



Metropolitan Transportation Authority

Capital Program Committee Meeting

May 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. Mihaltzes

J. Samuelsen

V. Tessitore

N. Zuckerman

Capital Program Committee Meeting

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

Monday, 5/22/2023
1:00 - 2:00 PM ET

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**CONSTRUCTION & DEVELOPMENT
COMMITTEE ACTIONS
SUMMARY for MAY 2023**

Responsible Department	Vendor Name	Total Amount	Summary of Action
Contracts	Henningson, Durham & Richardson Architectural and Engineering P.C.	\$ 7,820,806	Award of a modification to Contract PSC-16-2991G for the continuation of program and construction management services for the Central Business Tolling Program and a two and a half year time extension.
Contracts	L3Harris Technologies, Inc.	\$ 55,117,480	Award of a modification to Contract 6166 for additional work to address system and cyber security upgrades and upgrades to the Operation and Maintenance plan.
Contracts	TC Electric/J-Track JV	\$5,210,000	Award of two modifications to Contract P36444 to address deterioration and corrosion of existing electrical systems and equipment for the 53rd Street Tube and Time extension and associated impact costs.
Contracts	EJ Electric Installation Company	\$1,240,000	Award of a modification to Contract RK-66 for the replacement of the cooling tower and chiller at Robert Moses Building.
Contracts	Paul J. Scariano Incorporated	\$ 3,358,260	Ratification of a modification to Contract CM030 for a time extension and payment of impact cost.
Contracts	JTTC, JV	\$ 2,108,000	Ratification of a modification to Contract C-48704 to replace an additional forty-two interior steel columns between 161 st and 167 th Streets.

MINUTES OF MEETING
MTA CAPITAL PROGRAM COMMITTEE
April 24, 2023
New York, New York
12:45 P.M.

CPC members present:

Hon. Janno Lieber
Hon. Andrew Albert
Hon. Gerard Bringmann
Hon. Norman Brown
Hon. Sammy Chu
Hon. Randolph Glucksman
Hon. David Jones
Hon. Blanca Lopez
Hon. Haeda Mihaltses
Hon. Sherif Soliman
Hon. Neal Zuckerman

CPC members not present:

Hon. Jamey Barbas
Hon. Michael Fleischer
Hon. David Mack
Hon. John Samuelsen
Hon. Vinnie Tessitore

MTA Board Member present:

Midori Valdivia

MTA staff present:

Lew Deara
Evan Eisland
Dana Hecht
Tim Kaiser
Bob Laga
Amy Linden
John McCarthy
Tim Mulligan
Mark Roche
Steve Plochochi
Jamie Torres-Springer
Michele Woods

Independent Engineering Consultant staff present:

Joe DeVito
Elizabeth King

* * *

Chairman Lieber called the April 24, 2023 Capital Program Committee Meeting to order at 1:20 P.M.

Public Comments Period

There were three Public Speakers during the Public Comments Period: Bruce Hain; Jason Anthony; and Christopher Greif.

Meeting Minutes

The minutes of the meeting held on March 27, 2023 were approved.

CPC Work Plan

There were two changes to the CPC Work Plan: the report on Capital Security Projects scheduled for today's CPC Meeting was provided to the Safety Committee earlier today, and the Systems Program update scheduled for April will be re-scheduled for May.

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

While citing OMNY and the Infrastructure Business Unit as today's major agenda items, President Torres-Springer also noted the following: the recent announcement of MTA's Climate Framework, which not only quantifies the extraordinarily positive impact that the MTA already has on greenhouse gas reduction, but also outlines MTA's efforts to reduce its own operating emissions by 2040 – a full presentation on which will be delivered to the April Board; substantial completion on the Penn Station LIRR Concourse project having been achieved in March of this year; reopening of the escalators at the 181st Street Station; and completion of the LIRR Cherry Valley Bridge Replacement.

Update on OMNY Program

President Torres-Springer provided an overview of the OMNY program which -- as announced in previous CPC Meetings -- has recently undergone a Strategic Review. In addition to the far-reaching benefits of OMNY, and specifically the advantages to MTA and its customers of OMNY's "open-loop" digital wallet platform, President Torres-Springer cited the rapid uptake of OMNY by MTA bus and subway customers stemming from the successful rollout of the system itself. He then outlined the scope, resource, and project management challenges that have confronted the program, as well as recent strategies -- the core of which is to incorporate the OMNY program into C&D's management structure as the megaproject that it is -- to address these and future such challenges. Before turning to the IEC for its Project Review, Chairman Lieber acknowledged the contribution of the current OMNY team, led by Amy Linden, for the success of the program to date and the myriad benefits the program has provided to customers. In its Project Review of the NYCT portion of OMNY, the IEC noted that C&D is re-baselining the program, which will entail undertaking an assessment of the Commuter Railroad scope and strategy, as well as re-evaluating and prioritizing change orders that affect customer usage and operations. The IEC then noted that NYCT subway and bus validator installations, Open Payment rollout, Fare Capping, and Reduced Fare Programs have all been completed. The next major element to be introduced is the NYCT Configurable Vending Machine installation, with a forecasted completion in 4Q 2024, which the IEC believes is achievable. The IEC concluded its remarks by noting that risks associated with quality control, outstanding change orders, and resource availability, as well as issues related to the Commuter Railroad scope, are all intended to be addressed through C&D's new management structure.

Update on C&D's Infrastructure Business Unit

Ms. Hecht provided an overview of the Infrastructure Business Unit's (BU) 2022 accomplishments, 2023 goals, and details on the BU's Elevated Structural Repair and Painting Program. The Infrastructure BU, whose *raison d'être* is "to support more reliable and efficient service" across the MTA, currently comprises 275 active projects with an aggregate value of \$9B. In 2022 project awards totaled nearly \$2.4B and the total value of project completions stood at \$665M across 21 projects. Goals for 2023 include \$1.3B in awards and \$2.2B in completions. Ms. Hecht then noted that of NYCT's 60 total miles of elevated track structure, the Infrastructure BU's 2020-2024 Elevated Structural Repair and Painting Program will address over 26 miles -- nearly six times that of the 2015-2019 Capital Plan. Ms. Hecht then pointed out that the Infrastructure BU is not simply executing an increased level of structural repair and painting work, but this work is now being delivered more efficiently and effectively than in the past. By collaborating with C&D colleagues from the Bridges and Tunnels (B&T) BU, which has a long record of success with its structural repair and painting initiatives, the Infrastructure BU is executing this work to mirror B&T's means and methods of abrasive blasting for surface preparation, updated paint specifications that streamline the approval process, and improved techniques that better protect structures from water infiltration. This multi-faceted approach is expected to extend the paint cycle from 15 years to 30 years, a clear cost-saving measure that also minimizes required service disruptions. Ms. Hecht concluded her presentation with brief project updates on Coney Island Yard, 207th Street Yard, and the Bus Radio System. In its Project Review of the Infrastructure BU, the IEC reported on the following projects:

- Coney Island Yard: Overall, the project is 98% complete, with a current budget and Estimate at Completion (EAC) of \$524.4M -- a \$3.8M increase since the last IEC report, primarily due to repairs to the signal system. C&D's forecast Substantial Completion (SC) -- with which the IEC concurs -- is June 2023, a slip of 3 months since the last report due to the signal cable replacement as well as the testing and commissioning of the signal system and flood barrier equipment. In addition, the IEC stated that at this point in the project there are few significant risks remaining. Finally, the IEC noted that based on the size and complexity of the Coney Island Yard facility, the project team has done a tremendous job of implementing storm recovery and resiliency protection, to ensure effective delivery of service for MTA's customers, while the rail yard operations remained underway.

- 207th St Yard: Overall, the project is 92% complete, with a current budget and EAC of \$643M, an increase of \$9.8M since last report, largely due to overruns in TA Labor and support services. C&D has identified savings and has maintained sufficient risk reserve to fund the shortfall. The IEC has reviewed project costs and believes the project can be completed within the project's latest EAC. By advancing the signal system breakdown testing, followed by installation and field testing of the new signal equipment, the contractor's latest schedule submission indicates a 2-month recovery to the original SC date of November 2023. However, the IEC finds that achieving SC by this date will be challenging, and given risks to the project, believes a January 2024 SC date is possible.
- 207th St Sewer Replacement: The project stands at 63% complete, with a budget of \$152M and an EAC of \$163M, which has not changed since last report. C&D has a budget modification in process to cover the cost for a CCM and higher-than-expected utility relocation costs, and the IEC concurs with this EAC. With respect to schedule, since the last report the contractor's SC date has moved from April 2024 to November 2024. C&D, however, has not accepted this change and is working with the contractor to improve the forecast for SC, which the IEC contends can be achieved by June 2024 provided major activities such as manhole/regulator construction and pipe jacking take place concurrently at multiple locations over the remaining 14 months of the project.
- Bus Radio System: At 70% complete, C&D's EAC is \$330M, however, due to delays, the impact of change orders and various commercial issues, the IEC forecasts an EAC of \$360M -- an increase of \$10M since the last IEC report. The IEC notes that the project has made progress in the following critical areas: production bus installation began in November 2022, immediately upon the successful Pilot testing in October; prototype installation of additional bus types, and a new training program instituted by the contractor to cut down on training and certification time; bus radio installation at 5 depots with plans to expand to 10 depots by July 2023; and completion of all base stations (except Todt Hill and Kearny, which are planned for September 2023 and February 2024, respectively). The IEC concurs with C&D's forecasted project completion in 3Q 2024, provided the contractor continues to accelerate their installations and achieves the full production rate now planned for July 2023. In concluding its remarks, the IEC noted that Department of Buses (DOB) is making sufficient buses, installation locations, and resources available to enable the contractor to meet its installation plan.

Procurement Actions

Chairman Lieber noted that there were no Procurement Actions for review at this month's CPC.

Adjournment

Upon motion duly made and seconded, Chairman Lieber adjourned the April 24, 2023 Capital Program Committee Meeting at 2:34 PM.

Respectfully submitted,
Michael Jew-Geralds
Office of Construction Oversight



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

June

Overall Capital Program

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

Quarterly Traffic Light Report

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
- Small Business Development Program
- Minority, Women and Disadvantaged Business 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



LIRR M-9 Railcar Project

Anthony Kamanes
Acting Chief Rolling Stock Officer
LIRR Rolling Stock Programs

LIRR M-9 Project

The M-9 trains are a **key part of the LIRR's modernization strategy** to provide more reliable and comfortable equipment

The M-9 trains operate in LIRR's electric territory, including Grand Central Madison

The trains also include new customer amenities

- **More comfortable:** Closed loop armrest, improved bathroom amenities
- **More convenient:** Electrical outlets at each row of seats
- **Easier to navigate:** Car number displayed (e.g. Car 2 of 8), powered B-end door
- **More secure:** CCTV

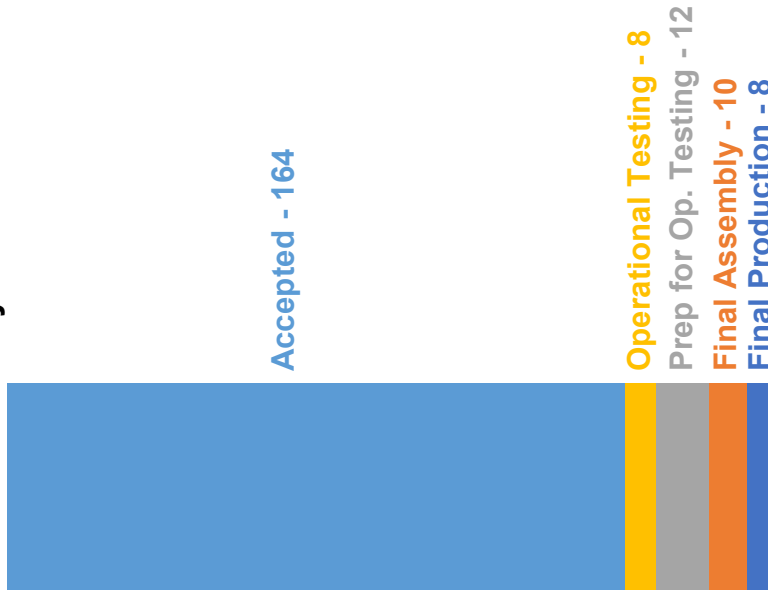


LIRR M-9 Project

LIRR M-9 Project	As of Last Report	Current Forecast
Conditional Acceptance	Sep 2023	Sep 2023
Budget	\$734M Budget \$733M EAC	\$736M Budget \$731M EAC
This includes 202 cars (92 base order + 110 option cars) Supplier: Kawasaki		

- Since our last report to CPC, the schedule and budget have remained on track
- To ensure that Kawasaki's current schedule is met, the LIRR continues to provide the resources needed to support Kawasaki's daily Operational Testing, where cars are run in simulated revenue service

M-9 Car Delivery Status



Rigorous Oversight to Ensure Reliability

- LIRR's project team continues to perform rigorous oversight during car testing and acceptance to ensure that all M-9s are safe, reliable, and provide our customers the quality they deserve
- As a result, while the project has experienced delays, for M-9 cars accepted to date, **the Mean Distance Between Failure (MDBF) exceeds the contract requirement by over 86% (280,000 miles vs. 150,000)**



Final Assembly at Kawasaki Rail Car (KRC), Yonkers, NY

**May 2023 CPC
Independent Engineering Consultant
Project Review**

LIRR M-9 Railcar Project

LIRR M-9 Railcar Project

Scope of Work

- In September of 2013, Kawasaki was awarded a base contract for 92 M9 vehicles. A follow-on option order for 110 railcars was exercised in July 2017.
- The M9 is a PTC-equipped, self-propelled electric multiple unit (EMU) vehicle for use on electrified territory.

LIRR M-9 Railcar Project

Schedule

- The project is reporting that Kawasaki is accelerating delivery of the remaining 18 cars to LIRR property planned by July 2023. In addition, 22 vehicles are in testing at LIRR and 162 have been conditionally accepted. Acceptance completion forecast remains September 2023.
- Since our last report 32 vehicles have been accepted, which was below plan. Conditional acceptance delays can be attributed to these following items. These issues apply to each car and require time for correction.
 - Vestibule flooring repair due to installation and process issues.
 - Door, lavatory, and other quality issues needing rework.
 - Extensive number of onsite Field Modification Instructions (FMI) needing to be completed.
 - Workmanship not keeping to processes and procedures, requiring the constant need for the repair or replacement of parts or material.
- Due to the time required for the rework of the stated quality issues, the IEC forecasts conditional acceptance of all vehicles by December 2023.

LIRR M-9 Railcar Project

Budget

- The LIRR's reporting an M-9 budget of \$735.7M an increase of \$2.1M and Estimate at Completion (EAC) of \$730.8M, which is a decrease of \$2.6M since last report, primarily due to some of the consultant charges coming in lower than originally estimated.
- The IEC has reviewed the project expenditures to date, including change orders, unallocated contingency, delay costs and risk on remaining work and forecasts that the project will complete at or near the current budget of \$735.7M.

