



Metropolitan Transportation Authority

# Capital Program Oversight Committee Meeting

## December 2021

---

### Committee Members

J. Lieber, Chair  
N. Zuckerman, Vice Chair  
A. Albert  
J. Barbas  
N. Brown  
M. Fleischer  
R. Glucksman  
R. Herman  
D. Jones  
K. Law  
R. Linn  
D. Mack  
J. Samuelsen  
V. Tessitore

# **Capital Program Oversight Committee Meeting**

**2 Broadway, 20th Floor Board Room**

**New York, NY 10004**

**Monday, 12/13/2021**

**2:00 - 3:00 PM ET**

## **1. PUBLIC COMMENTS PERIOD**

## **2. APPROVAL OF MINUTES NOVEMBER 15, 2021**

*CPOC Committee Minutes - Page 3*

## **3. COMMITTEE WORK PLAN 2021 - 2022**

*CPOC Committee Work Plan - Page 6*

## **4. MTA C&D CAPITAL PROGRAM UPDATE**

*C&D Progress Report on Integrated Megaprojects - Page 8*

*IEC Project Review on East Side Access - Page 19*

*IEC Project Review on LIRR Expansion - Page 25*

## **5. CAPITAL PROGRAM STATUS**

*Commitments, Completions, and Funding Report - Page 31*

## **6. QUARTERLY TRAFFIC LIGHT REPORTS**

*Third Quarter 2021 Core & Sandy Traffic Light Reports - Page 50*

MINUTES OF MEETING  
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE  
November 15, 2021  
New York, New York  
2:00 P.M.

CPOC members present in person:

Hon. Janno Lieber  
Hon. Andrew Albert  
Hon. Jamey Barbas  
Hon. Norman Brown  
Hon. Randolph Glucksman  
Hon. Rhonda Herman  
Hon. David Jones  
Hon. Kevin Law  
Hon. Robert Linn  
Hon. Neal Zuckerman

CPOC members not present:

Hon. Michael Fleischer  
Hon. David Mack  
Hon. John Samuelsen  
Hon. Vincent Tessitore, Jr.

MTA staff present:

David Cannon  
Evan Eisland  
Michael Garner  
Robert Gomez  
John McCarthy  
Tim Mulligan  
Nan Ng  
Mark Roche  
Tom Savio  
Jamie Torres-Springer

Independent Engineering Consultant staff present:

Joe Devito

\* \* \*

Chairman Lieber called the November 15, 2021 meeting of the Capital Program Oversight Committee to order at 2:02 P.M.

Public Comments Period

There were three public speakers in the public comments portion of the meeting: Carlton D'Souza; Jason Anthony; and Kara Gurl.

Meeting Minutes

The minutes to the meeting held on October 18, 2021 were approved.

Committee Work Plan

There were no changes to the CPOC Work Plan.

### Chair/President Opening Remarks

In his opening remarks, Chairman Lieber noted as a cause for celebration the recent signing of the Bipartisan Infrastructure Bill by President Biden, and its significance to the MTA. He then provided a brief introduction to newly appointed President of C&D, Jamie Torres-Springer, which was followed, in turn, by brief remarks from Mr. Torres-Springer himself.

### Presentation on C&D Changes in Contracting

Mr. Eisland noted that among the reasons for consolidating capital construction work under C&D is that it provided the opportunity to improve MTA's contracts and bidding process. Citing the recommendations of the Board's Cost Containment Working Group -- and the broad goal of increasing competition, resulting in better bids and proposals -- he then outlined several key elements of this initiative: standard contract terms and conditions across the MTA; neutral dispute resolution; rational risk allocation; and incentives and penalties to keep projects on schedule. Further details of the presentation, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

### C&D Capital Program Update

Mr. Gomez gave an overview of the Signals and Train Control Business Unit, which currently includes 16 projects in construction with a total value of \$2.6B. He then provided detailed updates on the ISIM-B, Module 3 project (61% complete; \$154M forecast), as well as the following CBTC/interlocking projects: Queens Boulevard West (80% complete; \$729M forecast), 8<sup>th</sup> Avenue Line (40% complete; \$760M forecast), and Culver Line (67% complete; \$482M forecast). In its Project Review of the Queens Boulevard West CBTC project, the IEC noted that while CBTC operation has been successfully extended to three additional sections since the April 2021 CPOC report, and notable progress has been made in improving system stability and performance issues, the project has experienced a budget overrun and is behind schedule. As reported by C&D, the project budget remains under review. With respect to schedule, the IEC finds that there remains some risk to placing all sections of the line in CBTC operation by December 2021, as forecast by the project team, given that doing so is dependent upon further improving stability in future software releases and resolving remaining system issues in a timely manner. In addition, the IEC has performed a schedule review that finds that Substantial Completion (SC) may not be achieved until the second quarter of 2022, in contrast to the project team's forecast of early 2022. Finally, the IEC remains concerned that the contractually required CBTC Interface and Interoperability Specifications have not yet been fully validated, particularly with respect to operation of Thales-equipped trains in Siemens-equipped territories; this interoperability is critical since the R-211 fleet, which will operate on 8<sup>th</sup> Avenue, is being equipped by Thales, with wayside equipment provided by Siemens. In its Project Review of the Culver Line CBTC project, the IEC noted that while the project remains on budget, it has experienced a 10-month delay from the contractual completion date of August 2022. In addition, although project costs are trending upward somewhat -- with an additional \$5M for TA Labor and Engineering Force Account, due to delays -- the IEC finds there remains sufficient monies to complete the project at the current Estimate at Completion of \$482M. With respect to schedule, the project has experienced a further 3-month delay to SC since the last report to CPOC due to the contractor being late with material deliveries and installation of signal cable. In the opinion of the IEC, this project will likely continue to experience delays, as evidenced by the contractor's progress to date, as well as the level of effort needed for the testing and commissioning of three entirely new relay rooms. Other major risks to the project schedule include availability of weekend outages (*a risk common to many NYCT projects*) and a potential lack of qualified engineering resources from Siemens to support the project. The IEC concluded its remarks on the Culver Line by noting that the project has achieved a significant milestone by completing modification to the existing structure, which supports the new switches at Church Avenue. Further details of the presentations, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

### Update on the Small Business Development Program

Ms. Ng highlighted the key aspects of the Small Business Development Program (SBDP), including the 2021 award goal of \$70M, together with the current status of \$34.5M in awarded projects and \$33.2M in projects in procurement, for a total of nearly \$68M. Mr. Garner then cited the core mission of the SBDP from its inception: to create a large pool of qualified diverse prime contractors -- that have historically worked as subcontractors -- who have the ability to complete MTA projects safely, timely, and on budget. He then stated that while the MTA has achieved the Program's goal of awarding prime construction contracts totaling \$516M, he pledged to address the disparity of contract awards as it relates to ethnicity by going out and recruiting ethnic minority firms to participate in the Program. Mr. Garner then concluded the presentation by citing the following actions to improve growth in the SBDP: re-alignment of projects to match bidders' pool; increase annual commitment of smaller projects (less than \$400K) from operating fund; increase number of diverse contractors in the regions north of New York City; and increase diversity in the pool of contractors in Tier-2 and Federal Program. Further details of the presentation, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

### MTA Capital Program Commitments & Completions and Funding

Mr. Mulligan reported that through October, agencies have achieved commitments of \$2.6B versus a YTD goal of \$4.4B. Current forecasts call for achieving \$4.9B out of the overall yearly goal of \$6.2B, or 79% of those projects that were included in the initial goal. He then noted that there are several very large contracts that were not part of the initial goal that, if delivered by the end of the year, will likely result in total commitments above that number. With respect to completions, Mr. Mulligan reported that through October agencies have completed \$3.2B versus a \$5.6B YTD goal. The current projection for the end of the year is to achieve 77% of the total target, which is \$5.5B for the year. Further details of the presentation, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

### Adjournment

Upon motion duly made and seconded, Chairman Lieber adjourned the November 15, 2021 meeting of the MTA Capital Program Oversight Committee at 3:07 PM.

