7041267	Platform Components: 10 Locs BW7 DES	Construction	$4,792,000	1	1.00	▬	0	▬	G
T8041218	Platform Components: 5 Locs BW7	Construction	$72,344,190	1	1.00	▼	0	▬	G
T8050239	ML Track Replacement 2021 / 86th St (Bway-7th Ave)	Construction	$9,879,541	0	1.00	▼	0	▬	G
All Other Stations									
ET060332	Sandy Resiliency: 3 Pump Rooms (53rd St Tube)	Construction	$27,954,817	88	1.43	▼	0	▬	R

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Construction & Development									
Stations									
All Other Stations Projects									
All Other Stations - cont'd									
T7040703	Replace 8 Traction Elevators / Various	Construction	$56,058,184	86	.99	▬	3	▲	R
T8040711	4 Escalators at 2 Locs Dekalb 4Av & 181 St BXC	Construction	$49,144,139	20	.99	▬	0	▬	G
T8040712	18 Escalators at 7 Locations	Construction	$207,688,460	7	1.00	▬	0	▬	G
T8040716	Replace 6 Esc and 2 Stairs (Sut Blvd ARC/W4 8AVE)	Construction	$81,130,897	3	1.00	▲	0	▬	G
T8040717	Replace 19 Elevators at Various Locations	Construction	$165,220,124	3	1.00	▲	0	▬	G
T8041210	Water Condition Remedy: Various Locations	Construction	$7,233,650	25	1.00	▬	0	▬	G
T8041217	Platform Components: 3 Locs QBL/ARC	Construction	$31,484,972	5	1.00	▬	0	▬	G
T8160711	EFR Consolidation: 2 Ave / 6Ave	Construction	$20,054,641	25	1.08	▬	0	▬	R
Infrastructure									
207th St Yard Rehab									
ET100210	Power Cable Replacement- 207th Street Yard	Construction	$47,883,857	99	1.12	▲	0	▬	R
ET100218	Sandy Repairs: 207th St Yard Signals	Construction	$301,092,732	83	1.00	▬	0	▬	G
ET100219	Sandy Repairs: 207 St Yard Track	Construction	$63,978,069	99	1.05	▬	0	▬	G
ET100220	Sandy Repairs: 207 St Yard Switches	Construction	$51,271,993	98	1.02	▲	0	▬	G
ET100310	Long Term Perimeter Protection: 207th St Yard	Construction	$166,152,637	68	1.07	▬	0	▬	G
ET100312	Sandy Mitigation: 207th Street Yard Portal	Construction	$27,103,195	89	1.00	▼	0	▬	G
Tiffany Warehouse Mitigation									
ET160312	Sandy Mitigation: Tiffany Central Warehouse	Construction	$25,027,469	47	1.00	▬	0	▬	G
T7160723	Tiffany Warehouse Exterior Wall Structural Repair	Construction	$18,657,420	47	.99	▬	0	▬	G
T7160727	Roof Replacement: Tiffany Central Warehouse	Construction	$18,881,566	47	1.02	▬	0	▬	G

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Construction & Development									
Infrastructure									
Structural Repairs - Eastern Parkway Line									
T7070323	LSCRP: Brooklyn (EPK)	Construction	$80,508,497	93	.99	▬	0	▬	G
T8070311	Plenum Plate Demo & Struct. Rehab EPK	Construction	$497,251	100	1.00	▬	0	▬	G
T8090408	Rehab CBH Enclosure: CBH 301 Pennsylvania Av / EPK	Construction	$1,783,300	100	1.00	▬	0	▬	G
Structural Rehab and Overcoat Painting at 180th St									
T6080337	Walkway for 8 Bridges/Dyre	Construction	$2,173,289	8	1.00	▬	0	▬	G
T7070301	Struct Rehab/Overcoating - E 180 St Abut WPR	Construction	$71,108,920	8	1.01	▬	0	▬	G
T7070310	Overcoat: 17 Bridges & Flyover at E 180 St DYR	Construction	$64,154,262	8	1.00	▬	0	▬	G
T7070357	East 180 Street Flyover / Dyre Av	Construction	$5,017,221	8	1.00	▬	0	▬	G
T8070341	Demolition of Abandoned Structures - WPR - Phase 2	Construction	$774,323	8	1.00	▬	0	▬	G
Overcoat Painting - Jamaica Line									
T8070335	Overcoating: Myrtle Avenue - DeSales Place/JAM	Construction	$80,420,203	0	1.00	▬	0	▬	G
T8070336	Overcoating: Williamsburg Bridge - Myrtle Ave/JAM	Construction	$72,140,187	0	1.00	▬	0	▬	G
T8070337	Overcoating: E New York Yard & Shop Leads/Loops	Construction	$57,873,073	0	1.00	▬	0	▬	G
Component Repairs - Concourse Line									
T8060512	Fan Plants Component Repairs - BXC Line	Construction	$237,910	10	1.00	▬	0	▬	G
T8070318	LSCRP 161 -192 Sts BXC	Construction	$127,790,306	49	1.00	▬	0	▬	G
T8070319	Vents 161 - 192 Sts BXC	Construction	$11,715,519	22	1.00	▬	0	▬	G
T8080640	Antenna Cable Concourse Line (IND)	Construction	$9,758,422	61	1.00	▬	0	▬	G
Steinway Tunnel Portal Resiliency									
ET060338	Sandy Resiliency: 2 Pump Rooms (Steinway Tube)	Construction	$12,681,940	1	1.00	▬	0	▬	G
ET070308	Sandy Mitigation: Steinway Portal	Construction	$21,108,934	1	1.02	▬	0	▬	G
T6070343	Steinway Portal Mitigation	Construction	$10,874,666	0	1.00	▬	0	▬	G

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Construction & Development									
Infrastructure									
Steinway Tunnel Portal Resiliency - cont'd									
T6080336	Cathodic Protection, Steinway Tube	Construction	$1,475,829	1	1.00	▬	0	▬	G
T7080648	Police Radio System: Enhance Coverage-SteinwayTube	Construction	$5,467,026	1	1.00	▬	0	▬	G
Hardening of 26 Substations									
ET090307	Hardening of Substations at 24 Locations	Construction	$98,550,788	2	1.00	▬	0	▬	G
ET090313	Hardening Substations: W. Broadway & Murray St.	Construction	$2,772,256	1	1.06	▬	0	▬	G
ET090314	Hardening Substations: Tudor City	Construction	$6,441,432	1	1.03	▬	0	▬	G
T60412J3	Sandy Mitigation: 26 Substations	Construction	$23,971,377	0	1.00	▬	0	▬	G
T6090219	Sandy Mitigation: 26 Substations	Construction	$6,000,000	0	1.00	▬	0	▬	G
T6090417	Sandy Mitigation: 26 Substations	Construction	$7,500,000	0	1.00	▬	0	▬	G
T6160730	Sandy Mitigation: 26 Substations	Construction	$19,000,000	0	1.00	▬	0	▬	G
Jamaica Bus Depot Reconstruction									
T8030219	Jamaica Gantries BEB (Charging)	Construction	$14,395,148	0	1.00	▬	0	▬	G
T8120303	Jamaica Depot Reconstruction	Construction	$576,060,276	0	1.00	▬	0	▬	G
T8120307	Bus Parking Lot at York College	Construction	$26,980,186	0	1.00	▬	0	▬	G
Line Structure Overcoat Painting - West End Line									
T7070322	Overcoat: 9 Av Portal to 79 Street WST DES	Design	$1,209,847	95	1.00	▬	1	▲	R
T7070348	Overcoat: 79 St - 24 Ave / West End DES	Design	$351,150	95	1.00	▬	1	▲	R
T7070349	Overcoat: 24th Ave - Stillwell Terminal WST DES	Design	$351,150	95	1.00	▬	1	▲	R
T8070313	Overcoat: 9 Av Portal to 79 Street West End	Design	$2,091,453	95	1.00	▬	1	▲	R
T8070313	Overcoat: 24th Ave - Stillwell Terminal West End	Design	$1,483,256	95	1.00	▬	1	▲	R
T8070313	Overcoat: 79 St - 24 Ave / West End	Design	$1,090,705	95	1.00	▬	1	▲	R
T8070314	Elevated Structure Repairs Design	Design	$2,410,280	95	1.00	▬	1	▲	R

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Construction & Development									
Infrastructure									
Coney Island Abutment Wall and St. Mark's Ave Bridge									
T8070332	Repair Abutment Wall: Coney Island Yard	Construction	$15,343,831	3	1.00	▬	0	▬	G
T8070333	Replace Bridge: St Marks Ave/Franklin Ave Shuttle	Construction	$20,402,271	3	1.00	▬	0	▬	G
SIRTOA Station Components and Bridge Rehabilitation									
S8070101	Station Components: Various Locations	Design	$34,294,362	64	1.00	▬	32	▲	R
S8070103	Rehabilitate: Stapleton Viaduct	Design	$29,260,271	2	1.00	▬	4	▲	R
S8070103	Overcoat 6 SIR Bridges	Design	$13,717,903	2	1.00	▬	4	▲	R
S8070103	Rehabilitate Garretson Ave. Bridge	Design	$10,763,878	2	1.00	▬	4	▲	R
Structural Component Repairs - Jamaica Line									
T70502A3	Myrtle Av Line (U69 Plates)	Construction	$406,037	0	1.00	▬	0	▬	G
T8050241	Jamaica Direct Fixation	Construction	$57,585,082	98	1.00	▬	0	▬	G
T8050242	63rd Street Direct Fixation	Construction	$107,035,991	47	.99	▬	0	▬	G
T8070326	Jamaica Structural Repairs	Construction	$2,195,062	98	1.00	▬	0	▬	G
T8070327	63 St Structural Repairs	Construction	$1,559,591	0	1.00	▬	0	▬	G
T8090211	Jamaica Line: 84C Contact Rail	Construction	$3,566,446	98	1.00	▬	0	▬	G
T8090212	Jamaica Line Negative Side Feeders	Construction	$429,285	98	1.00	▬	0	▬	G
T8090213	63 St 84C Contact Rail	Construction	$9,545,612	0	1.00	▬	0	▬	G
T8090214	63 St Negative Side Feeders	Construction	$946,040	0	1.00	▬	0	▬	G
Rehabilitation of Pumping Facilities									
T8060521	Rehabilitate Pump Room #1028 - Willoughby St/BWY	Construction	$1,969,458	0	1.00	▬	0	▬	G
T8060522	Rehabilitate Pum Room #1029 - Adams St/BWY	Construction	$14,603,894	0	1.00	▬	0	▬	G
Bus Radio System									
T6120403	Replace Bus Radio System	Construction	$225,637,180	65	1.04	▬	8	▲	R

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Construction & Development									
Infrastructure									
Bus Radio System - cont'd									
T6120444	Repair of East New York Tower	Construction	$5,925,000	94	1.36	▬	8	▲	R
U6030226	Bus Radio System	Construction	$34,311,391	65	1.07	▬	8	▲	R
U7030211	Bus Radio System - MTA Bus Share	Construction	$42,148,710	65	1.00	▼	8	▲	R
U7030224	Repair of East New York Tower (MTAB)	Construction	$1,975,000	94	1.36	▬	8	▲	R
Flood Mitigation - Coney Island Yard									
ET100211	Power Cable/Comm. Equipt. Repl- Coney Island Yard	Construction	$162,887,094	96	1.00	▬	0	▬	R
ET100307	Coney Island Yd: Long Term Perimeter Protection	Construction	$327,307,123	96	.67	▼	0	▬	R
T8090409	Rehab 4 CBH Enclosures at Coney Island Yard	Construction	$5,615,825	95	1.00	▬	0	▬	R
New Substations at New Dorp and Clifton Stations									
S7070106	New Power Substation: New Dorp	Construction	$24,858,161	98	1.01	▬	6	▲	R
S7070107	New Power Substation: Clifton	Construction	$30,509,353	98	.99	▬	6	▲	R
Clifton Shop Track and Switch									
S7070103	SIR Mainline Track Replacement	Construction	$49,319,678	100	1.00	▬	2	▲	R
S7070113	SIR Clifton Yard Track and Switch Replacement	Construction	$15,945,306	96	.92	▬	2	▲	R
S8070109	SIR Mainline (2021)	Construction	$34,357,067	80	.97	▬	2	▲	R
S8070109	Track and Switch Rehab: SIR Mainline (Addtnl Work)	Construction	$15,113,650	80	.97	▬	2	▲	R
Bundle BL01-8845									
T8160605	IQ Consulting Serv.: UST Remediation - 2021	Construction	$5,240,496	8	1.00	▬	0	▬	G
U7030225	IQ: UST Remediation at CP & Eastchester	Construction	$1,865,723	8	1.00	▬	0	▬	G
Structural Repairs - Rockaway Viaduct									
ET070310	Rockaway ROW Debris Shielding	Construction	$18,360,209	1	1.00	▲	0	▬	G
ET070311	Sandy Mit: New Crossover at Beach 105th St. / RKY	Construction	$81,385,220	1	1.00	▬	0	▬	G

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Construction & Development									
Infrastructure									
Structural Repairs - Rockaway Viaduct - cont'd									
ET070312	Rockaway Line Long Term Protection	Construction	$72,766,382	1	.99	▬	0	▬	G
ET070312	Sandy Mitigation: South Channel Bridge Generator	Construction	$2,394,196	1	1.01	▬	0	▬	G
ET070313	Rockaway Park Yard Compressor Room (ROW)	Construction	$18,520,597	1	.99	▬	0	▬	G
ET070314	Rockaway ROW Debris Shielding: Hammels Wye	Construction	$64,314	1	.01	▬	0	▬	G
T6080338	Sandy Mitigation: Rockaway Bundle	Construction	$118,402,250	0	1.00	▬	0	▬	G
T8070323	Repl of Elect/Equip: S. Channel Bridge	Construction	$63,206,301	1	1.04	▬	0	▬	G
T8070324	Rehab Hammels Wye	Construction	$110,348,636	1	1.00	▬	0	▬	G
T8070325	Elev Structure Repairs: Over-Land Sections	Construction	$104,566,380	1	1.01	▬	0	▬	G
BL01-9528									
ET060305	Sandy Mitigation: Fan Plant 2 Locations	Post Des to Const Awd	$317,922	0	1.00	▬	0	▬	G
ET060336	Sandy Resiliency: 4 Pump rooms(Jerome/Pelham Tube)	Post Des to Const Awd	$3,643,884	100	.31	▼	0	▬	G
BL01-9686									
ET060305	Sandy Mitigation: Fan Plant 3 Locations	Design	$388,658	75	1.00	▬	0	▬	G
ET090244	Traction Power Repairs: Various Locations	Design	$137,179,610	75	.99	▬	0	▬	G
Substation Component Replacement Bundle									
T7090206	Replace High Tension Switchgear at 7 Substations	Construction	$31,100,280	95	1.02	▬	0	▬	R
T8090216	Replace Transformer and Associated Equip - 41 St Substation	Construction	$7,525,953	7	1.08	▲	0	▬	R
All Other Infrastructure									
ET070209	Sandy Repairs: Rockaway Line Wrap Up	Construction	$48,935,876	55	.99	▬	0	▬	G
ET090304	Sandy Mitigation: Montague-Furman Substation / BWY	Construction	$9,164,597	78	.89	▬	0	▬	R
ET100314	Sandy Mitigation: 207th Street Sewers	Construction	$148,907,374	61	1.05	▬	0	▬	R
ET160310	Sandy Mitigation: Consolidated Revenue Facility	Construction	$11,574,218	67	.99	▬	9	▲	R