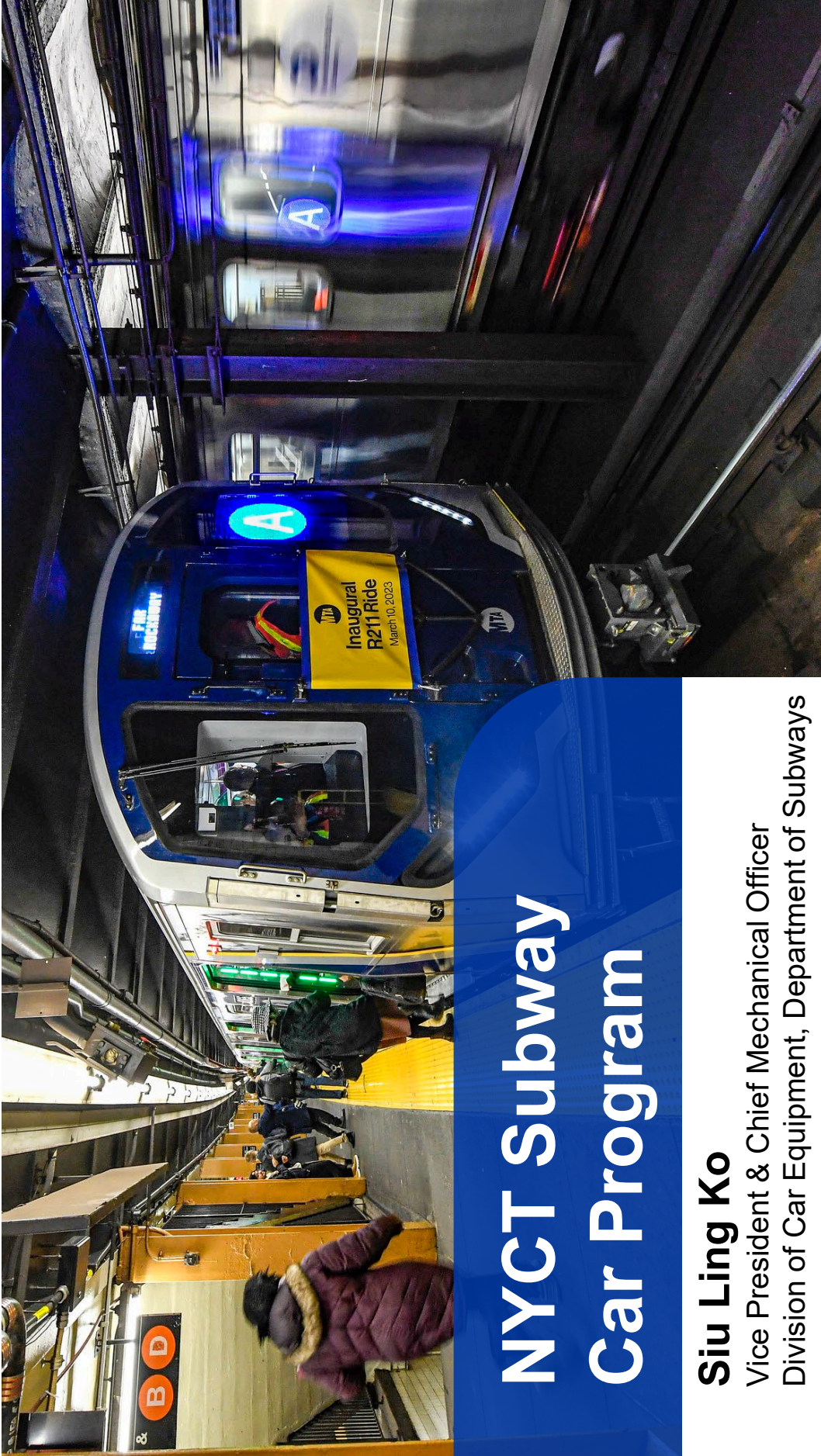
LIRR M-9 Railcar Project

Observations

- ▣ The IEC continues to support the LIRR practice of holding off on vehicle acceptance until they are assured all quality issues have been addressed as per contractual requirements.
- ▣ 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.

Concern

- ▣ The IEC is concerned that Kawasaki has not been able to achieve the necessary level of quality at the time of vehicle delivery to meet the contractual requirements. The project team needs to continue to coordinate with the R211 project on quality issues.



NYCT Subway Car Program

Siu Ling Ko

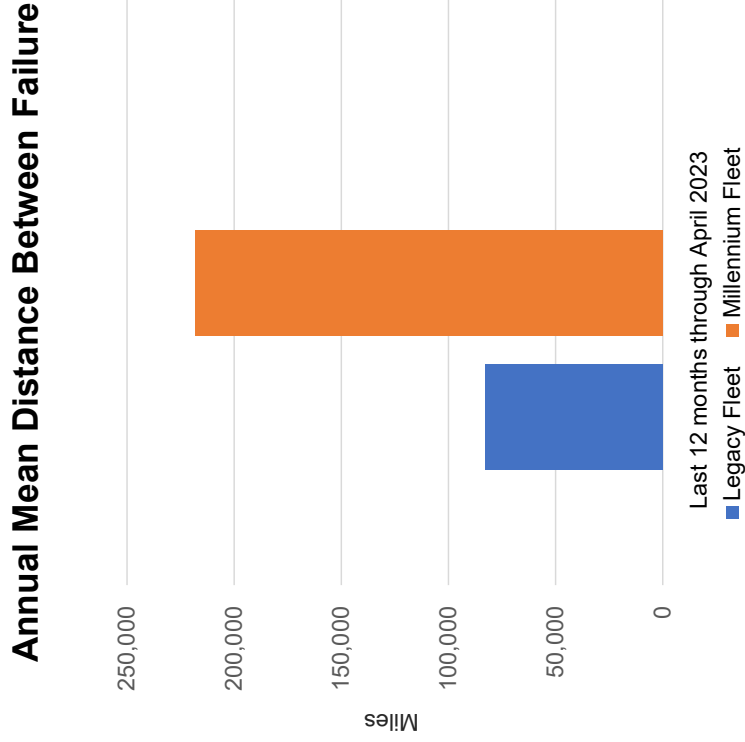
Vice President & Chief Mechanical Officer
Division of Car Equipment, Department of Subways

Subway Rolling Stock Modernization

Adding new rolling stock to replace the old is critical to **ensure a safe and reliable fleet**

Reliability of the millennium fleet (cars purchased since 2000) **exceeds the legacy fleet by an average of 2.5 times**

The R211 project is the next step in our fleet renewal



NYCT R211 Project

NYCT R-211 Project	As of Last Report	Current Forecast
Base Order Completion	Jan 2025	Jan 2025
Budget	\$1.75B Budget \$1.75B EAC	\$3.67B Budget* \$3.67B EAC* <i>*increase due to the exercise of Option 1</i>
Base Order of 535 Cars (61 trains), including: <ul style="list-style-type: none"> • 440 R211A Standard Cars • 75 R211S Staten Island Cars • 20 R211T Open Gangway Test Cars Option 1 of 640 R211A Cars (64 trains) exercised in November 2022 Supplier: Kawasaki		

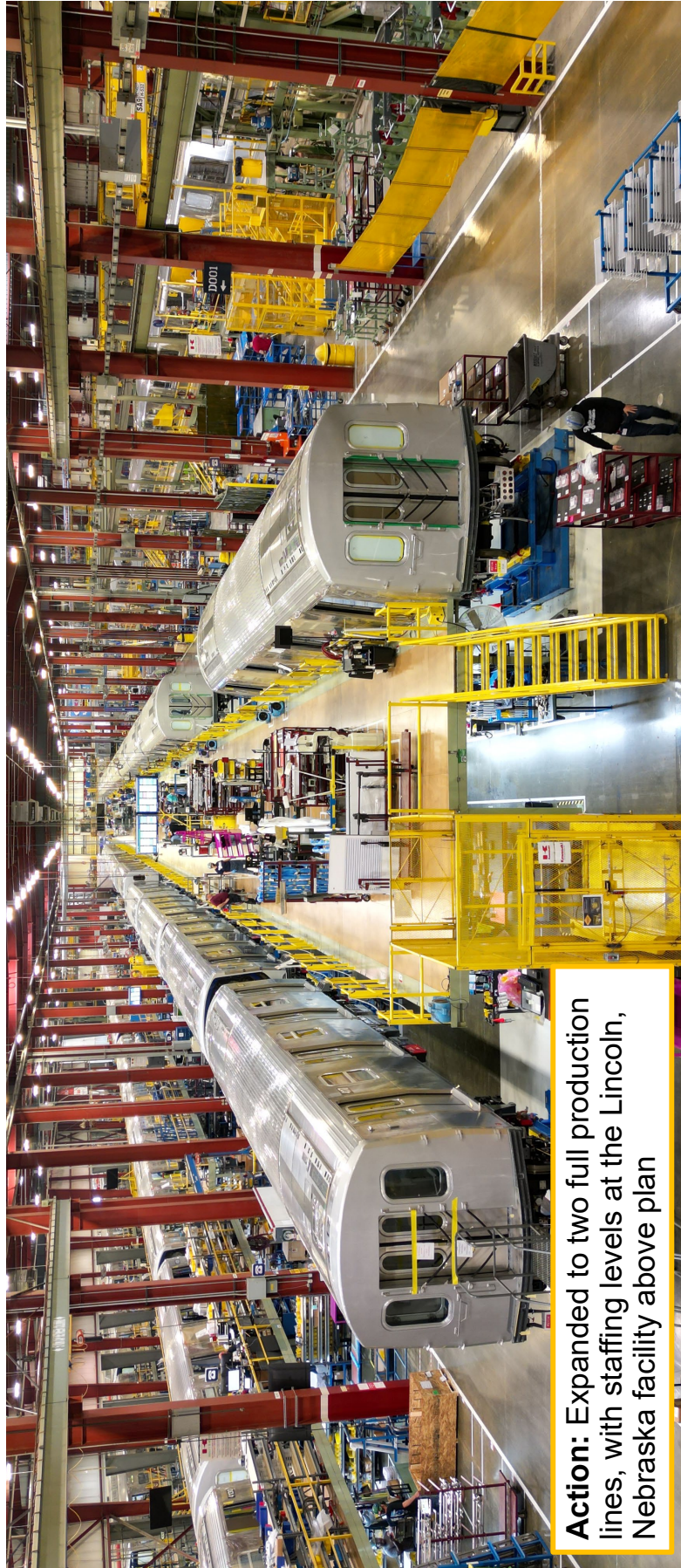
- Since our last report to CPC, the budget and overall schedule have remained on track
- This is the result of work NYCT has done with Kawasaki to improve project management and ensure proper resourcing



Kawasaki's Lincoln, Nebraska facility



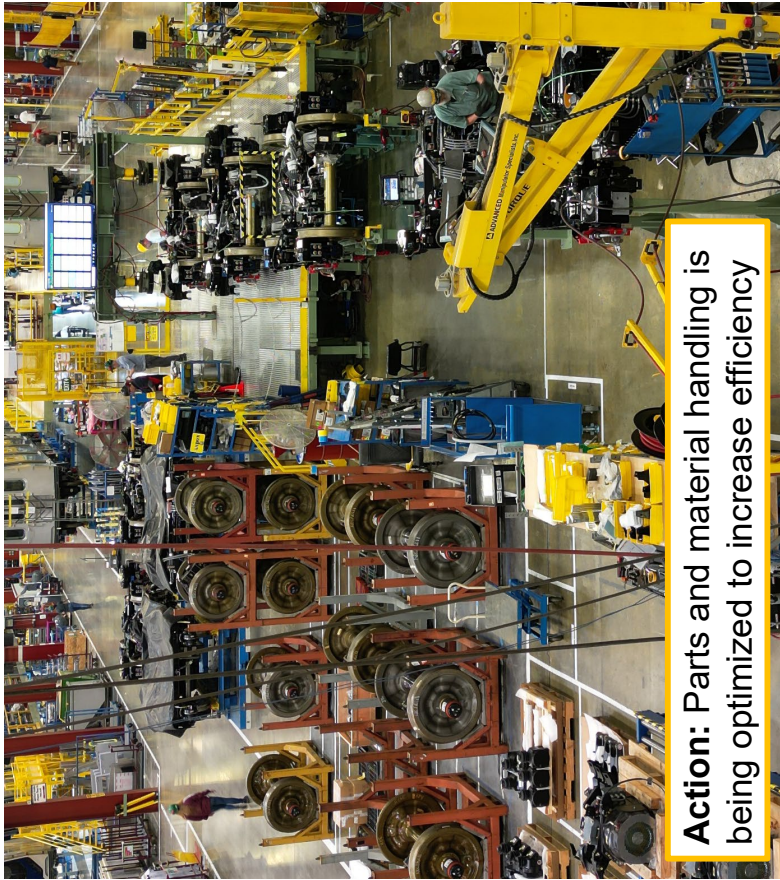
Increased Resources & Staffing



Action: Expanded to two full production lines, with staffing levels at the Lincoln, Nebraska facility above plan



Better Processes



Action: Parts and material handling is being optimized to increase efficiency



Action: Digital work instructions in place to streamline assembly and improve quality



R211A – Standard Cars

The R211A standard cars will serve the NYCT B-Division, starting with **A C** service.

Status:

- The prototype 10-car train entered in-service testing in March of this year
- An additional 2 trains have been received and are currently being used for training



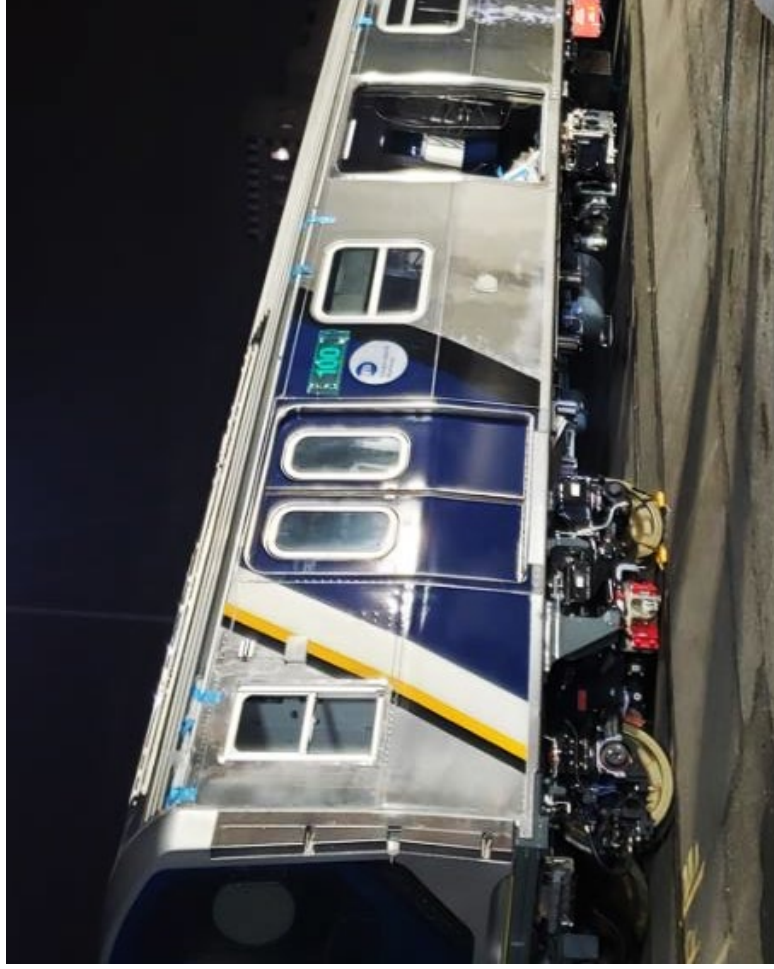
R211S – Staten Island Railway Cars

The R211S will serve the Staten Island Railway, replacing the aging R44 fleet and representing a generational investment in SIR.

It is similar to the R211A, with SIR's Automatic Train Control system included.

Status:

- Earlier this month, NYCT received the first 5-car prototype train, which is currently undergoing qualification testing
- Cars will transfer to SIR to complete testing, with in-service testing targeted for Q4 2023
- Production cars delivery is scheduled to begin in March 2024



R211T – Open Gangway Test Cars

The R211T will serve as a pilot of open gangway trains, which allow for passenger flow between cars.