Respectfully submitted,  
Michael Jew-Geralds  
Office of Construction Oversight



## 2022 CPOC Committee Work Plan

---

I. Recurring Agenda Items

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

II. Specific Agenda Items

**January**

Overall Capital Program

- Stations

OMNY

**February**

Overall Capital Program

- Railroads

**March**

Overall Capital Program

- B&T
- Infrastructure

Quarterly Traffic Light Report

**April**

Overall Capital Program

- Signals and Train Control

Minority, Women and Disadvantaged Business Participation

**May**

Overall Capital Program

- Integrated Megaprojects

**June**

Overall Capital Program  
Rolling Stock  
OMNY  
Security Projects  
Quarterly Traffic Light Report

**July**

Overall Capital Program

- Stations

**September**

Overall Capital Program

- Railroads

Quarterly Traffic Light Report

**October**

Overall Capital Program

- Infrastructure

**November**

Overall Capital Program

- Signals and Train Control

Minority, Women and Disadvantaged Business Participation

Small Business Development Program

**December**

Overall Capital Program

- Integrated Megaprojects

OMNY

Security Projects

Quarterly Traffic Light Report

## MTA Board & Capital Program Committee Update Integrated Projects

This is MTA Construction & Development’s first report to the Capital Oversight Program Committee on the East End Gateway and LIRR Concourse Project. This document summarizes the progress on some of the significant elements of the project. This project is delivered via a development agreement with Penn District Station Developer LLC. (Vornado Realty Trust) and the Design Builder Skanska Penn Station Constructors.

Phase I, the new East End Gateway, includes a dramatic new entrance with views of the Empire State Building. Located at 33<sup>rd</sup> Street and 7<sup>th</sup> Avenue, the entrance has three escalators and a stairway.

Phase II, the LIRR Concourse project, is widening LIRR’s main concourse under 33<sup>rd</sup> Street from 30 to 57 feet and raising the ceiling height to 18 feet. The widened corridors will relieve congestion. The project will provide better lighting, air flow, and intuitive wayfinding, with enhanced retail and dining options. ADA improvements include a brand-new elevator and four elevator replacements.

Phase I completed with the opening of the new entrance at the end of 2020. It is currently in the Closeout Phase. Phase II is currently 40% complete with Substantial Completion forecasted for March 2023.

The project is on schedule and under budget.

### East End Gateway

L70206/VN  
 L70206/EF

The project will provide a new entrance at 33<sup>rd</sup> and 7<sup>th</sup> Avenue with three new escalators and one staircase from the street level to the LIRR 33<sup>rd</sup> Street Connecting Concourse and associated work. MTA C&D has executed a Change Order Phase 1 to move certain Phase 2 work into Phase 1. The Change Order scope includes advance design work, utility survey and test pits in 33<sup>rd</sup> Street, station roof replacement and street reconstruction in front of Madison Square Garden.

PROJECT STATUS	Original	Actual	Forecast
Substantial Completion	December 2020	December 2020 (A)	
Closeout			
Budget	\$190.9M*	\$175.6M	\$188 M

\*Includes \$20.9M of Phase 2 Scope performed in Phase 1

\*Includes \$5 M for the Penn Station Master Plan

The project is substantially complete including the Phase 2 work that was advanced to Phase 1. The contractor (Skanska) continues to address remaining closeout items including as-builts and final deliverables.

**LIRR Concourse**

L70206/VN  
L70206/EG  
L80206/04  
T80407/07  
T70413/50  
T80412/19  
T80806/13  
N51001/18

The project will provide improvements to widen the 33<sup>rd</sup> Street LIRR Concourse with associated architectural, structural, utilities and mechanical work. Project elements are as follows:

- Widen and increase the overhead clearance of the 33<sup>rd</sup> Street Connecting Concourse. Demolish the barreled ceiling and relocate affected utilities and other systems. Provide a new ceiling structure with up to 18 feet of overhead clearance and reconfigure retail spaces, mechanical and electrical spaces. Provide luminous ceiling and integrate with LIRR entry hall constructed under Phase 1. Provide modern finishes and contemporary lighting throughout the renovated spaces, including new floor, column covers, lighting, and ceiling treatments. Incorporate digital displays along the length of the 33<sup>rd</sup> Street Concourse. Provide signage and wayfinding in the affected areas including both static and dynamic signage.
- Replace the Passenger Information Display System (PIDS) with a new head end and new digital screen displays distributed throughout the renovated spaces and in retail spaces.
- Upgrade other building systems in Penn Station in the work area. These include a new service feed from Con Edison from 34<sup>th</sup> Street, an upgraded fire alarm system, and upgraded security systems.
- Remove and relocate the two (2) utility structures known as “sewer boxes” and the associated utilities in the bed of 33<sup>rd</sup> Street to increase the overhead clearance, reframe the street and the Penn Station roof under 33<sup>rd</sup> Street.
- Remove seven (7) beams “Head Knockers” at the west end of the 33<sup>rd</sup> Concourse (which provides less than 7 feet of overhead clearance) and HVAC equipment supported by the beams; relocate the HVAC equipment and establish the ceiling structure to match the rest of the Concourse.
- Remove the Level B Amtrak retail (kitchen) overhangs in the 33<sup>rd</sup> St. Concourse. This work includes removing overhead transverse beams, kitchen spaces, mechanical spaces, and other spaces. Reestablish the ceiling structure and finishes; relocated and reestablish the removed mechanical systems and restore the affected Amtrak spaces on Level B.
- Add view to tracks in the Main Gate Area
- Renovate the 34<sup>th</sup> Street Concourse.
- Increase the HVAC capacity to meet the demands of the widened Concourse and the expanded Back of House (BOH) space within One Penn Plaza.
- Relocate the MTA Back-of-House facilities in Penn Station and One Penn Plaza. New facilities will house offices, conference rooms, breakrooms, restrooms, locker rooms, workshops, storage, utility rooms, furniture and fixtures, mechanical, electrical, plumbing, fire protection, communications and security systems with integration and connections to both LIRR

network and systems and to base building utilities.

MTA C&D has bundled priority capital work and State of Good Repair (SOGR) from various agencies into the Phase 2 LIRR Concourse Development Agreement to integrate work and reduce disruption to operations. Included are:

- LIRR SOGR work: Replacement of Elevator P-11; Replacement of Platform stairs – Stairs 11E, 11C, 11M, and 11EE; Repair of Stair 10EE; Replacement of mechanical equipment such as air curtains and air handlers and associated work. Replace boiler including pumps, piping and demolition of non-functioning equipment in the Chiller Plant.
- NYCT priority work: Provide a new ADA elevator (EL-618) and associated work from the street to the Concourse Level. Demolish the existing NYCT Street stair on the northwest corner of 33<sup>rd</sup> St. and 7<sup>th</sup> Avenue and provide a new widened stair. The new elevator and the new stair are in a new entrance in the former Capital One Bank easement space.
- NYCT SOGR work: Replace existing NYC Transit elevators EL-214, EL-215 and EL-216. Perform leak remediation in the 33<sup>rd</sup> Street subpassage under 7<sup>th</sup> Avenue and at NYCT Control Area R-138. Provide for new HVAC in Communications Room 318A.
- MTAPD priority work: Provide in-building fiber network connectivity between the MTAPD, LIRR, and NYCT Communications systems and provisions for a new MTA Police Radio System in Penn Station.

PROJECT STATUS	Original	Forecast
Substantial Completion	March 2023	March 2023
Budget	\$538.7 M	\$538.7 M
*Deducts \$20.9 M of Phase 2 work performed in Phase 1.		
Skanska	40% complete	

The Design-Builder is working in multiple areas for the Phase 2 work. Accomplishments include:

- Completion of the west sewer box utility work.
- Rebuilt new utility box structures at higher elevations to provide additional head heights for the concourse.
- In the ADA street entrance, framing and the demising wall construction for the elevator shaft for the new street to Concourse ADA elevator has been completed.
- Demolition activities have started in multiple areas. The Chillers and the Cooling Tower at the 34<sup>th</sup> Street entrance have been demolished.
- Inside Penn Station, Stair 11C and 11E have been completed.

