

Capital Program Committee Meeting

May 2024

Committee Members

Janno Lieber, Chair Meera Joshi, Vice Chair Andrew Albert Jamey Barbas* Gerard Bringmann Norman Brown Samuel Chu* **Michael Fleischer** Dan Garodnick Randy Glucksman Marc Herbst **David Jones** Blanca Lopez* David Mack* Haeda Mihaltses* John Ross Rizzo John Samuelsen Vinnie Tessitore Neal Zuckerman

Capital Program Committee Meeting

Monday, 5/20/2024 10:00 AM - 12:00 PM ET

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2. PUBLIC COMMENTS PERIOD

- 3. APPROVAL OF MINUTES-April 29, 2024 C&D CPC Committee Minutes - Page 4
- 4. 2024-2025 COMMITTEE WORK PLAN C&D CPC Committee Work Plan - Page 8
- 5. NEW FARE PAYMENT SYSTEM/OMNY UPDATE C&D New Fare Payment System/OMNY Update - Page 9 IEC Project Review on New Fare Payment System/OMNY - Page 12
- 6. C&D SAFETY REPORT C&D CPC Committee Safety Report - Page 21
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- 8. C&D PROCUREMENTS C&D Procurements - Page 39

CONSTRUCTION & DEVELOPMENT COMMITTEE ACTIONS SUMMARY for MAY 2024

Responsible Department	Vendor Name	Total Amount	Summary of Action
Contracts	Cubic Transportation Systems Inc.	(\$36,388,937)	Approval of a modification to Contract A-34024 for a New Fare Payment System to: (i) remove the requirement to incorporate Long Island Rail Road and Metro-North Railroad into the new system, (ii) develop enhancements to the OMNY Business-to-Business Portal and mobile application and (iii) modify the Contract Milestones to reflect the schedule impacts experienced in the program, including the changes in this Modification, resulting in a 29 month extension of time for Substantial Completion.

MINUTES OF MEETING MTA CAPITAL PROGRAM COMMITTEE April 29, 2024 New York, New York 12:45 PM

CPC Members present:

Hon. Janno Lieber, Chair

Hon. Andrew Albert

Hon. Jamey Barbas

Hon. Norman Brown

Hon. Randolph Glucksman*

- Hon. Marc Herbst
- Hon. David Jones
- Hon. Blanca Lopez

CPC Members not present:

Hon. Gerard Bringmann Hon. Samuel Chu Hon. Michael Fleischer Hon. Meera Joshi Hon. Haeda Mihaltses Hon. John-Ross Rizzo Hon. John Samuelsen Hon. Vincent Tessitore, Jr. Hon. Midori Valdivia Hon. Neal Zuckerman

MTA staff present:

Christine Budhwa Paul Corrigan Lew Deara Eric Jones Steven Loehr John McCarthy Mark Roche Jamie Torres-Springer Michele Woods

Independent Engineering Consultant staff present:

Sirish-Sarat Peyyeti

*Attended virtually.

* *

Chairman Lieber called the April 29, 2024, Capital Program Committee Meeting to order.

Public Comments Period

There were seven public speakers during the Hybrid Public Comment Period: Bruce Hain, Jesse Figueroa, Aleta Dupree, Kara Gurl, Jason Anthony, Christopher Greif, and Matthew Buchys Hyland*.

*Provided comment virtually.

Meeting Minutes

Upon a motion duly made and seconded, the Board approved the minutes of the meeting held on March 25, 2024. Upon a motion duly made and seconded, the Board approved the updated work plan that moves the discussion of OMNY to the May meeting.

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

President's Report

Prior to introducing the Systems Business Unit as the major agenda item MTA Construction and Development ("C&D") President Jamie Torres-Springer first highlighted the following accomplishments: the opening of the 3rd and 4th fully ADA-accessible elevators at the Metropolitan Ave and Lorimer St G and L complex which benefit the over 60,000 weekday riders at the 7th-busiest station in Brooklyn; completion of the 63 Street Tunnel Track Reconstruction on time and under budget; conclusion of the pilot phase of the OMNY Card Vending Machine rollout, installing the first 65 machines out of a total of 900 across the system.

Next, President Torres-Springer expressed gratitude for Governor Kathy Hochul's leadership on the recently approved state budget that provided wins to the Capital Program, specifically \$52 million for preliminary design and engineering for the Interborough Express, \$16 million for the study of the western expansion of the Second Avenue Subway, and \$20 million for hardening and resiliency efforts on the Metro-North Hudson Line. However, President Torres-Springer noted that certain elements of the Capital Program rely on major federal support and cited as examples Westchester Yard's stormwater drainage project and Borough Hall station, where the ADA project and station renewal is well underway. And speaking of federal priorities, President Torres-Springer noted that the pre-qualification stage of the major tunnelling contract for the Second Avenue Subway Phase 2 project had begun.

Lastly, President Torres-Springer highlighted a procurement action being presented to the Committee this month for a change order to the of the Park Avenue Viaduct Contract. The change order will add Phase 2, which is the replacement of the Viaduct from East 127th Street to midblock between East 131st and East 132nd Streets. Adding this work as a change order will result in schedule and cost savings.

Systems Business Unit Update

Next, Eric Jones, Vice President & Deputy Lead for the Systems Business Unit reminded the Committee that Systems encompasses not only all technologies used by the MTA, but also the infrastructure that connects them to each other and allows them to communicate. Vice President Jones noted that the Systems Business Unit was established in 2022 to focus on technology specifically to replace old or obsolete technologies, expand existing systems to add capacity, to integrate systems, and to harden vulnerabilities. Examples of current projects include updating the Supervisory Control and Data Acquisition ("SCADA") systems that monitor and control third rail traction power, modernizing and replacing field equipment, and building a new backup Emergency Power Control Center.

Next, Paul Corrigan, Vice President and Project Executive for Industrial and Systems Engineering, highlighted the following ongoing initiatives:

- Operations Control Center installation of a new 160' x 20' live video wall to monitor train locations as well as a new fully equipped space to house all future CBTC-enabled dispatching functions with increased security features and hardened backup power.
- CCTV Expansion installation of security cameras at fare control areas at over 106 stations throughout the subway system.
- Mission Systems Directorate ("MSD") establishment of a new intra-agency group to address mission critical telecommunications issues.

<u>IEC</u>

Sirish Peyyeti, Program Director of the Independent Engineering Consultants ("IEC"), provided a brief update on the Systems BU. The IEC commended C&D's recent formation of the MSD. This creates a path forward to ensure the continued protection and uninterrupted delivery of critical communication technologies and services.

To complement the project reporting in the Traffic Light Report, the IEC will also provide more detailed, comprehensive monitoring of two Systems projects currently in construction: emergency alarm installations and system-wide ethernet connection improvements. These IEC reports will be presented at the next Systems Capital Program Committee Board Meeting.

Procurement Actions

Christine Budhwa, Assistant Vice President, Contracting Services, reported that C&D had four procurement actions being brought to the Capital Program Committee this month. Assistant Vice President Budhwa then presented the items.

Although a quorum was not present, those members of the Capital Program Committee in attendance recommended that the following procurement actions be presented to the full MTA Board for approval:

- 1. Ratification of a modification to a contract with Judlau/TC Electric, JV (MN-39881) to replace damaged trough and conduit carrying communications and power cables on Metro North Railroad's Hudson Line with new duct bank and trough;
- Ratification of a modification to a contract with F&S General Construction, Inc. (MN-106401) for additional concrete repairs to a 40-foot section of platform at Metro North Railroad's Rye Station;

- 3. Ratification of a modifications to a contract with Halmar International, LLC (MN-171020) to add Phase 2 of the Park Avenue Viaduct replacement, from East 127th Street to midblock between East 131st and East 132nd Streets; and,
- 4. Ratification of a modification to a contract with Tully Construction Co., Inc. (C-34836) for purchase and installation of additional signal wiring for the new signal Program Logic Controller system being installed in the Coney Island Yard.