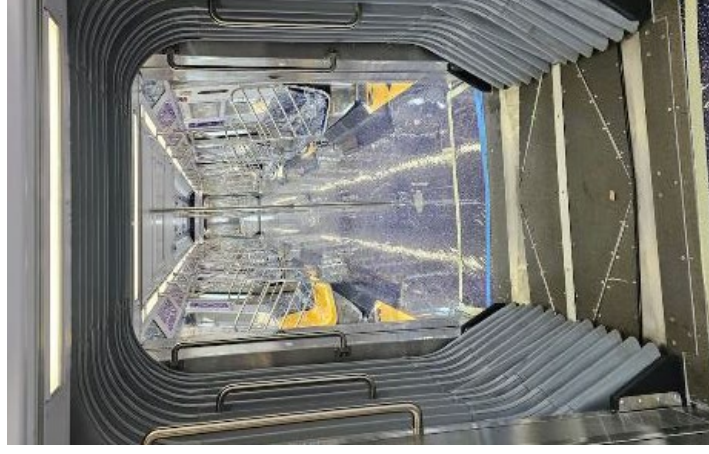
The pilot will evaluate both “hard shell” and “soft shell” configurations.

Status:

- The first 10-car hard shell test train was delivered in November 2022 and is undergoing qualification testing
- The final 5 cars of the first soft shell test train are expected later this month
- Criteria for evaluating the pilot include:
 - Car performance
 - Durability / vandalism
 - Maintenance
 - Operational performance
 - Passenger flow / gangway usage
 - Passenger experience / feedback



“Hard shell” prototype



“Soft shell” prototype

**May 2023 CPC
Independent Engineering Consultant
Project Review**

NYCT R211 Subway Car Program

NYCT R211 Subway Car Program

Scope of Work

- The R211 program for the 535-car base order was awarded to Kawasaki in February 2018 for \$3.7B, including option 1, funding was provided for in the 2015-2019 Capital Program.
- The contract has three vehicle sub-classes: R211A, R211S, and R211T:
 - 440-R211A cars to partially replace 748 B-Division R46 vehicles.
 - 75-R211S cars to replace the R44 fleet on the Staten Island Railway. All R44 SIR cars will be retired.
 - 20-R211T open gangway pilot cars. The R211T open gangway test trains will prove the feasibility of this design.
 - R211A pilot vehicles are on site and are now being tested.
- R211A Option 1 was exercised November 16, 2022, for 640 cars.
- This program is Buy America compliant.

NYCT R211 Subway Car Program

Schedule

R211 Project Schedule			
Milestone	Base Contract Date	Latest Schedule Update Apr-23	Delay since last report (Jun-22)
R211A First Production Unit Delivery	Sep-21	Mar-23	3 mo.
R211T Pilot Car Delivery Unit 4	May-21	Jun-23	1 mo.
R211A Pilot Car Conditional Acceptance	Jul-21	Jun-23	1 mo.
R211S Start Car Delivery	Sep-22	Mar-24	UNCH
R211T Pilot Car Conditional Acceptance	Nov-22	Apr-24	UNCH
R211S Last Production Car Delivery	Jun-23	Nov-24	1 mo.
R211A Last Production Unit Delivery	Aug-23	Jan-25	UNCH

- The IEC has reviewed the Kawasaki monthly Master Program Schedule (MPS) submittals. As reported in the June 2022 report the program had experienced an 18-month schedule slip since award.
- Recent delays (see table above) are due to the following reasons:
 - Delayed start of the 30 days in-service testing process.
 - Delayed completion of preliminary testing due to technical issues.
 - Delays in the manufacturing process due to parts shortages.
- Since last report, the IEC acknowledges that Kawasaki has made significant progress to reduce the duration of the final car assembly stage. Further improvement is required to achieve the necessary 23 cars per-month production rate which would maintain January 2025 substantial completion date.
- In the IEC's opinion, ramping up to 23 cars per month will require additional time, and the IEC believes the program may be delayed an additional 4-6 months to July 2025, if action is not taken.
- 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 or the program will likely be delayed.

NYCT R211 Subway Car Program

Project Status

R211A

- The R211A pilot cars entered the 30-day in-service testing in March 2023. They were scheduled to be completed in April 2023 and are now scheduled to be completed by June 2023. This delay is due to the following system issues:
 - A propulsion issue which was resolved with a software upgrade.
 - A communications software issue is still pending resolution.
- Kawasaki began to deliver production cars prior to the conditional acceptance of the pilot vehicles. The IEC believes this was a prudent action (any risk borne by the contractor) that allowed the program schedule to be maintained while in-service testing continues.
- Production Units 1-4 (20 cars) are on NYCT property for training purposes.
 - Production Units 5 & 6 have shipped.

R211S

- Qualification testing on the pilot vehicles has begun and is scheduled to be completed 4th quarter 2023.

R211T

- Qualification testing is in progress and scheduled to be completed by 2nd quarter 2024.

NYCT R211 Subway Car Program

Budget

- ▣ The project budget and EAC have increased from \$1.75B to \$3.67B with the exercise of the Option 1 order in November 2022.
- ▣ IEC finds there's no change since last report and is reviewing expenditures to date to determine how they compare to the project spend plan.

NYCT R211 Subway Car Program

Observations

As reported by the R211 team, Kawasaki is ensuring fleet performance meets requirements by:

- Closely monitoring vehicle performance and vendor support in order to assess areas which may need improvement.
- Initiating a goal of continuous improvement of the production and quality process by improving information accessibility between facilities and maintaining up-to-date information of problem areas.
- Maintaining tight control and monitoring of running repairs, field modifications, information tracking, staffing, vendor coordination and training, allowing for better management of the program.

Concern

- 300 R211A cars are needed by August 2024, for testing, per the 8th Ave CBTC program's mitigation plan. Based on our schedule analysis, the IEC is concerned that this date may not be met. The schedules for these projects must be closely coordinated.

NYCT R211 Subway Car Program

Recommendations

- ▣ Kawasaki has not been able to achieve the necessary level of quality of M9s, at the time of vehicle delivery to meet the contractual requirements. The IEC recommends NYCT closely monitor Kawasaki's quality program in order to ensure it meets acceptance criteria and maintain schedule.
- ▣ In order to improve the production rate to meet the schedule, the IEC recommends NYCT review Kawasaki's schedule and take appropriate actions to meet production requirements.



Metro-North

Dual Mode Locomotives

Joseph Reynolds
Senior Director, Metro-North RSDI

SC42-Dual Mode Locomotive Project

Based on Metro-North Railroad's needs, locomotives have been prioritized to **deliver more reliable and greener service**

The SC42 Dual Mode locomotives will replace the aging P32 locomotives

Benefits include:

- **Slashed airborne emissions:** In diesel territory, massive reductions of emissions of pollutants like Nitrogen Oxide (84%) and Particulate Matter (86%)
- **Expanded electrical territory:** The new Dual Mode will be able to operate in electric mode throughout third-rail territory, rather than just in Manhattan
- **Reduced carbon emissions:** 25,000 metric tons of carbon annually



A Massive Increase in Dual Mode Electric Territory



SC42-Dual Mode Locomotive Project

SC42 Dual Mode Locomotive Project	As of Last Report	Current Forecast
Base Order Completion	Q2 2027	Q2 2027
Budget	\$378M Budget \$414M EAC	\$378M Budget \$414M EAC
<p>Current order: 19 locomotives base order, along with 8 locomotive option exercised March 2021</p> <p>Additional Potential Options:</p> <ul style="list-style-type: none"> • 32 Metro-North locomotives • 65 LIRR locomotives in alternate configuration • 20 CDOT locomotives in alternate configuration • 25 NYSDOT locomotives in alternate configuration <p>Supplier: Siemens</p>		

- Since our last report to CPC, the schedule and budget have remained on track
- Design was completed in Q4 2022 and manufacturing of the first pilot locomotive has already begun **ahead of schedule**

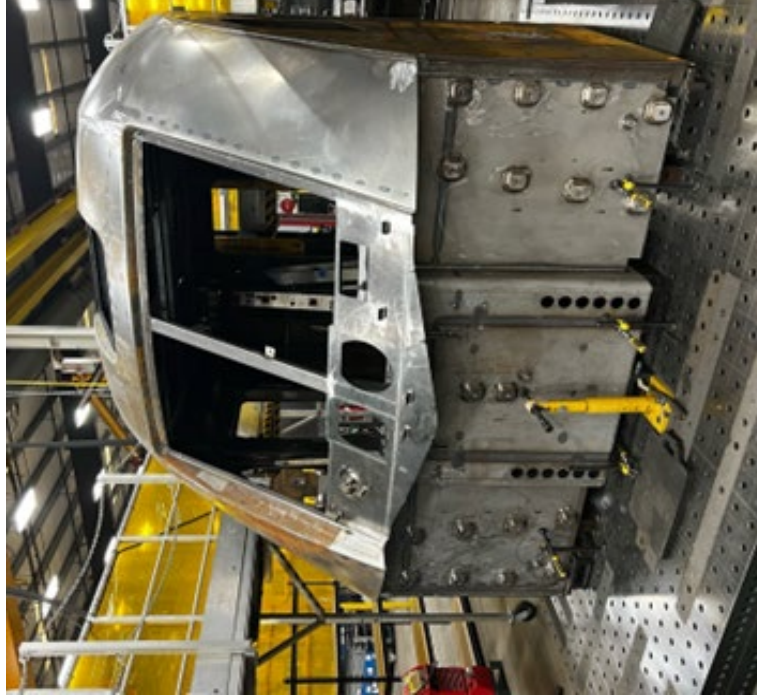


Manufacturing of the first pilot locomotive



Upfront Project Management

- Drawing on lessons learned from prior rolling stock projects, Metro-North is front-loading intensive project management activities to ensure a high-quality product
- First Article Inspections have begun, with two weekly meetings between MNR and Siemens
- Coordination with internal MTA and other potential option purchasers is ongoing



Early stages of the cab construction



May 2023

**Independent Engineering Consultant
Project Review**

MNR Dual Mode Locomotive Project

MNR Dual Mode Locomotive Project

Scope of Work

- Provide new SC42 Dual Mode locomotives (designed by Siemens) that replace the existing GE P32AC-DM locomotive fleet. These diesel-electric locomotives are designed to be compliant with the latest U.S. Environmental Protection Agency (EPA) emissions standards, reducing emissions by up to 85 percent compared to older locomotives.
- Metro North Railroad (MNR) base order contract was awarded to Siemens in March 2021 for 19 locomotives, and they also exercised an option for 8 additional vehicles. The last vehicle is scheduled to be delivered in April 2027.

MNR Dual Mode Locomotive Project

Schedule

MNR Dual Mode Locomotive	
Milestone	Scheduled Completion
Initial Design Review & Submittal	June 2021
Design Completion	December 2022
First Article Inspection Locomotive #1	November 2024
Locomotive #1 Shipping and Receiving	April 2025
Locomotive #1 Acceptance Testing and Commissioning	August 2025
Locomotive #27 Acceptance Testing and Commissioning	April 2027

Based on the progress to date, the IEC finds that production is on time and in some areas ahead of schedule.

MNR Dual Mode Locomotive Project

Budget

- ▣ The current project EAC is \$413.6M unchanged since last report.
- ▣ The IEC concurs that there are sufficient funds to compete the current project scope of work.

MNR Dual Mode Locomotive Project

Production

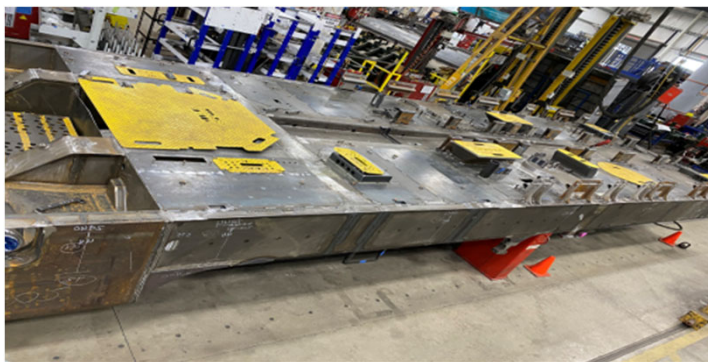
- Vehicle production has commenced and is on schedule. The first two locomotives are in production. Side walls, underframes and cabs sections are being manufactured and assembled.



Locomotive Shell



End-frame Assembly



Underfloor Frame



Cab Section

MNR Dual Mode Locomotive Project

Observation

- It's the IEC's understanding that a Diesel Exhaust Fluid storage and dispensing system, which is required for the diesel fuel additive to achieve the 85% emission reduction on the new locomotives, will be included in a separate project.



MTA New Bus Program

Daniel Cardoza
Vice President & Chief Maintenance Officer
NYCT/DOB & MTA Bus Company

Current Bus Fleet and Fleet Age

MTA operates the **largest bus fleet in the country**, with a diverse portfolio

Since last year, the average age of the fleet has been **reduced by 6 months**

New bus replacements allow us to:

- **Improve reliability**
- **Deliver new customer amenities**
- **Achieve our Zero-Emissions Bus goal**

Bus Type	Number of Buses	Average Fleet Age (years)
Standard 40 feet	3,606	7.09
Articulated 60 feet	1,162	7.47
Coach 45 feet	1,041	8.29
Total	5,809	7.38

Age of Bus Fleet



Above figures based on Spring 2023 Bus Assignment



2015-2019 Capital Program Bus Procurements

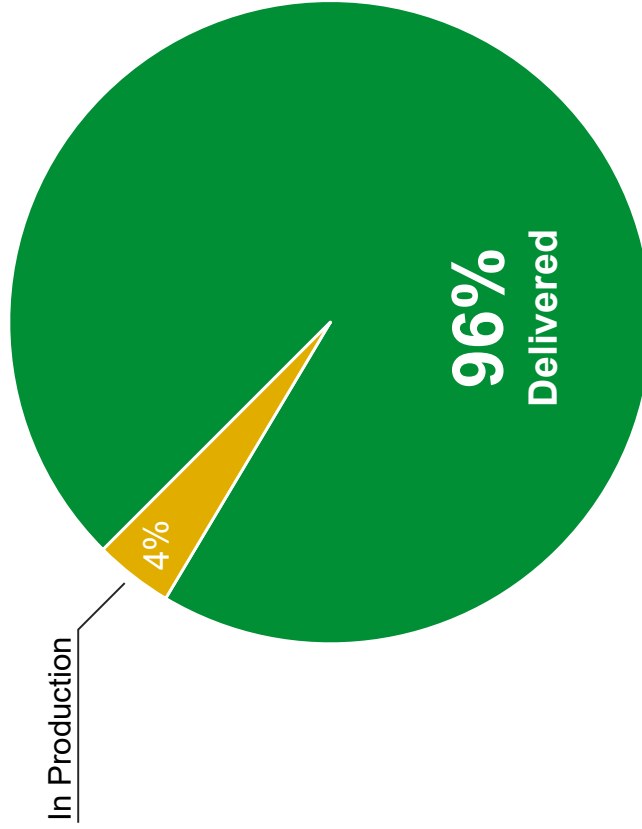
100% of 2015-2019 Program bus purchases awarded

- 1,776 total buses
- 96% of buses delivered (1,706)