Current activities include:

- Continue replacement of LIRR's P11 Elevator. Install Stair 11E.
- Continue the build out of NYCT's elevator 215 and associated systems. Electrical conduits and fiber were installed on the express platform to feed the new NYCT elevator. Upcoming outages will continue the electrical feed work.
- Finish framing the west station roof. Complete the water main work on the east side. Backfill the 33<sup>rd</sup> Street excavation to close up the station before the end of the year.
- Transformers, boilers, hot water pumps, electrical systems, HVAC and other equipment in the LIRR power plant have been installed and is waiting to be energized by Con Edison and commissioned.
- Continue MEP work under the luminous ceiling and down the concourse.

Project Risks include:

- Delays in procurement of materials by the Design Builder could be affected by supply chain interruptions.
- Coordination of the 33<sup>rd</sup> Street Concourse MEP (ductwork, electrical and piping) could require additional time to identify and propose routing.
- The Luminous Ceiling engineering, fabrication, installation, and commissioning is complicated and could require extensive coordination.

The project team has mitigated project issues to ensure that the project is on schedule and under budget.

**East Side Access**

*East Side Access will provide LIRR passengers with direct service to Grand Central Terminal. Project involves building out an 11.5 mile underground tunnel with a new station and concourse below the existing Grand Central Terminal.*

CM007  
 CM014B  
 CM030  
 CS179  
 CS084  
 CS086  
 CQ033  
 CH058A  
 CH063

<b>PROJECT STATUS</b>	<b>Original</b>	<b>Forecast</b>
<b>Substantial Completion</b>	Dec 2022	Dec 2022
<b>Budget</b>	\$11.1B*	\$11.1B
<i>*Project was re-baselined to \$11.1 B in April of 2018</i>		
<i>The project is approximately 89% complete</i>		

The ESA program consists of 9 active third party and 5 force account construction contracts that are all or partially undertaking ESA construction work. Project is currently approximately 89% overall complete against a planned completion of 94% with a public Revenue Service Date of December 13, 2022.

ESA is transitioning from a construction site to an operating commuter railroad. All track is in place and traction power substations have been energized, which allowed for the running of test trains starting in September 2021. To address worker safety in this new environment, all staff that works near the right-of-way, received Live Rail Training. ESA and LIRR are meeting with the FRA to ensure that the new service complies with federal operating and safety regulations. The turnover of assets that LIRR will maintain is being scheduled. The MTA Board has approved the Grand Central Madison Concourse Operating Company — a “special purpose entity,” technically separate from the LIRR — that will oversee much of the day-to-day operations of the new station once it opens. Procurement of an interim asset maintainer is in progress and the RFP for a long-term station facilities maintainer and concourse master tenant is close to being issued.

**Concourse**

- As reported in May 2021, CM014B was suffering from lack of manpower and resolution of deficiencies and vertical transportation installation and testing was putting pressure on the revenue service date. Work has begun on remediation including replacement of treads, drives and cleaning of drive chains.
- Despite ESA’s best efforts, the CM014B challenges continue. The contractor is late in delivering of the Biltmore Connection, and facilities substation B-20. ESA continues to work closely with the contractor to resolve these issues. B-20 is slated for energization before end of year. Biltmore predecessor work material has been ordered, so the cut-over to MNR electrical equipment and subsequent removal of existing equipment can begin.

- Contract CM030 Design/Build Services for Passenger Experience Enhancements and Finish Detailing for the ESA Project was awarded.
- Integrated testing between the contractors has put pressure on the schedule. ESA has developed a “joint test team” with the CS179 and CM014B contractors to pre-test all systems and remediate issues right away. This will facilitate a more expeditious completion of integrated tests. In addition, ESA is currently working with the contractors to create off-shift test teams to recover schedule.

#### **Platform and Mezzanine**

- The May 2021 report had indicated positive movement on CM007, which had completed the majority of testing activities and had increased work on architectural finishes.
- CM007 is near substantial completion, but the architectural finishes are being delayed by supply chain issues.

#### **Right-of-Way**

- All traction power work has been completed and testing is done on third rail and SCADA. Blue light station testing is being progressed through the CS084 and CS179 contracts and will be completed mid-December.
- Track work has been completed, including the rail and frog remediations. A full clearance alignment check and geometry car runs have been completed.
- In May 2021, the CS179 contractor was beginning integrated testing and had been focused on integrated manpower through the three systems contracts.
- Integrated systems testing continues, with an added focus on systems that will allow LIRR to start Physical Characteristics Training and Commissioning before the end of this year. Currently, one important issue ESA is working with the contractor on is to resolve technical problems with the Tunnel Vent Fan System. The tunnel vent fan schedule for remediation has been delivered with an approved repair method. Repairs of booster fans and horizontal vent fans are forecast to be completed by end of December.

#### **Mid-Day Storage Yard (MDSY)**

- The CQ033 contract has been delayed due to flooding during Hurricane Ida, but this will not delay the handover of the MDSY to LIRR for Physical Characteristics Training.
- FRA testing and supervisory control to be completed by end of December

#### **Recent Completed Milestones (MS):**

- CH058A:
  - MS #8 - Substantial Completion

- CM014B:
  - MS #19 - GCT Zones 1 and 4 MEP
- CS084:
  - MS #4A - C03 - Control Cable Testing Complete
  - MS #9A - C06 - Control Cable Testing Complete
- CH063:
  - MS #5 - Complete Design/Submittals for Work Element C-Loop1A/Loop1&2/Penn Lead/North Runner/R In
  - MS #11 - Complete Design/Submittals for W Crossover and WBBY Initial Operating Segment
  - MS #11A - Complete Design/Submittals for 3234 Catenary
  - MS #9A - Complete Design/Submittals for Procurement of Special Trackwork Materials-Turnouts 703/705/725
- CS086:
  - MS #1 - Complete GCT-4 CIR & Associated Wayside Work
  - MS #2 - Complete GCT-3 CIR & Associated Wayside Work
  - MS #3 - Complete GCT-5 CIR & Associated Wayside Work
  - MS #4 - Complete GCT-6 CIR & Associated Wayside Work

**Looking ahead:**

- Complete testing of required systems and turn right-of-way over to LIRR for Physical Characteristics Training and Commissioning.
- Substantial Completion of CM007, CS084, CS086 and CQ033.
- Finish IST for the Substantial Completion of CS179.
- Substantial Completion of CM014B and CM030 while finishing LIRR Physical Characteristics Training.
- Take Beneficial Occupancy of all assets and transfer them to the GCMCOC or the LIRR.
- Award long-term maintenance contract and master tenant contracts.
- Start Revenue Service.

C&D continues to take the following actions to keep the project on schedule and on budget:

- Hold daily meetings with the contractor to discuss production rates and six-week schedule – outreach has been made to contractor leadership to assist and enforce ESA’s legal rights.
- Actively monitor progress and productivity of the contractor’s Subcontractors and pay them directly when needed to advance critical work.
- Conduct engineering workshops to reduce timeframes for reviews and resolution of issues as needed.
- CM014B CM is having weekly meetings with GCTC to cover work that needs to be accomplished, is generating weekly letters to GCTC documenting that work, and is identifying areas where GCTC is falling short and what level of manpower is needed to complete the work.