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Construction & Development									
Infrastructure									
All Other Infrastructure - cont'd									
T6120323	Flatbush & Ulmer Park: Window Replacement	Construction	$9,312,141	79	1.00	▬	5	▲	R
T7060506	Rehab Forsyth St Vent Plant	Construction	$93,548,145	78	1.03	▬	4	▲	R
T7070308	Rehab Emergency Exits (3rd Party) - Var Locs	Construction	$19,402,302	17	1.00	▬	0	▬	G
T7090202	Substation Renewal: Av Z CUL	Construction	$32,170,967	91	.99	▬	0	▬	R
T7090219	New Substation: Canal St 8AV	Construction	$80,252,619	6	.99	▬	0	▬	G
T7100441	New Railcar Receiving Improvements	Construction	$121,018,836	4	1.01	▬	0	▬	G
T7120306	Generator: Yukon Depot	Construction	$11,816,772	68	1.00	▬	4	▲	R
T7120307	Roof, Office, HVAC: Fresh Pond Depot	Construction	$14,859,564	53	1.00	▬	3	▲	R
T7120321	East New York Depot Windows and Fa¿¿ade	Construction	$18,061,652	74	1.00	▬	0	▬	R
T8060505	Rehab Deep Wells & Control Upgrade Nostrand Line	Construction	$22,685,806	32	1.01	▬	0	▬	G
T8060506	Rehab Fan Plant Damper Systems - 7 Locations	Construction	$33,771,531	72	1.00	▬	5	▲	R
T8060514	Fan Plant SCADA Head-End Upgrade	Construction	$18,357,610	25	.97	▬	0	▬	G
T8060517	Deep Wells Back-flushing - Lenox Line	Construction	$11,688,810	80	1.00	▬	0	▬	G
T8070344	Paint and Steel Repair, Culver Line South	Construction	$100,636,234	0	1.00	▬	0	▬	G
T8070345	Steel Repair, Culver Line North	Construction	$53,077,941	0	1.00	▬	0	▬	G
T8090207	Negative Cables:4th Ave Line - 36St to Pacific Ph3	Construction	$47,207,431	45	.97	▬	0	▬	G
T8090215	New Substation: 28 St / 8AV	Construction	$72,289,959	4	1.01	▬	0	▬	G
T8090410	Installation of Second Negative Rail / Dyre	Construction	$33,017,807	0	1.00	▬	0	▬	G
T8090411	Rehabilitation of 5 CBHs; Various Locs	Construction	$55,604,805	5	.97	▬	0	▬	G
T8100417	207th St OH Facility	Construction	$39,178,936	2	1.00	▬	0	▬	G
T8120304	Roof Topping & Expansion Joints Replacement at MJQ	Construction	$12,136,355	7	1.00	▬	0	▬	G

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Construction & Development									
Infrastructure									
All Other Infrastructure - cont'd									
T8160705	Livingston Plz Elec, Mechanical, Generator Phase B	Construction	$69,060,269	32	1.00	▬	0	▬	G
T8160706	EMD Facility: Hoyt-Schermerhorn FUL	Construction	$13,993,204	63	.99	▬	4	▲	R
U7030207	Storerooms and Depot Reconfiguration: LaGuardia	Construction	$7,418,500	64	1.00	▬	3	▲	R
ET060327	Existing Pump Room Enhancements	Design	$22,636,885	60	.56	▬	0	▬	G
ET100315	Sandy Mitigation: Resiliency Improvements at Westchester Yard	Design	$77,715,821	60	1.00	▬	0	▬	R
T8100405	Yard Fencing: Fresh Pond Yard	Design	$10,652,161	27	1.00	▼	3	▲	R
T8100419	Jamaica Yard Expansion Ph 1 - Design	Design	$8,921,648	0	1.00	▬	0	▬	G
ET100315	Sandy Mitigation: Resiliency Improvements at Corona Yard	Post Des to Const Awd	$17,165,058	99	1.01	▬	0	▬	G
Systems									
Upgrade SCADA System - BMT Division									
ET090310	Sandy Mitigation: Back-up Power Control Center	Construction	$13,435,530	12	1.00	▬	0	▬	G
T8090406	Upgrade SCADA BMT	Construction	$50,847,369	12	1.00	▬	0	▬	G
All Other Systems									
ET040317	Upgrade Emergency Booth Comm System (EBCS)	Construction	$77,368,275	89	.98	▬	9	▲	R
S7070104	UHF T-Band Radio System Replacement, SIR	Construction	$44,779,486	11	1.01	▬	0	▬	G
T7080603	PBX Upgrade - Phase 2	Construction	$54,608,861	95	1.31	▬	3	▲	R
T7080607	UHF T-Band Radio System Replacement	Construction	$7,426,891	2	1.00	▬	0	▬	G
T8080615	Liftnet Transition to Ethernet; Ph. 2 - Package 1	Construction	$8,903,483	68	1.00	▬	2	▲	G
T8080616	Liftnet Transition to Ethernet; Ph. 2 - Package 2	Construction	$7,581,165	30	1.00	▬	0	▬	G
T8080641	Asych Fiber Optic Network Ring F	Construction	$26,556,548	59	.96	▬	9	▲	R
T8080602	Upgrade/Replace PBX-2 at Jay St	Design	$7,890,932	16	1.00	▬	0	▬	G
T8080604	Copper Cable Replacement: Various Locations	Design	$9,999,939	40	1.00	▬	0	▬	G

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Construction & Development									
Systems									
All Other Systems - cont'd									
T8080608	PA/CIS B-Division Upgrade - 76 Stations	Design	$300,677,827	15	1.00	▬	0	▬	G
Signals / Train Controls									
200th and 207th Street Interlocking Repairs									
ET050217	Sandy Repairs: ML Track 200-207 St/8AVE	Construction	$46,785,995	67	1.00	▬	0	▬	G
ET050218	Sandy Repairs: ML Switches 200-207 St/8AVE	Construction	$33,765,637	80	1.00	▬	0	▬	G
ET080207	Signals: 200 St - 207 St / 8th Ave	Construction	$70,473,438	66	1.01	▬	0	▬	G
CBTC - QBL East									
T8050321	CBTC: Queens Blvd East Switch Replacement	Construction	$22,147,497	28	1.00	▬	0	▬	G
T8080317	CBTC: Queens Blvd East and 3 Interlockings - Furnish	Construction	$98,808,870	26	1.00	▬	0	▬	G
T8080318	CBTC: Queens Blvd East and 3 Interlockings - Install	Construction	$413,691,790	28	1.00	▲	0	▬	G
CBTC - Crosstown Line									
T7080347	CBTC: Crosstown Line and 3 Interlockings DES	Construction	$648,087	3	1.00	▬	0	▬	G
T8080323	CBTC: Crosstown Line & 3 Interlockings	Construction	$588,727,447	3	1.00	▬	0	▬	G
T8080328	Bergen St Interlocking Upgrade	Construction	$25,764,958	5	1.00	▬	0	▬	G
CBTC - 8th Ave Line									
T7080304	CBTC: 8AV (59 St - High St)	Construction	$222,803,780	67	1.01	▬	0	▬	G
T7080304	CBTC: 8AV (59 St - High St)	Construction	$4,100,000	67	1.00	▬	0	▬	G
T7080335	Interlocking Modernization: 30 St & 42nd St / 8AV	Construction	$228,431,294	80	.88	▬	0	▬	G
T7080344	2019 M/L Switch Repl: 10 Switches CBTC 8AV	Construction	$27,563,382	80	1.00	▬	0	▬	G
CBTC - Culver Line									
T7080307	Interlocking Modernization: Ditmas CUL	Construction	$112,258,763	86	.91	▬	0	▬	R
T7080332	CBTC: CUL (Church Av to W8 St)	Construction	$137,416,022	86	1.03	▼	0	▬	R

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Construction & Development									
Signals / Train Controls									
CBTC - Culver Line - cont'd									
T7080333	Interlocking Modernization: Ave X CUL	Construction	$181,218,203	86	.96	▬	0	▬	R
T7080343	2018 M/L Switch Repl: 7 Switches CBTC CUL	Construction	$39,929,364	86	1.01	▬	0	▬	R
CBTC - QBL West									
T6080319	CBTC Queens Blvd Ln West Ph 1	Construction	$87,047,387	94	1.00	▬	8	▲	R
T7080342	CBTC: 8AV Equip 112 R160 Cars (26 units)	Construction	$11,900,000	50	1.00	▬	8	▲	R
T7080350	CBTC QBL West Phase 1 TA Labor	Construction	$56,784,488	98	1.14	▬	8	▲	R
All Other Signals / Train Controls									
T7080327	Life Cycle Mod - Speed Enforcement Systems	Construction	$59,320,029	71	.90	▬	0	▬	G
T7080342	CBTC: 8AV Equip 316 R179 Cars (73 units)	Construction	$36,910,323	21	.99	▬	12	▲	R
T7080342	CBTC: 8AV Equip 460 R211 Cars (92 units)	Construction	$36,476,901	30	.99	▬	0	▬	G
T7080349	Signal Quality Enhancements (SAP)	Construction	$17,803,891	93	.97	▬	1	▲	R
T8080314	Single Chip UWB Interoperability (Proof of Concept) - Thales	Construction	$13,415,259	64	1.00	▬	1	▲	R
T8080316	CBTC: GEC Services	Construction	$18,946,076	55	1.00	▬	0	▬	G
T8080326	CBTC: Equip 640 R211 Option 1 Cars (128 units)	Construction	$14,411,606	16	1.00	▬	0	▬	G
ET100222	Sandy Repairs: Culver Yard (Signals/Track/Switches)	Design	$278,460,000	17	1.62	▲	0	▬	R
NYCT									
T6100408	Replace Heavy Shop Equipment	Construction	$8,179,000	35	1.08	▲	0	▬	G
T6160705	Employee Facility Rehab: RTO Chambers St NAS	Construction	$19,689,116	77	1.05	▬	0	▬	R
T8041223	Station Ventilators Ph 21 - 4 Locs/ Manh & BX	Construction	$10,260,856	98	1.00	▬	0	▬	G
T8041235	Station Ventilators Ph 20 - 4 Locations MHTN	Construction	$10,478,119	1	1.00	▬	0	▬	G
T8041254	Station Ventilators: Ph 19 - 4 Locs, Brooklyn	Construction	$9,182,508	1	1.00	▬	0	▬	G
T8041263	Replacement of Signage at Various Stations (2022)	Construction	$10,789,176	0	1.00	▬	0	▬	G

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Construction & Development									
NYCT									
T8070330	LSCRP: Repair of Priority Column Bases/JER&WPR	Construction	$7,470,786	78	1.00	▬	5	▲	R
T8070334	Rehab of Emergency Exits - 2022	Construction	$12,507,676	68	1.00	▬	0	▬	G
MTA Track Program									
NYCT Department of Subways Track Projects									
T70502A2	Continuous Weld Rail Ph 2 (SAP)	Construction	$19,340,634	88	1.00	▬	0	▬	R
T8050208	Mainline Track Replacement 2020 / Flushing	Construction	$59,886,344	92	1.00	▬	0	▬	G
T8050210	Mainline Track Replacement 2020 / Brighton	Construction	$15,212,679	94	1.00	▬	3	▲	R
T8050211	Mainline Track Replacement 2020 / Jamaica	Construction	$28,061,426	86	1.00	▬	8	▲	R
T8050214	Mainline Track Replacement 2020 / Astoria	Construction	$21,026,790	79	1.00	▬	0	▬	R
T8050227	Mainline Track Replacement 2021 / 11th st Cut	Construction	$19,926,544	74	1.00	▬	0	▬	R
T8050230	Mainline Track Replacement 2021 / Concourse	Construction	$21,661,732	99	1.38	▲	-2	▼	R
T8050232	Mainline Track Replacement 2021 / Jamaica	Construction	$27,039,948	55	1.00	▬	5	▲	R
T8050233	Mainline Track Replacement 2021 / Eastern Parkway	Construction	$7,645,460	88	.93	▼	0	▬	G
T8050234	Mainline Track Replacement 2021 / Jerome	Construction	$9,611,107	91	1.11	▲	9	▲	R
T8050235	Mainline Track Replacement 2021 / Flushing	Construction	$29,054,120	19	1.00	▬	0	▬	R
T8050237	Mainline Track Replacement 2021 / Lenox - WPR	Construction	$8,079,477	45	1.00	▬	0	▬	R
T8050240	Mainline Track - 2021 Support Costs	Construction	$14,428,518	40	1.01	▬	0	▬	G
T8050247	Mainline Track Replacement 2022 / 6th Ave-Culver	Construction	$23,264,750	92	.89	▼	-7	▼	G
T8050248	Mainline Track Replacement 2022 / 8th Avenue	Construction	$29,699,960	96	1.13	▬	-1	▼	R
T8050249	Mainline Track Replacement 2022 / 7th Avenue	Construction	$16,042,944	92	1.00	▬	2	▲	G
T8050250	Mainline Track Replacement 2022 / Brighton	Construction	$32,977,292	15	1.00	▬	0	▬	G
T8050251	Mainline Track - 2022 / Support Costs	Construction	$15,095,217	5	1.00	▲	0	▬	G

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Construction & Development									
MTA Track Program									
NYCT Department of Subways Track Projects									
T8050252	Mainline Track Replacement 2022 / Myrtle	Construction	$9,224,812	63	1.00	▬	0	▬	R
T8050254	Mainline Track Replacement 2022 / Astoria	Construction	$18,591,811	54	1.00	▬	0	▬	R
T8050258	Mainline Track Replacement 2022 / Liberty	Construction	$23,698,058	19	1.00	▬	0	▬	R
T8050263	Mainline Track Replacement 2022 / Culver	Construction	$17,098,309	88	1.00	▬	0	▬	R
T8050264	Track Force Account - 2022	Construction	$35,000,000	60	1.00	▬	0	▬	G
T8050265	Track 2022 / 8AV tk A1	Construction	$16,659,388	90	1.00	▬	-4	▼	G
T8050266	ML Track - 2022/ White Plains Rd	Construction	$19,002,082	28	1.00	▬	0	▬	G
T8050268	Mainline Track Replacement 2023/6th Ave Culver	Construction	$52,996,617	54	1.00	▬	0	▬	G
T8050269	Mainline Track Replacement 2023/ CWR	Construction	$77,720,623	8	1.00	▬	0	▬	G
T8050270	Mainline Track Replacement 2023/Queens 63 St	Construction	$8,408,488	90	1.00	▬	0	▬	G
T8050272	ML Track - 2023 DES/EFA	Construction	$26,394,861	0	1.00	▬	0	▬	G
T8050320	Mainline Track Switches- 2021 Support Costs	Construction	$11,670,721	10	.95	▬	0	▬	G
T8050322	Mainline Switches - 2022 DES/EFA	Construction	$15,713,385	10	1.00	▬	0	▬	G
T8050324	Mainline Track Switches 2022 / 8th Avenue	Construction	$32,639,912	31	1.00	▬	0	▬	R
T8050328	Mainline Track Switches 2022 / Brighton	Construction	$21,321,211	63	1.00	▬	8	▲	R
T8050333	Mainline Track Switches 2023/ N/O 62nd Street	Construction	$7,339,996	82	1.00	▬	0	▬	G
T8050334	ML Switches -2023 DES/EFA	Construction	$17,713,385	0	1.00	▬	0	▬	G
T8050340	ML Switches - 2023 / SEA	Construction	$10,337,265	0	1.00	▬	0	▬	G
MNR Track Projects									
M8030108	2020 Cyclical Track Program	Construction	$19,260,000	88	1.00	▬	0	▬	G
M8030302	West of Hudson Track Program - Pt Jervis Line	Construction	$6,654,999	40	.41	▬	0	▬	G