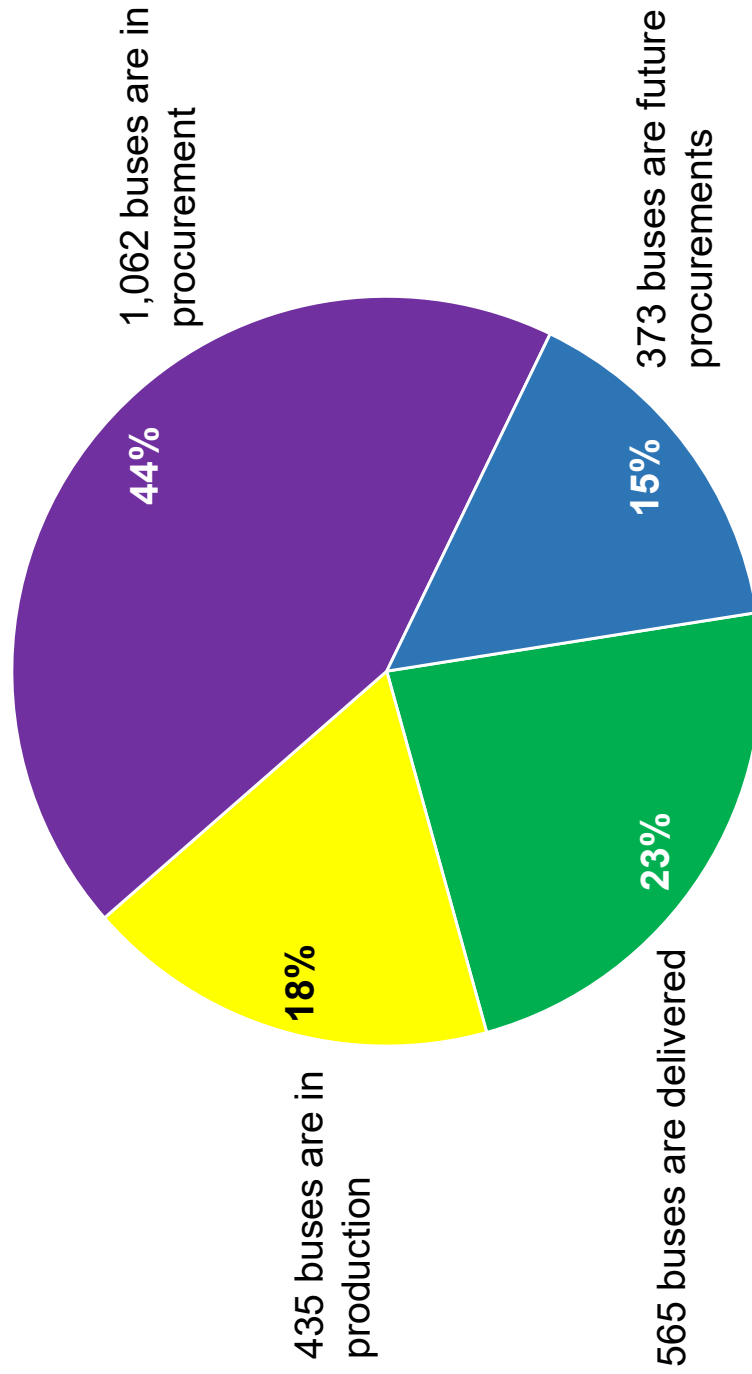
Production underway for 2 contracts

- 25 standard clean-diesel buses - part of 135 Nova bus order (110 are in the 20-24 Capital Plan)
- 45 standard battery-electric buses - part of 60 New Flyer bus order (15 are in the 20-24 Capital Plan)

2015-2019 Capital Program Bus Purchases



2020-24 Capital Program Bus Procurement Overview



Reliability

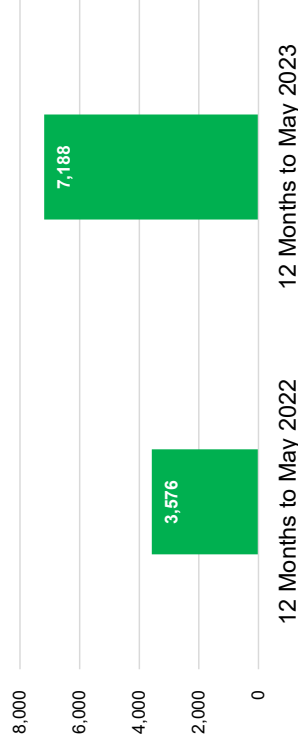
Buses delivered between 2021 and 2023 include electrified components as part of our transition to zero emissions

- Worked through infancy failures and applied lessons learned to current and future procurements

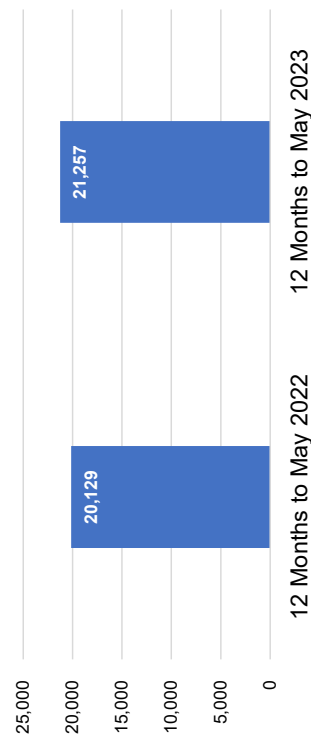
Mean Distance Between Failure (MDBF) has improved as a result of increased oversight

- Working closely with bus manufacturers to identify root causes of individual component/system failures and implement engineering solutions
- Issuance of Fleet Defect notifications to require retrofits and proactive changes to the production line

MDBF of New Local Buses
Delivered 2021-2023



MDBF of New Express Buses
Delivered 2021-2023



2020-2024 Capital Program Contracts - Current

- All contracts are within budget
- Continue to work closely with bus manufacturers to mitigate schedule slippages primarily driven by vendor labor and material shortages, and a NHTSA recall associated with our 60 BEB procurement
- Provide critical oversight to improve and resolve production technical and quality issues driven primarily by vendor labor shortages
 - Meet regularly with the bus manufacturer Principals, and Executive Officers
 - Meet daily with project teams

Fleet	Completion Date as of Last Report	Current Completion Date	Current Budget
209 Nova Standard Diesels	February 2023	June 2023	\$141.2 million
135 Nova Standard Diesels*	March 2023	October 2023	\$96.8 million
116 New Flyer Standard Diesels	May 2024	May 2024	\$101.3 million
173 Nova Standard Diesels	July 2024	July 2024	\$149.4 million
60 New Flyer Standard BEBs**	September 2023	September 2024	\$72.6 million
5 Nova BEBs	April 2024	September 2024	\$10.6 million

* 25 of 135 buses in 2015-2019 Capital Program

** 45 of 60 buses in 2015-2019 Capital Program



Zero-Emissions Fleet Progress

Zero-Emissions Bus Program: MTA's commitment to reduce operating emissions by 85% by 2040

60 New Flyer Bus Purchase

- Pilot buses scheduled to begin testing Q3 2023
- Bus deliveries delayed due to NHTSA recall

5 Nova Standard Bus Test & Evaluate

- Contract awarded in September 2022
- Pilot bus testing scheduled to begin Q4 2023

470 Bus Purchase

- Proposals under review; award projected for Q4 2023
- Also submitted Lo-No Grant applications for additional funding



FTA “Champion of the Challenge” award recipient!



Bus Improvements



Accessibility

- All new buses will be equipped with additional flip-up seats to provide accessibility accommodations.



ABLE: Automatic Bus Lane Enforcement

- 423 buses are equipped in service
- On track to retrofit another 600 buses this year; by the end of the year, will have more than 1,000 ABLE-equipped buses across all five boroughs



Bus Improvements



Bike Racks

- 110 buses are being retrofitted
- Completion slated for Q3 2023



Digital Information Screens (Phase II)

- Phase II consists of 953 buses retrofitted with DIS
- By the end of the year, approximately 4,700 buses will have DIS

APPENDIX

Ongoing Bus Deliveries 209 Nova Clean-Diesel 40-ft Standards (NYCT-DOB)

- Contract for 209 buses awarded February 2020
- \$141.2 million budget (on budget)
- 193 of 209 buses delivered
- Buses are operating in Queens



Completed Bus Deliveries 126 Nova Hybrid 40-ft Standards (NYCT-DOB)

- Contract for 126 buses awarded February 2020
- \$107.9 million budget (on budget)
- All 126 buses delivered
- Buses operating in the Bronx and Manhattan



Completed Bus Deliveries 23 Prevost 45-ft coaches (NYCT-DOB)

- Contract for 23 buses awarded December 2021 (4 buses are operating funded)
- \$14.27 million budget – Capital (on budget)
- \$ 2.5 million budget – Operating (on budget)
- All 23 buses accepted
- Buses operating in Staten Island



Completed Bus Deliveries 139 New Flyer Clean-Diesel 40-ft Standards (NYCT-DOB)

- Contract for 139 buses awarded March 2021
- \$98.8 million budget (on budget)
- All 139 buses accepted
- Buses are operating in Brooklyn



2020-2024 Capital Program Contracts - Upcoming

Fleet	Agency	Current Budget
Contracts in Procurement		
355 Standard BEBs (Part of 470 BEBs)	NYCT	\$497.8 million
25 Standard BEBs (Part of 470 BEBs)	MTA Bus	\$35.1 million
90 Artic BEBs (Part of 470 BEBs)	NYCT	\$164.3 million
245 Articulated Buses	NYCT	\$282.4 million
250 Express Buses	MTA Bus	\$208.9 million
92 Express Buses	NYCT	\$80.7 million
5 Express BEBs	NYCT	\$8.3 million
Future Contracts		
5 BEB Test Buses	NYCT	\$12.0 million
110 Standard CNG Buses	MTA Bus	\$107.8 million



Service Reliability Improvements

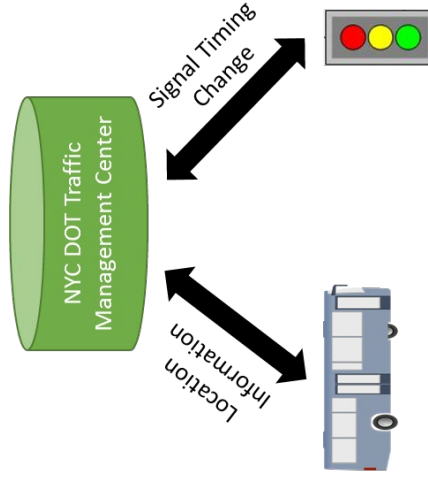


Automatic Bus Lane Enforcement (ABLE)

- ABLE legislation amended to include bus stops and double parking
- Partnership with NYCDOT/NYCDOF to ticket vehicles in bus lanes
- ABLE buses on 423 buses on 16 routes in all five boroughs.
- Over 250,000 violations issued since the inception of the program
- 80% of violators commit only one violation, and only 8% of violators commit more than two violations.
- Expanding to total of 1,000 buses by the end of the year

Transit Signal Priority (TSP)

- Shortens red or extends green lights to allow buses to travel without stopping
- Over 4,400 buses deployed across 122 routes
- All new buses are TSP-ready
- 732 new intersections with TSP over '22 and '23
- Over 3,000 intersections systemwide



Safety Improvements

Advanced Camera Systems

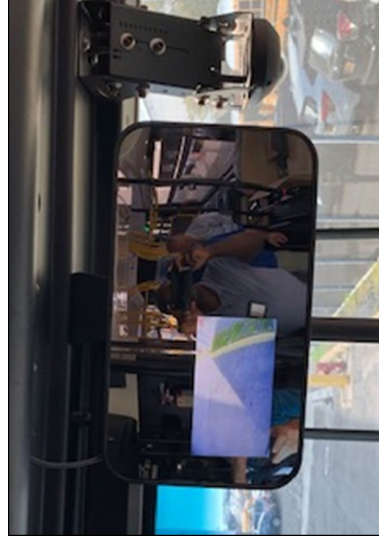
- Improve situational awareness for incident investigations
- Over 4,900 buses currently equipped
- All new buses come equipped



Advanced Camera System

Back-Up Cameras

- Provide added visibility and safety for operators while backing up
- Nearly 2,000 buses are currently equipped
- All new buses will come equipped



Back-Up Camera

Safety Improvements

Pedestrian Turn Warning (PTW)

- Audible announcement outside the bus when the bus makes a turn
- Approximately 2,400 buses are currently equipped



Pedestrian Turn Warning

High Visibility (Hi-Vis) Windows

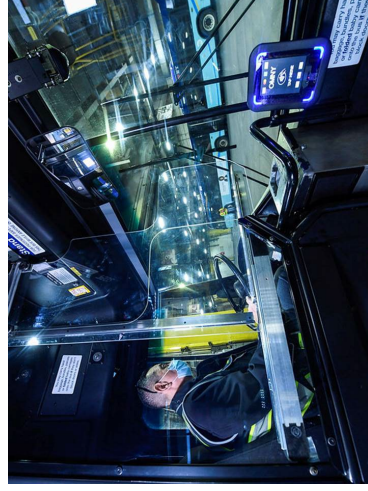
- Structural changes reduce obscuration by ~50%
- Approximately 2,500 buses currently equipped



New Hi-Vis Window

Bus Operator Barriers

- Barriers installed on 100% of the local fleet, to be followed by express buses
- All local buses have been retrofitted with a polycarbonate slider



Bus Operator Barriers

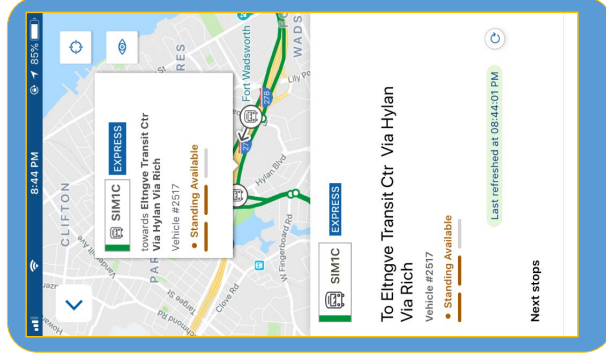
Customer Amenities

Automatic Passenger Counters (APC)

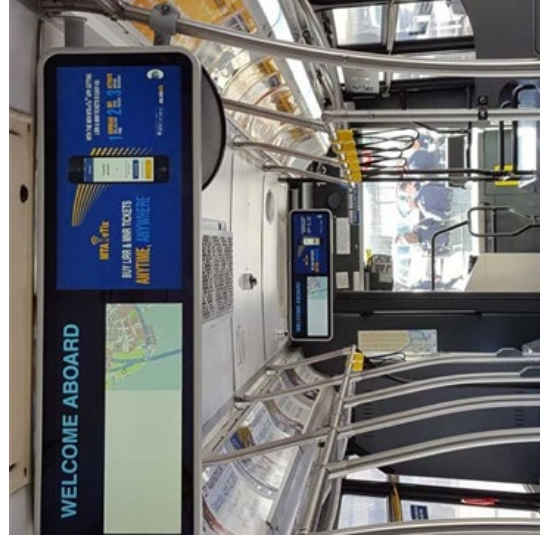
- Provides real-time information on vehicle loads
- Over 4,100 buses currently equipped
- Retrofit of 350 buses planned for EOY

Digital Information Screens (DIS)

- Provides customers with a new level of “next stop” information, as well as service alerts, and other digital content
- Contract for retrofit of ~950 buses awarded and retrofits planned for completion by EOY
- Over 3,900 buses currently equipped



Automatic Passenger Counter
Real Time Seat Availability

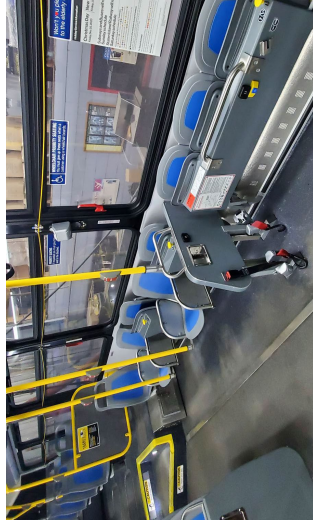


Digital Information Screens

Accessibility Enhancements

Accessibility enhancements developed with the System Wide Accessibility Group

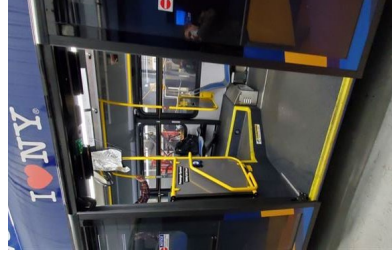
- Additional flip-up seats for flexible seating options (e.g., walkers, strollers, etc.), and new longitudinal seats
- Wider ramp with improved visible delineation (Ramp widened from 30 inches to 32 inches)
- Wider rear door allows ease in egress with improved access to handrails (Door width increased from 30 inches to 40 inches)



Longitudinal Alternating Flip-up Seats



Wider Ramp with Stripe



Wider Rear Door

May 2023 CPC Independent Engineering Consultant Project Review

MTA New Bus Program

MTA New Bus Program

Overall, Bus Contract status update since last report

- The IEC is monitoring 17 bus contracts (see *table on next page*)
 - 5 bus contracts for 1053 buses valued at \$777.6M are completed.
 - Completions were delayed due to COVID, technical & supply chain issues.
 - 8 bus contracts for 489 vehicles valued at \$436.6M are active.
 - Except for Battery Electric Buses (BEBs) all contracts are on schedule and on budget.
 - 4 contracts for 970 buses are in procurement – proposals have been received.
 - One of the 4 contracts in procurement is for 470 BEBs for which proposals have been received.