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

<u>Adjournment</u>

Upon motion duly made and seconded, Chairman Lieber adjourned the April 29th, 2024, Capital Program Committee Meeting.

Respectfully submitted, Lizzy Berryman MTA C&D, Contracts

2024-2025 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 2024 President's Update Rolling Stock Diversity Quarterly Traffic Light Report

July 2024 President's Update Integrated Projects

September 2024 President's Update Agency Initiatives Quarterly Traffic Light Report

October 2024 President's Update Stations

November 2024 President's Update Railroads

December 2024 President's Update Bridges & Tunnels Quarterly Traffic Light Report January 2025 President's Update Infrastructure

<u>February 2025</u> President's Update Agency Initiatives

<u>March 2025</u> President's Update Signals Quarterly Traffic Light Report

<u>April 2025</u> President's Update Systems

<u>May 2025</u> President's Update OMNY

Capital Program Committee Update New Fare Payment System (NFPS) / OMNY

The MTA's New Fare Payment System (NFPS) provides for the replacement of the MetroCard fare collection system used by New York City Transit (NYCT) and other non-MTA agencies, as well as the legacy fare collection systems of Metro-North Railroad (MNR) and the Long Island Rail Road (LIRR), with new state-of-the-art contactless fare collection. In April 2019, the new system was publicly branded as "One Metro New York" or "OMNY". This is a multi-year design-build program being designed with open architecture and is an account-based system that accepts open payments made with contactless credit and debit bank cards, as well as digital wallets in smartphones and watches (known as "open-loop" media) at transit point-of-entry gates. The system will also accept certain MTA-issued cards (known as "closed-loop" media) for fare payment and non-revenue access to MTA services.

Program Highlights:

The last report to the Capital Program Committee (CPC) for the NFPS/OMNY Program was on April 24, 2023. Since that time, we have completed the transition of this program under MTA Construction & Development management and completed the schedule re-baselining process. During this process, it was determined that continuing with Cubic as the vendor for the railroads would result in completion of this aspect of the scope no earlier than 2027 and require approximately \$35 million in additional costs. The current fare collection systems in use by the railroads were installed almost 25 years ago and cannot be maintained in a state of good repair beyond 2025. Consequently, MTA has determined that it is both more expedient and more cost-effective to negotiate the replacement of the MNR and LIRR fare collection system with their existing vendors: Scheidt & Bachmann and Masabi. As such, Railroads-related scope will be removed from the Cubic contract, pending MTA Board approval. This approach will also allow for continued use of the MTA's TrainTime app for mobile ticketing. TrainTime has been a widely adopted success for LIRR and MNR riders and now represents 70% of all railroad ticket revenue, with 91% customer satisfaction.

Meanwhile, OMNY adoption continues to steadily increase amongst NYCT customers, growing in market share by 9% over the past year. Of regular fare NYCT customers, over 75% are now using contactless payment, with 85% customer satisfaction. The OMNY program has achieved several significant milestones since last year's update, including the launch of OMNY service at the first three outside agency affiliates: JFK AirTrain and Roosevelt Island Tram in the second half of 2023 and Hudson Rail Link in January 2024. Additionally, pilot programs were launched for Fair Fares, Paratransit, and select pre-tax benefit providers in the first quarter of 2024. The start of these pilots represented the first use of the OMNY Business-to-Business (B2B) Portal, which facilitates bulk sales and account management for external bulk user groups. Installation of Configurable Vending Machines (CVMs) also began with a pilot program in October 2023 and is now continuing to roll out across the subway system. To date, approximately 70 CVMs have been placed in service at 37 subway stations. CVM installation will continue through 2024 and into the first half of 2025.

The OMNY program continues to increase dedicated resourcing to support the two recently-formed OMNY teams: OMNY Delivery, which manages delivery of the OMNY capital project, and the OMNY Operations & Services team, which manages the day-to-day operations of the OMNY fare payment system. OMNY Delivery remains focused on implementing closed-loop OMNY features and installing CVMs throughout the NYCT system to replace legacy vending machines. The ultimate goal is to ensure all NYCT customers and ridership classes are able to transition from MetroCard to OMNY by the end of 2024. OMNY Operations & Services continues to manage steady-state operations and maintenance as new features are launched and to manage the customer experience as new subscribers implement OMNY.

Current Status:

The overall NFPS program remains on budget.

Cubic's projected Substantial Completion date for NYCT work remains December 2025, as reported last year. The re-baselined Cubic schedule allows all remaining NYCT rider classes (DOE students, CUNY students, Reduced Fare customers, Paratransit customers, and Fair Fares customers) to convert from MetroCard to OMNY before the end of 2024. Deliverables expected in 2025 include deployment of the OMNY mobile application, rollout of the OMNY virtual card and OMNY employee pass, and the launch of OMNY service for Nassau Inter-County Express (NICE) bus and Westchester County Bee-Line (WBL) bus service.

The projected Substantial Completion date for Railroads work is Q2 2026, pending Board approval and award of new contracts.

PROJECT STATUS	Previous Report	Current Status
Substantial Completion NYCT	December 2025	December 2025
Substantial Completion RRs	TBD	Q2 2026
Program Budget	\$772M	\$772M

Accomplishments since April 2023:

- Completed program transition to MTA Construction & Development
- Completed re-baselining of overall program schedule
- Completed Configurable Vending Machine (CVM) pilot
- Began CVM installation at NYCT customer service center stations and major station complexes
- Installed platform transfer validators to facilitate ADA-compliant transfers at newly-accessible stations
- Launched Paratransit pilot
- Launched Fair Fares pilot
- Launched pilot for pre-tax transit benefit providers using the B2B Portal
- Launched OMNY at JFK AirTrain
- Launched OMNY at Roosevelt Island Tram
- Launched OMNY at Hudson Rail Link

Upcoming NYCT Major Activities:

- Launch of OMNY service for NYC Department of Education students expected Q3 2024
- Launch of OMNY service for CUNY students expected Q3 2024
- Expanded roll out of OMNY service for Paratransit customers beginning in Q3 2024
- Expanded partner implementation of pre-tax programs beginning in Q3 2024
- Bulk issuance of closed loop Reduced Fare OMNY cards expected Q4 2024
- Expanded rollout of OMNY service for Fair Fares customers beginning in Q4 2024
- Full completion of CVM installation across subway system expected Q2 2025
- Launch of the OMNY virtual cards expected Q3 2025
- Scoping and legal agreements for remaining MetroCard affiliates (NICE and WBL) will continue through 2024 with partner implementation expected in 2025

Upcoming Railroads Major Activities:

- Award new contracts expected Q2 2024 (pending Board approval)
- Install new vending machines at pilot locations expected Q2 2025

Program Risks:

- Vendor quality control issues have the potential to impact planned software releases and risk delaying OMNY service for student and reduced fare customers.
- Delays between existing MetroCard affiliates and Cubic in entering into contracts could delay OMNY implementation for NICE Bus and Westchester County Bee-Line bus.

May 2024 CPC

Independent Engineering Consultant Project Review

OMNY MTA New Fare Payment System



We Make a Difference

Scope of work at award:

OMNY is a Design/Build project that is being deployed in phases and replaces MTA's Subway, Bus, and Commuter Railroads fare systems. Contract was awarded to Cubic Transportation Systems in November 2017 with Substantial Completion (SC) date of July 2023.