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Construction & Development									
LIRR									
Babylon Interlocking									
L70502LH	Babylon Interlocking Renewal	Construction	$32,639,998	1	1.00	▬	2	▲	G
L8050201	Babylon Interlocking Renewal & New Sidings	Construction	$91,860,713	1	.98	▼	2	▲	G
Long Island City Yard Resiliency									
EL0602ZL	Long Island City Yard Restoration - Phase 3B	Construction	$6,999,074	19	1.00	▬	0	▬	G
EL0603ZS	Long Island City Yard Resiliency - Wall and Pumping System	Construction	$26,562,327	19	1.01	▬	0	▬	G
EL0603ZU	Long Island City Yard - Construction	Construction	$2,381,000	19	1.00	▬	0	▬	G
L606016J	Long Island City Yard - Phase 3B Core	Construction	$15,200,000	19	1.03	▬	0	▬	G
LIRR ADA Package									
L8020411	ADA Locust Manor New Elevators	Construction	$22,787,433	0	1.00	▲	0	▬	G
L8020413	ADA Copiague Platform and New Elevator	Construction	$18,045,726	0	1.00	▲	0	▬	G
L8020414	ADA St Albans New Elevator	Construction	$25,459,146	0	1.00	▬	0	▬	G
L8020420	ADA Amityville Station	Construction	$15,469,291	0	1.00	▲	0	▬	G
L8020421	ADA Laurelton Station	Construction	$22,210,135	0	1.00	▬	0	▬	G
L8020422	ADA Massapequa Park Station	Construction	$15,900,038	0	1.00	▲	0	▬	G
L8020423	ADA Lindenhurst Station	Construction	$17,982,066	0	1.00	▲	0	▬	G
L8020424	Valley Stream Escalator / Elevator Replacement	Construction	$23,671,492	0	1.00	▼	0	▬	G
L8020425	Auburndale Elevator Replacement	Construction	$8,257,909	0	1.04	▲	0	▬	G
All Other LIRR									
EL0303ZH	Emergency Management Equipment Mitigation	Construction	$29,026,102	76	.96	▬	8	▲	R
EL0602ZD	West Side Storage Yard Restoration	Construction	$43,986,089	64	1.00	▬	0	▬	R
L60304TU	Jamaica Capacity Improvements - Phase One	Construction	$301,645,074	96	1.00	▬	0	▬	R
L70502LN	Babylon to Patchogue Signal Improvements	Construction	$45,610,421	16	.99	▬	0	▬	G

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Construction & Development									
LIRR									
All Other LIRR - cont'd									
L70701XB	Substation Components	Construction	$24,534,829	80	1.01	▬	2	▲	R
L70701XU	Substation Repl Pkg 2: Construction	Construction	$27,687,990	90	1.14	▬	0	▬	R
L70701XX	Hall & Babylon Signal Power Motor Generator Repl.	Construction	$21,432,744	30	1.09	▬	0	▬	G
L8020417	Tactile Strips - Various Locations	Construction	$12,800,000	37	2.28	▬	0	▬	G
L8020418	Mets-Willets EIC Relocation	Construction	$28,700,000	40	1.00	▬	0	▬	G
L8020419	Northport Station Improvements	Construction	$11,067,829	28	.72	▼	0	▬	G
L8020701	GCT Facility Needs	Construction	$18,000,000	1	1.00	▬	-18	▼	G
L8030101	Construction Equipment	Construction	$38,560,567	21	.96	▬	0	▬	G
L8030102	Various Right of Way Projects	Construction	$10,000,000	25	1.00	▬	0	▬	G
L8030105	Queens Interlocking	Construction	$109,124,542	30	.95	▼	0	▬	R
L8030403	JCI - Hall Interlocking Expansion	Construction	$168,714,498	6	1.14	▲	15	▲	G
L8040107	Cherry Valley Rd Bridge Replacement (Hempstead)	Construction	$32,436,148	75	1.08	▲	0	▬	G
L8050103	Fiber Optic Network	Construction	$8,000,000	30	1.00	▬	0	▬	G
L8050205	Signal Replacement and Interlocking Improvements	Construction	$41,000,000	17	1.01	▼	0	▬	G
L8050205	Signal Replacement and Interlocking Improvements	Construction	$20,000,000	66	1.00	▬	0	▬	G
L8050205	Infrastructure Projects - PTC Add-Ons	Construction	$13,165,851	70	1.04	▬	0	▬	G
L8050207	Positive Train Control (ESA)	Construction	$33,220,000	0	1.00	▬	0	▬	G
L8060105	Mid Suffolk Yard Phase 2	Construction	$30,000,000	0	1.00	▬	0	▬	G
L8060403	Fire Protection Improvements	Construction	$25,000,000	0	1.00	▬	0	▬	G
L8070102	Atlantic Avenue Tunnel Lighting	Construction	$10,000,000	5	1.00	▬	0	▬	G
L8070102	Yard Lighting & Amenities	Construction	$8,000,000	12	1.00	▬	0	▬	G

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Construction & Development									
LIRR									
All Other LIRR - cont'd									
L8070103	Station & Building Electrical Systems and Platform	Construction	$8,000,000	24	1.00	▬	0	▬	G
L8070103	Signal Power & Power Pole Line Replacement	Construction	$8,000,000	25	1.00	▬	0	▬	G
L8070104	3rd Rail - Protection Board & Aluminum Rail	Construction	$27,000,000	2	1.00	▬	0	▬	G
L8070104	3rd Rail - 2000 MCM Feeder Cable Upgrade	Construction	$13,000,000	6	1.00	▬	0	▬	G
L8070106	Substation Component Renewal	Construction	$37,805,000	10	3.10	▲	0	▬	G
L8070107	Jamaica Substation	Construction	$74,303,279	1	1.29	▬	2	▲	G
EL0402ZA	East River Tunnel Signal Sys & Infra Restoration	Design	$179,871,202	98	1.00	▬	0	▬	G
L60502LR	Centralized Train Control - UWB Train Positioning	Design	$17,000,000	0	1.00	▬	0	▬	G
L70204UO	East Yaphank Station	Design	$19,573,669	50	.97	▬	0	▬	R
L70304WU	JCI PH 2 -Signals - 3P Design	Design	$43,020,000	96	1.01	▬	0	▬	G
L80204DD	ADA Accessibility and Components 24 Stations DES	Design	$18,100,000	25	1.09	▲	0	▬	G
L8040103	Systemwide Bridge Assessment Study	Design	$44,282,676	0	.98	▼	0	▬	G
L8050204	Centralized Train Control	Design	$30,800,000	0	1.02	▬	0	▬	G
L8070101	Substation Replacements	Design	$114,159,228	22	.95	▲	0	▬	G
MNR									
86th and 110th St Substations									
M6050103	H&H Power (86th St / 110th St)	Construction	$18,792,697	100	1.00	▬	9	▲	R
M7050113	H&H Power (86th St / 110th St)	Construction	$14,536,700	99	1.18	▬	9	▲	R
Grand Central Terminal Trainshed									
M8020101	GCT Trainshed	Construction	$203,678,206	20	1.01	▬	0	▬	G
Harmon to Poughkeepsie Signal System - Phase 1									
M7040102	Harmon to Poughkeepsie SignalSystem - Phase 1	Construction	$150,052,520	84	1.48	▬	0	▬	R

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Construction & Development									
MNR									
Harmon to Poughkeepsie Signal System - Phase 1 - cont'd									
M8040114	Harmon to Poughkeepsie Signal System - Phase 1 - F/A & Proj Mgt	Construction	$38,263,877	84	1.00	▬	0	▬	G
Harlem and New Haven Line Priority Repair Bundle									
M7020204	Harlem Line Station Improvements	Construction	$20,538,233	47	.95	▬	2	▲	R
M7020217	Purdy's Elevator Improvements	Construction	$7,542,007	47	.91	▬	2	▲	R
All Other MNR									
EM050208	Power Infrastructure Restoration-Substations	Construction	$49,727,592	97	1.07	▬	10	▲	R
M7020101	GCT Trainshed - Sector 2 Design	Construction	$28,475,986	82	1.08	▬	0	▬	R
M7030303	F/A Undergrade Bridge Rehabilitation West of Hudson	Construction	$9,404,423	61	1.04	▬	0	▬	R
M7030304	Moodna/Woodbury Viaduct (incl timbers/walkways)	Construction	$15,441,816	5	.97	▬	0	▬	G
M7040112	Harlem Wayside Comm & Signal Improvements	Construction	$72,793,590	100	1.05	▼	0	▬	R
M7050101	Replace MA's in Signal Substations	Construction	$32,897,111	60	1.33	▲	15	▲	R
M7050105	Harlem and Hudson Power Improvements	Construction	$30,969,190	90	1.32	▬	0	▬	R
M7060101	Harmon Shop Replacement - Phase V	Construction	$428,893,101	92	.99	▬	0	▬	G
M7060103	Brewster YD Improvements - Design	Construction	$5,767,096	100	.76	▲	0	▬	G
M8020201	Upper Hudson and & Harlem Station Priority Repairs	Construction	$36,789,386	36	.98	▬	0	▬	G
M8020208	North White Plains Station Rehab	Construction	$11,498,636	87	.92	▬	0	▬	G
M8030104	Rock Slope Remediation - East of Hudson	Construction	$6,345,538	0	.42	▬	0	▬	G
M8030107	MoW Equipment	Construction	$29,500,001	0	1.00	▬	0	▬	G
M8030201	Park Avenue Viaduct Replacement	Construction	$491,194,467	4	.83	▬	-19	▼	G
M8030212	Replace South Street and Fulton Ave Bridges (MtV)	Construction	$46,939,275	2	.96	▬	0	▬	G
M8050110	Rebuild 2 NHL AC Substations	Construction	$63,500,081	0	.98	▬	0	▬	G
M8060101	Upgrade Automotive Fuel System	Construction	$12,293,814	0	1.01	▬	0	▬	G

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Construction & Development									
MNR									
All Other MNR - cont'd									
M7060104	West of Hudson Yard Improvements - Passing Sidings	Design	$6,415,924	32	.82	▬	0	▬	G
M8020102	Park Avenue Tunnel Improvements	Design	$11,846,049	47	.89	▼	0	▬	G
M8020103	GCT Fire Standpipe Replacement - Phase 2 Design	Design	$11,363,063	88	.22	▲	1	▲	R
M8020202	Harlem Line Station Renewals - Bot. Gardens, Wdlwn, and Williams Br.	Design	$5,506,332	0	.06	▬	1	▲	G
M8030105	Rebuild Marble Hill Retaining Wall - Phase 1	Design	$1,708,911	58	.11	▼	0	▬	G
M8030304	Moodna/Woodbury Viaduct Repairs	Design	$38,890,258	5	.97	▬	0	▬	G
B&T									
BW Bridge Structural Steel Rehab and Painting									
D801BW14	Miscellaneous Structural Rehabilitation	Construction	$27,243,720	25	.98	▲	0	▬	G
D807BWPT	BW Facility-Wide Painting Program	Construction	$8,955,507	88	.90	▬	0	▬	G
Henry Hudson Bridge Retaining Walls and Shared Use Path									
D801HH37	Upper Level North Abutment & Retaining Wall R	Design	$8,852,449	95	.99	▲	0	▬	G
RFK Bridge Sidewalk Connection and Fender Upgrades									
D702RK23	HRLS Sidewalk Connection at RFK Bridge	Construction	$21,977,632	49	.95	▬	0	▬	G
D801RK83	RFK Bridge Lift Span Fender Upgrades	Construction	$31,593,486	16	.96	▲	0	▬	G
TN Bridge Structural Steel Rehab and Painting									
D801TN52	Miscellaneous Structural Steel Rehabilitation at TN Bridge	Construction	$9,276,962	0	.90	▼	0	▬	G
D807TNPT	TN Facility-Wide Painting Program - Phase 1	Construction	$16,928,270	0	1.00	▬	0	▬	G
Structural Rehab. at Cross Bay and Marine Parkway Bridges									
D801CB30	Structural Rehabilitation of CBB	Construction	$29,693,584	4	.81	▬	0	▬	G
D801MP16	Miscellaneous Steel Repairs	Construction	$14,016,077	4	.97	▲	0	▬	G

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Construction & Development									
B&T									
Utility Redundancy and Resiliency Improvements at BW and VN Bridges									
D804BW96	Lighting, Power Redundancy & Resiliency Improvements	Construction	$65,514,364	0	.95	▲	0	▬	G
D804VN12	SCADA and Electrical Controls System Upgrade at VNB	Construction	$17,245,048	5	.96	▼	0	▬	G
ED010307	BWB Mitigation - Flood Wall & Other	Construction	$8,302,575	0	1.00	▼	0	▬	G
All Other B&T									
D701TN53	Approach Viaduct Seismic Retrofit/Structural Rehab	Construction	$193,249,635	68	.86	▬	0	▬	G
D801HH36	Dyckman Street Substations Upgrade	Construction	$42,935,396	17	.86	▬	0	▬	G
D801RK93	Reconstruct / Relocate Randall's Island Ramps (QR & RM)	Construction	$123,810,109	5	.93	▬	0	▬	G
D802VN86	Widening Belt Parkway, Phase 1B	Construction	$33,634,176	0	.83	▬	0	▬	G
D804MP09	Electrical Rehabilitation (Elevator)	Construction	$21,701,358	55	.86	▬	0	▬	G
D805QM36	Relocation of QMT Refueling Station and QSB Switchgear	Construction	$29,715,655	30	.95	▬	0	▬	G
D807RKPT	RK Facility-Wide Painting Program - Phase 1	Construction	$50,198,612	100	.99	▲	-2	▼	G
D807RKPT	RK Facility-Wide Painting Program - Phase 2	Construction	$21,820,530	46	.94	▬	0	▬	G
D801HC48	Rehabilitation of Tunnel Entrance/Exit - Manhattan	Design	$20,450,230	5	.99	▼	0	▬	G
Integrated Projects									
Third Track Expansion Project									
G7130103	D-B Construction Contract Base	Construction	$1,428,242,791	91	.99	▬	0	▬	G
G7130104	D-B Mobilization/Early Payments	Construction	$87,323,163	0	1.00	▬	0	▬	G
G7130105	D-B Construction Contract Option - Westbury North - MTA Funding	Construction	$21,756,982	91	1.00	▬	0	▬	G
G7130105	D-B Construction Contract Option - Westbury North - NYS Funding	Construction	$964,179	91	1.00	▬	0	▬	G
G7130106	Mineola Second St. - Parking Structure Option 1	Construction	$856,929	91	1.00	▬	0	▬	G
G7130107	Force Account Construction	Construction	$126,683,747	91	1.08	▬	0	▬	G
G7130108	Force Account Materials	Construction	$4,243,201	91	1.30	▬	0	▬	G

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Cross Agency									
Integrated Projects									
Third Track Expansion Project - cont'd									
G7130109	Force Account Support	Construction	$97,012,389	91	1.35	▬	0	▬	G
G7130110	Busing	Construction	$3,949,485	91	.66	▬	0	▬	G
G7130111	LIRR F/A Project Management	Construction	$16,093,850	91	1.00	▬	0	▬	G
G7130112	Force Account Design	Construction	$4,681,454	91	1.00	▬	0	▬	G
G7130114	3P Project Management Contract	Construction	$66,818,615	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$8,649,405	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$1,000,000	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$870,000	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$580,000	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$295,000	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$292,310	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$250,000	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$99,500	91	1.00	▬	0	▬	G
G7130115	MTACC Project Management	Construction	$95,500	91	1.00	▬	0	▬	G
G7130116	NYSDOT Project Management	Construction	$1,339,200	91	1.00	▬	0	▬	G
G7130117	Project Administration (Other Costs)	Construction	$3,000,000	91	1.00	▬	0	▬	G
G7130117	Project Administration (Other Costs)	Construction	$1,392,000	91	1.00	▬	0	▬	G
G7130117	Project Administration (Other Costs)	Construction	$1,008,000	91	1.00	▬	0	▬	G
G7130118	Owner Controlled Insurance Program (OCIP)	Construction	$13,808,290	0	.65	▼	-1468	▼	G
G7130119	Real Estate	Construction	$40,000,000	0	1.00	▬	-1468	▼	G
G7130120	Arts for Transit	Construction	$2,000,000	0	1.00	▬	-1468	▼	G