- Reduce number of change orders to advance work to meet schedule needs. Utilize task order contract whenever reasonable.
- Continued close coordination between JPMC and CS179 to allow for parallel activities within the same workspace; weekly walks confirm work progress and mitigate any challenges.
- Weekly cross contract coordination meeting focused on efficiently streamlining all activities (with priority given to IST) throughout the tunnel ROW.
- Coordinate with LIRR to determine, and complete installation and testing of systems required for Physical Characteristics Training.
- Work with railroad to plan LIRR takeover of assets, including the Mid-Day Storage Yard and Yard Services Building.
- Meeting with FRA to obtain federal approvals required for operations
- Advancing procurements for interim asset maintenance and long-term facilities maintenance

**LIRR Main Line  
 Expansion  
 (Third Track)**

*This project will add a 10-mile-long third track on the LIRR Main Line to reduce train congestion and enable bi-directional service during peak hours. LIRR Expansion also includes several related projects, including the elimination of eight street level grade crossings, improvements to rail bridges, reconstruction of five stations, and new parking garages.*

<b>PROJECT STATUS</b>	<b>Original</b>	<b>Forecast</b>
<b>Substantial Completion</b>	April 2023	April 2023
<b>Budget</b>	\$2,588 M	\$2,588 M
<i>The design/build portion of the project is approximately 80% complete</i>		

Overall, the project is on schedule to reach substantial completion in Q2 2023 and is still on track to put the third track into service in Q4 2022.

In early 2021 The Garden City Village Board voted to pursue litigation against the project to remove the newly installed steel utility poles. In Summer 2021 the State Supreme Court Judge’s summarily dismissed the Village of Garden City litigation against MTA regarding the resilient steel utility poles. However, the Village responded by refusing to issue permits necessary to begin work related to the Denton Avenue Bridge replacement. The Project Team is identified a temporary alternative means of construction to advance the project schedule to completion. On December 2, two judicial decisions were rendered in the MTA’s favor compelling the Village to both issue the permits so work could proceed and not interfere further with the progress of the work. Further meetings with the Village and the judge are pending, but the path forward appears clear. Some acceleration may be required to meet the late April 2022 bridge replacement date, but the schedule has been protected from this risk.

Planning for the completion and activation of the entire new Third Track is on-going. Current projections indicate that all major project elements related to train service on the Third Track will be in place before November 2022. The March 2021 safety incident which prompted a shutdown directed by MTA HQ following a construction accident at Mineola Station has been fully evaluated and has not impacted construction completion of the Third Track. As a result of multiple independent investigations, senior personnel were removed from the Design-Builder team and enhanced safety protocols were implemented to mitigate the risk of similar accidents going forward. The project continues to progress on all fronts:

**Grade Crossings**

- With the completion of the Willis Avenue grade crossings in September, all 8 grade crossings along the Main Line have now been permanently eliminated.

### **Track and Systems**

- Signals and Interlockings from Floral park to Mineola supporting infrastructure have been installed and commissioned.
  - Nassau 1 Interlocking Commissioned was commissioned and placed into service in February 2021.
- Signals and Interlockings from Mineola to Hicksville supporting infrastructure (Track Switches, Signal Control Houses, Signal Power, Communications Equipment and Networks, Fiber-Optic Cables, Utility Poles) is being installed.
  - Commissioning of Nassau 3 and Divide 1 Interlockings forecasted in March 2022.
- Park 1 and Park 2 Interlockings supporting infrastructure are being installed along the Hempstead Branch.
  - Park 1 and Park 2 are forecasted to be commissioned in Q3 2022
- Divide 4 Interlocking supporting infrastructure is scheduled to be completed at the end of Q2 2022 and will be commissioned thereafter.
- Infrastructure to Support Nassau 2 Interlocking is scheduled to be completed in Q4 2022 and will be commissioned immediately thereafter.

### **Stations**

- All Stations expected to be completed with exception of Elevators.
- Carle Place Station ribbon cutting ceremony was held in November 2021.
- Merillon Ave Station is well underway, with the south platform restored to 12 car lengths and ADA elevators near ready for turnover.
  - Forecast full operation in Q1 2022
- New Hyde Park Station's new 10-car platform has been opened for public use. It will be extended to 12 cars after completion of the pedestrian underpass at South 12th Street. The station building renovation is in progress.
  - Forecast full operation in Q1 2022
- Mineola Station construction is ongoing a temporary 12 train car platform was built to the east of the station to allow passengers access to the station while the new structures are completed.
  - Forecast full operation in Q3 2022
- Westbury Station construction began in Spring 2021. Construction of the permanent platforms, walls and overpass are in progress A temporary 6

---

train car platform was built to the east of the station to allow passengers access to the station while the new structures are completed.

- Forecast full operation in Quarter 4, 2022

**Bridges**

- All bridges complete before Q3 2022.

**Parking garages**

- Harrison Ave Garage was turned over to the Town of Mineola on December 1, 2021.
- Westbury North Garage was opened to the public in August 2021.
- Westbury 2<sup>nd</sup> Street Garage is being removed from the Contract; 3TC notified in November 2021.

# December 2021 CPOC Independent Engineering Consultant Project Review

## East Side Access



McKISSACK

MTA Independent Engineering Consultant

# Scope of Work

- The East Side Access project will provide a new Long Island Railroad (LIRR) commuter service into Grand Central Terminal (GCT). This project includes: over 11.5 miles of tunneling, utilizing the vacant lower level of the existing 63<sup>rd</sup> Street tunnel to cross under the East River; new 8-track terminal and concourse beneath Metro North Railroad's (MNR) existing facility at GCT; improvements in Harold that will facilitate train movements through the existing and new tracks; storage yard in Queens; traction power, signal, communications, and life safety systems; the commissioning of all new facilities and systems; and the new M9A LIRR vehicles.



MTA Independent Engineering Consultant

# Cost and Schedule Review

## ■ Cost

- The Independent Engineering Consultant's (IEC) analysis indicates that the budget of \$11.133B, with the established allocated and unallocated contingencies, remains sufficient to complete the work required to enter Revenue Service in December 2022.
- In the IEC's opinion, there remains sufficient contingency to address all known issues and remaining risks; this includes the current third party and force account issues, claims, pending change orders, potential time extensions for individual contracts, additional soft cost needs, and risks on remaining work.

## ■ Schedule

- The IEC concurs with the project team that the East Side Access Revenue Service Date (RSD) of December 13, 2022, is still achievable.
- Systems testing, a critical program level activity that has been analyzed and reported by the IEC, has slipped two months since the last report, which resulted in the consumption of all schedule contingency.
- Integrated Systems Testing (IST) is currently scheduled to complete at the end of August of 2022, followed by a three-month period that is critical to perform:
  - MTA/LIRR takeover of the facilities and concourse systems.
  - Burn-in for all systems to validate that the expected performance is achieved.
- It is the opinion of the IEC that further delays to the completion of all IST could compress the three-month period remaining for the MTA/LIRR takeover and familiarization of the facilities and concourse and put pressure on the Revenue Service Date.



# Systems Testing Observations

- Systems testing work has fallen behind plan and has been impacted by the contractors' performance, quality issues and outstanding change order work. As a result, key Integrated Systems Testing milestones have been delayed up to five months, which contributed to the consumption of program contingency.

**Figure 1 – Key Systems Milestones**

Milestones	Contractual Date	Forecast	Delay (Months)
Completion of Building Management System/Fire Life Safety System (BMS/FLSS) IST	Jun-22	Aug-22	2
Completion of Fire Alarm IST	Nov-21	Apr-22	5
Completion of Tunnel (SCADA) IST (includes Tunnel Ventilation)	Oct-21	Mar-22	5

*Data date: 10/1/2021*

- In order to maintain the current program schedule, the project team is working closely with the contractors to implement additional measures to increase testing productivity. These include:
  - Extended work shifts.
  - Joint testing between the CS179 Systems and CM014B GCT Concourse contractors.

# Program Observations

## □ Quality Concerns

- As cited in earlier reports, several systems had not been properly protected and maintained. The required assessments and corrective work have impacted the progress of Integrated Systems Testing, in particular, Tunnel SCADA and the Building Management System (BMS)/Fire Life Safety System (FLSS).
- Design and quality issues for Tunnel Ventilation and Booster Fans have delayed Tunnel SCADA IST by five months. Corrective actions are being implemented and expected to be completed in the first quarter of 2022. It is the IEC's understanding that safety protocols are being developed for use in case of an emergency during LIRR training activities.
- Damage to the elevators/ escalators in the concourse and caverns, which have impacted the testing of BMS/FLSS, are being addressed.
- To support the program schedule, it is essential to complete the required remediation work (Tunnel Ventilation and Escalators/ Elevators) and Integrated Systems Testing by no later than August 2022.