OMNY is an open architecture account-based system that will accept contactless credit and debit cards, mobile payment, and MTA issued contactless cards.

Major project elements include:

- Integration of MTA fare systems, supporting flexible fare policy, i.e., flat fare for Subway and Bus, zone-based fare for Commuter Railroads, supporting a single customer account across agencies to provide a seamless customer experience.
- One central back-office clearing house for processing fares, managing fare system and financial reconciliation and settlement of transactions for Commuter Railroad, Subway, Bus and Affiliates.
- A fully integrated OMNY Revenue System (ORS).
- NYCT Configurable Vending Machines (CVM): Design, develop, furnish and install.
- Railroads equipment: Design CVMs, Ticket Office Machines (TOMs), and (e-Tix).
- Roll out of Student Fare, Reduced Fare, Paratransit and Employee cards.
- A full featured mobile app with a link to My MTA app for trip planning.
- Removal of all legacy MetroCard Vending Machines (MVM) and MetroCard Express Machines (MEM).

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Scope changes :

- MTA has decided to descope Commuter Railroads elements from Cubic OMNY contract and continue using Masabi for Mobile ticketing (e-Tix) and Scheidt & Bachmann for vending machines.
 - However, OMNY Back office is designed to be scalable to accommodate Commuter Railroads in future. It would allow one central back-office clearing house for processing fares, managing fare system and financial reconciliation and settlement of transactions for Commuter Railroad, Subway, Bus and Affiliates.
- Based on an MTA analysis and successful adoption of OMNY, business decision was made to reduce the quantity of NYCT CVMs from 1720 to 993.



We Make a Difference

Completed work:

- Completed central back-office clearing house for processing OMNY transactions.
- Subway and Bus validator installations completed in December 2020.
- Reduced Fare deployed for open payment customers was introduced in Summer 2022.
- Rolling Fare Cap was introduced in August 2023.
- Roosevelt Island Tram stations were integrated with OMNY in August 2023.
- NYCT OMNY Revenue System (ORS) to support CVMs revenue processing was completed in September 2023.
- JFK AirTrain (Phase 1) joined OMNY in October 2023.
- Pilot testing of (10) CVMs at 5 Subway Stations started in October 2023.
- Launched pre-tax benefit transit providers pilot using the Business to Business (B2B) OMNY Web portal in January 2024.
- All 16 Hudson Rail Link Buses joined OMNY in January 2024.
- Paratransit pilot with 86 customers started in March 2024, which would allow participants to use personalized OMNY card to pay for fare when making appointment for rides.
- Fair Fare pilot with 75 customers started in March 2024.



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NYCT Configurable Vending Machine (CVM) status:

- □ Thirteen (13) CVMs were installed at training and test sites in 4th Q 2023.
- Ten (10) CVMs were installed at 5 stations (Bowling Green, Atlantic Ave, Fordham RD, Junction Blvd and 86 St) for pilot testing on October 30, 2023.
- As result of hardware and software issues discovered during software testing and CVMs pilot, the CVMs implementation was delayed.
- Additional 44 CVMs were installed in 4th Q 2023. These CVMs were not placed Inservice.
- Installation of the remaining CVMs restarted in mid April 2024, and Contractor is planning to complete the installation by April 2025.
- As of May 15, 2024, in NYCT Stations, 89 CVMs have been installed and 63 are Inservice. In addition, 61 MVMs and 57 MEMs have been removed.

IEC forecasts 500 CVMs will be In-service by end of 2024, and the remaining 480 CVMs will be In-service by August 2025.



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Remaining key deliverables in 2024:

- Continue CVMs implementation
- Special Program OMNY Card distribution:
 - Student Fare card (NY City Department Of Education)
 - Student Fare card (City University of NY)
 - Reduced Fare card
 - Paratransit card
 - Fair Fares card (Department of Social Services)

Remaining key deliverables in 2025:

- Complete CVMs implementation
- Employee card
- OMNY Mobile application
- Mobile Virtual card
- Enhanced Business to Business features
- Affiliates joining OMNY:
 - Westchester Bee-Line
 - Nassau Inter County Express (NICE) Bus
 - JFK AirTrain Phase 2



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Schedule:

The IEC forecasts that based on rebaseline schedule all remaining OMNY tasks would be completed by December 2025.

Budget:

The IEC's review indicates that the current budget is sufficient for completing the OMNY project.



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Top Risks and Mitigations:

- Risk: Delay by affiliates (Nassau Inter-County Express (NICE), Westchester County Bee line Bus and the Port Authority JFK AirTrain to execute separate contracts with Cubic to integrate with OMNY.
 - Mitigation: PMO has assigned a dedicated staff to support affiliates in executing their contracts with Cubic.

In IEC's opinion timely resolution of the commercial issues will determine the effectiveness of the above mitigations.

- Risk: Delay in roll out of OMNY Student cards for NYCDOE and CUNY before 2024 fall semester school opening.
 - Mitigation : PMO has communicated to Cubic that the OMNY Student cards roll out is top priority, and as contingency MTA is prepared to have Student DOE MetroCard available for fall 2024 semester.
- Risk: Cubic's insufficient staffing resources, inadequate QA and software defects could result in delay of CVMs roll out, and completion of other key deliverables.
 - Mitigation: PMO is considering to assign a dedicated staff as Resident Engineer at Cubic facility in San Diego to monitor Cubic allocation of resources, and to ensure all QA and software testing are being performed correctly per contract.

IEC concurs with the above two mitigations and actions.



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Concern:

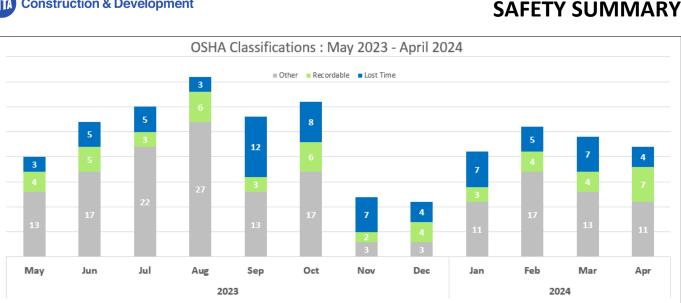
Coin recirculating system is not functioning per contract requirements, specifically with respect to issuing dime as change. Cubic is actively engaged to resolve the problem.

Observation:

- OMNY project was transitioned to MTA Construction & Development last year, and the PMO was reorganized into OMNY Delivery and Operation & Services teams. Additional resources through Project Management Consultant (PMC) were assigned to Delivery group to focus in accelerating and completing remaining OMNY works.
- Campaign to replace Bus Validators to prevent cracking of Bus Validator housing and brackets is still not resolved. A technical solution to address this systemic defect has been identified and the final resolution is in mediation. Meanwhile, Cubic as part of warranty will replace any cracked housing when it occurs.



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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 ults in restricted work or transfer to another job, medical treatment beyond first aid, or a

SAFETY NARRATIVE

APRIL UPDATE:

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- 22 safety incidents were reported in April 2024, including:
 - Four (4) lost time incidents.
 - Seven (7) recordable incidents.
- The reported lost time incidents in April 2024 decreased by 43% (3 incidents) compared to March 2024.
- Leading lost-time and recordable incident types for April 2024 were Struck By/Against (27%), Caught In Between (27%), . Slips/Trips/Falls (18%) and Strains/Sprains (18%).
- Overall, the total reported incidents in April 2024 decreased by 8% (2 incidents) over those reported in March 2024
- No Serious incidents were reported.