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Cross Agency									
Integrated Projects									
Third Track Expansion Project - cont'd									
G8130103	D-B Construction Contract	Construction	$284,138,924	91	1.00	▬	0	▬	G
G8130107	Force Account Construction	Construction	$15,000,000	91	1.00	▬	0	▬	G
G8130109	LIRR F/A - Flagging	Construction	$52,996,052	91	1.27	▬	0	▬	G
G8130114	3P Project Management Contract	Construction	$33,177,581	0	1.31	▲	0	▬	G
G8130117	Project Administration (Other Costs)	Construction	$1,000,000	0	1.00	▬	0	▬	G
PSNY 33rd St Corridor									
T7041350	Additional elevator 34 St BW7 PSNY-33rd	Construction	$16,541,862	100	1.00	▬	0	▬	G
T8040707	Replace 3 Hydraulic Elevators: 34th BW7 PSNY-33rd	Construction	$21,586,064	100	1.00	▬	0	▬	G
T8041219	Leak Remediation 34 St BW7 PSNY-33rd	Construction	$2,405,903	100	1.00	▬	0	▬	G
T8080613	Comm Room 318A 34 St BW7 PSNY-33rd	Construction	$1,479,645	100	1.00	▬	0	▬	G
L70206EG	PSNY-33rd Corridor (Phase 2 Construction)	Construction	$439,379,160	100	1.00	▬	0	▬	G
L8020604	PSNY-33rd Phase 2 LIRR 20-24 Plan Contribution	Construction	$18,806,909	100	1.00	▬	0	▬	G
Penn Station Access									
G7110107	Penn Station Access D/B Stations	Construction	$281,385,133	17	1.00	▬	0	▬	G
G7110112	Penn Station Access Demolition & 3P Utilities	Construction	$24,110,669	17	1.00	▬	0	▬	G
G8110103	Penn Station Access Construction Management	Construction	$140,450,623	0	1.00	▬	0	▬	G
G8110108	New Rochelle Yard Improvements	Construction	$146,938,000	17	1.00	▬	0	▬	G
G8110114	Penn Station Access Other Design and Indirects	Construction	$697,251,450	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Systems	Construction	$186,074,700	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Catenary	Construction	$150,931,200	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Pelham Bridge, Drainage, & Site Improvements	Construction	$141,344,200	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Trackwork	Construction	$98,949,900	13	1.00	▬	0	▬	G

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ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
Cross Agency									
Integrated Projects									
Penn Station Access - cont'd									
G8110114	Oak., Co-Op City, DC Substations & 3rd Rail	Construction	$90,024,900	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Bronx River, Bronxdale, & Eastchester Bridges	Construction	$69,371,400	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Design, CP215, & Annex Substations	Construction	$11,812,500	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Catenary (Design)	Construction	$10,395,000	13	1.00	▬	0	▬	G
G8110114	Penn Station Access Van Nest, Bowery Bay, NR Substations	Construction	$4,354,100	13	1.00	▬	0	▬	G
Second Ave Subway - Phase 2									
G7100101	SAS 2 PE, Design & Environmental	Design	$199,094,903	90	.97	▬	0	▬	G
G7100101	SAS 2 Consultant Environmental Services	Design	$2,342,188	90	1.00	▬	0	▬	G
G7100105	SAS Consult and in-house Construction Management	Design	$42,144,532	90	1.04	▬	0	▬	G
G7100107	SAS 2 Prelim Const/Utilities	Design	$270,000,000	90	1.00	▬	0	▬	G
G7100198	SAS 2 Real Estate	Design	$39,926,264	90	1.00	▬	0	▬	G
OMNY									
All Other OMNY									
T6040405	New Fare Payment System, Phase 2	Construction	$102,466,900	98	1.00	▬	0	▬	R
T7040401	New Fare Payment System, Phase 2	Construction	$470,823,580	42	1.00	▬	0	▬	R
T8040405	Additional Work: Fare Collection	Construction	$21,704,846	61	1.00	▬	0	▬	R
L8020406	Fare Collection Program	Construction	$35,000,000	0	1.00	▬	0	▬	G
M8020206	New Fare Payment Equipment	Construction	$33,434,305	0	1.00	▬	0	▬	G
Rolling Stock									
Rail Cars									
M42 Dual-Mode Locomotives									
M7010101	Locomotive Purchase	Construction	$291,750,993	23	1.13	▬	0	▬	R

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ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
Cross Agency									
Rolling Stock									
Rail Cars									
M42 Dual-Mode Locomotives - cont'd									
M8010102	Locomotive Replacement	Construction	$503,877,933	23	2.09	▲	0	▬	R
Purchase of R211 B-Division Cars - Kawasaki									
S7070101	Purchase 75 SIR Passenger Rail Cars	Construction	$257,484,699	10	1.00	▬	0	▬	R
T7010101	Purchase 440 B-Division Cars	Construction	$1,402,231,935	15	1.00	▬	0	▬	R
T7010102	Purchase 20 Open Gangway Prototype Cars	Construction	$79,905,106	15	1.00	▬	0	▬	R
T8010102	Purchase 640 B-Division Cars (R211 Option 1)	Construction	$1,929,528,508	5	1.00	▬	0	▬	G
NYCT and SIRTOA Flat Cars									
S8070111	SIR Purchase: 7 Flat Cars	Construction	$6,464,484	3	1.00	▬	0	▬	G
T8130206	NYCT Purchase: 45 Flat Cars (Fleet Growth)	Construction	$41,557,394	3	1.00	▬	0	▬	G
All Other Rolling Stock									
ET060317	Sandy Resiliency: Conversion of 2 Pump Trains	Construction	$28,889,741	17	.96	▬	0	▬	G
T7130208	Purchase 12 3-Ton Crane Cars	Construction	$32,794,585	40	1.00	▬	0	▬	G
T7130211	Purchase Locomotives	Construction	$256,092,473	32	1.00	▬	0	▬	G
T7130215	Conversion of 10 R77E Locomotives	Construction	$34,272,847	43	1.00	▬	0	▬	G
L70101ME	M-9 Procurement (110 Cars)	Construction	$368,800,000	74	.99	▬	0	▬	G
M6010102	M-8 New Haven Line Purchase	Construction	$217,116,915	85	.99	▬	0	▬	G
M7010102	M-8 Fleet Purchase	Construction	$117,375,862	85	.99	▬	0	▬	G
Buses									
Purchase of 470 Battery Electric Buses									
T8030214	Bus Purchase Design	Construction	$350,000	0	1.00	▬	0	▬	G
T8030203	Purchase 90 Articulated Electric Buses	Design	$156,243,600	5	1.15	▲	1	▲	G

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ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
Cross Agency									
Rolling Stock									
Buses									
Purchase of 291 Hybrid and 209 Diesel Buses - Nova									
T7030203	Purchase 165 Standard Hybrid Buses (Nova)	Construction	$146,059,062	100	1.00	▬	0	▬	R
T8030208	Purchase 126 Hybrid (Nova)	Construction	$107,949,896	87	1.00	▬	0	▬	R
T8030209	Purchase 209 Standard Diesel (Nova)	Construction	$141,211,796	87	1.00	▬	0	▬	R
Purchase of 60 Battery Electric Buses - New Flyer									
T7030216	Purchase 45 Standard Electric Buses	Construction	$60,412,073	4	1.09	▬	0	▬	R
T8030213	Purchase 15 Standard All-Electric Buses	Construction	$18,514,987	1	1.07	▬	0	▬	R
Bundle BL01-9620									
U8030218	289 Standard Diesel Buses	Construction	$149,359,420	0	1.00	▬	0	▬	G
U8030227	116 Standard Diesel Buses (New Flyer)	Construction	$101,308,089	0	1.00	▬	0	▬	G
Bundle BL01-9490									
T7120418	Automated Fuel Management System Upgrade	Construction	$1,971,228	16	1.00	▬	0	▬	G
T8120406	Automated Fuel Management System: 15 Depots	Construction	$6,745,963	1	1.00	▬	0	▬	G
U8030222	Automated Fuel Management System Upgrade	Construction	$3,404,848	0	1.00	▬	0	▬	G
Purchase of 135 Diesel Buses - Nova									
U7030219	Purchase 25 Standard Diesel Buses	Construction	$16,419,960	0	.97	▬	0	▬	R
U8030216	Purchase 25 Standard Diesel Buses	Construction	$17,682,210	0	1.00	▬	0	▬	R
U8030217	Purchase 85 Standard Diesel Buses	Construction	$61,917,132	0	1.00	▬	0	▬	R
All Other Rolling Stock									
T6030227	On-Board Audio Visual (OBAV) System	Construction	$9,323,503	1	1.00	▬	0	▬	G
T7030215	AVLM for Paratransit Vehicles	Construction	$26,828,317	65	1.00	▬	0	▬	R
T7030224	AEB Charging Infrastructure - Support of 5 Depots	Construction	$59,502,804	22	1.19	▬	0	▬	R

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ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
Cross Agency									
Rolling Stock									
Buses									
All Other Rolling Stock - cont'd									
T8030211	Purchase 139 Standard Diesel (New Flyer)	Construction	$98,709,722	100	1.02	▬	0	▬	R
T8030215	Purchase 5 Standard Battery Elec Buses Test/Eval	Construction	$10,581,362	2	1.00	▬	0	▬	G
U7030202	Purchase 257 Express Buses	Construction	$166,665,518	90	1.00	▬	-1	▼	R

Stations Business Unit Program Overview

The Stations Business Unit currently oversees 228 active projects, including 81 projects in construction, with a budget of $12.6B. In addition to ADA Package 3 bundle, C&D's first Public-Private Partnership and includes 21 new elevators at eight stations, notable projects under construction are Flushing Line State of Good Repair work at 5 station bundles, the replacement of 11 elevators at five stations, and the Livonia-Junius connector.

The IEC's Traffic Light Report currently tracks 187 ACEPs (tasks) in the Stations' BU, across multiple capital programs, and 104 fall within the TLR guidelines and are included in the published report. Of those, 13 tasks (13%) were flagged red, representing two projects. The reports below describe why these tasks were flagged, and what C&D is doing to remediate.

The Stations BU is also seeking to identify and remediate issues at the program level by proactively engaging project control measures to anticipate challenges as the business unit expands at an unprecedented pace.

Stations BU Response to the IEC Traffic Light Report

Individual project descriptions

T7040703: Replacement of 8 Traction Elevators - Various Locations		
Project Budget at award: $61.8M	**Current Budget: $56.1M**	**EAC: $56.1M**
Substantial Completion at Award: October 2022	**Current Substantial Completion: April 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 96%**

This project includes the replacement of 8 existing traction elevators which are approaching the end of useful life. The stations include two elevators at Court Street Station on the Broadway Line, three elevators at Clark Street Station on the Clark Street Line, one elevator at Lexington Ave-63rd Street station, and two elevators at Roosevelt Island station on 63rd St Line. The major scope of work includes the replacement of elevator cabs and equipment within the elevators cabs, shaft ways, pits, and machinery rooms; replacement of ropes and traveling cables; installation of solid state controls; installation of fault finders; guide rails brackets; and replacement of the existing DC hoist motors and controllers with the new AC gearless drives with variable frequency drive control system and the new controllers. All new elevators will be installed in accordance with the latest codes and design standards.

During the first quarter 2023, the Substantial Completion (SC) date was extended by four months, from Jan. 2023 to April 2023, due to the need for resolution of elevator communication issues and deficiencies identified during the elevator acceptance testing at the Court Street station's elevators.

The contractor has been working steadily to correct the elevator issues found during testing. The issues have been resolved and the 24hr testing of elevators was scheduled. The contractor continues to work on finalizing the remaining work, with a subsequently revised SC date of June 2023.

Bundled Contract - ADA Package A		
Project Budget at award: $324.1M	**Current Budget: $324.1M**	**EAC: $324M**
Substantial Completion at Award: July 2023	**Current Substantial Completion: December 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 84%**

This bundled contract includes the following ACEPs:

- S8070101: Station Components at New Dorp – Staten Island Railroad
- S8070108: ADA: New Dorp – Staten Island Railroad
- S8070110: Station Components at New Dorp – Staten Island Railroad
- T8041215: Station Components at Metropolitan Ave – Crosstown Line
- T8041231: Station Components at Metropolitan Ave – Crosstown Line
- T8041303: ADA: Dyckman Street (Northbound) – Broadway/7th Ave Line
- T8041317: ADA: Grand Street – Canarsie Line
- T8041319: ADA: 7th Avenue – Culver Line
- T8041327: ADA: Lorimer Street – Canarsie Line
- T8041328: ADA: Metropolitan Ave – Crosstown Line
- T8041332: ADA: East 149th Street – Pelham Line
- T8041337: ADA: Beach 67th St – Far Rockaway Line

It will provide or upgrade all accessibility elements to bring these stations into full compliance with the Americans with Disabilities Act. State-of- good-repair work is also included at select locations. These improvements will allow wheelchair users and other NYCT customers to utilize the transit network where they were unable to do so previously and move NYCT towards its goal of fulfilling a “two accessible stations away” coverage goal system wide.

During the first quarter 2023, the Substantial Completion date was extended by five months, from July 2023 to December 2023, due to following reasons:

- Easement agreement delayed at Beach 67th St. Station between Arverne by the Sea and MTA Real Estate, which was signed off on April 11, 2023.
- The street elevator shaft work, at Metropolitan Ave. Station, was delayed due to ground water infiltration.

The PMC’s scheduler has completed the contractor delay analysis and provided minimum time required to complete the remaining work of this contract. The Project team reviewed the delayed schedule and agreed that the five month time extension be granted.

Infrastructure Business Unit Program Overview

The C&D Infrastructure Business Unit currently oversees 180 active projects comprised of 294 sub-projects, with a budget of $10B, including 79 projects comprised of 151 sub-projects in construction ($6B).

The IEC's Traffic Light Report currently tracks 221 ACEPs (tasks) in the Infrastructure BU, across multiple capital programs, and 125 fall within the TLR guidelines and are included in the published report. Of those, 26 tasks (21%) were flagged red, representing 19 projects. The reports below describe why these tasks were flagged, and what C&D is doing to remediate.