## □ Safety and Security Certification

- The Safety and Security Certification (SSC) process verifies that the system, as designed, installed and tested, meets the requirements for safe, secure operations, and maintenance.
- The body of evidence, required to obtain the certifications, needs to be provided by the contractor(s) for approval by Substantial Completion. The IEC is concerned that slow progress has been observed in the submittal of the required documentation by the contractors that are close to reaching Substantial Completion within the next quarter.



MCKISSACK  
MTA Independent Engineering Consultant

# Program Observations

## □ Operational Readiness of ESA

- Close coordination is ongoing between the project team, LIRR and the Federal Railroad Administration (FRA) to ensure a safe and smooth transition from construction completion to railroad readiness and to start-up operations.
- The project team has been successful in advancing the signals, track and traction power work, including the rail remediation, to allow for the start of LIRR training and familiarization of the ESA right of way in December 2021.
- MTA/LIRR is expected to take over the remaining concourse and facility systems upon completion of Integrated Systems Testing, which is forecast at the end of August 2022.
- While LIRR has sufficient personnel to commence Operational Readiness of the rail systems in December 2021, further ramp up is necessary to obtain the projected number of LIRR employees required for Revenue Service Date (RSD).

## □ Operation and Maintenance of ESA

- An interim maintenance contractor(s) will be required to perform the maintenance work on ESA assets prior to acceptance by MTA/LIRR. The contract(s) award is expected within a month.
- MTA has created the Special Purpose Entity, Grand Central Madison Concourse, to manage the Operation and Maintenance of East Side Access. The staffing plan is being developed.
- Third-Party Operation and Maintenance contract(s) is expected to be awarded in the second quarter of 2022. This will allow sufficient time for the contractor(s) to become familiar with the significant amount of new assets, systems and territory covered by East Side Access. This familiarization period, which will run concurrently with the MTA/LIRR takeover activities, has yet to be included in the program schedule.



MTA Independent Engineering Consultant

December 2021 CPOC  
Independent Engineering Consultant  
Project Review

Long Island Railroad Expansion



McKISSACK

MTA Independent Engineering Consultant

# Long Island Railroad Expansion

## Scope of Work

- The primary purpose of the LIRR Expansion Project is to improve rail service, reliability, and public safety along the LIRR Main Line segment between Floral Park and Hicksville by constructing a third track, eliminating eight grade crossings, constructing various station improvements and modifications, and other related railroad infrastructure improvements. The 9.8-mile project is divided into three blocks. Block 1 is Queens interlocking to Nassau 1 interlocking; Block 2 in Nassau 1 to Nassau 3; Block 3 is Nassau 3 to Divide Interlocking.



McKISSACK

MTA Independent Engineering Consultant

# Long Island Railroad Expansion

## Budget

- Upon review of the design, construction and soft costs, the IEC finds the project budget and Estimate at Completion (EAC) remain at \$2.58B. Project expenditures to date of \$ 1.77B are in line with plan. The project management team EAC is under review. However, based on expenditures to date, project contingency and estimated future costs, the IEC forecasts an EAC that is trending below the budget.
- Many of the potential risks that were previously identified have not been realized, thereby leaving adequate project contingency and reserve to keep the EAC below the budget.



McKISSACK

MTA Independent Engineering Consultant

# Long Island Railroad Expansion

## Schedule

- The IEC's review of the schedule and work to date verifies that the project's substantial completion date for major construction remains April 2023.
  - The field progress, based on contractor's invoice to date, is 80% complete vs. 78% of the time expended.
  - The project team continues to work aggressively to achieve a 4th quarter 2022 in-service date.
- Currently, the critical path goes through the completion of fiber backbone and all associated work for the Nassau 3 (N3) signal cutover in March 2022. This is followed by the decommissioning of the existing N3 and installation of Nassau 2 (N2) signal cutover activities.
  - In the opinion of the IEC, the critical path includes multiple cutovers that require a LIRR 2022 system outage plan that cannot be modified or delayed.
- Major near-critical path activities are:
  - Divide 1, Park 1 and Nassau 2 design and testing activities
  - Denton Avenue bridge
  - Westbury Station work
  - Mineola Station work



MTA Independent Engineering Consultant

# Long Island Railroad Expansion

## Risk

A recent Quantitative Risk Analysis (RA) was performed to assess the risk and develop mitigations. The top risks and mitigations are:

- Delay due to weather or equipment failure may prevent the successful completion of work during the limited number (19) of planned double track outages in 2022.
  - The project team is conducting weekly coordination meetings and developing a Testing and Commissioning schedule to focus on progress and evaluate timing of required resources.
- Completion of New Nassau 3/Divide 1 Cutover and related work.
  - Project Team continues to conduct a series of workshops with all stakeholders and utilizes a tracking tool to identify potential slippages of activities and discuss mitigations.
- Delay in the issuance of permits will impact the construction of the new Denton Avenue Bridge.
  - Project Team is mitigating the risk by identifying a substitute method, a temporary rail bridge that will allow the construction of the 3<sup>rd</sup> track, thereby the construction could progress.
  - The IEC finds the design and implementation of this method will need to commence soon. In addition, this method will still require the full replacement of the bridge later.
- In the opinion of the IEC, the mitigations for the above stated risks are adequate however, a risk assessment refresher is needed shortly to evaluate and forecast risk exposure for the upcoming year's scheduled work.



MTA Independent Engineering Consultant

# Long Island Railroad Expansion

## Observations

- In the opinion of the IEC, the project management team has made significant progress on milestones since last report:
  - Completion of the final grade cross elimination.
  - Westbury North Garage & Harrison Garage turned over to their respective villages.
  - Demolished Old Nassau Tower.
- The signal cutover work at the New Nassau 3 and Divide 1 Interlockings are scheduled to be done in March. The project is expected to perform pre-testing in late January and late February to identify any possible problems before the actual cut-over. After completion of this cutover, there is multiple weekends of track and signal work that leads to the commissioning of the third track.
  - In the opinion of the IEC, the project's decision to complete all pre-cutover activities and testing over a month earlier than the planned cutover in March will allow for more time for any corrections and assure the project of a well planned and smoothly executed signal cutover.
- The overall LIRR system outage schedule in 2022 leaves no room for schedule contingency. This may be an issue in case of severe weather events or unforeseen delays to the progress.
- Denton Avenue Bridge decision has applied schedule pressure to maintaining the staggung of the project station schedule.
- Removal of 2<sup>nd</sup> Street/Westbury garage from the project should result in a significant cost reduction to the project.