YEAR-TO-DATE TRENDS:

- LOST TIME INCIDENT TRENDS: 23 Lost Time incidents have been reported YTD (through April 30th, 2024), an increase of 21% (or four (4) incidents) vs. the same reporting period in 2023. The top injury types associated with lost time incidents YTD are Slips, Trips and Falls (43%) and Struck By/Against, currently at (30%).
- **RECORDABLE INCIDENT TRENDS:** 18 Recordable incidents have been reported YTD (through April 30th, 2024), a decrease of 22% (or five (5) incidents) vs. the same reporting period in 2023. The top injury types associated with recordable incidents YTD are Struck By/Against, currently at (39%) & Strains/Sprains (22%).
- SERIOUS INCIDENTS: None

INSPECTIONS & AUDITS: Active Capital Projects for April - 545

- **APRIL INSPECTIONS:**
 - **INTERNAL 222**
 - EXTERNAL 787 (64 Third-Party Safety Consultants; 723 OCIP Visits)
 - **YTD TOTAL # OF INSPECTIONS:**
 - **INTERNAL 919**
 - EXTERNAL 2,900 (308 Third-Party Safety Consultants; 2,592 OCIP Visits)
- APRIL NEGATIVE OBSERVATION(S) Supervision/Organization, General Safety/Housekeeping, Fire Prevention/Protection, Tools (Hand & Power), Electrical, Stairs/Ladders, Fall Protection. APRIL POSITIVE OBSERVATION(S) - General Safety/Housekeeping, Supervision/Organization, Fore Prevention/Protection, Stairs/Ladders, Electrical, Barriers/Enclosures, Scaffolds/Aerial Lifts.



SAFETY SUMMARY

INVESTIGATIONS & LESSONS LEARNED:

• NUMBER OF INVESTIGATIONS for APRIL - None

MTA C&D SAFETY STRATEGIC INITIATIVES:

- The C&D Safety VP conducted a presentation to the MTA Chairman and the MTA Safety Committee Board members on April 30th outlining the Safety Management System. The presentation included overviews of the implementation strategies and expectations for enhancing the safety culture and behavior of the C&D organization staff and Contractors working on the MTA Capital Program.
- C&D Safety continues using the in-house interim safety management reporting program until the agency-wide ESS program is accepted for solicitation. Based on user feedback, updates and refinements continue to be implemented to improve and facilitate the user experience while allowing for more efficient data capture. Although the program has some limitations, it continues to provide a higher level of automation by allowing direct input by the Analytics Team into the new safety data portal and dashboard. C&D Safety continues working with MTA HQ on the possible use of a software platform currently used by the MTA Police Department as a potential upgrade to the interim safety management reporting program.
- C&D Safety continues supporting the business units by partnering with the safety teams to conduct project safety
 assessments and promote the observational approach process. These expanded safety assessments are shared with the
 project Safety Teams and their leadership to assist them in identifying at-risk projects or Contractors. The results of these
 additional assessments, in conjunction with those performed at the contract management level, will be used during
 reviews of leading indicators to better focus communication and enforcement strategies.
- C&D Safety continues its outreach with the Building Trades Employers' Association (BTEA) and other trade and organizations like the Construction Management Association of America (CMAA) to discuss C&D Safety trends and possible collaborations.
- C&D Emergency Management finalized the next Table Top Exercise, which will be conducted in the first half of May. The goal continues to be to perform these exercises quarterly. In addition, the team continues drafting an agency Emergency Management system to streamline contracts and operations coordination with MTA stakeholders.
- C&D Safety has implemented the Safety Management System Phase 1 of 3 phases, implementing the new Safety Management System (SMS) throughout the entire agency but rolling out the program in stages to ensure all staff, supporting projects, vendors, and contractors are systematically adopting the new process and protocols. The focus of Phase 1 continues to be on the enhancements to current safety practices and procedures. These enhancements include identifying and providing clear roles and responsibilities for all levels, updating levels of safety training requirements, and enhancing best practices for safety meetings. The project safety teams continue training the respective project staff and teams. Training of project PMC staff is also ongoing, and C&D Safety continues to assist the project Safety Teams as needed. The informational sessions with the Safety Departments of the various MTA Operational Agencies have been completed. Outreach with vendors and contractors is ongoing, and preparations for other MTA stakeholders are being scheduled.
 - C&D Safety continues working with AECOM on finalizing the Phase 2 training materials rollout and final enhancement to the SMS. The tentative rollout is currently scheduled for Q2 of 2024.
- C&D Safety continues to conduct training sessions on incident notifications for project teams to support the timely and accurate reporting of project incidents throughout all MTA operating agencies where C&D construction occurs.
- The C&D Safety Analytics team is working on integrating all Safety Data statistics, including observations, incidents, labor reporting hours, and labor force counts, onto the current project dashboards. These would be available when filters are selected to view the specific projects or overall BU programs. This effort is currently planned for late Q2 or early Q3 of 2024.
- C&D Safety continues to work on several new and updated policies, where deficient, and procedures to support MTA HQ. In addition, the department is working on creating and obtaining best-in-class safety training currently being used throughout NYC construction sites to enhance the programs further and offer them to our MTA project staff as part of the SMS.

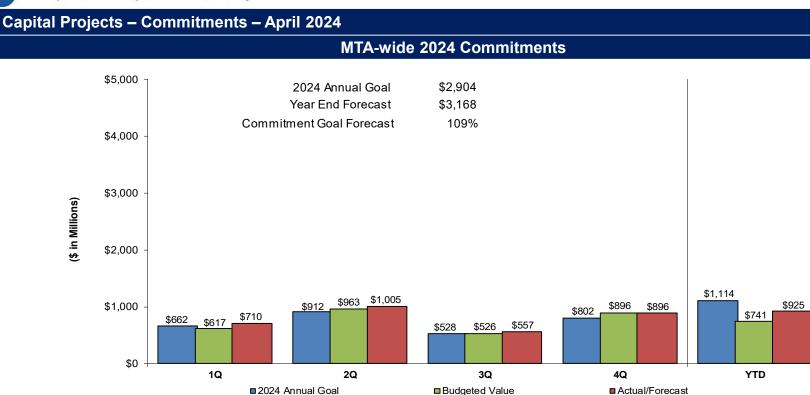
MTA Capital Program Commitments & Completions

through April 30, 2024





Metropolitan Transportation Authority



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.

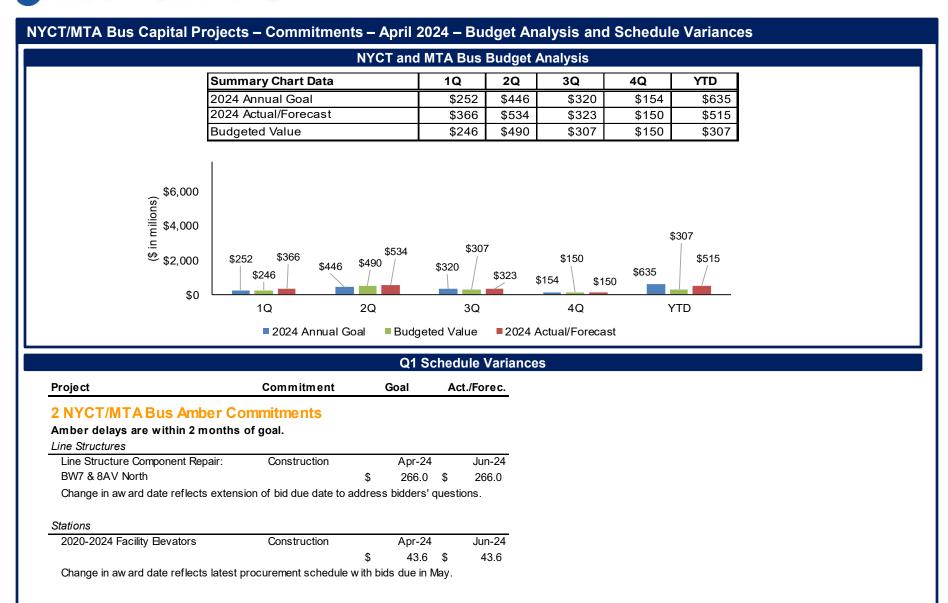
Actuals: The value of the goals and any additional unplanned commitments as they are achieved during the year.