- The C&D Infrastructure Business Unit is responsible for all infrastructure construction projects on the NYC Transit and SIR – Staten Island Railway network. This includes line structures (e.g., tunnels, bridges), line equipment (e.g., lighting, pumps, ventilation plants) power substations and cabling, shops and facilities that are essential to NYCT's and SIR's operation.
- Notable projects under construction include Sandy Mitigation: Steinway Tube; Overcoating Jamaica Line; Tiffany Central Warehouse and Substation Renewals

Infrastructure BU Response to the IEC Traffic Light Report

Individual project descriptions

Bundled Contract - Line Structure Overcoat Painting - West End Line		
Project Budget at Design Start: $9M	**Current Budget: $9M**	**EAC: $9M**
Design Completion at Start: January 2023	**Current Design Completion: April 2023**	
Trigger: Cumulative Schedule	**Phase: Design**	**Phase Complete: 100%**

This bundled contract includes the following ACEPs:

- T7070322: Overcoat: 9th Av Portal to 79th Street West End Line
- T7070348: Overcoat: 79th St - 24th Ave - West End Line
- T7070349: Overcoat: 24th Ave - Stillwell Terminal - West End Line
- T8070313: Overcoat: 9th Av Portal to 79th Street - West End Line
- T8070313: Overcoat: 79th St - 24th Ave - West End Line
- T8070313: Overcoat: 24th Ave - Stillwell Terminal - West End Line
- T8070314: Elevated Structure Repairs 9th Ave - West End Line

This is a bundled project which consists of the projects listed above. These projects will provide overcoat painting and select steel repairs on the West End Line for approximately five route miles.

Over the last two quarters, this project bundle design completion delay of three months, from January 2023 to April 2023, due to field condition, which needed to be addressed with Con Edison. There are several Con Edison power cables attached to NYCT elevated structure, where contractual work will be performed. Several meetings were held, with Con Edison officials, to discuss and develop a strategy to relocate the power cables. Subsequently, the matter was resolved, and design drawings were developed and forwarded to Con Edison. Subsequent to the reporting period, the design was completed, and the project award is anticipated in August 2023.

Bundled Contract - SIRTOA Station Components and Bridge Rehabilitation

Project Budget at Design Start: $88M	**Current Budget: $88M**	**EAC: $88M**
Design Completion at Start: April 2023	**Current Design Completion: August 2023**	
Trigger: Schedule	**Phase: Design**	**Phase Complete: 30%**

This bundled contract includes the following ACEPs:

- S8070101: 2020-2024 Staten Island Railroad (SIR): Station Components Program
- S8070103: Rehabilitation of Garretson Ave Bridge
- S8070103: Overcoat Painting of Six SIR Bridges
- S8070103: Rehabilitation of Stapleton Viaduct

This bundled contract will perform station component repairs at seven Staten Island Railroad stations, overcoat painting and structural repairs on six bridges, rehabilitate both the Garretson Avenue Bridge and Stapleton Viaduct.

During the first quarter 2023, the design completion date was extended four months, from April 2023 to August 2023, due to a change in the Designer of Record. This was originally a Design-Build (DB) project assigned to C&D In-House technical staff to develop the bridging contract documents. C&D management strategically elected to change the project delivery method from DB to Design-Bid-Build (2Q 2022) because the scope of work does not lend itself to technological innovations.

Bundled Contract – Bus Radio System		
Project Budget at award: $304.1M	**Current Budget: $303.9M**	**EAC: $318.5M**
Substantial Completion at Award: January 2021	**Current Substantial Completion: August 2024**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 69%**

This bundled contract includes the following ACEPs:

- T6120403 Replace Bus Radio System (Construction phase)
- U6030226 Bus Radio System (Construction phase)
- U7030211 Bus Radio System - MTA Bus Share (Construction phase)
- T6120444 Repair of East New York Tower
- U7030224 Repair of East New York Tower (MTAB)

These projects will replace the existing radio system for NYC Transit and MTA Bus Company with a digital state of the art Bus Radio System (BRS). The BRS project includes design and construction of base stations, retrofit of buses with the new equipment, and provision and setup of equipment at the new Bus Command Center (BCC) in East New York.

During the first quarter 2023, the substantial completion date was extended eight months, from December 2023 to August 2024, due to slow contractor progress, technological issues, poor contractor quality and 3rd party leased site delays. At this time, the MTA is transmitting with the newer technology, at 33 of 35 base radio sites, with a retrofitted new antenna at Todt Hill and Kearny, NJ. Two new sites in Staten Island are pending FTA approval to proceed. One thousand of the six thousand buses have been retrofitted as of this report.

Mitigation includes the following: The contractor has implemented a Bus Installer training program and is currently producing approximately 12 buses per day. The Contractor plans to ramp up to 20 buses per day in the next few months.

Bundled Contract – New Substations at New Dorp and Clifton Stations		
Project Budget at award: $55.4M	**Current Budget: $55M**	**EAC: $55.4M**
Substantial Completion at Award: July 2020	**Current Substantial Completion: September 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 98%**

This bundled contract includes the following ACEPs:

- S7070106: New Power Substation: New Dorp
- S7070107: New Power Substation: Clifton

This project will construct two new substations on Staten Island, in the vicinity of the New Dorp and Clifton stations. These additional substations will augment the electrical power requirements in these areas, thus improving the reliability of train service along the right-of-way.

During the first quarter 2023, the substantial completion date was delayed six months, from March 2023 to September 2023 due to communication issues and a fire at the New Dorp facility. The communications network, connecting New Dorp Substation to the St. George SCADA head end, is currently overloaded and the fire damaged High Tension (HT) switchgear needs to be repaired. Infrastructure is attempting to mitigate the communications network delay by working closely with MTA IT, who is administering an in-house project to upgrade the overloaded network. Infrastructure is attempting to mitigate the HT fire delay by working closely with Con Ed and Powell, the HT switchgear manufacturer.

ET160310: Sandy Mitigation at Consolidated Revenue Facility		
Project Budget at award: $11.4M	**Current Budget: $11.6M**	**EAC: $11.6M**
Substantial Completion at Award: July 2023	**Current Substantial Completion: October 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 67%**

This project will provide an affective flood mitigation scheme to protect the Consolidated Revenue Facility located in Maspeth Queens. The project consists of a perimeter flood wall to protect against storm surges, as well as improvements of the drainage system to mitigate effects of heavy rain fall. Deployable floods walls will be used at the facility entrances to maintain access and will be deployed when a storm is forecasted to arrive.

During the first quarter 2023, the substantial completion date was extended nine months, from January 2023 to October 2023, due to the discovery of existing Con Edison concrete vaults and high voltage electrical conduits. The existence of these hinders the installation of the stop log foundation system and a revised foundation had to be designed and installed in a different location. Since the revised location is in the NYCDOT sidewalk, master land use and construction permits were required from DOT, which have been obtained and the work is ongoing.

T6120323: Flatbush and Ulmer Park Window Replacement		
Project Budget at award: $9.3M	**Current Budget: $9.3M**	**EAC: $9.3M**
Substantial Completion at Award: January 2023	**Current Substantial Completion: June 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 100%**

The project involves architectural, civil, mechanical, and electrical work for window replacement and associated brick repairs at Flatbush Bus Depot & Ulmer Park Bus Depot.

During the first quarter 2023, the substantial completion date was extended five months, from January 2023 to June 2023, due to a delay in award of another contract. This project could not install seven windows due to

interference from a storage shed and adjacent fence on the sidewalk. Another project's scope included the demo of the shed and fence, but the award was delayed. Subsequent to the reporting period, SC was declared May 2023.

T7060506: Rehab Forsyth St Vent Plant		
Project Budget at award: $91.6M	**Current Budget: $90.6M**	**EAC: $93.6M**
Substantial Completion at Award: October 2022	**Current Substantial Completion: March 2024**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 85%**

This project is for the construction of a new ventilation facility at Forsyth & Delancey Streets in Manhattan.

During the first quarter 2023, the substantial completion date was delayed four months, from November 2023 to March 2024, due to unforeseen site conditions. During excavation for caissons the project encountered existing soldier piles, about 30 feet below the street, which obstructed the installation of a wall panel for the Support of Excavation (SOE). In lieu of installing the SOE panel, the contractor had to engineer and install eight jet grout columns and two micro-piles.

T7120306: Generator at Yukon Depot - NYPA		
Project Budget at award: $11.8M	**Current Budget: $11.8M**	**EAC: $11.8M**
Substantial Completion at Award: February 2022	**Current Substantial Completion: May 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 95%**

At Yukon Bus Depot, the existing generator is beyond its useful life. There is no emergency generator to continue depot operations during a power outage. This project provided all labor, materials, tools, and equipment necessary for the complete installation of a standby emergency diesel generator.

During the first quarter 2023, the substantial completion date was delayed four months, from January 2023 to May 2023, due to the need to reschedule the utility power shutdown. The shutdown is for testing of the new switchgear equipment. It was determined that a full power shutdown during the winter months would leave the depot without heating and create major safety concerns. As of May 2023, ConEd completed their testing and inspections.

Subsequent to the reporting period, the SC date was pushed out another month, to July, for the addition of heat detection system required by FDNY and OSS to replace the sprinklers in the new generator room. Once completed FDNY needs to inspect the heat detectors and fuel system.

T7120307: Roof, Office, HVAC at Fresh Pond Depot - NYPA		
Project Budget at award: $14.9M	**Current Budget: $14.9M**	**EAC: $14.9M**
Substantial Completion at Award: June 2022	**Current Substantial Completion: April 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 95%**

This project will provide all labor, materials, tools, and equipment necessary for complete major work elements of this project. The work shall include but not limited to the following:

- Replace existing HVAC system including Heat Recovery Units (HRU's), HVAC units, exhaust fans, etc
- Provide all necessary structural design, specification, procurement, and installation required to support new HVAC system equipment.
- Provide a new Building Management System (BMS) including Demand Control Ventilation (DCV)

- Provide power, new controls for the HRU's and other HVAC equipment, as required.

During the first quarter 2023, the substantial completion date was delayed three months, from January 2023 to April 2023, due to problems with various BMS control systems. The BMS issues were resolved in March 2023. However, the integration of the new Fire Alarm (FA) Devices could not be completed due to communication problems between the new equipment and existing system. A change order was processed so an integrator could be hired to resolve the communication issue. Subsequent to the reporting period, substantial completion was pushed out June 2023.

T8060506: Rehabilitation of Fan Plant Damper System – 7 Locations		
Project Budget at award: $33.8M	**Current Budget: $33.8M**	**EAC: $33.8M**
Substantial Completion at Award: December 2023	**Current Substantial Completion: May 2024**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 82%**

The purpose of this project is to rehabilitate the damper systems at 7 locations located on the Brighton (Manhattan Bridge and Delkalb Ave) and Queens Blvd lines (36th street and Union Tpke).

During the first quarter 2023, the substantial completion date was extended five months, from December 2023 to May 2024, due to no track access. C&D Infrastructure's requests for track diversions, on the Brighton Line in Brooklyn and the Queens Boulevard Line in Queens, were repeatedly rejected by Operations Planning due to the priority given to other projects. Track access to install conduit and cable along the track to control and power the dampers in the air vents is required. C&D Infrastructure has met with Operations Planning in the attempt to schedule the required track diversions over successive nights.

T8100405: Yard Fencing at Fresh Pond Yard		
Project Budget at Design Start: $10.7M	**Current Budget: $10.7M**	**EAC: $10.7M**
Design Completion at Start: October 2021	**Current Design Completion: May 2023**	
Trigger: Schedule	**Phase: Design**	**Phase Complete: 98%**

This project will install security fencing along the perimeter of the Yard. The scope of work includes demolition and removal of existing aging fencing and replacing them with more secure iron ornamental fencing at Fresh Pond Yard. New fencing will vary in height from 8' to 16' with a "bear claw" extension on top making it less prone to being breached or scaled.

During the first quarter 2023, the design completion date was delayed three months, from February 2023 to May 2023, due to the decision to bundle this project with the Rehabilitation of Fresh Pond Yard Lighting project to realize efficiencies and avoid construction conflicts. Bundling the two projects required the updating of specifications and other front-end documents. Subsequent to the reporting period, design achieved completion and the bundle award is anticipated November 2023.

T8160706: EMD Facility at Hoyt-Schermerhorn Station - Fulton Line		
Project Budget at Award: $15.6M	**Current Budget: $14M**	**EAC: $14M**
Substantial Completion at Award: December 2021	**Current Substantial Completion: July 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 63%**

Electronic Maintenance Department (EMD) facility is located on the Mezzanine level of the Hoyt-Schermerhorn

Station on the Fulton (IND) Line in Brooklyn. This project will provide EMD with a fully renovated space, including new communications and HVAC systems, to accommodate its increasing workforce. The proposed facility will be designed to include offices, male and female restrooms, roll call room, conference room, kitchen/break room, storage room, and a training/lab room where electronic equipment will be tested. The project was awarded to Infrastructure Capital Construction (ICC).

During the first quarter 2023, the substantial completion date was extended four months, from March 2023 to July 2023, due to the following:

- A Fire hydrant pressure test requested, by the MTA, to validate the design to the sprinkler system
- ICC is having difficulties procuring equipment and material delivery due to supply chain issues

Systems Business Unit Program Overview

The C&D Systems Business Unit currently oversees 84 active projects with a budget of $2.38B, including 32 projects in construction ($559M. In addition, the $1B Cellular/WiFi Expansion project is not included in the PSR as it is a public private partnership license agreement which is managed by the Systems Business Unit; the $300M Ad concession is also excluded from the PSR.

- The Systems Business Unit is responsible for the delivery of all C&D Systems projects and supporting other Business Units in implementing Systems best practices. Some of the major customer facing programs include Help Points in all stations, Public Address/Customer Information Systems and Countdown Clocks, OutFront Digital Information & Advertising Screens, and Wi-Fi & Cellular Services in all subway stations, as well as the networking infrastructure needed to support them.

- Some of the major projects under construction include installing a new Enhanced Emergency Booth Communication System, upgrading the power Supervisory Control and Data Acquisition (SCADA) system for the BMT Division and building an Emergency Power Control Center, adding resiliency to power, cooling and systems at the Operations Control Center, installing Closed Circuit TV (CCTV) cameras in stations, and upgrading the B Division Public Address System.

The Systems Business Unit continues to identify and address issues at the program level. Due to attrition and the slow pace of hiring, the Systems Business Unit continues to evaluate its current organizational structure along with utilization of consultant support and streamlining workflows.

The IEC's Traffic Light Report currently tracks 25 tasks in the Systems' BU, across multiple capital programs, and 12 fall within the TLR guidelines and are included in the published report. Of those, one task (8%) was flagged red, representing one projects. The report below describe why these tasks were flagged, and what C&D is doing to remediate.

Individual project descriptions

T8080641: Upgrade of Asynchronous Fiber Optic Network - Ring F		
Project Budget at award: $27M	**Current Budget: $27.5M**	**EAC: $26.6M**
Substantial Completion at Award: March 2023	**Current Substantial Completion: December 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 67%**

This Project will furnish and install the equipment to upgrade the Asynchronous Fiber Optic Network (ASYN) to Synchronous Optical Network (SONET) technology on the existing F-Ring.

During the first quarter 2023, the Substantial Completion was delayed nine months, from March 2023 to December 2023, due to supply chain issues with both SONET related and Benning Power equipment. This prevented the contractor from performing the Factory Acceptance Testing. After completion of the Site Acceptance Testing, Electronic Maintenance Division personnel will need to provide support for the migration of circuits from ASYN to SONET.

Signals / Train Controls Business Unit Program Overview

The Signal's Business Unit currently oversees 29 active projects, including 13 projects in construction, with a budget of $3.2B. Notable projects under construction include CBTC QBL West, East, and Culver Line.

The IEC's Traffic Light Report currently tracks 44 ACEPS (tasks) in the Signal's BU, across multiple capital programs, and 28 fall within the TLR guidelines and are included in the published report. Of those, one task (4%) was flagged red, representing one project. The report below describes why this task was flagged, and what C&D is doing to remediate.

Signals / Train Controls BU Response to the IEC Traffic Light Report

Individual project description

T7080342: Furnish and Install CBTC Equipment for R179 cars - 73 units		
Project Budget at award: $36.6M	**Current Budget: $37M**	**EAC: $37M**
Substantial Completion at Award: March 2023	**Current Substantial Completion: December 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 41%**

This project will furnish and install Communications-Based Train Control (CBTC) Equipment for 73 of the R179 units (cars) in advance of the modernization of the 8th Avenue Line. Siemens is providing the equipment and installation support while in-house forces are performing the equipment installation.