Battery Electric Bus (BEB) Status (included in contracts above)

- There are 15 BEBs currently being tested in Manhattan.
- Contracts for 60 BEB have been delayed.
 - Now planned to be completed by September 2024, a 10-month slip since last report.
 - EAC has increased by \$6.5M since our last report due to Early Warning Detection System development.
- The IEC concurs with the bus procurement team on cost and schedule as reported.

MTA New Bus Program

Bus Contract Status						
Mfg	Qty	Bus Type	Award	Budget	EAC	Comments
Completed Contracts						
Prevost	50	DEB	Nov-19	\$33.9M	\$33.9M	Delivery completion slipped from 12/2021 to 12/2022
Prevost	23	DEB	Dec-21	\$16.8M	16.8M	Delivery completion on time
Prevost	257	DEB	Nov-19	\$166.7M	\$166.7M	Delivery completion slipped from 2/2022 to 3/2023
New Flyer	84/139	HEB/SDB	Dec-19	\$170M	\$170M	2 option orders - Includes 4 pilot buses 84 HEB completion slipped from 3/2022 to 4/2022 139 SDB completion slipped from 3/2022 to 10/2022
Nova	165/ 126/209	HEB HEB/SDB	Oct-20	\$400.2M	\$400.2M	Base order + 2 options Base order completion slipped from 10/2021 to 1/2023 Options (2) delivery completion slipped from 3/2022 to 4/2023
Active Contracts						
New Flyer	15	BEB	Dec-21	\$17.3M	\$18.5M	1) Evaluation is delayed due to testing, force majeure, technical changes. Planned completion 3Q2024, a 10-month slip. 2) Contract costs increased \$6.5M from \$72.4M to \$78.9M due to Early Warning Detection System development.
New Flyer	45	BEB	Dec-21	\$55.1M	\$60.4M	
Nova	25	SDB	Dec-21	\$16.4M	\$16.8M	Deliveries period from 6/2023 to 10/2023
Nova	25	SDB	Dec-21	\$17.7M	\$17.7M	
Nova	85	SDB	Dec-21	\$61.9M	\$61.9M	
Nova	5	BEB	Sep-22	\$10.7M	\$10.6M	1) Undergoing test & evaluation; Configuration Audit planned 9/2023 to 10/2023 2) Deliveries planned for 09/2024, a six month slip due to supply chain issues to the ESS system 3) Contract cost reduced by \$0.1M (\$20k/bus)
Nova	173	SDB	Dec-22	\$149.4M	\$149.4M	Deliveries period from 11/2023 to 7/2024
New Flyer	116	SDB	Dec-22	\$101.3M	\$101.3M	Deliveries period from 7/2023 to 5/2024
Contracts in Procurement						
TBD	245	ADB	TBD	TBD	TBD	Proposals received
TBD	250	DEB	TBD	TBD	TBD	Proposals received
TBD	470	BEB	TBD	TBD	TBD	Proposals received
TBD	5	BEB	TBD	TBD	TBD	Proposals received

Bus types
 DEB - Diesel Express Bus
 HEB - Hybrid Electric Bus
 SDB - Stand. Diesel Bus
 BEB - Battery Electric Bus
 ADB - Artic. Diesel Bus

MTA New Bus Program

Observations

- Completed bus contracts experienced delivery delays and performance issues primarily due to:
 - Seat supplier issues.
 - Electric doors issues.
 - Part shortages.
 - Quality/technical problems requiring rework and impacting Mean Distance Between Failures (MDBF) failure rates.
- Manufacturers and vendors have identified root causes for technical and quality issues, and they are working to develop and implement proper corrective actions on active contracts.
- The IEC concurs with the MTA strategy of not accepting buses until all technical and quality issues are resolved and meet contract requirements.
- Upon receipt of the Zero-Emissions Fleet Transition study, which is due September 2023, the IEC will provide our assessment of the cost, infrastructure requirements and impact of the transition from Legacy to a Zero-Emissions Fleet.

MTA Board & Capital Program Committee Update

C&D Systems Projects

May 2023

MTA Construction & Development's last report to the Capital Program Committee on C&D Systems projects was in November 2022. Of the 27 contracts scheduled to be awarded last year, 25 projects were awarded (one project was an early 2023 project commitment). The total value of the projects awarded in 2022 was \$359M, an increase of \$247M over the previous year.

The Systems Business Unit provides expert project delivery for mission critical systems and control centers and to integrate advanced technology into Transit assets. It serves as a Center of Excellence for strategic planning for other projects. Typical projects include Control Centers and systems integration, emergency & customer communications, camera and electronic security systems deployment and communication networks.

The MTA is facing a generational challenge, and opportunity, in its mission critical systems and facilities. Succeeding in our operational, reliability, and sustainability goals, while in a rapidly evolving and demanding systems landscape, has become formidable. However, the capabilities and performance that new solutions offer us have also grown. These include more unified, intelligent Mission Critical Command and Control Systems, Customer Movement and Communication Management Systems, Plant (Power, Fans, Pump) Management Systems, Backbone Infrastructure (including Fiber and Radio Frequency communications), and Data Center Facilities.

To realize greater value in these areas, MTA C&D has constituted the Industrial & Systems Engineering (I&SE) function within its C&D Systems Business Unit. Industrial & Systems Engineering is tasked with working across the organization to identify, define, and deliver superior mission critical solutions to meet the businesses' needs in these areas. Using a combination of proven first principles, real world experience, and agency partnerships, Industrial & Systems Engineering will establish a capability-driven approach to drive the engineering of more powerful and appropriate industrial systems and facilities. Ultimately, I&SE's goal is for the MTA to be the leading Industrial and Systems Engineering (I&SE) organization in North American transportation.

Looking ahead in 2023, the C&D Systems focus will be to award 18 Projects with a value of \$942M. Planned project completions are 25 projects with a total value of \$292M. Challenges are primarily Human Resources constraints (attrition and staffing difficulty in attracting staff as outside companies are offering higher salaries).

Two projects have been awarded thus far in 2023 (with a combined value of \$14M) – W32557 UHF T-Band Radio System Replacement and W32530 Antenna Cable Replacement Manhattan Bridge - Phase 2.

This document summarizes the progress on three of our projects:

1. BMT Traction Power Control System Upgrade
2. UHF T-Band Radio System Replacement
3. Passenger Station Local Area Network (PSLAN)

**BMT Traction Power Control System Upgrade
C34866/7**

The project will improve reliability and operation of the existing BMT traction power control system and provide redundancy in case of failure. It will replace the antiquated Master Terminal Units at the Power Control Center with touchscreen LED monitors and a state-of-the-art video wall and construct a new Emergency Backup Power Control Center. Work will be performed at 13 power substations, 14 communications rooms, and the Power Control Center.

PROJECT STATUS	Original	Forecast
Substantial Completion	August 2025	August 2025
Estimate at Completion	\$55 M	\$55 M
The project is approximately 14% complete.		

**UHF T-Band Radio System Replacement
W32557**

This project’s initial scope was to replace the Subways’ UHF (Ultra High Frequency) T-Band radio system. As a cost savings approach, we reached an agreement with the MTA Police Department to use the Metropolitan Regional Radio System (MRRS) instead of building a new radio system. This approach reduced the project cost by \$35M, reduced the project delivery schedule by 20 months, and eliminated the risk of constructing new radio sites in NYC. It also provided a larger radio coverage area and utilized more channels resulting in increased system capacity.

PROJECT STATUS	Original	Forecast
Substantial Completion	April 2024	April 2024
Estimate at Completion	\$7 M	\$7 M
The project is approximately 2% complete.		

**Passenger Station Local Area Network (PSLAN)
A37183
E34050/1**

These projects involve the installation of network access nodes on platforms and the expansion of Passenger Station Local Area Network (PSLAN) infrastructure to provide connectivity for improved Public Address / Customer Information Screen systems, and the ADA, Elevator, and Escalator Programs. Work is performed by in-house forces with a total budget of \$21M. This new C&D approach leverages the network & technology experience of the Systems Business Unit and the expertise of the Stations Business Unit to deliver greater value for our customers.

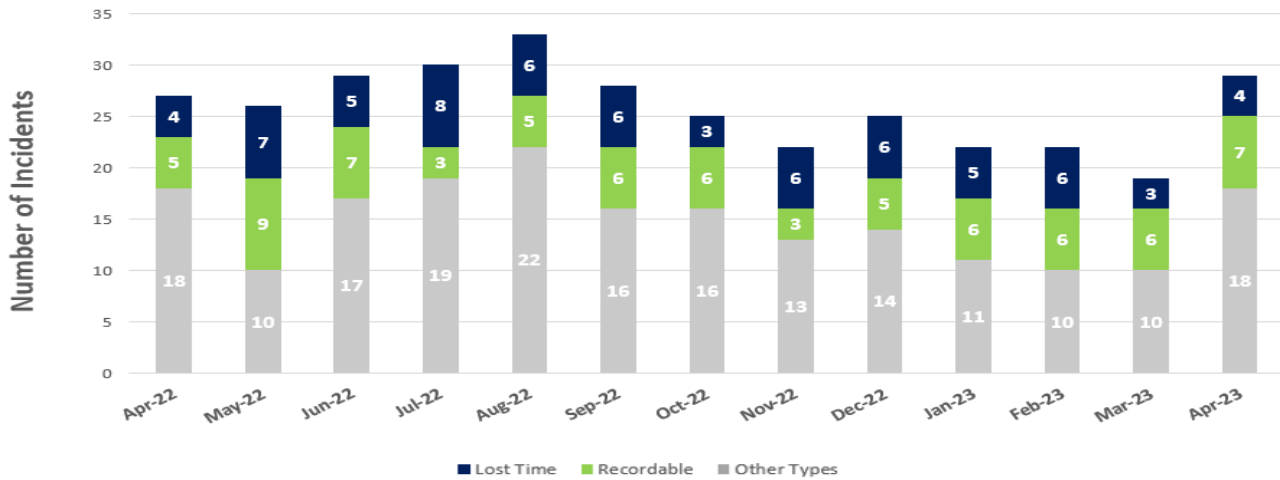
PROJECT STATUS	Original	Forecast
Substantial Completion	11/2023	11/2023
Estimate at Completion	\$21 M	\$21 M
The project is approximately 28% complete.		

Systems TLR Summary

IEC's Systems Business Unit Review:

- C&D's Systems Business Unit is represented this month by the 12 Systems projects monitored by the IEC in the latest quarterly Traffic Light Report (TLR).
- The **12** projects were reviewed for both Cost and Schedule performance. This quarter, **1** Project triggered a Red variance due to a schedule delay.
- This project, the upgrade of the Asynchronous Fiber Optic Network valued at \$28M, experienced a 9-month schedule delay due to lack of Electronic Maintenance Division (EMD) support and equipment supply chain delays.
- C&D is preparing a variance report for the project and the report will be included in June's CPC package with the overall quarterly TLR results for all MTA's Agencies and Business Units.

OSHA Classifications - April 2022 - April 2023



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

APRIL UPDATE:

- **29 safety incidents were reported in April 2023, including:**
 - 4 lost time incidents
 - 7 recordable incidents
- **Reported lost time incidents in April 2023 increased by 33% (or 1 incident) vs. March 2023**
- **Leading lost-time and recordable incident types for April 2023 were Caught In Between (27%), Slip/Trip/Fall (27%), Struck by/Against (27%), and Debris in Eyes (18%).**
- **1 serious incident in April*.**

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	1	6%	9	36%	8	33%	8	32%	26	28%
Slip, Trip, Fall	7	39%	4	16%	6	25%	5	20%	22	24%
Other	4	22%	4	16%	2	8%	7	28%	17	18%
Sprain/Strain	3	17%	2	8%	5	21%	4	16%	14	15%
Caught in Between	2	11%	6	24%	3	13%	1	4%	12	13%
Electrical	1	6%	0	0%	0	0%	0	0%	1	1%
Totals	18	100%	25	100%	24	100%	25	100%	92	100%

- **LOST TIME INCIDENT TRENDS:** 18 lost time incidents have been reported YTD (through April 30, 2023), an increase of 6% (or 1 incident) vs. the same reporting period in 2022. This year's (through April 30, 2023) top injury types associated with lost time incidents are Slips/Trips/Falls (39%).
- **RECORDABLE INCIDENT TRENDS:** 25 recordable incidents have been reported YTD (through April 30, 2023), an increase of 79% (or 11 incidents) vs. the same reporting period in 2022. This year's (through April 30, 2023) top injury type associated with recordable incidents is Struck By/Against (36%)
- **SERIOUS INCIDENTS:** 2023 Total – 3
 - ELECTRICAL SHOCK - 1
 - ENVIRONMENTAL – 1
 - FALL – 1* (new)

INSPECTIONS & AUDITS:

- **APRIL INSPECTIONS:**
 - **INTERNAL – 254**
 - **EXTERNAL – 574** (129 Third-Party Safety Consultants; 445 OCIP Visits)
- **YTD TOTAL # OF INSPECTIONS:**
 - **INTERNAL – 921**
 - **EXTERNAL – 2,227** (352 Third-Party Safety Consultants; 1,875 OCIP Visits)
- **APRIL NEGATIVE OBSERVATION(S)** – Negative Findings identified through the various inspections include Housekeeping, Fire Protection/Prevention, Fall Protection, Security & Public Protection, and Stairs & Ladders.
- **APRIL POSITIVE OBSERVATION(S)** - Positive Findings identified through the various inspections include General Safety, Supervision/Organization, Fire Protection, Tools (Hand & Power), and Electrical.

INVESTIGATIONS & LESSONS LEARNED:

- **NUMBER OF INVESTIGATIONS for APRIL – 1***
 - **C-33941 – Lost Time – 4/19/2023 – Fall from Height** – Contractor employee fell from an engineered work platform approximately 12.5' in height. The worker suffered a broken femur, skull fractures and was hospitalized for several days. A preliminary investigation conducted by C&D Safety identified multiple contributing factors, some of which were not recognized by the Contractor's competent personnel, supervision, or Safety Engineer. A Stop Work Order (SWO) was issued to the project, and the Contractor was directed to have an independent Safety Consultant visit the worksite and perform a safety audit of the site and associated work practices. The Contractor corrected all items identified by the Consultant and revised appropriate Safe Work Plans, especially those with fall exposure potential. The Safety Engineer of the project was also replaced. Safety bulletins reflecting lessons learned are being drafted specific to the incident to be distributed.

MTA C&D SAFETY STRATEGIC INITIATIVES:

- CD 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.
- 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.
 - Presented C&D initiative to MTA HQ Safety Leadership and the proposed implementation. The presentation was well received. AECOM is developing 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.
 - 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 has started performing inspections within the various CD Business Units with a small group of inspectors off a current contract modification. There have been challenges with rollout and implementation that C&D Safety Oversight has worked with the Consultant to resolve. C&D Safety Oversight met with the

Consultant's Executive Management Team and reviewed their corrective action plan. Inspections continue to be closely monitored by C&D Safety Oversight.