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

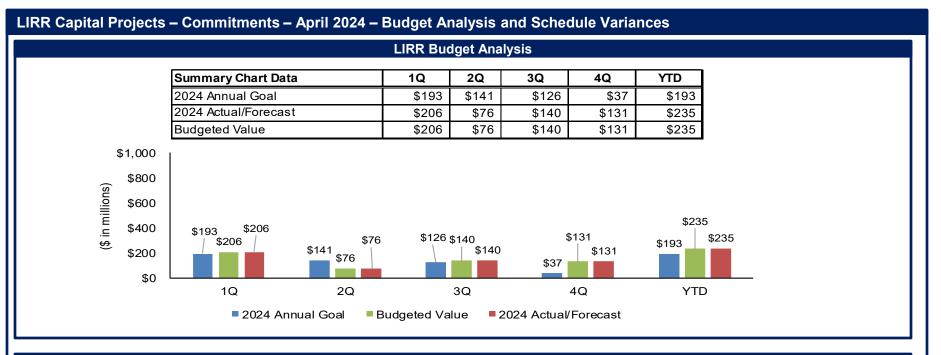
Due to the risk of ongoing litigation delaying congestion pricing funding the MTA plans to commit \$2.9 billion worth of capital projects in 2024. Through April, the MTA has committed \$925 million of the \$1,114 million YTD goal. The difference between the YTD actuals and the goal can be attributed to two delayed major commitments at NYCT. The 9% overage in the year end commitment goal forecast is due to NYCT and the LIRR committing projects not originally part of the 2024 commitment plan. The commitment plan may be revised, pending the availability of Central Business District Tolling funds.

At the end of each quarter in 2024 any schedule variances for major commitments will be reported on the following pages. In Q1 there were two delayed major commitments for NYCT, but these are still expected to be committed within the year.



VITA

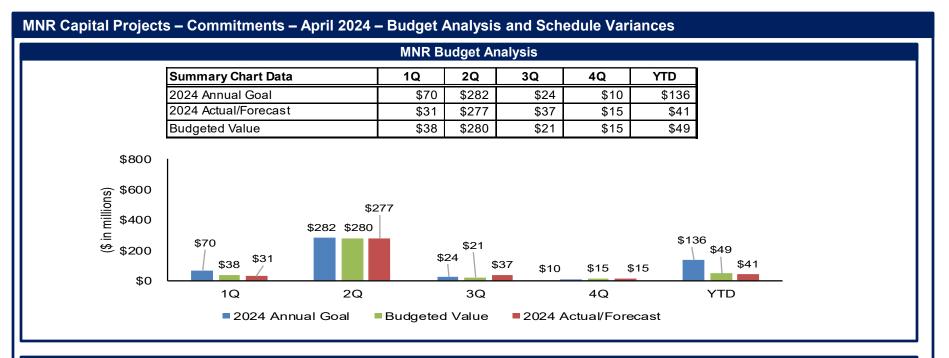




Q1 Schedule Variances

There are no major schedule slippages to report for the LIRR.

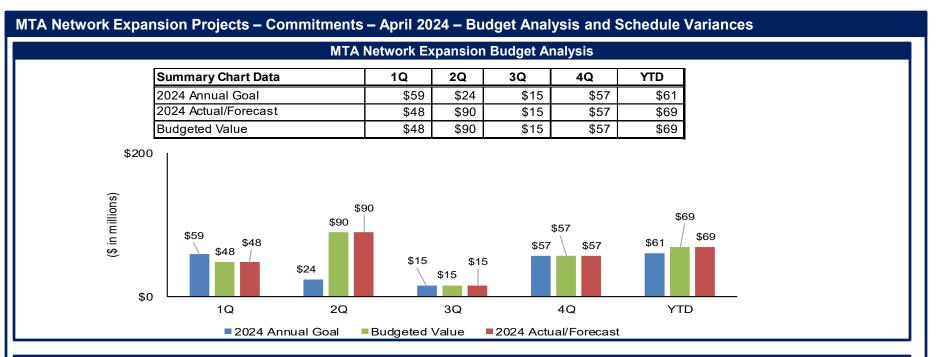




Q1 Schedule Variances

There are no major schedule slippages to report for MNR.

Metropolitan Transportation Authority

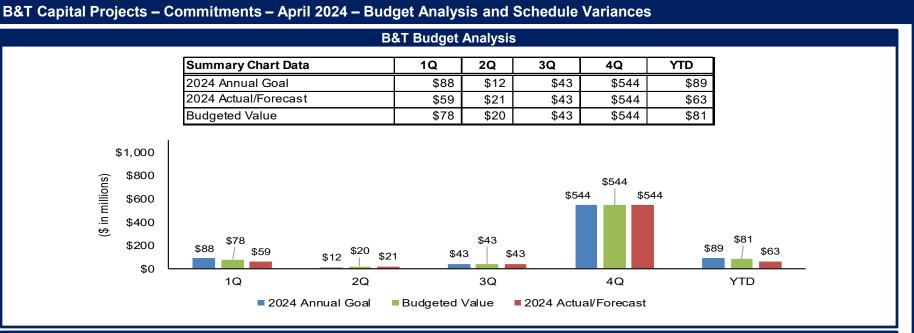


Q1 Schedule Variances

There are no major schedule slippages to report for Expansion.

MTA





Q1 Schedule Variances

There are no major schedule slippages to report for B&T.

Capital Projects – Completions – April 2024

Fo	recast		MTA-wide 2024 Major Completions							Post				
Goal		Jan-24	Feb-24	Mar-24		May-24					Oct-24	Nov-24	Dec-24	2024
Total	59	3	4	2	2	5	7	2	4	8	2	5	15	0
Jan-24	3	3												
Feb-24	4		3		1									
Mar-24	5		1	2		1			1					
Apr-24	6				1	2	3							
May-24	2					2								
Jun-24	5						4			1				
Jul-24	2							2						
Aug-24	4								3	1				
Sep-24	8									6		2		
Oct-24	2										2			
Nov-24	3											3		
Dec-24	15												15	

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

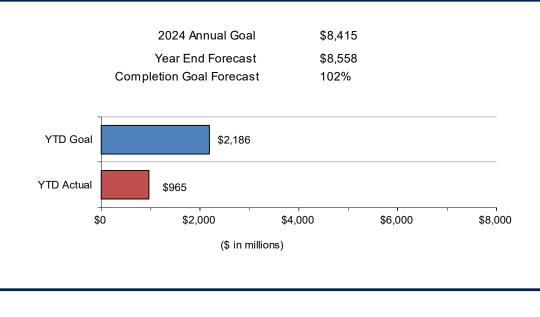
Completions Summary

In 2024 the MTA plans to complete \$8.4 billion of projects. 59 Major completions will be tracked throughout the year.