During the first quarter 2023, the substantial completion was delayed nine months, from March 2023 to December 2023, due to:

- Procurement and manufacturing of tachometer
- Manufacturing activities for cables/connectors, Conductor Remote Display and On-Board Communication Units
- Subsequent delay in the delivery and installation

Siemens equipment has been installed on approximately 60 of the 73 units. During the testing of installed equipment, some communication issues, on an existing network, became apparent. The project team is actively researching the cause and possible mitigation of this problem. While the expectation is that all units will need to be brought back to the facility so the network issue can be corrected, currently installation expenditures are below forecast, and a budget impact is not expected.

NYCT In-house Department Response to the IEC Traffic Light Report

Individual project descriptions

T8070330: LSCRP: Repair of Priority Column Bases - Jerome and White Plains Road Lines		
Project Budget at award: $7.5M	**Current Budget: $7.5M**	**EAC: $7.5M**
Substantial Completion at Award: February 2023	**Current Substantial Completion: July 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 93%**

This project will repair "A" defects on 54 elevated track column bases in the Bronx, on the Jerome Ave and White Plains Road Lines. The work is being performed by the In-house Maintenance of Way Infrastructure Capital Construction's (ICC), as part of the MTA's Line Structure Component Repair Program (LSCRP). The LSCRP program is essential to the continued health of the MTA's line infrastructure and customer safety.

During the first quarter 2023, the Substantial Completion date was delayed five months, from February 2023 to July 2023, due to active signal system cables which needed to be removed and temporarily relocated. 13 of the 54 columns, in this project's scope, were affected by this development. These locations required the involvement of MOW Engineering to review the scope removal and to propose alternative work locations to continue defect removal along these lines.

Long Island Rail Road Business Unit Program Overview

The LIRR Business Unit currently oversees 103 active projects with a budget of $3.3B, including 53 projects in construction. Notable projects under construction include Hall Interlocking, ADA Package 1, and Queens Interlocking. Non-C&D LIRR projects tracked by the LIRR Business Unit include 60 active projects with a budget of $1.6B (35 in construction, $538M).

The IEC's Traffic Light Report currently tracks 131 tasks in the LIRR program, across multiple capital programs and 35 fall within the TLR guidelines and are included in the published report. Of those, one task (2%) was flagged red, representing one project. The reports below describe why these tasks were flagged, and what C&D is doing to remediate.

Long Island Rail Road BU Response to the IEC Traffic Light Report

Individual project descriptions

EL0303ZH: Emergency Management Equipment Mitigation		
Project Budget at award: $20.0M	**Current Budget: $30M**	**EAC: $29M**
Substantial Completion at Award: December 2018	**Current Substantial Completion: December 2023**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 80%**

As part of LIRR's efforts to prepare for future extreme weather events, Emergency Management Equipment will be purchased for systemwide utilization but with emphasis in flood prone areas, including major yards and towers, which play a vital role in train operation. Myers Controlled Power has been awarded a contract to design, procure, deliver and test five mobile substations trailers to LIRR.

During the first quarter 2023, the Substantial Completion was delayed eight months, from April 2023 to December 2023, due to shortages of copper material to complete the build out of the second transformer and trailer equipment. To date four out of five trailers have been delivered to the West Hempstead yard and field testing is finishing up. Myers has had challenges with fabrication and testing of the last trailer which is scheduled to be delivered and tested by fourth quarter 2023.

Metro-North Railroad Program Overview

MNR currently oversees 77 active projects, including 20 projects in construction, with a budget of $3B. Notable projects under construction include the Harmon Shop Improvements, Grand Central Terminal Trainshed, and the Park Avenue Viaduct Replacement projects.

The IEC's Traffic Light Report currently tracks 61 ACEPs (tasks) in the Metro-North's BU, across multiple capital programs, and 29 fall within the TLR guidelines and are included in the published report. Of those, 2 tasks (7%) were flagged red, representing two projects. The reports below describe why these tasks were flagged, and what C&D is doing to remediate.

Metro-North Railroad Response to the IEC Traffic Light Report

Individual project descriptions

EM050208: Power Infrastructure Restoration – Substations		
Project Budget at award: $39.5M	**Current Budget: $46.2M**	**EAC: $49.7M**
Substantial Completion at Award: February 2017	**Current Substantial Completion: July 2024**	
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 97%**

This project is replacing three Hudson Line substations damaged by Superstorm Sandy. While the three substations, located at Tarrytown, Riverdale, and Croton-Harmon, were repaired after Sandy and returned to service, their useful lives were reduced and required full replacement in order to provide the functionality and reliability needed to continue running full Hudson Line service. The substations at Tarrytown and Riverdale are fully operational.

During the First Quarter of 2023, the forecasted Substantial Completion date was pushed out ten months, from September 2023 to July 2024. This schedule delay was caused by the unsuccessful commissioning of the new substation at Croton Harmon in August 2022 and the need to replace the damaged traction power substation transformers, which failed during the commissioning. The delay is primarily attributed to the long lead time for transformer fabrication, supply chain delays, and testing issues. The additional delay is attributed to the delivery schedule of the transformers based on the "Buy America" requirement which does not to allow for shipping through a "non-US flag bearing ship".

The project team is coordinating with the transformer manufacturer to expedite the submittal and approval process for the transformer fabrication and delivery. The cost of the transformer replacement will be covered by the Contractor's insurance under warranty.

M7050101: Replace Motor-Alternator sets (MA's) in Signal Substations		
Project Budget at award: $21.2M	**Current Budget: $24.6M**	**EAC: $32.9M**
Substantial Completion at Award: July 2021	**Current Substantial Completion: January 2025**	
Trigger: Schedule and Cost	**Phase: Construction**	**Phase Complete: 60%**

This project provides for the replacement of two MA sets along with related equipment located in Mott Haven Yard's Substation. MA sets provide continuous 100 Hz power to the signal infrastructure. A backup MA set along with related equipment in portable enclosure will also be purchased under this project to provide backup 100 Hz

power during construction. This portable unit will also be used as a backup for other MA sets scheduled for replacement in subsequent Capital Programs.

During the first quarter of 2023, the project encountered a problem which created a budget shortfall of $8.3M and delayed the substantial completion date fifteen months, from October 2023 to January 2025 due to the following:

On December 23, 2022, Con-Ed power tripped which caused the Substation and Mobile Substation to trip due to a programmable logic controller failure (PLC), requiring it to be brought back to the manufacturer for investigation. Additionally, a faulty current transformer (CT) and ongoing SCADA communication issues have delayed the completion of the testing and commissioning of the mobile set. This delay is due to the long lead time required for the procurement of a replacement CT and the longer-than-expected time to investigate and resolve the PLC failure and SCADA communication issues. The decommissioning and construction of the Substation work cannot commence until the backup mobile substation is online to feed signal power to the Railroad.

The project's Estimate at Completion has increased due to the extension of the contract duration for contractors and third-party consultants and associated soft costs. Additional funding has been requested and will be allocated to the project.

NYCT Department of Subways Program Overview

NYCT Department of Subways conducts a range of in-house capital work, including tracks and switches, as well as employee facilities. The IEC's Traffic Light Report flagged seven Track project tasks (ACEP) in the NYCT DOS program.

NYCT often schedules track work to take advantage of General Orders already obtained for other projects, a practice known as piggy-backing. This saves resources for the agency and reduces service disruptions for our customers. Unfortunately, this dependence on other projects' schedules makes the track program more vulnerable to schedule changes.

It should be noted that when there is no available track access for some projects, the in-house track workforces will schedule work at other locations where track access is available. The in-house track workforce has this flexibility to be opportunistic by shifting their resources to other locations that are track accessible assuming they have the material and resources on hand to do the work. Unlike the third-party contractors, schedule slippages do not result in cost impacts for the in-house program.

NYCT In-house Department of Subways Response to the IEC Traffic Light Report

Individual project descriptions

T8050210: 2020 Mainline Track Replacement – Brighton Line		
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 97%**
Project Budget at award: $19.2M	**Current Budget: $19.2M**	**EAC: $19.2M**
Substantial Completion at Award: November 2020	**Current Substantial Completion: April 2023**	

This project will reconstruct segments of mainline tracks, along the Brighton Line, that have reached the end of their useful life. Locations were determined based on the latest condition survey. In addition to the track scope, the signals and contact rails will also be replaced as required.

During the first quarter 2023, the Substantial Completion date was extended three months, from January 2023 to April 2023, due to the availability of Resilient Fastener plates for the track curve on this line. Subsequent to the reporting period, the plates were delivered, installed, and substantial completion has been achieved.

T8050211: 2020 Mainline Track Replacement – Jamaica Line		
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 89%**
Project Budget at award: $28.1M	**Current Budget: $28.1M**	**EAC: $28.1M**
Substantial Completion at Award: December 2021	**Current Substantial Completion: November 2023**	

This project will reconstruct segments of mainline tracks, along the Jamaica Line, which have reached the end of their useful life. Locations were determined based on the latest condition survey. In addition to the track scope, the signals and contact rails will also be replaced as required.

During the first quarter 2023, the Substantial Completion date was extended eight months, from March 2023 to November 2023, due to bus operators not being available. MTA Capital program projects, on the Jamaica Line, were given priority track access due to these constraints. This project was coordinated with MTA capital work on

the Jamaica line due to constraints with bus operators. The work will be rescheduled once outages resume on the Jamaica Line.

T8050230: 2021 Mainline Track Replacement – Concourse Line		
Trigger: Cost	**Phase: Construction**	**Phase Complete: 100%**
Project Budget at award: $15.6M	**Current Budget: $15.6M**	**EAC: $21.7M**
Substantial Completion at Award: September 2022	**Current Substantial Completion: February 2023**	

This project will reconstruct segments of mainline tracks, along the Concourse Line, that have reached the end of their useful life. Locations were determined based on the latest condition survey. In addition to the track scope, the signals and contact rails will also be replaced as required.

During the first quarter 2023, had a budgetary shortfall of $6.1M due to a change in the scope of work. The original replacement scope was Type II SCRP, but it was changed to Type II Ekki Hilti, because of worse deterioration than forecast, which resulted in a higher labor cost.

T8050232: 2021 Mainline Track Replacement – Jamaica Line		
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 60%**
Project Budget at award: $27M	**Current Budget: $27M**	**EAC: $27M**
Substantial Completion at Award: August 2022	**Current Substantial Completion: November 2023**	

This project will reconstruct segments of mainline tracks, along the Jamaica Line, that have reached the end of their useful life. Locations were determined based on the latest condition survey. In addition to the track scope, the signals and contact rails will also be replaced as required.

During the first quarter 2023, the Substantial Completion date was extended five months, from June 2023 to November 2023, due to limited track access. Since there was no availability for track access in this area the schedule has slipped, and the work will be rescheduled once track access becomes available.

T8050234: 2021 Mainline Track Replacement – Jerome Line		
Trigger: Cost and Schedule	**Phase: Construction**	**Phase Complete: 91%**
Project Budget at award: $8.6M	**Current Budget: $8.6M**	**EAC: $10.5M**
Substantial Completion at Award: August 2022	**Current Substantial Completion: February 2024**	

This project will reconstruct segments of mainline tracks, along the Jerome Line, that have reached the end of their useful life. Locations were determined based on the latest condition survey. In addition to the track scope, the signals and contact rails will also be replaced as required.

During the first quarter 2023, the Substantial Completion date was extended nine months, from May 2023 to February 2024 and has a budgetary shortfall of $1.9M, due to limited track access, additional General Orders (GOs) required, and added scope. Track access was not available in this area, because of conflicts with the Concourse Line structures project. The work will be rescheduled once track access becomes available. Additionally, the expenditures for this project overran the budget due to a need for increased GOs because of the guarded curve. Subsequent to the reporting period, the budgetary need has increased an additional $2.8M.

T8050248: 2022 Mainline Track Replacement – 8th Avenue Line		
Trigger: Cost	**Phase: Construction**	**Phase Complete: 98%**
Project Budget at award: $26.3M	**Current Budget: $26.3M**	**EAC: $29.7M**
Substantial Completion at Award: January 2023	**Current Substantial Completion: February 2023**	

This project will reconstruct segments of mainline tracks, along the 8th Avenue Line, that have reached the end of their useful life. Locations were determined based on the latest condition survey. In addition to the track scope, the signals and contact rails will also be replaced as required.

During the first quarter 2023, the project encountered a budgetary shortfall of $3.4M, due to unforeseen site conditions. Once the work was started, adjacent locations were found to have deteriorated further since the last survey. The scope was increased, by 170 track feet, resulting in the need for additional GOs, increasing labor costs.

T8050328: 2022 Mainline Track Switches – Brighton Line		
Trigger: Schedule	**Phase: Construction**	**Phase Complete: 63%**
Project Budget at award: $21.3M	**Current Budget: $21.3M**	**EAC: $21.3M**
Substantial Completion at Award: June 2023	**Current Substantial Completion: February 2024**	

This project will replace mainline switches, along the Brighton Line, with in-house forces. Locations were determined based on the latest switch survey. In addition to the track scope, the existing turnouts, track switches, switch valves, connection valves, ties, and signal cables will also be replaced as required.

During the first quarter 2023, the Substantial Completion date was extended eight months, from June 2023 to February 2024, due to limited track access and material availability. Coordination with the CBTC work, along the Culver Line, took priority because both Culver and Brighton Lines cannot be shut down at the same time. The work will be rescheduled once the required switches are available and track access can be coordinated.

Projects in CPC's Risk-Based Monitoring Program
(1st Quarter 2023 Traffic Light Report – Period Ending March 31, 2023)

The following projects in CPC's Risk-based Monitoring Program are currently reported on by the responsible MTA Business Unit in accordance with the CPC Work Plan schedule and are continually monitored by the Independent Engineering Consultant. Monitored projects from multiple Capital Programs are included in the Quarterly Traffic Light Report. The list is subject to periodic review and adjustment by the MTA.

Projects in CPC's Risk-Based Monitoring Program

Capital Programs			Project
2010-14	2015-19	2020-24	
Integrated Capital Projects			
	X		Second Avenue Subway - Phase 2
	X		Penn Station Access
		X	Penn Station – 33rd St Corridor
	X		LIRR Expansion Project – Mainline Third Track - Floral Park to Hicksville
Signals and Communications			
X			Communications Based Train Control - Queens Blvd. West- Phase 1
		X	Communications Based Train Control – Queens Blvd East
	X		Communications Based Train Control – 8th Ave Line
		X	Communications Based Train Control – Crosstown Line
	X		Communications Based Train Control – Culver Line
X	X		Replace Bus Radio System
Subway Car, Bus and Rolling Stock Procurement			
X	X		New Subway Car Procurement
X	X		New Bus Procurement
X	X		Commuter Rail Road Rolling Stock Procurement
Passenger Stations Program			
	X		OMNY New Fare Payment System – Phase 2
	X		ADA 149th St/Tremont Ave Stations
	X	X	ADA Accessibility Package 1
		X	ADA Accessibility Packages 2, 3 and 4
		X	ADA 68th St / Hunter College

Projects in CPC's Risk-Based Monitoring Program
(1st Quarter 2023 Traffic Light Report – Period Ending March 31, 2023)

Capital Program			Project
2010-14	2015-19	2020-24	
Shops and Yards			
	X		Harmon Shop Replacement Phase V, Stage 2
Line Structures and Track			
X			Jamaica Capacity Improvements Phase 1
Sandy Program			
Sandy Program			207th Street Yard Long Term Perimeter Protection

Contracts Department

Stephen Plochochi, Senior Vice President, Contracts

PROCUREMENT PACKAGE
June 2023

PROCUREMENTS

The Procurement Agenda this month includes 13 actions for a proposed expenditure of $30.5 M.