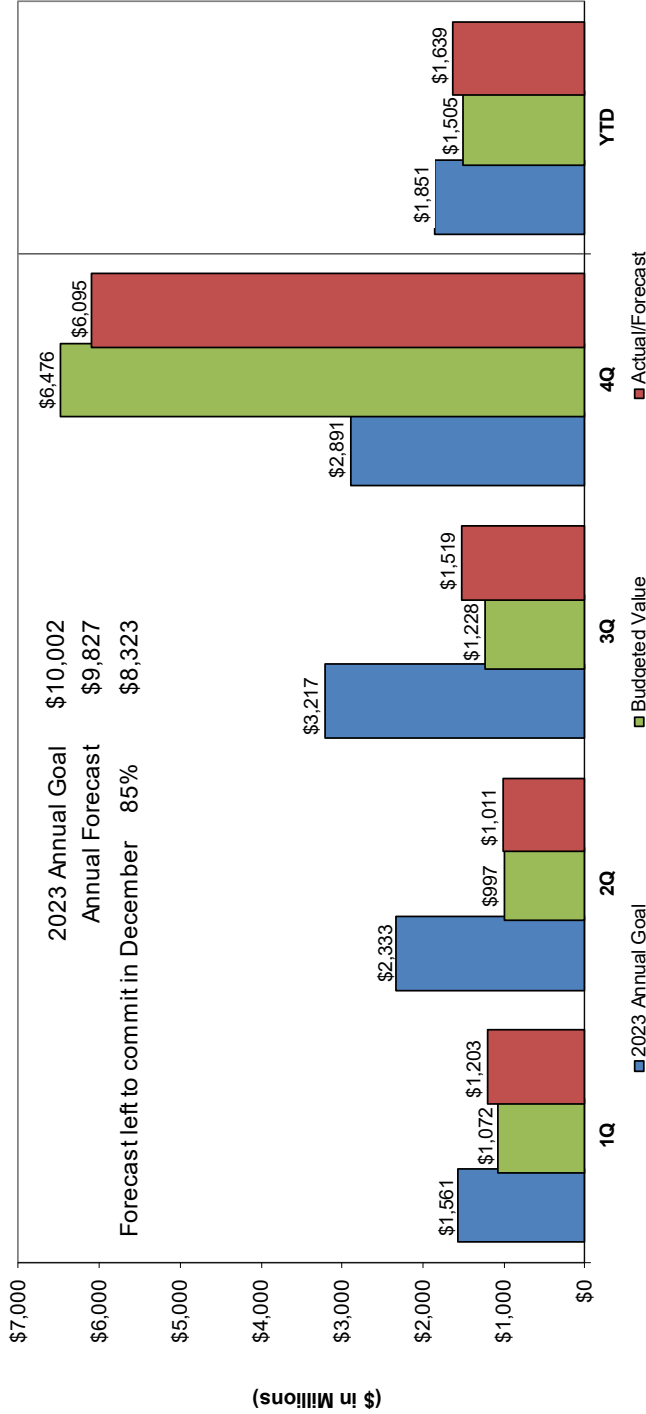
- VP Safety Oversight continues outreach initiatives with Contractors and Construction organizations to discuss C&D Safety trends and lessons learned from current projects. The Monthly & Quarterly Outreach meetings with the various PMC/CCM consultant companies are ongoing and include discussions on possible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

MTA Capital Program Commitments & Completions

**through
April 30, 2023**

Capital Projects – Commitments – April 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

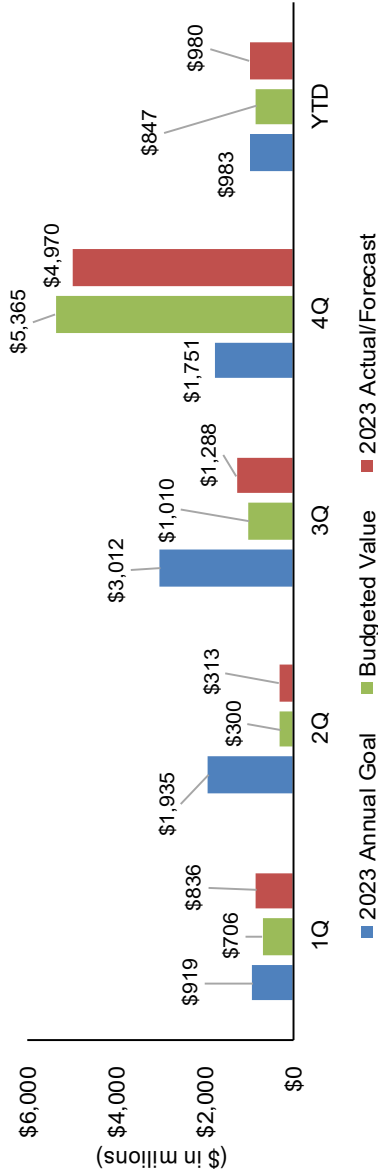
In 2023 the MTA plans to commit \$10 billion worth of capital projects. The MTA is tracking 38 "major" commitments across the agencies and business units. At the end of each quarter in 2023 any schedule variances will be reported on the following pages.

Through April, the MTA has committed \$1,639 million versus a \$1,851 million YTD goal and by year end the MTA expects to make 98% of its \$10 billion goal. The ~\$212 million shortfall in actual commitment versus the YTD annual goal is due to several smaller projects from the Long Island Rail Road as well as Expansion's Penn Station Reconstruction Design award which have been delayed past April. These are still expected to be committed later in the year.

NYCT/MTA Bus Capital Projects – Commitments – April 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	\$983
2023 Actual/Forecast	\$836	\$313	\$1,288	\$4,970	\$980
Budgeted Value	\$706	\$300	\$1,010	\$5,365	\$847



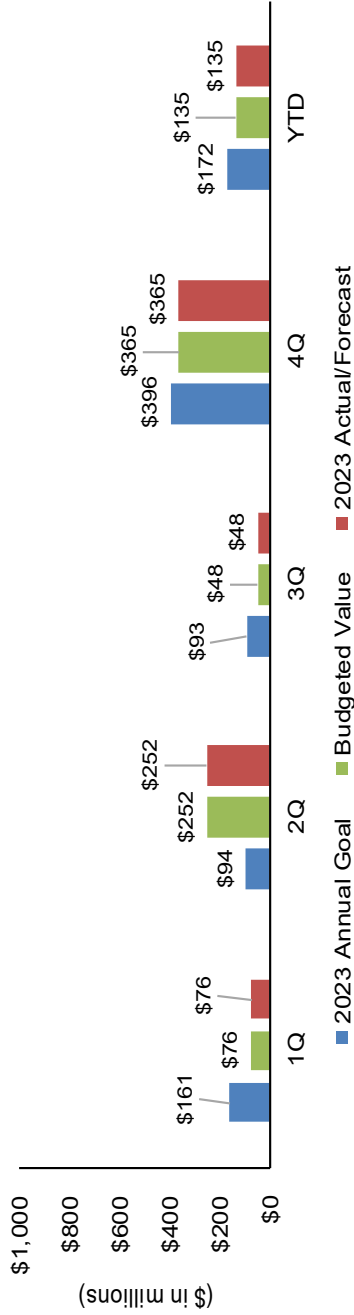
Q1 Schedule Variances

There are no major schedule slippages to report for NYCT and MTA Bus.

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

LIRR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	\$161	\$94	\$93	\$396	\$172
2023 Actual/Forecast	\$76	\$252	\$48	\$365	\$135
Budgeted Value	\$76	\$252	\$48	\$365	\$135



Q1 Schedule Variances

Project	Commitment	Goal	Act./Forec.
---------	------------	------	-------------

1 LIRR Amber Commitment

Amber delays are within 2 months of goal.

Track

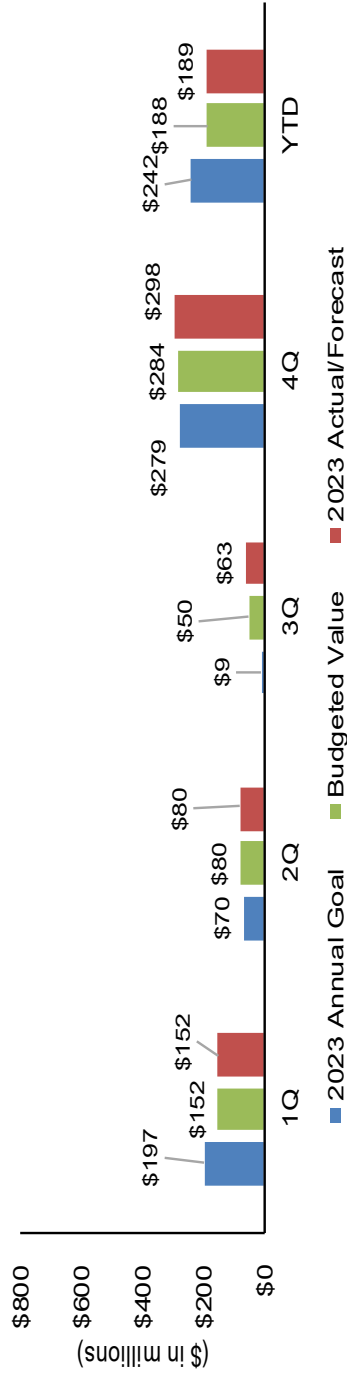
2023 Annual Track Program	Construction	Mar-23	Apr-23 (A)
		\$ 62.0	\$ 50.0

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 – April 2023 – Budget Analysis and Schedule Variances

MNR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	\$197	\$70	\$9	\$279	\$242
2023 Actual/Forecast	\$152	\$80	\$63	\$298	\$189
Budgeted Value	\$152	\$80	\$50	\$284	\$188



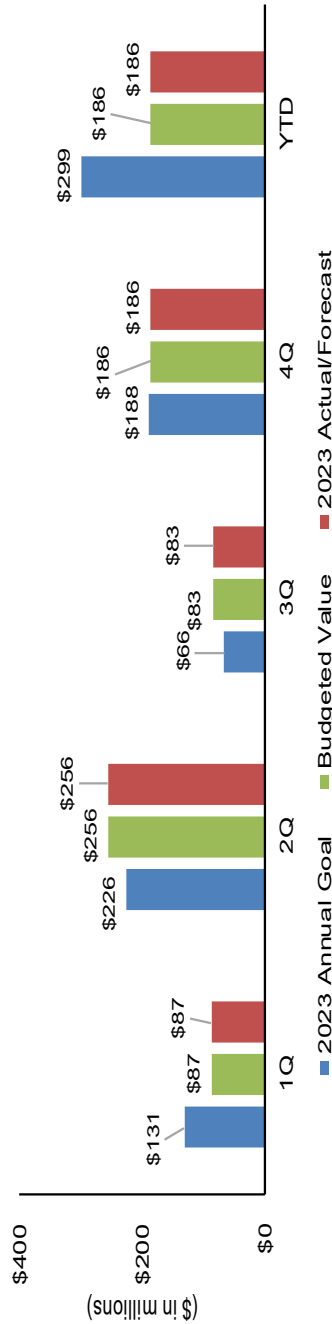
Q1 Schedule Variances

There are no major schedule slippages to report for Metro-North Railroad.

MTA Network Expansion Projects – Commitments – April 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	\$299
2023 Actual/Forecast	\$87	\$256	\$83	\$186	\$186
Budgeted Value	\$87	\$256	\$83	\$186	\$186



Q1 Schedule Variances

Project	Commitment	Goal	Act./Forec.
---------	------------	------	-------------

1 Network Expansion Amber Commitments

Amber delays are within 2 months of goal.

Penn Station Access

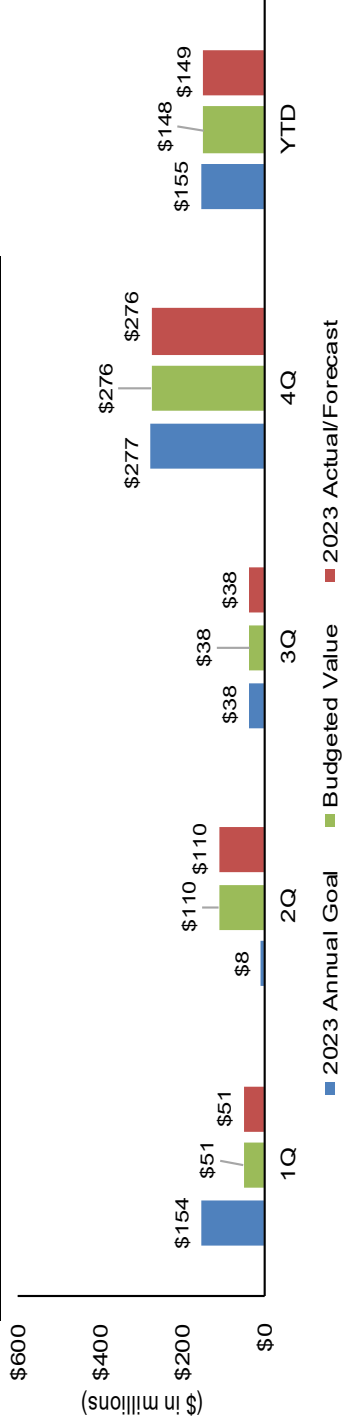
Penn Reconstruction: Architectural & Engineering Design Svcs - FXC WSP	Design	Mar-23	May-23
		\$ 60.82	\$ 60.82

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

B&T Capital Projects – Commitments – April 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	\$155
2023 Actual/Forecast	\$51	\$110	\$38	\$276	\$149
Budgeted Value	\$51	\$110	\$38	\$276	\$148



Q1 Schedule Variances

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

Capital Projects – Completions – April 2023

Forecast	MTA-wide 2023 Major Completions												Post 2023
	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	
Goal	4	1	3	4	2	5	1	1	3	4	1	12	1
Total	4	4											
Jan-23	4												
Feb-23	1	1			1								
Mar-23	6	2	2	2	1	1						1	
Apr-23	6	1	1	2	1	3						1	
May-23	2		1	1									
Jun-23	2				1	1			1				
Jul-23	2					1	1					1	
Aug-23	1						1	3					
Sep-23	3								3				
Oct-23	3									3			
Nov-23	2										1		
Dec-23	10			1								9	1

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

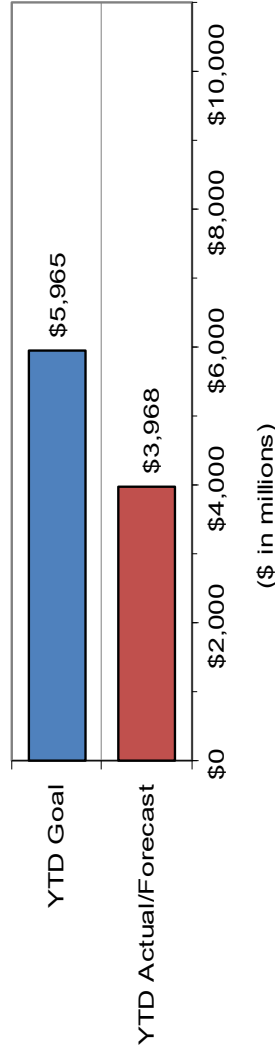
In 2023 the MTA plans to complete \$10.4 billion of projects. 42 Major completions are being tracked throughout the year.