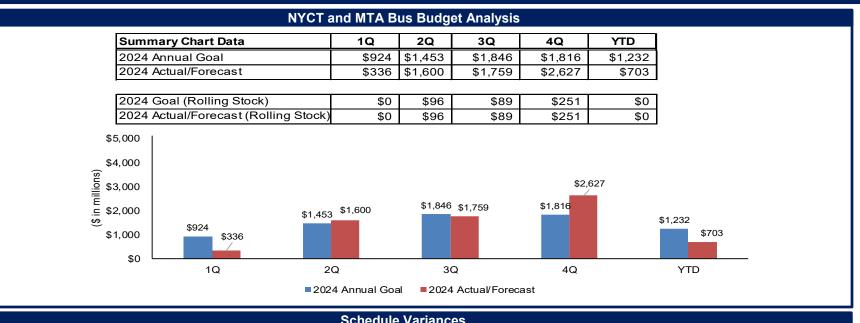
Through April, the MTA has completed \$965 million versus its year-to-date goal of \$2,186 million. The shortfall is primarily due to the delays of the GCT Concourse and Facilities project with Expansion, the Direct Fixation Track Replacement at 63rd & Jamaica with NYCT, and several ADA projects at the LIRR. Overall, there are 12 delayed major completions, all of which are still expected to be completed within the year.

By the year end the MTA forecasts achieving 102% of its completions goal. Reflecting additional unplanned completions by NYCT.

Budget Analysis



NYCT/MTA Bus Capital Projects – Completions – April 2024 – Budget Analysis and Schedule Variances



Schedule Variances							
Project	Completion	Goal	Act./Forec.	Project	Completion	Goal	Act./Forec.

1 NYCT/MTA Bus Red Completion

Red delays are beyond 2 months of	f goal.		
MTA Bus			
Storeroom Expansion - LaGuardia	Construction	Mar-24	Aug-24
		\$7.42	\$7.42
CCTV activation was scheduled for 4 correspond, so had to reschedule	/2024. But some of the fib	er optics cables did r	not

5 NYCT/MTA Bus Amber Completions (1 new this month)

Amber delays are delayed less than 2 months of goal.

DA			
ADA: 8 Stations (Pkg A)	Construction	Feb-24	Apr-24 (A)
		\$278.76	\$278.76
Change in schedule reflects delay i Metropolitan Av station.	n fire alarm testing due to C	onEd pow er issues	at
ADA Pkg 2: ADA/Elevators at	Construction	Sep-24	Nov-24
Legacy Sations		\$411.17	\$411.73
Change in schedule due to addition latest estimate at completion.	al steel defects to be addres	ssed. Change in cos	st reflects

5 NYCT/MTA Bus Amber Completions (1 new this month)

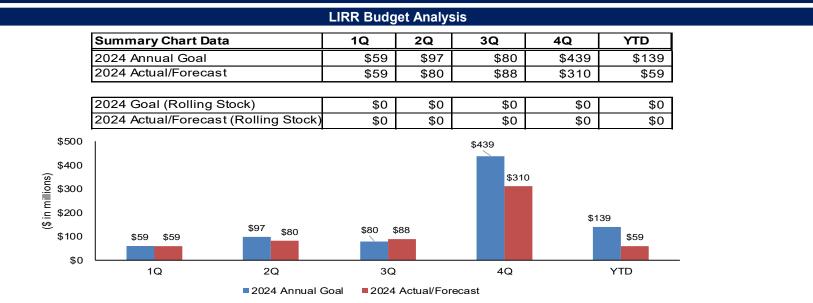
Amber delays are delayed les	s than 2 months of goal.		
Stations	-		
Replace 12 Escalators	Construction	Sep-24	Nov-24
		\$83.80	\$83.80
Change in schedule due to other	escalator work at Lexingtor	n Ave Station.	
Buses			
Bus Radio System	Construction	Aug-24	Sep-24
		\$263.73	\$254.01
Substantial completion date subjection estimate at completion.	ect to mediation w ith contrac	tor. Change in cost r	eflects latest
Track			
Direct Fixation Track	Construction	Apr-24	Jun-24
Replacement: 63rd St &		\$183.35	\$203.61
Iomoioo (Nour Itom)			

Jamaica (New Item)

The change in project schedule is due to pending as-built drawings.

VITA

LIRR Capital Projects – Completions – April 2024 – Budget Analysis and Schedule Variances



Schedule Variances

Project	Completion	Goal	Act./Forec.					
4 LIRR Amber Completions (4 new this month) Amber delays are delayed less than 2 months of goal. ADA								
ADA Copiague (New Item)	Construction	Apr-24	May-24					
		\$18.05	\$18.05					
Delay with materials for the curta	ain wall and installation of the	elevator componen	ts					
ADA Lindenhurst (New Item)	Construction	Apr-24	Jun-24					
		\$17.98	\$17.98					
Delay with materials for the curta	ain wall and installation of the	elevator componen	ts					
Delay with materials for the curta ADA Amityville (New Item)	ain w all and installation of the Construction	elevator componen Apr-24	ts Jun-24					

4 LIRR Amber Completions (4 new this month) Amber delays are delayed less than 2 months of goal.

Facilities

Project

Mets-Willets EC Relocation	Construction	Apr-24	May-24
(New Item)		\$28.70	\$28.70
Date moved out due to a delay in Fa	A w ork.		

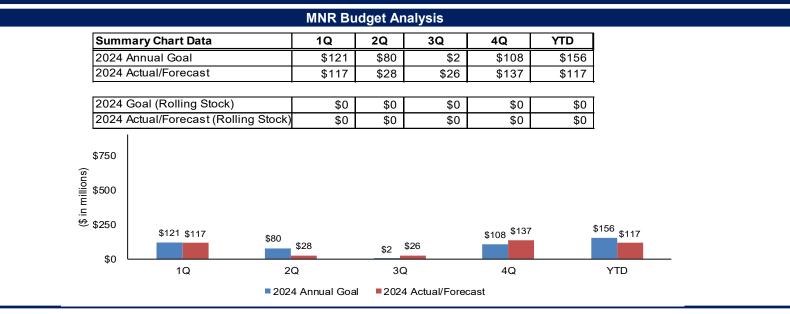
Completion

Goal

Actual(A)

VITA

MNR Capital Projects – Completions – April 2024 – Budget Analysis and Schedule Variances



Schedule Variances

Project	Completion	Goal	Act./Forec.
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1 Metro-North Red Completion (1 new this month)

Red delays are beyond 2 months of goal.

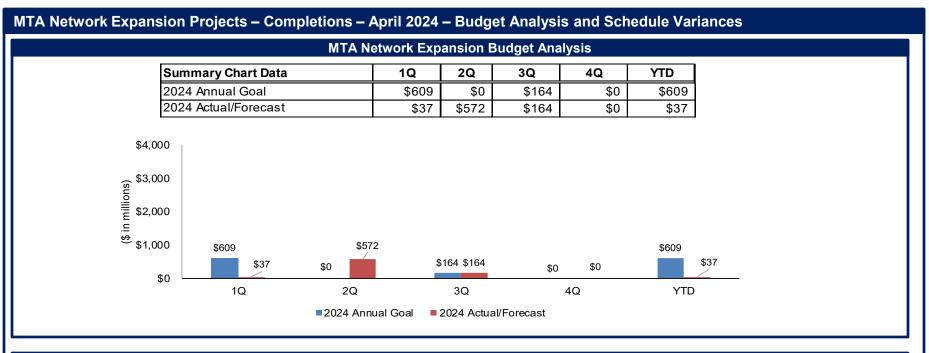
Shops

Harlem & Hudson Power	Construction	Jun-24	Sep-24
Improvements (City Water		\$23.70	\$23.70
Substation) (New Item)			

Problems stemming from equipment performance issues have delayed testing and commissioning of the substation.