Staff Summary

Subject	Request Authorization to Award Several Procurement Actions
Contracts Department	Stephen Plochochi, Senior Vice President
Date: June 22, 2023	

Board Action

Order	To	Date	Approval	Info	Other
1	Capital Program Committee	6/26/23	X		
2	Board	6/27/23	X		

Internal Approvals

	Approval		Approval
X	Deputy Chief Development Officer, Delivery	X	President
X	Deputy Chief Development Officer, Development	X	Executive Vice President & General Counsel

Purpose

To obtain the approval of the Board to award several procurement actions and to inform the Capital Program Committee of these procurement actions.

Discussion

MTA Construction & Development proposes to award Competitive Procurements in the following categories:

Schedules Requiring Majority Vote	# of Actions	$ Amount
F. Personal Service Contracts	4	$ 10,118,821
I. Modifications to Purchase and Public Work Contracts	1	$ 2,875,000
SUBTOTAL	5	$ 12,993,821

MTA Construction & Development proposes to award Ratifications in the following category:

Schedules Requiring Majority Vote	# of Actions	$ Amount
K. Ratification of Completed Procurement Actions	8	$ 17,527,646
SUBTOTAL	8	$ 17,527,646
TOTAL	**13**	**$ 30,521,467**

Budget Impact

The approval of these procurement actions will obligate capital and operating funds in the amounts listed. Funds are available in the capital program and operating budget for these purposes.

Recommendation

That the procurement actions be approved as proposed. (The items are included in the resolution of approval at the beginning of the Procurement Section.)

MTA Construction & Development

BOARD RESOLUTION

WHEREAS, in accordance with Sections 559, 2879, 1209 and 1265-a of the Public Authorities Law and the All Agency General Contract Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public works contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All Agency Service Contract Procurement Guidelines and the All Agency General Contract Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous service and miscellaneous procurement contracts, certain change orders to purchase, public work, and miscellaneous service and miscellaneous procurement contracts;

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All-Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.

2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein, the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals and authorizes the solicitation of such proposals.

3. As to each request for proposals (for purchase and public work contracts set forth in Schedule C for which a recommendation is made to award the contract), the Board authorizes the execution of said contract.

4. As to each action set forth in Schedule D, the Board declares competitive bidding impractical or inappropriate for the reasons specified therein, and ratifies each action for which ratification is requested.

5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.

6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

June 2023

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

Schedule F. Personal Service Contracts
(Staff Summaries required for all items greater than $1M)

1-4. Various **$ 10,118,820.41** ***Staff Summary Attached***
Contracts Nos. CS00011B-CS00014B

a. Stantec Consulting Services
b. HNTB New York Engineering and Architecture, PC
c. HNTB New York Engineering and Architecture, PC
d. LOZIER, INC.

MTA Construction & Development requests Board approval to award four publicly advertised and competitively solicited personal services contracts for MTA Bridges & Tunnels' 2023 Biennial Bridge Inspections as follows: Group A - Throgs Neck Bridge to Stantec Consulting Services Inc. in the NTE amount of $3,087,750.26; Group B – Bronx-Whitestone Bridge to HNTB New York Engineering and Architecture, P.C. in the NTE amount of $2,689,739.37; Group C – Marine Parkway and Cross Bay Bridges to HNTB New York Engineering and Architecture, P.C. in the NTE amount of $2,210,498.84; and Group D – Henry Hudson Bridge, Queens Midtown Tunnel Approach Bridge, and Hugh L. Carey Tunnel Approach Bridge to LOZIER, INC. in the NTE amount of $2,130,831.94.

Schedule I. Modifications to Purchase and Public Work Contracts
(Staff Summaries required for all items greater than $1M)

5. L.K. Comstock & Company, Inc. **$ 2,875,000** ***Staff Summary Attached***
Contract No. S48006.16

MTA Construction and Development Company requests Board approval to award Modification No. 16 to the Contract to mitigate a design risk identified by the Independent Safety Assessor.

Staff Summary

MTA Construction & Development

Schedule F: Personal Service Contracts
Items Numbers: 1-4

Dept. & Dept. Head:
B&T Business Unit, Joe Keane, VP & Chief Engineer

Contracts Department
Laura A. Smith, Vice President

Board Reviews

Order	To	Date	Approval	Info	Other
1	Capital Program Committee	6/26/23	X		
2	Board	6/27/23	X		

Internal Approvals

	Approval		Approval
X	Deputy Chief, Development	X	President
X	Deputy Chief, Delivery	X	Executive Vice President & General Counsel

SUMMARY INFORMATION

Vendor Name	Contract Number
Stantec Consulting Services Inc. HNTB New York Engineering and Architecture, P.C. HNTB New York Engineering and Architecture, P.C. LOZIER, INC.	CS00011B Group A CS00012B Group B CS00013B Group C CS00014B Group D

Description
2023 Biennial Bridge Inspection and Design of Miscellaneous Structural Repairs at the Throgs Neck Bridge; Bronx-Whitestone Bridge; Marine Parkway and Cross Bay Bridges; Henry Hudson Bridge, Queens Midtown Tunnel Approach Bridge, and Hugh L. Carey Tunnel Approach Bridge

Total Amount: $10,118,820.41
CS00011B Group A $3,087,750.26
CS00012B Group B $2,689,739.37
CS00013B Group C $2,210,498.84
CS00014B Group D $2,130,831.94

Contract Term
Two (2) Years, Nine (9) Months

Option(s) included in Total Amount? ☐ Yes ☒ No ☐ N/A

Renewal? ☒ Yes ☐ No

Procurement Type
☒ Competitive ☐ Non-competitive

Solicitation Type
☒ RFP ☐ Bid ☐ Other:

Funding Source
☒ Operating ☐ Capital ☐ Federal ☐ Other:

Purpose/Recommendation
MTA Construction & Development ("C&D") requests Board approval to award four publicly advertised and competitively solicited personal services contracts for MTA Bridges & Tunnels' 2023 Biennial Bridge Inspections as follows: Group A - Throgs Neck Bridge to Stantec Consulting Services Inc. in the not-to-exceed ("NTE") amount of $3,087,750.26; Group B – Bronx-Whitestone Bridge to HNTB New York Engineering and Architecture, P.C. in the NTE amount of $2,689,739.37; Group C – Marine Parkway and Cross Bay Bridges to HNTB New York Engineering and Architecture, P.C. in the NTE amount of $2,210,498.84; and Group D – Henry Hudson Bridge, Queens Midtown Tunnel Approach Bridge, and Hugh L. Carey Tunnel Approach Bridge to LOZIER, INC. in the NTE amount of $2,130,831.94. Each contract will be for a duration of approximately two years and nine months.

Discussion
This contract solicitation is for the services of engineering consultant firms to perform biennial bridge inspections and miscellaneous engineering and design services at the Throgs Neck Bridge; the Bronx-Whitestone Bridge; Marine Parkway and Cross Bay Bridges; and the Henry Hudson Bridge, Queens Midtown Tunnel Approach Bridge, and Hugh L. Carey Tunnel Approach Bridge. For purposes of this solicitation, the bridges were divided into four groups and proposals were requested for each of the groups. The scope of services for each group includes inspection and examination of all structural components of the bridges in a group, and their appurtenances, as well as ancillary tasks. The biennial inspections are required by the Federal Highway Administration and the New York State Department of Transportation.

Selection was determined by utilizing a "Best Value" procurement process. A one-step solicitation was publicly advertised in the New York State Contractor Reporter, Daily News, Minority Commerce Weekly, and on the MTA website. In addition, notice of the Request For Proposals ("RFP") was sent to 57 prequalified firms on the MTA's General Engineering Consultant list. In response to the RFP, proposals were received on March 21, 2023, from the following six firms:

1. AI Engineers, Inc. ("AIE")
2. HNTB New York Engineering and Architecture, P.C. ("HNTB")
3. LOZIER, INC. ("LOZIER")
4. MP Engineers and Architects, P.C. ("MP")
5. KB Group of NY, dba PRIME AE Group of NY ("PRIME AE")
6. Stantec Consulting Services Inc. ("Stantec")

During the selection committee's review of the technical proposals, PRIME AE withdrew its proposal and advised that it was discontinuing its bridge inspection and engineering support operations within New York City. The remaining five proposals were evaluated and scored by a selection committee consisting of representatives from C&D, utilizing the following pre-established selection criteria: Technical Work Proposed and Plan of Approach; Depth of Understanding of Project; Qualifications of Firm and Experience in Relevant Areas; Experience of Project Team/Key Personnel; Availability of Resources and Current Workload of Consultant and Sub-Consultants; Management Approach; Quality Assurance Plan; Diversity Practices; and Other Relevant Matters.

Oral presentations were conducted with the remaining five firms and four firms were then shortlisted for further consideration. MP was not shortlisted because it was unable to demonstrate that it had sufficient resources to perform the work. The selection committee reviewed the cost proposals from the four shortlisted firms and then ranked each of the proposers considering both their technical and cost proposals in accordance with the evaluation criteria. The selection committee deemed all four firms to be both technically qualified and in the competitive range and recommended these firms be invited for negotiations. Several rounds of negotiations were conducted, focusing on levels of effort, staffing, hourly rates, overhead rates and contract terms and conditions. During negotiations, AIE withdrew its proposal advising that it also did not have sufficient resources available to perform the work.

Best and Final Offers ("BAFO") were requested and received from the remaining three firms and evaluated against C&D's in-house budget estimate based on hours distributed among various titles and tasks, and the selection committee's review of the technical proposals and oral presentations. The selection committee recommended awards to all three firms: HNTB, LOZIER, and Stantec. Stantec, an experienced engineering firm that has successfully performed prior biennial bridge inspections at various locations for the MTA, was unanimously recommended for the award of Group A as they were considered the technically superior firm with the lowest price for Group A. HNTB, a strong firm that has also successfully performed multiple biennial bridge inspection services at various locations for the MTA, was unanimously recommended for the award of Group B, despite their pricing being slightly ($117,633) higher than the lowest price proposal for Group B, as they were ranked the technically superior firm in Group B and the selection committee determined their offer provided the best value. HNTB was also unanimously recommended for the award of Group C as they were ranked the technically superior firm in the Group and provided the lowest pricing. In regard to Group D, LOZIER, a certified Disadvantaged Business Enterprise, was unanimously recommended for the award based on their technical capabilities and providing the lowest pricing. While Stantec was rated technically higher than LOZIER in Group D, during negotiations Stantec stated that they did not have the resources to receive an award for more than one Group. Accordingly, the selection committee determined that awarding Group A to Stantec and Group D to LOZIER provided the best value to MTA.

The recommended NTE Contract amounts have been reviewed and are considered fair and reasonable.

D/M/WBE Information
The MTA's Department of Diversity and Civil Rights has established a Minority Owned Business Enterprise ("MBE") goal of 15%, a Women Owned Business Enterprise ("WBE") goal of 15%, and a Service-Disabled Veteran-Owned Business ("SDVOB") goal of 6% for this contract series. DDCR has determined that all three firms' utilization plans meet the MBE/WBE/SDVOB requirements established for the contracts.

HNTB and Stantec have achieved MBE/WBE/SDVOB goals on recently completed MTA contracts. LOZIER has not completed any MTA contracts with MBE/WBE/SDVOB goals; therefore, no assessment of the firm's MBE/WBE/SDVOB performance can be determined at this time.

Impact on Funding
Funding in the amount of $10,118,820.41 is available in the Operating Budget under GFM-546, General Ledger #711101.

Staff Summary

MTA Construction & Development

Schedule I: Modifications to Purchase and Public Works Contracts
Item Number: 5

Vendor Name (Location) L.K. Comstock & Company, Inc. (Bronx, NY)	
Description CBTC 8th Avenue (59th Street to High Street) in the Boroughs of Manhattan and Brooklyn	
Contract Term (including Options, if any) January 11, 2020 – January 10, 2025	
Option(s) included in Total Amt? ☐ Yes ☐ No ☒ n/a	
Procurement Type ☒ Competitive ☐ Noncompetitive	
Solicitation Type ☐ RFP ☐ Bid ☒ Other: Modification	
Funding Source ☐ Operating ☒ Capital ☐ Federal ☐ Other:	
Requesting Dept./Div., Dept./Div. Head Name: Delivery/Mark Roche	

Contract Number S-48006	**Mod. #** 16	
Original Amount:	$	245,798,000
Prior Modifications:	$	12,204,524
Prior Budgetary Increases:	$	0
Current Amount:	$	258,002,524
This Request:	$	2,875,000
% of This Request to Current Amt.:		1.1%
% of Modifications (including This Request) to Original Amount:		6.1%

Discussion:

Contract S-48006 is for a Communications Based Train Control ("CBTC") signal system on the 8th Avenue Line from south of the 59th Street Interlocking in Manhattan to the High Street Station in Brooklyn, including the installation of two solid state interlockings at 34th Street and 42nd Street in Manhattan. MTA Construction and Development Company ("C&D") requests Board approval to award Modification No. 16 to the Contract to mitigate a design risk identified by the Independent Safety Assessor ("ISA").

A design review by the ISA identified a risk of non-CBTC-equipped (e.g., work trains) or improperly functioning CBTC-equipped trains operating within the 34th St. and 42nd St. interlockings. To address this issue and to ensure that these trains are accurately tracked in this area after activation of the CBTC system, this modification will provide for updates to the Programmable Logic Controller and the circuit design, signal modifications, relocation of stop machines and axel counters, associated cable, terminations and trenching and related simulator and training updates.

The Contractor submitted a proposal in the amount of $3,230,669. Negotiations resulted in agreement of a lump sum price of $2,875,000 which is considered fair and reasonable.

JUNE 2023

LIST OF RATIFICATIONS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

Schedule K. Ratification of Completed Procurement Actions (Involving Schedule E – J)
(Staff Summaries required for all items)

6. Banton Construction Company **$ 1,879,228.01** ***Staff Summary Attached***
Contract No. 82133.75

MTA Construction & Development requests that the Board ratify Modification No. 75 to address changed conditions and an unanticipated method for installing the new fiber optic cable.

7. Parsons Transportation Group of New York, Inc. **$ 2,278,418** ***Staff Summary Attached***
Contract No. CM1236.02

MTA Construction & Development requests that the Board ratify Modification No. 2, to provide additional construction phase support services for the Culver Line Communication Based Train Control Contract and to extend the PTG Contract term by nine months, until December 31, 2024.

8-9. Parsons Transportation Group of New York, Inc. **$ 6,450,000** ***Staff Summary Attached***
Contract No. W32366.59 & 115

MTA Construction & Development requests that the Board ratify Modification Nos. 59 and 115 which, respectively, provide for (i) the design and construction of a new radio base station equipment shelter at the East New York Train Yard and (ii) additional prototyping work associated with additional bus types identified after Contract award.

10-13. Walsh Construction Company II, LLC **$ 6,920,000** ***Staff Summary Attached***
Contract No. C34838.105, 107, 132 & 142

MTA Construction & Development requests that the Board ratify Modification Nos. 105, 107, 132 and 142, which provide for the implementation of re-designed pile foundations and additional floodwall (Nos. 105 & 107) and the reconfiguration of new wayside equipment to comply with the Limiting Line of Line Equipment train clearance envelope for tracks in the Yard (Nos. 132 & 142).