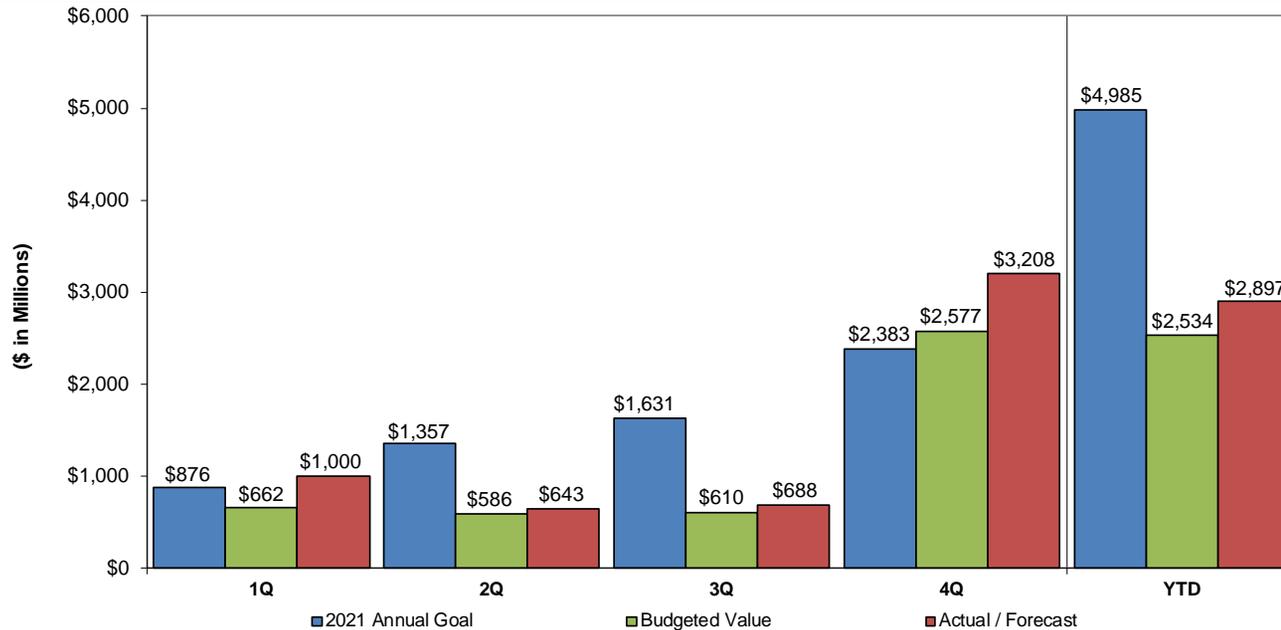
---

# MTA Capital Program Commitments & Completions

through  
November 30, 2021

Capital Projects – Commitments – November 2021

MTA-wide 2021 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

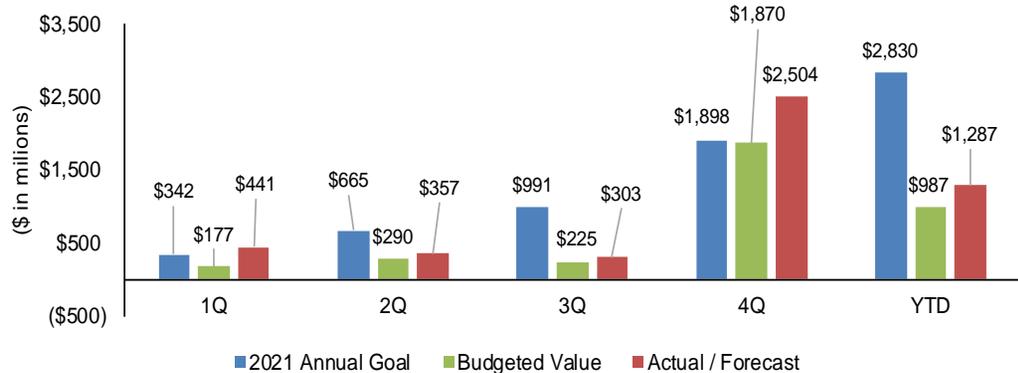
In 2021, agencies have a goal of \$6.2 billion in overall commitments, including \$3,839 million for NYCT, \$485 million for LIRR, \$777 million for MNR, \$57 million for MTA Bus, \$40 million for MTA Interagency, \$867 million for MTA Network Expansion, and \$173 million for B&T.

Through November, agencies have committed \$2.9 billion versus a \$5.0 billion YTD goal including a total of nearly \$1.0 billion of unplanned commitments that partially offset delayed awards. Currently the MTA forecasts achieving \$5.5 billion (89% of the overall 2021 commitment goal) during the year. The year-end shortfall is due to the impact of commitments currently forecast to be delayed until 2022. At the end of each quarter in 2021, schedule variances are explained on the following pages with current explanations covering the first three quarters of 2021. Fourth quarter results will be reported in the year-end report.

## NYCT/MTA Bus Capital Projects – Commitments – November 2021 – Budget Analysis and Schedule Variances

### NYCT and MTA Bus Budget Analysis

NYCT and MTA Bus Agency: Commitments					
Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Annual Goal	\$342	\$665	\$991	\$1,898	\$2,830
Actual / Forecast	\$441	\$357	\$303	\$2,504	\$1,287
Budgeted Value	\$177	\$290	\$225	\$1,870	\$987



### Q1, Q2 and Q3 Schedule Variances

Project	Commitment	Goal	Forecast
---------	------------	------	----------

#### 3 NYCT/MTA Bus Amber Commitments

Amber delays are within 2 months of goal.

##### Passenger Stations

Replace 8 Traction Elevators / Various	Construction Award	Q1	Q2(A)
		\$66.0	\$50.0
The project's award was delayed due to bid opening delays early in the year which were caused, in part, by time needed to answer requests for information. Bids were received in late March. The project cost decreased reflecting good bid savings.			

##### Superstorm Sandy Repairs

Roackaway Line Wrap-Up	Construction Award	Q2	Q3(A)
		\$56.4	\$40.4
Project award was delayed pending resolution of a bidder qualification hearing earlier in the year. The contract was awarded in July. The project cost reflects good bid savings.			

##### Shops & Yards

Livonia Maintenance Facility Ph. 1	Construction Award	Q3	Q4(A)
		\$66.9	\$21.9
Project award was delayed to comply with Federal requirements due to changing funding source from Local to Federal. The actual award value reflects favorable bidding results.			

Project	Commitment	Goal	Forecast
---------	------------	------	----------

#### 8 NYCT/MTA Bus Red Commitments

Red delays are beyond 2 months of goal.

##### Stations

Connection-Oriented Ethernet (COE) at 265 Stations, Ph 3B-2	Construction Award	Q2	Q4
		\$43.5	\$26.4
The project's award was initially rescheduled to reflect the availability of funding. The grant has now been executed and a contract award is scheduled for November.			
Replace 12 Escalators	Construction Award	Q2	Q4(A)
		\$120.5	\$83.5
Award delayed due to issues with the schedule submitted by the low bidder. Thereafter, the schedule was corrected/resubmitted and the procurement staff summary is being prepared. Awarded in November with and the award reflects good bid savings.			

## NYCT/MTA Bus Capital Projects – Commitments – November 2021 – Schedule Variances

Project	Commitment	Goal	Forecast
---------	------------	------	----------

### 8 NYCT/MTA Bus Red Commitments (continued)

#### Misc./Emergency

Livingston Plz Elec and Mech Sys Improvements, Ph. B	Construction Award	Q2	Q4
		\$53.6	\$53.4

The award was initially delayed to October due to extended time needed to update specifications and to process addenda during procurement. Qualification hearings occurred in October and an award is anticipated for December.

#### Track

8th Ave ROW (Misc. ) Bundle	Construction Award	Q2	2022
		\$83.2	\$143.2

The award was previously re-scheduled to accommodate design criteria development and related procurement activities. Project cost reflects latest estimate.

#### Sandy

Mainline Track 200-207th St., 8th Ave	Construction Award	Q3	2022
		\$137.0	\$171.5

The award was rescheduled due to contract revisions based on constructability and to address bidders' questions which extended the bid due date date. The project's cost reflects the latest estimate.

Tiffany Central Warehouse	Construction Award	Q3	2022
		\$59.5	\$58.4

The award was re-scheduled to allow for updating of technical specifications and contract documents. The bid package was released on November 1st. The project's cost reflects the latest estimate.

Project	Commitment	Goal	Forecast
---------	------------	------	----------

#### Power

New Substation: Canal St. 8th Ave	Construction Award	Q3	2022
		\$64.7	\$69.5

Delayed in part due to outstanding real estate issues, now resolved. The MTA and the City have resolved an easement agreement.