MTA

Metropolitan Transportation Authority



Schedule Variances

Project Completion Goal Act./Forec.

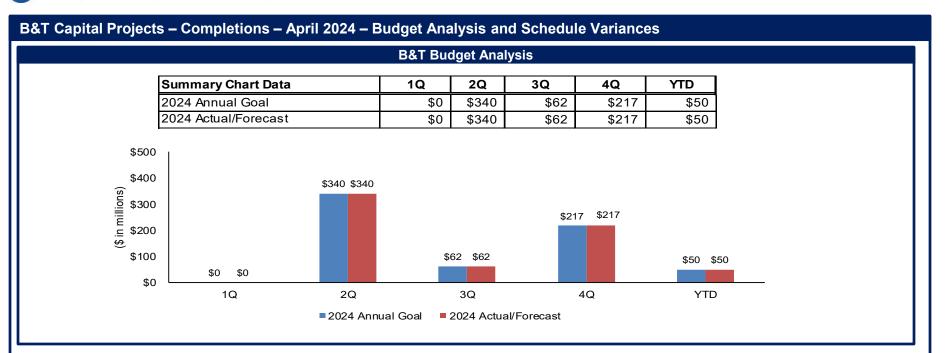
1 Network Expansion Amber Completion (1 new this month)

Amber delays are delayed less than 2 months of goal.

East Side Access

GCT Concourse & Facilities	Construction	Mar-24	May-24
CM014B		\$572	\$572
The slip is due to a delay in the inst	allation/certification of seismi	c monitoring equipme	nt.

Metropolitan Transportation Authority



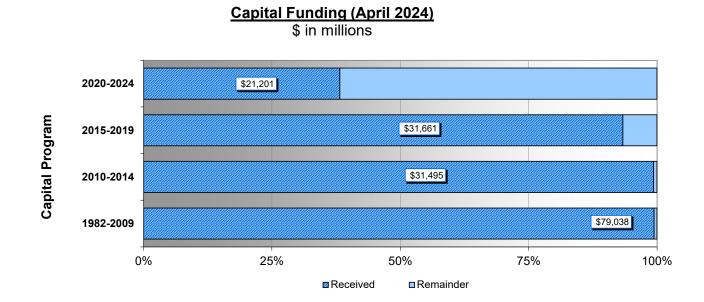
Schedule Variances

There are no major schedule slippages to report for B&T.

MITA

Status of MTA Capital Program Funding





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Capital Funding Detail (April 2024)

\$ in millions

	Funding Plan	Re	eceived/Secure	ed		
2010-2014 Program	Current	Thru March	<u>April</u>	Secured to date	Remainder	
Federal Formula, Flexible, Misc	\$5,844	\$5,790	\$ -	\$5,790	\$54	
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	524	524	-	524	-	
City Asset Sales	195	84	-	84	110	
State Assistance	770	770	-	770	-	
MTA Bus Federal and City Match	132	113	-	113	19	
MTA Bonds	11,635	11,635	-	11,635	-	
Other (Including Operating to Capital)**	1,290	1,290	-	1,290	0	
B&T Bonds	2,025	2,000	-	2,000	25	а
Hurricane Sandy Recovery						
Insurance Proceeds/Federal Reimbursement	6,697	6,697	-	6,697	-	
PAYGO	18	18	-	18	-	
Sandy Recovery MTA Bonds	659	658	-	658	0	b
Sandy Recovery B&T Bonds & Cash	383	383	-	383	-	а
Total	31,704	31,495	-	31,495	209	1%

	Funding Plan	Re	ceived/Secure	d		
2015-2019 Program	Current	Thru March	<u>April</u>	Secured to date	Remainder	
Federal Formula	\$4,873	\$4,873	\$ -	\$4,873	\$ -	
Federal Flex & Other (Incl HSR/Security/Core Capacity	528	528	-	528	-	
Federal New Start	1,400	1,400	-	1,400	-	
State Assistance	9,064	8,194	-	8,194	871	
City Capital Funds	2,067	2,066	-	2,066	1	
City Non-Tax Levy Revenue Sources	600	-	-	-	600	
MTA Bonds	9,118	9,118	-	9,118	-	
Asset Sales/Leases	959	326	-	326	633	
Pay-as-you-go (PAYGO)**	2,145	2,145	-	2,145	-	
Other	217	68	2	70	147	
B&T Bonds & PAYGO/Asset Sale	2,942	2,942	-	2,942	-	а
Total	33,913	31,660	2	31,661	2,252	7%

[Funding Plan	Rec	eived/Secure	d		
2020-2024 Program	Current	<u>Thru March</u>	<u>April</u>	Secured to date	Remainder	
Capital from Central Business District Tolling	\$15,000	\$ -	\$ -	\$ -	\$15,000	
Capial from New Revenue Sources	10,000	5,604	-	5,604	4,396	
MTA Bonds and PAYGO	7,393	723	-	723	6,671	
Other Contribution	542	-	-	-	542	
Federal Formula	9,984	8,113	-	8,113	1,871	
State of New York	3,101	511	-	511	2,590	
City of New York	3,007	2,740	-	2,740	267	
Federal New Start (SAS Ph2)	2,005	2,005	-	2,005	-	
Federal Flexible & Other	1,084	1,082	-	1,082	2	
B&T Bonds	3,327	423	-	423	2,904	
Total	55,442	21,201	-	21,201	34,241	62%

a) Receipt of \$1.8m in Contributions from NJT and Amtrak for Penn Station Master Plan Study per the 2020 Agreement among NJT, Amtrak and MTA.



Contracts Department Evan Eisland, Executive Vice President and General Counsel

PROCUREMENT PACKAGE May 2024



PROCUREMENTS

The Procurement Agenda this month includes 1 action for a proposed credit of (\$36 M).



Staff Summary

Subject	t Reque Action		ation for Seve	eral Proc	urement	Date	: May 16, 2024		
Contra	cts Departmen	t							
Evan Ei	island, Executiv	e Vice Pres	ident and Ger	neral Co	unsel				
	Board Action						Internal Approvals		
Order	То	Date	Approval	Info	Other		Approval		Approval
1	Capital Program Committee	5/20/24	x			x	Deputy Chief Development Officer, Delivery	x	President
2	Board	5/22/24	x			x	Deputy Chief Development Officer, Development	x	Executive Vice President & General Counsel

<u>Purpose</u>

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

Discussion

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

Schedules Requiring Majority Vote		# of Actions	\$	Amount
J. Modification to Miscellaneous Procurement Contract	SUBTOTAL	<u> </u>	\$ \$	(36,388,937) (36,388,937)
	TOTAL	1	\$	(36,388,937)

Budget Impact

The approval of this procurement action 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 action be approved as proposed. (The item is 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 I; vi) the modifications to miscellaneous procurement 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.



Staff Summary Attached

<u>May 2024</u>

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

Schedule J. Modification to Miscellaneous Procurement Contracts

(Approvals/Staff Summaries required for substantial change orders and change orders that cause the original contract to equal or exceed the monetary or durational threshold required for Board approval.)

1. Cubic Transportation Systems Inc. (\$36,388,937) Contract No. A34024

MTA Construction & Development seeks Board approval to modify Contract A-34024 for a New Fare Payment System to: (i) remove the requirement to incorporate Long Island Rail Road and Metro-North Railroad into the new system, (ii) develop enhancements to the OMNY Business-to-Business Portal and mobile application and (iii) modify the Contract Milestones to reflect the schedule impacts experienced in the program, including the changes in this Modification, resulting in a 29 month extension of time for Substantial Completion.