Staff Summary

Schedule K: Ratification of Completed Procurement Actions
Item Number: 6

MTA Construction & Development

Vendor Name (& Location) Banton Construction Company (North Haven, CT)	
Description Hudson Line Wayside Communications & Signal System Express Cable Installation	
Contract Term (including Options, if any) 59.7 Months	
Option(s) included in Total Amount? ☐ Yes ☐ No ☒ N/A	
Procurement Type ☒ Competitive ☐ Non-competitive	
Solicitation Type ☐ RFP ☐ Bid ☒ Other: Modification	
Funding Source ☐ Operating ☒ Capital ☐ Federal ☐ Other:	
Requesting Dept/Div & Dept/Div Head Name: Delivery/Mark Roche	

Contract Number	AWO/Modificatio
82133	75
Original Amount:	$ 51,099,329.60
Prior Modifications:	$ 26,899,943.71
Prior Budgetary Increases:	$
Current Amount:	$ 77,999,273.31
This Request	$1,879,228.01
% of This Request to Current Amount:	2.4%
% of Modifications (including This Request) to Original Amount:	56.3%

Discussion:

Contract 82133 (the "Contract") provides for, among other things, the replacement of express fiber optic cable along approximately 52 miles of track on Metro-North Railroad's Hudson Line, from Control Post 33 to the Amtrak Division Post near Mile Post 75.8. MTA Construction and Development ("C&D") requests that the Board ratify Modification No. 75 to address changed conditions and an unanticipated method for installing the new fiber optic cable in the net amount of $1,879,228.01.

The Contract contains unit prices for the items of work to be performed, including the installation of the new fiber optic cable using a cable plow. The cable plow is a piece of equipment that cuts a trench, lays the cable, and backfills the trench in a single operation. Based on the unit quantities included in the contract, the plan was to install most of the new cable with a cable plow.

After award of the Contract, however, and based on concerns that the cable plow might cause damage to existing underground fiber cable bundles, Metro-North Railroad modified its requirements such that a cable plow could no longer be used within five feet of buried fiber cable bundles. As a result, at numerous locations totaling approximately 55,000 linear feet, the Contractor was required to install the new fiber optic cable using more traditional excavation methods. For the excavation methods required for approximately 30,000 linear feet, there is no unit price included in the contract. Furthermore, because conditions varied at each location, it was difficult to estimate and thus negotiate an accurate linear foot cost for this extra work.

For those reasons, the Contractor was directed to perform the changed work on a time and material basis. The project inspector in the field tracked the labor, equipment, and material that the Contractor used to perform the work, then reconciled the Contractor's time and material tickets against the inspector's records. For the period from April 2022 through April 2023, the period covered by this change order, and based on the reconciled time and material records, the Contractor is entitled to $2,553,446.02 for this changed work. However, C&D is concurrently deleting from the contract approximately 55,000 linear feet of cable plow work at the contract unit price for that work. Accordingly, the net cost of this modification is $1,879.228.01.

A previous modification was issued to the Contractor in the amount of $231,569.04 to address this issue during the period between September 2021 and March 2022. The installation of the new fiber optic cable is now complete, and no further modifications are necessary to address the direct cost of this work. However, we are currently working on a time impact analysis and expect to issue another modification to address the time impacts associated with this change.

Staff Summary

Schedule K: Ratification of Completed Procurement Actions
Item Number: 7

Vendor Name (& Location) Parsons Transportation Group of New York, Inc. (New York, New York)	
Description Consultant Services – Design, Procurement and Construction Phase Support for Communications-Based Train Control and Auxiliary Wayside Signal Systems for the Culver Line	
Contract Term (including Options, if any) December 27, 2017 – March 26, 2024	
Option(s) included in Total Amount? ☐ Yes ☐ No ☒ N/A	
Procurement Type ☒ Competitive ☐ Non-competitive	
Solicitation Type ☐ RFP ☐ Bid ☒ Other: Modification	
Funding Source ☐ Operating ☒ Capital ☐ Federal ☐ Other:	
Requesting Dept/Div & Dept/Div Head Name: Delivery/Mark Roche	

Contract Number	**AWO/Modification #**	
CM1236	2	
Original Amount:	$	4,948,157
Prior Modifications:	$	(438,228)
Options:	$	
Current Amount:	$	4,509,929
This Request		$2,278,418
% of This Request to Current Amount:		50.5%
% of Modifications (including This Request) to Original Amount:		46%

Discussion

Contract CM1236 (the "PTG Contract") is for consultant services for design, procurement, and construction phase support for the Communication Based Train Control ("CBTC") element of the Work under the Culver Line CBTC contract S-47009 (the "Culver Line Project"). MTA Construction & Development ("C&D") requests that the Board ratify Modification No. 2, to provide additional construction phase support services for the CBTC Contract and to extend the PTG Contract term by nine months, until December 31, 2024, for the not-to-exceed amount of $2,278,418.

Under the PTG Contract, Parsons Transportation Group of New York, Inc. ("PTG") is required to provide CBTC related design services, technical specification development and procurement support services for the Culver Line Project. In addition, PTG is required to support the project during the construction phase, specifically with regard to the CBTC work. However, after award of the PTG Contract, the project management team determined that it required PTG to provide additional services in support of the Culver Line Project that were not included in the PTG Contract. Thus, PTG was directed to, among other things: (i) provide support for the Data Communication System contract, a separate contract for a critical component of the CBTC system; (ii) provide coordination with the Queens Boulevard West project with regard to software certification and completion of the Automatic Train Supervision database; (iii) provide support for the reconfiguration of the CBTC layout between West 8th Street and Neptune Avenue to account for a safety related scope change; and (iv) provide review, analysis and coordination for a revised cutover plan necessitated by a change to the available work outages.

Extension of the Contract Duration

The PTG Contract is currently scheduled to end on March 26, 2024. However, the Culver Line Project track work has been delayed and is currently planned to be completed in the fourth quarter of 2024. PTG's engineering support is required through final acceptance testing of the CBTC equipment which cannot occur until the delayed track work is completed. Accordingly, this Modification will extend the PTG Contract by nine months to December 31, 2024.

Cost

PTG's proposal for Modification No. 2 was submitted in the amount of $2,527,416. The C&D negotiation team conducted a detailed analysis of PTG's cost proposal and engaged in several scope clarification meetings with PTG, followed by negotiations resulting in the agreed upon amount of $2,278,418 for Modification No. 2 which was deemed to be fair and reasonable.

MTA Construction & Development

Staff Summary

Schedule K: Ratification of Completed Procurement Actions
Item Number: 8-9

Vendor Name (Location) Parsons Transportation Group of New York, Inc. (New York, New York)	
Description 700/800 MHz Bus Radio System for New York City Transit	
Contract Term (including Options, if any) March 2, 2016–January 2, 2021	
Option(s) included in Total Amount? ☐ Yes ☐ No ☒ n/a	
Procurement Type ☒ Competitive ☐ Noncompetitive	
Solicitation Type ☐ RFP ☐ Bid ☒ Other: Modification	
Funding Source ☐ Operating ☒ Capital ☒ Federal ☐ Other:	
Requesting Dept./Div., Dept./Div. Head Name: Delivery/Mark Roche	

Contract Number	**Mod. #s**
W-32366	59 & 115
Original Amount:	$ 202,100,000
Prior Modifications:	$ 12,756,758
Prior Budgetary Increases:	$ 0
Current Amount:	$ 214,856,758
Modification No. 59	$ 1,550,000
Modification No. 115	$ 4,900,000
This Request:	**$ 6,450,000**
% of This Request to Current Amount:	3%
% of Modifications (including This Request) to Original Amount:	9.5%

Discussion:

Contract W-32366 (the "Contract") provides for the design, furnishing, and installation of a new land mobile digital Bus Radio System ("BRS") servicing both the NYC Transit Department of Buses ("DOB") and the MTA Bus Company ("MTABC"). MTA Construction and Development Company ("C&D") requests that the Board ratify Modification Nos. 59 and 115 which, respectively, provide for (i) the design and construction of a new radio base station equipment shelter at the East New York ("ENY") Train Yard and (ii) additional prototyping work associated with additional bus types identified since Contract award.

Modification No. 59

The Contract requires the construction of numerous radio sites across the five boroughs of New York City and the City of Yonkers, as well as one site in New Jersey. The new radio base station at the ENY Yard was to utilize an existing equipment shelter and an existing tower for the new radio and microwave antennas. However, a study of the existing tower by the Contractor determined that the tower was not capable of supporting the additional load of the new BRS antennas. A new tower was constructed pursuant to Modification No. 12. Initially, it was believed that the existing equipment shelter could be used for equipment for the new tower, but it was subsequently determined that the existing shelter was not suitable. This Modification will provide for the design and construction of a new radio base station equipment shelter adjacent to the new tower to accommodate the new BRS electronic equipment. The Contractor submitted a proposal in the amount of $2,079,251. Negotiations resulted in agreement of a lump sum price of $1,550,000 which is considered fair and reasonable.

Modification No. 115

The Contract identifies 14 bus types that are required to be prototyped by the Contractor for the installation of BRS equipment on NYCT's and MTABC's entire bus fleet. Since Contract award, it has been determined that there are variations within the bus types identified in the Contract that require separate prototyping. As a consequence, 18 additional bus types have been identified as requiring prototyping. However, three of the original 14 bus types identified in the Contract are no longer required to be prototyped. This Modification provides for the prototyping of the 18 additional bus types, consisting of survey, design and revised installation of BRS equipment including radio antenna mounting, equipment power feeds and cable routing, as well as manuals for each additional bus type. This Modification also contains a credit for the deletion of prototyping work that is no longer required for three bus types originally identified in the Contract. The Contractor submitted a proposal in the amount of $5,719,700. Negotiations resulted in agreement of a lump sum price of $4,900,000 which is considered fair and reasonable.

The schedule impact of both modifications is the subject of ongoing discussions regarding overall project delays and will be addressed, if necessary, in a subsequent modification.

Staff Summary

Schedule K: Ratification of Completed Procurement Actions
Items Numbers: 10-13

Vendor Name (Location) Walsh Construction Company II, LLC (Little Falls, New Jersey)	
Description: Sandy Repair and Flood Mitigation at 207th Street Yard, Perimeter Wall, Portal, Signals, Track and Power Work, 8th Avenue Line (IND) Division in Manhattan	
Contract Term (including Options, if any) September 4, 2018 – November 4, 2023	
Option(s) included in Total Amt? ☐Yes ☐ No ☒ n/a	
Procurement Type ☒ Competitive ☐ Noncompetitive	
Solicitation Type ☐ RFP ☐ Bid ☒ Other: Modification	
Funding Source ☐ Operating ☒ Capital ☒ Federal ☐ Other:	
Requesting Dept./Div., Dept./Div. Head Name: Delivery/Mark Roche	

Contract Number	**Mod. #s**
C-34838	105, 107, 132 & 142

Original Amount:	$	383,564,083
Prior Modifications:	$	12,229,384
Prior Budgetary Increases:	$	0.00
Current Amount:	$	395,739,467
Modification No. 105	$	2,316,000
Modification No. 107	$	1,925,000
Modification No. 132	$	1,240,000
Modification No. 142	$	1,439,000
This Request:	**$**	**6,920,000**
% of This Request to Current Amt.:		1.75%
% of Modifications (including This Request) to Original Amount:		5%

Discussion:

Contract C34838 (the "Contract") is for Sandy repairs and flood mitigation at the 207th Street Yard (the "Yard") in Manhattan. MTA Construction and Development Company ("C&D") requests that the Board ratify retroactive Modification Nos. 105, 107, 132 and 142, which provide for the implementation of re-designed pile foundations and additional floodwall (Nos. 105 & 107) and the reconfiguration of new wayside equipment to comply with the Limiting Line of Line Equipment ("LLLE") train clearance envelope for tracks in the Yard (Nos. 132 & 142).

Modification No. 105
The Contract requires the installation of a floodwall and deployable flood gate (Gate 3) at the 9th Avenue entrance to the Yard, which borders the Harlem River. The Contract originally provided for installing uncased concrete piles approximately 75ft below grade and pouring a pile cap foundation on top of the piles to support the flood gate. Post-award investigations by the Contractor revealed the existence of an old concrete foundation running beneath the 9th Avenue entrance into the Yard. This field condition, which was not known at the time of design, obstructs the drilling path for the concrete piles and precluded the use of uncased concrete piles. Modification No. 105 implements a redesigned/reconfigured pile cap foundation, including the elimination of three of sixteen contractually required piles and installation of thirteen cased piles that are larger in diameter and longer than originally designed. In addition, the Contract provided for the use of sandbags for erosion and flood control in the area immediately adjacent to the flood gate rather than the installation of a permanent floodwall. To provide a longer term, maintainable solution, this Modification also provides for an additional 16.5 feet of new reinforced concrete floodwall, in lieu of the contractually specified sandbags. The Contractor submitted a proposal in the amount $2,786,494.89. Negotiations resulted in agreement of a lump sum price of $2,316,000 which is considered fair and reasonable. In order to permit this work to proceed without delay, approval to direct the contractor to proceed with the work was received from the President of MTA C&D on June 2, 2021.

Modification No. 107
The Contract requires the installation of a floodwall around the Con Edison Vault, located in the Yard along the Harlem River. The design for the floodwall required a pile cap foundation supported by 34 uncased deep foundation piles. After installing and grouting one of the piles, the Contractor observed that the level of the liquid grout pumped into the pile earlier that day had dropped significantly. The uncased drilled shaft for the pile was suspected to be leaking liquid grout into the surrounding soil. Subsequent borings and soil samples taken by the Contractor in the area determined that the pile design

provided in the Contract was not suitable for 20 of the 34 piles due to existing soil conditions. Modification No. 107 addresses this issue for 14 of the 20 piles by implementing a redesigned pile cap foundation that is suitable for the existing soil conditions, including the installation of fourteen cased foundation piles that are larger in diameter and longer than originally designed. The remaining six piles, that required a slightly different solution, will be addressed under a separate modification. The Contractor submitted a proposal in the amount of $2,217,260.29. Negotiations resulted in agreement of a lump sum price of $1,925,000 which is considered fair and reasonable. In order to permit this work to proceed without delay, approval to direct the contractor to proceed with the work was received from the President of MTA C&D on July 26, 2021.

Modification Nos. 132 and 142

The Contract requires the installation of new wayside equipment on existing concrete foundations near tracks located at the Yard. Post-award investigations by the Contractor discovered numerous locations where planned installation of wayside equipment will encroach upon the LLLE train clearance envelope. The LLLE is the minimum clearance around a track required to safely move trains along the rails. Any material or equipment installed along the wayside must be located outside of the LLLE. These modifications address this issue by extending existing concrete foundations, shifting wayside equipment resting on the foundations away from tracks, including associated cabling and conduit, and reducing the height of several pull boxes. In order to permit this work to proceed without delay, approval to direct the contractor to proceed with the work of Modification 142 was received from the President of MTA C&D on June 1, 2022 and for the work of Modification 132, from the C&D Contracts and Delivery Business Unit Leads on December 7, 2021.

Modification No. 132 addresses locations from Tracks 26 thru 41. The Contractor submitted a proposal in the amount $1,407,551.87. Negotiations resulted in agreement of a lump sum price of $1,240,000 which is considered fair and reasonable. Modification No. 142 addresses locations from Tracks 1 through 24. The Contractor submitted a proposal in the amount $1,912,119.15. Negotiations resulted in agreement of a lump sum price of $1,439,000 which is considered fair and reasonable.

Modification Nos. 107, 132 and 142 appear to be the result of design errors or omissions. These issues are being reviewed by C&D and, if appropriate, will be addressed with the consultant designer of record.