#### Line Structures

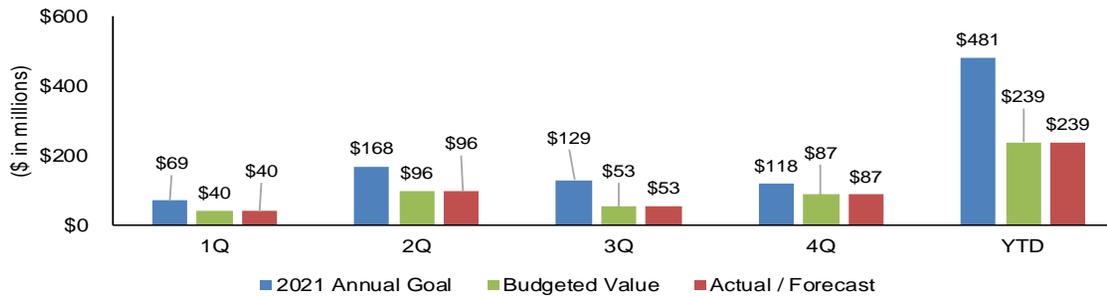
Line Structures Component Program: The Bronx and Vents (BL01-2519)	Construction Award	Q3	Q4
		\$191.9	\$189.4

The award was re-scheduled to accommodate specification revisions and the contract advertisement and procurement method was revised from D/B to Invitation for Bid (IFB). The project cost reflects the latest estimate.

LIRR Capital Projects – Commitments – November 2021 – Budget Analysis and Schedule Variances

LIRR Budget Analysis

LIRR Agency: Commitments					
Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Annual Goal	\$69	\$168	\$129	\$118	\$481
Actual / Forecast	\$40	\$96	\$53	\$87	\$239
Budgeted Value	\$40	\$96	\$53	\$87	\$239



Q1, Q2 and Q3 Schedule Variances

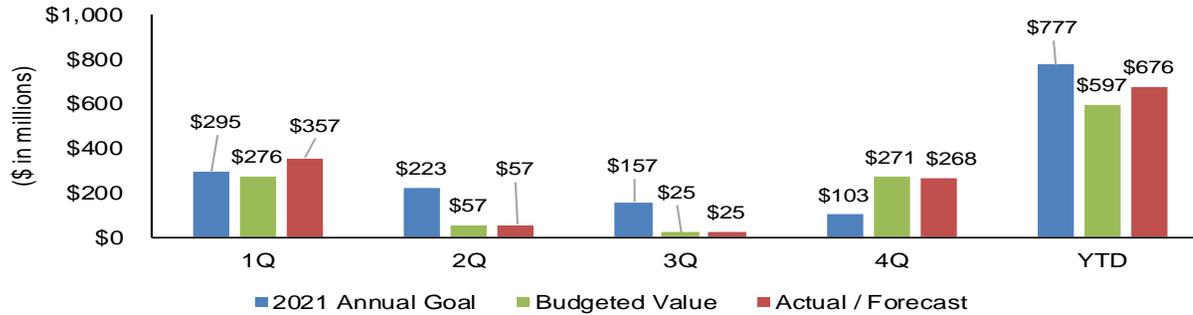
Project	Commitment	Goal	Forecast
<b>4 LIRR Red Commitments</b>			
<b>Red delays are beyond 2 months of goal.</b>			
<u>Superstorm Sandy</u>			
Long Island City Yard Restoration and Resiliency (contract)	Construction Award	Q2 \$13.4	Q4 \$39.8
Project award initially delayed due to additional bidder questions impacting bid opening schedule. The award was Board approved in November with a contract award anticipated for December. The revised estimate reflects a high bid.			
<u>Rolling Stock</u>			
Work Locomotives	Purchase	Q2 \$35.7	2022 \$45.7
Project award initially delayed to allow more time to negotiate with vendor. More recently, additional time has been needed for the Legal Department to negotiate and finalize an agreement for work trains (\$10M) along with the larger project (\$36M).			

Project	Commitment	Goal	Forecast
<u>Bridges</u>			
Cherry Valley Rd Bridge Replacement	Construction Award	Q3 \$25.0	Q4 (A) \$17.5
The project was delayed to accommodate responses to proposers' questions and contract negotiations. The award was Board approved in October and executed in November. The award value reflects the results of bidding.			
<u>Signals</u>			
Babylon Interlocking Signal System Renewal and Upgrade	Construction Award	Q3 \$30.0	2022 \$30.0
Commitment date now identified as January 2022 per the current procurement schedule contingent upon receipt of RFP comments from C&D Legal.			

**MNR Capital Projects – Commitments – November 2021 – Budget Analysis and Schedule Variances**

**MNR Budget Analysis**

<b>MNR Agency: Commitments</b>					
Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Annual Goal	\$295	\$223	\$157	\$103	\$777
Actual / Forecast	\$357	\$57	\$25	\$268	\$676
Budgeted Value	\$276	\$57	\$25	\$271	\$597



**Q1, Q2 and Q3 Schedule Variances**

Project	Commitment	Goal	Forecast
---------	------------	------	----------

**2 MNR Red Commitments**

Red delays are beyond 2 months of goal.

*Stations*

GCT Trainshed	Construction Award	Q2	Q4 (A)
		\$183.3	\$184.9

Delay was due to the amount of R.F.I.'s [Request for Information] from potential contractors; JP Morgan Chase shifted the award date to October 2021.

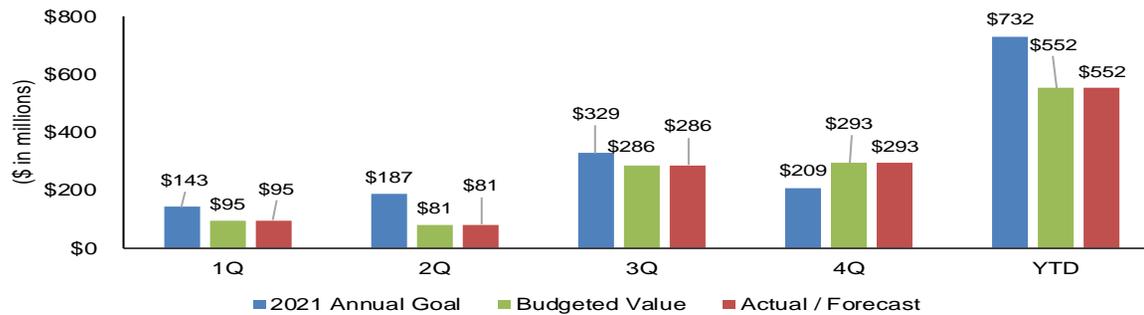
Upper Harlem & Hudson Stations	Construction Award	Q2	2022
Priority Repairs		\$31.0	\$31.0

The staging of this project is being altered to have two stations (Garrison and Cold Spring) completed first. Additional design is required to accommodate this resequencing of work. Because of this resequencing as well as coordination with other work in the vicinity, a new schedule has been developed.

MTA Expansion Capital Projects – Commitments – November 2021 – Budget Analysis and Schedule Variances

MTA Expansion Budget Analysis

Expansion Agency: Commitments					
Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Annual Goal	\$143	\$187	\$329	\$209	\$732
Actual / Forecast	\$95	\$81	\$286	\$293	\$552
Budgeted Value	\$95	\$81	\$286	\$293	\$552



Q1, Q2 and Q3 Schedule Variances

Project	Commitment	Goal	Forecast
---------	------------	------	----------

2 MTA Expansion Amber Commitments

Amber delays are within 2 months of goal.

East Side Access

Rail Replacement	Construction Award	Q1	Q2(A)
		\$20.0	\$3.0

Project award was delayed to negotiate a change order. The award value reflects reduced material quantities required.