Staff Summary

Schedule J: Modifications to Miscellaneous Procurement Contracts

Item Number: 1

Vendor Name (& Location)	Contract Number	AWO/	Modification #
Cubic Transportation Systems Inc. (San Diego, CA 32123)	A34024		32
Description			
New Fare Payment System	Original Amount:	\$	553,827,839
Contract Term (including Options, if any)	Prior Modifications:	\$	85,033,895
November 1, 2017 – July 31, 2024	Prior Budgetary Increases:	\$	
Option(s) included in Total Amount? Yes No Nn/a	Current Amount:	\$	638,861,734
Procurement Type Competitive Non-competitive Solicitation Type RFP Bid Other: Modification	This Request:	\$	(36,388,937)
Funding Source			
🛛 Operating 🖾 Capital 🔲 Federal 🔲 Other:	% of This Request to Current Amount	t:	(5.7%)
Requesting Dept/Div & Dept/Div Head Name: Delivery, Mark Roche, Deputy Chief Development Officer	% of Modifications (including This Request) to Original Amount:		8.8%

DISCUSSION:

MTA Construction & Development ("C&D") seeks Board approval to modify Contract A-34024 for a New Fare Payment System (the "Contract") to: (i) remove the requirement to incorporate Long Island Rail Road and Metro-North Railroad (collectively, "the Railroads") into the new system, (ii) develop enhancements to the OMNY Business-to-Business Portal ("B2B Portal") and mobile application and (iii) modify the Contract Milestones to reflect the schedule impacts experienced in the program, including the changes in this Modification, resulting in a 29 month extension of time for Substantial Completion. The negotiated price for this Modification, including the Impact Costs associated with the schedule adjustment, will result in a credit to MTA in the amount of \$36,388,937.

The Contract, which provides for both design-build services and operations services was, awarded to Cubic Transportation Systems ("Cubic"), on November 1, 2017, to provide the MTA with a state-of-the-art, integrated, reliable and convenient contactless fare payment system allowing customers to pay fares using mobile apps, digital wallets (e.g., Apple Pay, Google Pay, and Samsung Pay), contactless bank cards and MTA-issued contactless transit cards under the OMNY brand name. The Contract currently calls for the new fare payment system to replace the legacy payment systems in use by NYC Transit, MTA Bus, the Long Island Railroad and Metro-North Railroad. The Contract provides for installation of the system and for Cubic to service the system for a seven-year period (12-months during a warranty period which is paid for out of capital funds, and thereafter for a six year period to be paid for with operating funds).

The elements of the proposed Modification are as follow:

Removing the Railroads from the Cubic Contract:

Without this modification, the current schedule shows that the installation of the Cubic system on the Railroads will not be completed until 2027. The current fare collection systems in use by the Railroads were installed almost 25 years ago and are well-past their expected service life. These systems cannot be maintained in a state of good repair beyond 2025. Consequently, the Railroads have determined that it is more expedient and cost-effective to negotiate the full replacement of the fare collection system with its existing vendor. Additionally, the Railroad's current TrainTime mobile ticketing system has been a widely adopted commercial success and the MTA will benefit from the retention of this system instead of replacing it with the new, different system to be developed by Cubic.

Consequently, the remaining Railroad Work (other than some minor work related to communications connectivity on MNR) will be deleted from the Contract at a negotiated credit of \$36,406,166 in capital costs. In addition there will a reduction operating costs of \$6,928,726. Were the Railroads to remain in the Contract, certain requirements and change orders to address unique Railroad requirements would have been required, representing an additional cost to the program of approximately \$35 million in capital costs and \$4 million per year in operating costs.

Page 1 of 2



B2B Portal Enhancements:

The B2B Portal allows bulk purchasing and account management for third-party groups that will distribute OMNY cards, such as New York City Department of Education, City University of New York, and New York City Department of Social Services Fair Fares program, as well as private employers that will eventually utilize the system. The B2B Portal was designed, developed, and tested per MTA specifications in 2021and 2022. Since that time, additional enhancements have been identified by MTA and the various user groups, that will allow greater monitoring and administration of their fare card programs to provide functionality consistent with the latest standards. The cost of this Work will be \$5,200,000 (\$4,957,593.19 in capital costs and \$242,406.81 in operating costs). In addition, the Contract provides for two further five-year options to extend the operating support, at \$246,515.40 for each option.

Mobile App Enhancements:

The mobile application enhancements included in this Modification will provide for greater integration of the Cubic installed system with other MTA and third-party mobile applications, including the mobile ticketing application that will be used by the Railroads for their fare collection systems. The enhancements will also provide for additional push notifications to customers, customer ability to configure their communication preferences within their OMNY account and enhanced customer messaging allowing customers to monitor their usage. The cost for this Work will be \$2,100,000 (\$1,900,000 in capital costs and \$200,000 in operating costs). In addition, the Contract provides for two further five-year options to extend the operating support, at \$203,389.80 for each option.

Modification of Contract Milestones and Rebaselined Schedule:

Based on a Time Impact Analysis, the MTA has determined that delays in the program were attributable in different degrees to both Cubic and to the MTA (primarily due to updating the capability and functionality of the system resulting from rapid advances in technology and developing the specifications for incorporation of the Railroads into the Cubic system). Covid related impacts also played a part. Regardless, without this Modification, as noted above, full implementation of the system would not be achievable before 2027. After incorporating into the analysis the removal of the Railroad Work from the Contract, which eliminated a substantial source of delay, and the addition of the system enhancements included in this Modification, Substantial Completion of the Contract can be achieved by December 2025, with better functionality and a substantial savings in delay costs.

A revised schedule for completion of the Milestones (each Milestone represents the placement of a defined component of the Cubic system in revenue service) and Substantial Completion of the Contract was negotiated. The liquidated damages in the Contract for each Milestone and Substantial Completion remain in force subject to the revised date. The new Milestone and Substantial Completion Dates are as follows:

Milestone	Date upon Contract Award	Re-baselined Date
Complete implementation in all Subway Stations and on all Buses	October 2020	August 2024
Complete implementation of network for sale and reloading of MTA contactless cards and ticketing application	January 2021	July 2025
Complete implementation of Vending Machines	February 2022	May 2025
Complete Revenue Service Acceptance Testing of full system	November 2022	October 2025
Substantial Completion	July 2023	December 2025

Cubic submitted a proposal for this Modification asserting that it was due \$28,586,186.01 in Impact Costs (extended overhead, etc.) associated with delays to the Contract and \$53,843,992.69 as a result of the delay in service contract payments, which were not due to begin until Substantial Completion. Through negotiations, including the deletion of the Railroad Work and re-baselining effort, Cubic's Impact Costs have been reduced to \$7,150,000. With respect to the service contract, as part of this Modification, the service payments will commence for each component of the system as the Milestones above are achieved. Combined with the deletion of the Railroad servicing work, these changes result in a negotiated credit of \$9,560,941.

In sum, this Modification will resolve all outstanding scheduling issues and provide for both the Cubic system and the Railroad fare collection systems to be upgraded and modernized on the fastest possible schedule, preventing the Railroad Work from substantially delaying the Substantial Completion of the Contract and avoiding the danger of a breakdown in the Railroads' fare collection systems before the upgrade to that system can be implemented. This Modification also provides for upgrades to the Cubic system that will ensure that the Cubic system can be integrated with other MTA systems, including the Railroads, and provide the customer with a full featured up to date user experience.