Through April, the MTA has completed \$3,968 million versus its year to date goal of \$5,965 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 Spring. 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 \$10,070

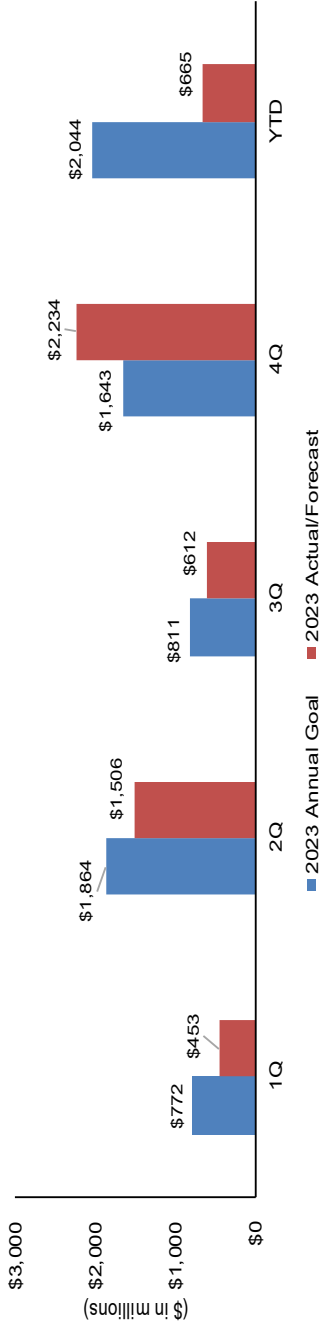


NYCT/MTA Bus Capital Projects – Completions – April 2023 – Budget Analysis and Schedule Variances

NYCT and MTA Bus Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	\$772	\$1,864	\$811	\$1,643	\$2,044
2023 Actual/Forecast	\$453	\$1,506	\$612	\$2,234	\$665

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. <i>Superstorm Sandy</i>			
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.			
<i>Signals & Communications</i>			
CBTC QBL West Ph.1 /Siemens	Construction	Apr-23 \$221.7	Dec-23 \$221.7
Change in project schedule due to the vendor's softw are-related reliability issues.			
<i>Stations</i>			
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.			
3 NYCT/MTA Bus Amber Completions (2 new this month) Amber delays are within 2 months of goal. <i>Staten Island Railway</i>			
M Track Rehab & Clifton Yard Sw itches	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 Red Completions (continued) <i>Line Equipment</i>			
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.			
<i>MTA Bus</i>			
Storeroom Expansion - LaGuardia	Construction	Mar-23 \$7.4	Jun-23 \$7.4
The projects' revised completion date reflects the delivery delay of a critical disconnect sw itch.			

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

Schedule Variances (Continued)

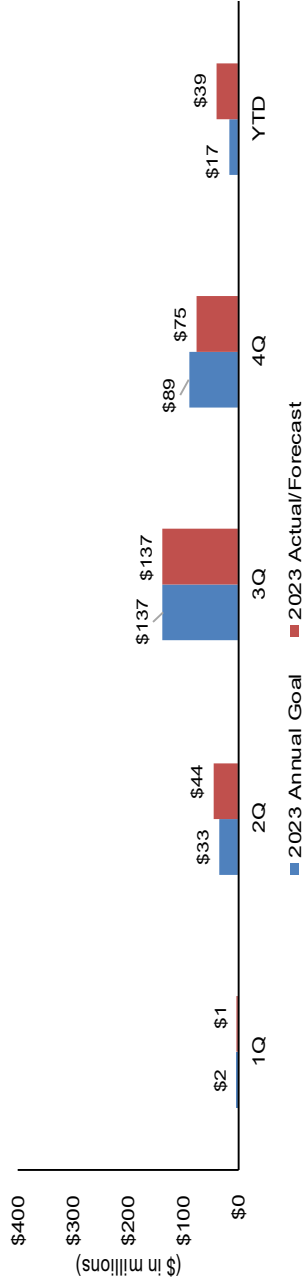
Project	Completion	Goal	Act./Forec.
3 NYCT/MTA Bus Amber Completions (2 new this month)			
Amber delays are within 2 months of goal.			
<i>Superstorm Sandy</i>			
Coney Island Yard: Sandy	Construction	Apr-23	Jun-23
Repair/Mitigation and CBHs (New Item)		\$609.0	\$609.0
Change in project schedule reflects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

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

LIRR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2023 Annual Goal	\$2	\$33	\$137	\$89	\$17
2023 Actual/Forecast	\$1	\$44	\$137	\$75	\$39

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



Schedule Variances

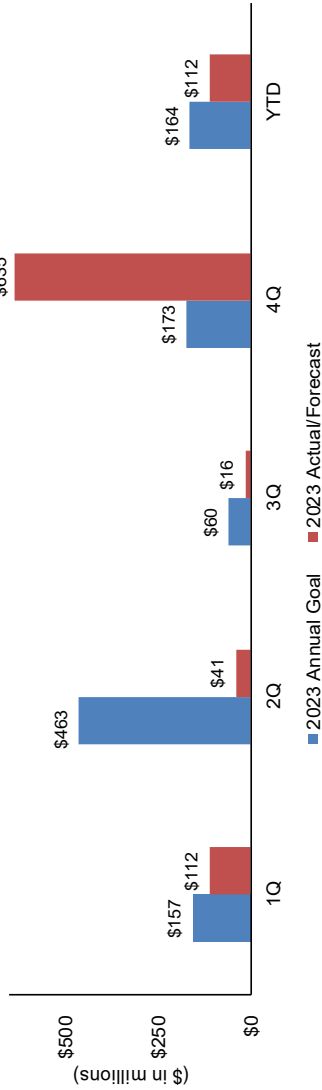
There are no major schedule slippages to report for the Long Island Rail Road.

MNR Capital Projects – Completions – April 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	\$41	\$16	\$635	\$112

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.
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1 Metro-North Red Completions (1 New Item)

Red delays are beyond 2 months of goal.

Shops

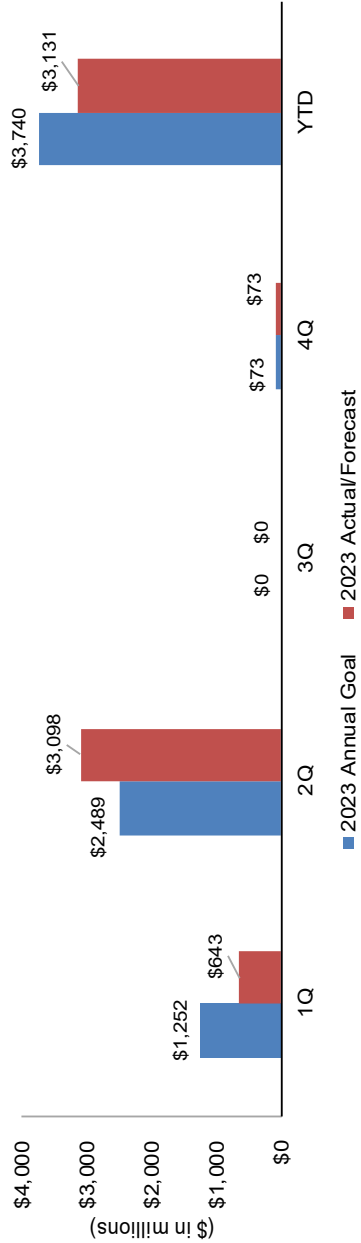
Harmon Shop Replacement - Phase V (New Item)	Construction	Jun-23	Oct-23
		\$439.6	\$439.6

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

MTA Network Expansion Projects – Completions – April 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	\$3,740
2023 Actual/Forecast	\$643	\$3,098	\$0	\$73	\$3,131



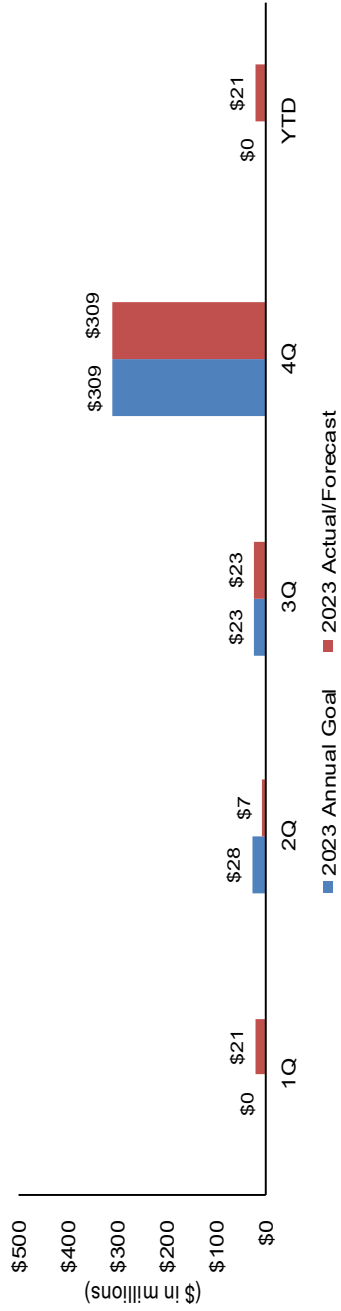
Schedule Variances

Project	Completion	Goal	Act./Forec.	Project	Completion	Goal	Act./Forec.
1 Network Expansion Completion (0 new this month)				1 Network Expansion Completion (0 new this month)			
Red delays are delayed more than 2 months of goal.				Amber delays are within 2 months of goal.			
<i>East Side Access</i>				<i>East Side Access</i>			
GCT Concourse & Facilities	Construction	Feb-23	May-23	Concourse, Cavern & Facility	Construction	Mar-23	May-23
		\$572.0	\$572.0	Detailing Services CM030		\$37.1	\$37.1
<p>Delay to CM014B is driven by the completion and testing of a freight elevator followed by ceiling/flooring finishes. This delayed scope is not required for revenue service and has no impact on the riding public.</p> <p>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.</p>							

B&T Capital Projects – Completions – April 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	\$0
2023 Actual/Forecast	\$21	\$7	\$23	\$309	\$21

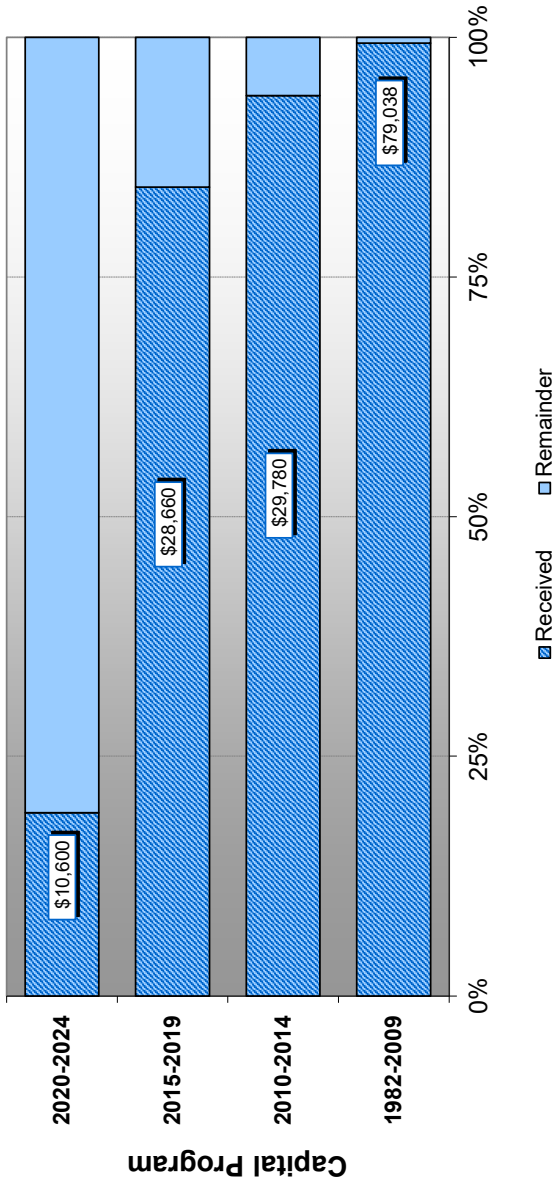


Schedule Variances

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

Status of MTA Capital Program Funding

Capital Funding (April 2023)
\$ in millions



Capital Funding Detail (April 2023)

\$ in millions

	Funding Plan		Receipts	
	Current	Thru March	April	Received to date
2010-2014 Program				
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				
<i>Insurance Proceeds/Federal Reimbursement</i>	6,698	6,697	-	6,697
<i>PAYGO</i>	171	171	-	171
<i>Sandy Recovery MTA Bonds</i>	658	225	-	225
<i>Sandy Recovery B&T Bonds</i>	229	23	-	23
Total	31,701	29,780	-	29,780

	Funding Plan		Receipts	
	Current	Thru March	April	Received to date
2015-2019 Program				
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	2,942	1,925	-	\$1,925
Total	33,969	28,660	-	28,660

	Funding Plan		Receipts	
	Current	Thru March	April	Received to date
2020-2024 Program				
Capital from Central Business District Tolling	\$15,000	\$ -	\$ -	\$ -
Capital from New Revenue Sources	10,000	1,648	-	\$1,648
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	1,087	236	\$1,323
Federal New Start (SAS Ph2)	2,905	-	-	\$ -
Federal Flexible	581	54	74	\$128
Federal Other	78	28	30	\$58
Federal Security	30	10	-	\$10
B&T Bonds	3,327	248	-	\$248
Total	55,442	10,260	339	10,600

Contracts Department

Evan Eisland, Executive Vice President & General Counsel

**PROCUREMENT PACKAGE
May 2023**

PROCUREMENTS

The Procurement Agenda this month includes seven actions for a proposed expenditure of \$74.9M.

Staff Summary

Subject Request Authorization to Award Several Procurement Actions					
Contracts Department					
Evan Eisland, Executive Vice President & General Counsel					
Board Action					
Order	To	Date	Approval	Info	Other
1	Capital Program Committee	5/22/23	X		
2	Board	5/24/23	X		

Date: May18, 2023			
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 a Competitive Procurement in the following categories:

<u>Schedules Requiring Majority Vote</u>	<u># of Actions</u>	<u>\$ Amount</u>
H. Modifications to Personal and Miscellaneous Service Contracts	1	\$ 7,820,806
I. Modifications to Purchase and Public Work Contracts	4	\$ 61,567,480
SUBTOTAL	5	\$ 69,388,286

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

<u>Schedules Requiring Majority Vote</u>	<u># of Actions</u>	<u>\$ Amount</u>
K. Ratification of Completed Procurement Actions	2	\$ 5,466,260
SUBTOTAL	2	\$ 5,466,260
TOTAL	7	\$ 74,854,546

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.

May 2023

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

Schedule H. Modifications to Personal and Miscellaneous Service Contracts
(Staff Summaries required for all items greater than \$1M)

1. **Henningson, Durham & Richardson** \$ 7,820,806 **Staff Summary Attached**
Architectural and Engineering P.C.
Contract No. PSC-16-2991G.4

MTA Construction & Development requests that the Board approve a modification to the Contract 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.

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

2. **L3Harris Technologies, Inc.** \$ 55,117,480 **Staff Summary Attached**
Contract No. 6155.16

MTA Construction & Development requests that the Board approve a modification to the Contract for additional work to address system and cyber security upgrades and upgrades to the Operation and Maintenance plan.

- 3 & 4. **TC Electric/J-Track JV** \$ 5,210,000 **Staff Summary Attached**
Contract No. P36444.45 & .51

MTA Construction & Development requests that the Board approve two modifications to the Contract 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 impacts costs.

5. **EJ Electric Installation Company** \$ 1,240,000 **Staff Summary Attached**
Contract No. RK-66.9

MTA Construction & Development requests that the Board approve a modification to the Contract for the replacement of critical components to the cooling plant at the Robert Moses Building at the Robert F. Kennedy Bridge Facility.

Staff Summary

Schedule H: Modifications to Personal and Miscellaneous Service Contracts

Item Number: 1

Page 1 of 1

Vendor Name (& Location) Henningson, Durham & Richardson Architectural and Engineering P.C. Description IQ Architectural/Engineering Design for Miscellaneous Construction Projects Contract Term (including Options, if any) Seven Years Eight Months Eighteen days Option(s) included in Total Amount? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other: Requesting Dept/Div & Dept/Div Head Name: Delivery/Mark Roche	Contract Numbers PSC-16-2991G	Modification Number 4	
	Original Amount:	\$	35,827,978
	Prior Modifications:	\$	0
	Prior Budgetary Increases:	\$	0
	Current Amount:	\$	35,827,978
	This Request	\$	\$7,820,806
	% of This Request to Current Amount:		21.8%
	% of Modifications (including This Request) to Original Amount:		21.8%

Discussion:

This contract (the “Contract”) is one of fifteen indefinite quantity (“IQ”) consultant contracts for inspection, design, expert engineering and engineering support services on an as-needed basis. MTA Construction and Development (“C&D”) requests that the Board approve a budget increase to the Contract in a not-to-exceed amount of \$7,820,806, and an extension of the term of the Contract for two years and six months (to December 31, 2025). The additional authorized funding and extension of the contract term are to provide for the continuation of program and construction management and inspection services for the Central Business District Tolling Program (“CBDTP”) that were awarded under Task Orders 47, 59 and 76 of this Contract.

In February 2017, the Board approved the award of the competitively negotiated zero dollar-based IQ contracts to provide inspection, design, expert engineering and engineering support services on an as-needed basis for a period of six years. Task Orders 47, 59 and 76 were awarded to Henningson, Durham & Richardson Architectural and Engineering P.C. (“HDR”), one of the pre-qualified design teams under the competitively solicited IQ contracts to provide program and construction management and inspection services in support of the CBDTP. This modification will allow for the continuation of those services.

HDR submitted a proposal in the amount of \$7,932,877.20 for the continued services. Negotiation resulted in both parties agreeing to the negotiated amount of \$7,820,806. HDR has agreed to maintain their current rates for this modification. As HDR is currently performing these critical support services pertaining to CBDTP and already has in-place established program wide procedures, tools, protocols, and file management system necessary to perform the work, it is in the best interest of the MTA to have HDR continue to provide these services.

Staff Summary

Schedule I: Modifications to Purchase and Public Works Contracts

Item Number: 2

Page 1 of 1

Vendor Name (& Location) L3Harris Technologies, Inc. (Lynchburg, VA)	Contact Number 6155	AWO/Modification # 16
Description Design, Build and Maintain Services for the Metropolitan Transportation Authority Police Department Metropolitan Regional Radio System Upgrade	Original Amount: \$41,130,739 Base (capital) \$29,557,470 Options (capital & operating)	
Contract Term (including Options, if any) July 2015 – December 2024 (capital work, including system optimization) 20 years (System Operations & Maintenance)	Prior Exercise of Options and Modifications: \$26,974,715 (exercise of non-capital contract O&M options) \$684,071 (exercise of capital contract options) \$10,529,706.59 (modifications for additional capital work)	
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Prior Budgetary Increases: - 0 -	
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-Competitive	Current Amount: \$79,319,231.59	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid Other:	This Request: Capital \$14,916,901.94	
Funding Source Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	Operating \$40,200,578.00	
Requesting Dept/Div & Dept/Div Head Name: Metropolitan Transportation Authority Police Department	% of This Request to Current Amount: 69% % of Modifications/Options (including This Request) to Original Amount: 32%	

DISCUSSION

Contract 6155 (the “Contract”) is for the upgrade and enhancement of the MTA Police Department’s (“MTAPD”) radio system and infrastructure and the installation of up to date equipment and technologies throughout the fourteen counties served by the MTAPD through strategic partnerships with local and state agencies. The Board’s approval is requested for a Modification to the Contract in the not to exceed amount of \$55,117,479.94 to (i) build out four (4) new sites and improve three (3) existing sites to expand coverage of MTAPD’s radio system in New York City; (ii) build out four (4) new sites to remedy gaps in coverage in the existing system in Westchester County; and (iii) expand the scope of the Operations and Maintenance plan to include the new sites in New York City and Westchester County built pursuant to this Modification and to upgrade and improve the system’s cybersecurity protections to meet MTA’s cybersecurity requirements and recommendations.

As a result of increased usage and cybersecurity requirements, the network that the New York State Police made available to the MTAPD for radio coverage in New York City can no longer support MTAPD’s requirements. Accordingly, under this Modification, four (4) new sites will be built, and three (3) existing sites will be improved to provide MTAPD with coverage within New York City. In addition, under this Modification, four (4) new sites will be built in Westchester County to address coverage gaps in the existing MTAPD radio system and, in Suffolk County the MTAPD radio frequencies will be re-tuned to comply with Federal Communications Commission regulations regarding radio interference. Lastly, this Modification will expand the scope of the Operations and Maintenance plan to cover the new sites added pursuant to this Modification and to update and improve cybersecurity for the system consistent with MTA’s cybersecurity requirements and recommendations.

The Contractor, L3Harris, submitted a final proposal in the amount of \$56,300,000 to perform this Work. The negotiated amount is not-to-exceed \$55,117,479.94 and is considered fair and reasonable. Funding is available through the MTAPD 2020 – 2024 capital budget as well as MTAPD operating funds.

Staff Summary

Schedule I: Modifications to Purchase and Public Works Contracts

Items Numbers: 3 and 4

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Vendor Name (Location) TC Electric/J-Track JV (Whitestone, New York)	Contract Number P36444	Mod. #s 45 & 51
Description Design-Build Services for Rutgers Tube Rehabilitation	Original Amount:	\$ 90,500,000
Contract Term (including Options, if any) July 28, 2020 – December 31, 2021	Prior Modifications:	\$ 25,987,165
Option(s) included in Total Amt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a	Prior Budgetary Increases:	\$ 8,000,000
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive	Current Amount:	\$ 116,487,165
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification	Modification No. 45	\$ 1,997,500
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	Modification No. 51	\$ 3,212,500
Requesting Dept./Div., Dept./Div. Head Name: Delivery/Mark Roche	This Request:	\$ 5,210,000
	% of This Request to Current Amt.:	4.5%
	% of Modifications (including This Request) to Original Amount:	34.5%

Discussion:

Contract P36444 (the “Contract”) is for the Rutgers Tube rehabilitation. MTA Construction and Development Company (“C&D”) requests Board approval to award Modification Nos. 45 and 51 to the Contract to address deterioration and corrosion of existing electrical systems and equipment for the 53rd Street Tube.

In October 2020, the Board approved Contract Modification No. 1 to the Contract which added work for pump room controls upgrades for the 53rd Street Tube which spans between the Lexington Avenue/53rd Street Station in Manhattan and the Court Square-23rd Street Station in Queens. The systems and components within the 53rd Street Tube were damaged during Superstorm Sandy from the storm surge inflow of saltwater. The 53rd Street work is essential to implement resiliency measures that will protect against future flooding of the Tube.

After award of Modification No. 1, the Contractor identified significant deterioration and corrosion of the electrical systems feeding the fan plants, pump rooms and related equipment at Nott Avenue, Roosevelt Island, and Sutton Place which has led to the additional work addressed by these Modifications.

Modification No. 45

At Sutton Place, the existing electrical switchgear necessary to energize and de-energize the pumps and controls is severely corroded and requires replacement. This modification is to install new switchgear equipment that was purchased under Modification No. 50. The proposal for this modification was \$2,573,658 and through negotiations the parties agreed to \$1,997,500.

Modification No. 51

Modification Nos. 31, 35, 40, 41, 42, 44, 45 and 50 addressed various aspects of additional work associated with significantly deteriorated electrical equipment at three locations (Sutton Place, Roosevelt Island & Nott Avenue) in the 53rd Street tube. This Modification No. 51 addresses the schedule impact of all these modifications. The proposal for this modification was for a time extension of 754 calendar days and \$4,030,087 in impact costs and through negotiations the parties agreed to a time extension of 609 calendar days with a revised Substantial Completion date of September 1, 2023, and impact costs in the amount of \$3,212,500.

The agreed-upon lump-sum price for the two modifications is \$5,210,000, with an excusable and compensable time extension of 609 calendar days, which is considered fair and reasonable.

Staff Summary

Schedule I: Modifications to Purchase and Public Works Contracts

Item Number: 5

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Vendor Name (Location) E-J Electric Installation Co. (Long Island City, NY)
Description Design-Build Services for Electrical Upgrades at the RFK Facility
Contract Term (including Options, if any) November 27, 2019 – June 15, 2022 (2 years, 6 ½ months)
Option(s) included in Total Amount <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other
Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:
Requesting Dept./Div., Dept./Div. Head Name: Delivery/Mark Roche

Contract Number	AWO/Mod. #s
RK-66	9
Original Amount:	\$ 29,300,000
Prior Modifications:	\$ 2,324,206.24
Prior Budgetary Increases:	\$ N/A
Current Amount:	\$ 31,624,206.24
This Request:	\$ 1,240,000
% of This Request to Current Amt.:	3.9%
% of Modifications (including This Request) to Original Amount:	12.2%

Discussion:

This Contract is for design-build services for electrical upgrades at the Robert F. Kennedy Bridge Facility (“RFK Facility”). MTA Construction & Development (“C&D”) requests that the Board approve a modification to the Contract to replace critical components of the cooling plant at the Robert Moses Building (“RMB”) at the RFK Facility in the not-to-exceed amount of \$1,240,000.

On November 27, 2019, the Contract was awarded to E-J Electric Installation Co. (“E-J”) in the amount of \$29,300,000 pursuant to a competitive Design-Build RFP process. The Work under this Contract includes: (i) electrical upgrades to improve resiliency of the tolling operations at the RFK Facility; (ii) replacement of boilers at the RMB; and (iii) demolition of the existing North Widening columns, deck and superstructure of the Manhattan Plaza between Bents 95 and 103.

The chillers and cooling tower equipment at the RMB are past their useful life. Currently, only one of the two existing chillers at the RMB is in operation, and one of the two existing cooling towers exhibits significant internal corrosion and leaks. Because their failure would disrupt critical operations at the RMB, one of the chillers and one of the cooling towers must be replaced immediately. The Work added by this modification consists principally of replacing: 1) one 80-ton closed circuit cooling tower in kind (existing support structure to be reused); 2) one 60-ton water-cooled chiller with a 60-ton modular water-cooled scroll chiller; 3) one existing ceiling hung condenser water expansion tank with floor mounted tank in location to allow proper serviceability; 4) one existing ceiling hung condenser water expansion tank with floor mounted tank in location to allow proper serviceability; and electrical upgrades to support new equipment.

E-J submitted a proposal in the amount of \$1,338,921 for the work. Negotiations resulted in the agreed upon price of \$1,240,000, which is considered fair and reasonable. This amendment will also extend the Contract’s Final Completion Date to April 30, 2024, to allow sufficient time for this additional work to be performed. Funding for this amendment is available in the Bridges and Tunnels Operating Program.

In connection with a previous Joint Venture Contract awarded to the Contractor, E-J was found to be responsible notwithstanding significant adverse information (“SAI”) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Managing Director in consultation with the MTA General Counsel on August 31, 2018. No new SAI has been found related to the Contractor and E-J has been deemed responsible.

Staff Summary

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

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Vendor Name (& Location) Paul J Scariano Inc. (New Rochelle, New York)	Contract Number		AWO/Modification #	
	CM030		183	
	Original Amount:		\$	30,987,000
	Prior Modifications:		\$	14,169,488
	Exercised Options:		\$	0
	Current Amount:		\$	45,156,488
	This Request		\$	3,358,260
	% of This Request to Current Amount:			7.4%
	% of Modifications (including This Request) to Original Amount:			56.6%
	Description CM030- Passenger Experience Enhancement & Finish Detailing for the East Side Access Project			
Contract Term (including Options, if any) 423 Calendar Days				
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A				
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive				
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification				
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:				
Requesting Dept/Div & Dept/Div Head Name: East Side Access, R. Troup				

Discussion:

Contract CM030 is a Design Build Contract for Passenger Experience Enhancements and Finish Detailing on the East Side Access Project (“ESA”). MTA Construction and Development (“C&D”) requests the Board ratify an extension to the Contract’s Substantial Completion date from October 13, 2022 to November 22, 2023, with \$3,358,260 in associated Impact Costs, due to delays to the Contractor’s access to the Project’s systems.

The Work under Contract CM030 generally consists of design and construction of final fit-out elements within the new Grand Central Madison terminal, including LED lighting modifications, ceiling modifications, architectural enhancements, pre-tenant fit-out and utility upgrades for retail, repurposing of existing spaces to provide additional retail spaces and additional customer services, providing infrastructure for digital advertising and MTA customer information screens, installation of architectural graphics and wayfinding signage, and integration and testing of the newly installed systems elements (fire alarm, sprinkler, building management system, CCTV, etc.) with the existing ESA Project systems. The original Contract duration to Substantial Completion is four hundred twenty-three (423) calendar days.

Because the work of Contract CM030 builds upon the work of other ESA contractors, the Contract includes certain dates by which the Contractor was to be provided access to certain Project systems. For a variety of reasons, completion of some of the systems were delayed and not turned over to the CM030 Contractor by their contractual release dates. Therefore, an adjustment to the CM030 Substantial Completion date is necessary to reflect the delayed turnover of those systems.

MTA performed time impact analysis and determined that the impacts of late turnover of systems caused an excusable delay extending Substantial Completion from October 13, 2022 to November 22, 2023, or four hundred five (405) calendar days. All of this delay is compensable, entitling the Contractor to Impact Costs. The parties reached an agreement on Impact Costs of \$8,292 per day. Based on 405 calendar days of compensable delay to Substantial Completion, the Contractor is entitled to a total of \$3,358,260 in Impact Costs, which is the value of the proposed modification. C&D considers this value to be fair and reasonable.

In connection with a previous contract awarded Paul J. Scariano, Inc., Paul J. Scariano, Inc. was found to be responsible notwithstanding significant adverse information (“SAI”) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman in consultation with the MTA General Counsel in January 2016. No new SAI has been found relating to Paul J. Scariano, Inc. and Paul J. Scariano, Inc. has been found to be responsible.

Staff Summary

Schedule K: Ratification of Completed Procurement Actions

Item Number: 7

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Vendor Name (Location) JTTC, JV (Great Neck, New York)	Contract Number C-48704	Modification Number 03
Description Line Structure Component Repair Concourse, Line (IND), The Bronx	Original Amount:	\$ 68,188,000
Contract Term (including Options, if any) December 17, 2021 – March 16, 2024	Prior Modifications:	\$ 0
Option(s) included in Total Amt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a	Prior Budgetary Increases:	\$ 0
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive	Current Amount:	\$ 68,188,000
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification	This Request:	\$ 2,108,000
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	% of This Request to Current Amt.:	3.09%
Requesting Dept./Div., Dept./Div. Head Name: Delivery/Mark Roche	% of Modifications (including This Request) to Original Amount:	3.09%

Discussion:

This contract (the “Contract”) provides for line structure component repairs on the Concourse Line between 161st Street and 205th Street in the Bronx. MTA Construction and Development (“C&D”) requests that the Board ratify Modification No. 03 to the Contract to replace an additional 42 interior steel columns between 161st St. and 167th St.

The subway tunnel between 161st St. and 167th St. consists of two local tracks and an express track running in between the local tracks. As part of this Contract, 174 interior steel columns, inside the walls separating the express and local tracks, are to be replaced on a unit price basis. During the structural steel replacement work, an additional 42 interior steel columns, that were previously encased in concrete, were identified as exhibiting excessive deterioration and corrosion levels that required immediate attention. The Work under this modification includes the replacement of the additional 42 interior steel columns and extension of the associated safety barricades needed to separate the work areas from the adjacent active tracks.

For work performed pursuant to unit prices the Contract permits the use of the unit prices for variances in quantities up to +/- 25% of the estimated quantities. With regard to the additional steel replacement work addressed in this modification, the additional 42 interior steel columns represent an increase of 24% from the Contract estimated quantity of 174 columns. Accordingly, the competitive unit pricing contained in the Contract’s Price Schedule was utilized to determine the cost of the additional column replacement work.

The Contractor submitted a cost proposal in the amount of \$2,161,686.10, including the cost of extending the safety barricades. Negotiations were held and the parties agreed to a lump sum cost of \$2,108,000 which is considered fair and reasonable. A budget modification will be processed to provide additional funding for this modification.