Regional Investments

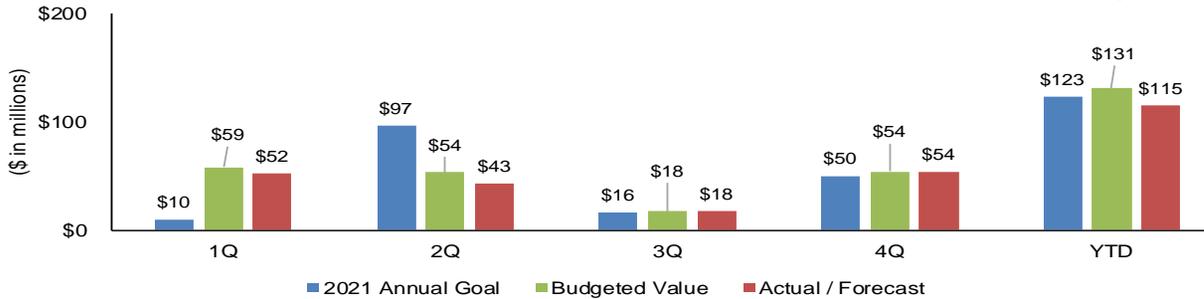
Eastbound Re-Route	Construction Award	Q3	Q3(A)
		\$250.0	\$183.4

The contract was Board approved in July and awarded in August. The budget at award reflects the impact of good bid savings.

**B&T Capital Projects – Commitments – November 2021 – Budget Analysis and Schedule Variances**

**B&T Budget Analysis**

<b>B&amp;T Agency: Commitments</b>					
<b>Summary Chart Data</b>	<b>1Q</b>	<b>2Q</b>	<b>3Q</b>	<b>4Q</b>	<b>YTD</b>
2021 Annual Goal	\$10	\$97	\$16	\$50	\$123
Actual / Forecast	\$52	\$43	\$18	\$54	\$115
Budgeted Value	\$59	\$54	\$18	\$54	\$131



**Q1, Q2 and Q3 Schedule Variances**

The Q1 schedule variance reflects the early award of the installation of protective fencing at the Verrazzano-Narrows Bridge. There are no Q2 or Q3 schedule slippages to report. Q4 schedule variances will be reported in the year-end report.

### Capital Projects – Completions – November 2021

Goal	Actual	MTA-wide 2021 Major Completions												Post 2021
		Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	
Total	51	1	1	1	5	3	2	3	0	3	3	1	10	18
Jan-21	1	1												
Feb-21	2				1			1						
Mar-21	1			1										
Apr-21	3				2					1				
May-21	7		1		2	1	1				1		1	
Jun-21	7					2	1			1				3
Jul-21	3									1			1	1
Aug-21	5							1					2	2
Sep-21	2													2
Oct-21	7							1					2	2
Nov-21	2													2
Dec-21	11											1	4	6

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

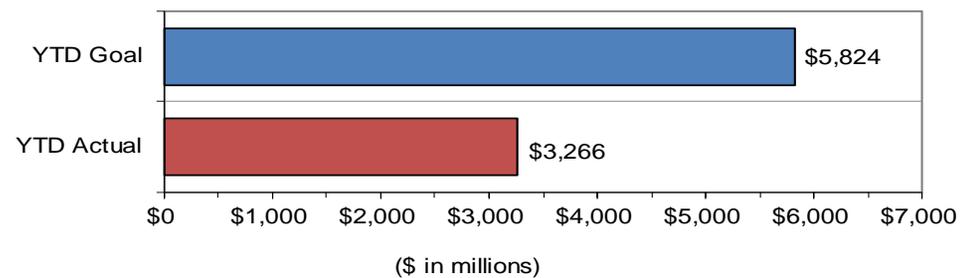
#### Completions Summary

In 2021, agencies have a goal of completing \$7.2 billion in work including 51 major completions. Major completions are generally those that have significant dollar value or have high visibility. Major completions for 2021 by agency include 26 for NYCT, 7 for LIRR, 7 for MNR, 2 for MTA Bus, 5 for MTA Expansion, and 4 for B&T.

Through November, agencies have completed \$3.3 billion versus a \$5.8 billion goal. The year-to-date shortfall is mainly due to slips of 18 major completions with 11 falling out of 2021. All schedule slips are explained on the following pages. The MTA currently anticipates achieving 71% of its overall 2021 annual completion goal.

#### Budget Analysis

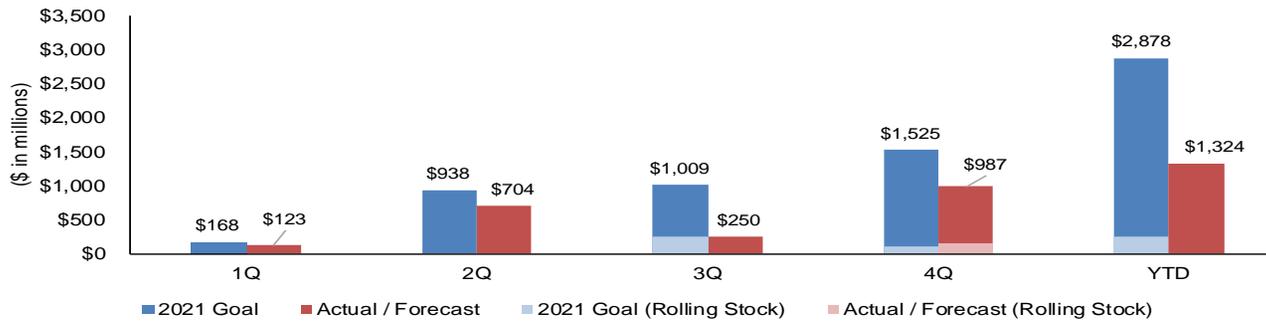
	(\$m)	
2021 Annual Goal	\$7,183	
2021 Forecast	\$5,089	71% of Annual Goal
Forecast left to Complete	\$1,822	



**NYCT/MTA Bus Capital Projects – Completions – November 2021 – Budget Analysis and Schedule Variances**

**NYCT and MTA Bus Budget Analysis**

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Goal	\$168	\$938	\$1,009	\$1,525	\$2,878
Actual / Forecast	\$123	\$704	\$250	\$987	\$1,324
2021 Goal (Rolling Stock)	\$0	\$0	\$259	\$99	\$259
Actual / Forecast (Rolling Stock)	\$0	\$0	\$0	\$149	\$0



**Schedule Variances**

Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
---------	------------	------	----------	---------	------------	------	----------

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

Amber delays are within 2 months of goal.

*Passenger Stations*

ADA: Gun Hill Rd / Dyre	Construction	Feb-21	Apr-21(A)
		\$55.1	\$59.5

Project completion was delayed due to an additional work order for the redesign of the fire sprinkler and fire alarm system as a result of changes to standards identified during pre-final inspection. Cost increase reflected additional project support costs.

*Miscellaneous/Emergency*

Power Upgrade: RCC, PCC - Phase 2	Construction	Oct-21	Dec-21
		\$63.4	\$63.4

Completion is now forecasted for December because more time is required to resolve the outstanding additional work orders (AWOs).

**17 NYCT/MTA Bus Red Completions (1 new this month)**

Red delays are beyond 2 months of goal.

*Signals & Communications*

CBTC Queens Blvd West - 50 St to Union Tpke: Ph 1	Construction	Aug-21	Jun-22
		\$235.8	\$254.8

Project completion was initially delayed due to software reliability issues as well as additional time needed to monitor each section of the line's performance prior to entering beneficial use. The completion date was recently moved to 6/2022 due to stability issues with CBTC carborne software and late delivery of completed ATS system. Project cost increase in part due to additional force account support, additional work orders, as well as additional administrative services.

*Staten Island Railway*

SIR: New Power Station: Clifton & New Dorp	Construction	Jun-21	Apr-22
		\$49.8	\$50.4

Project completion rescheduled due to Fire Alarm acceptance testing and Con Ed delay in providing Low and High Tensions service. Project cost increase due to additional support services needed as a result of project duration increase. Substantial completion has been revised due to ongoing punch list work, tests and inspections.

## NYCT/MTA Bus Capital Projects – Completions – November 2021 – Schedule Variances

Project	Completion	Goal	Forecast
---------	------------	------	----------

### 4 NYCT/MTA Bus Amber Completions (continued)

Amber delays are within 2 months of goal.

#### Buses

<b>Purchase 110 Hybrid-Electric Standard Buses (New Flyer) (New Item)</b>	Bus Procurement	Nov-21	Jan-22
		\$99.3	\$99.3

Production delays have impacted the delivery schedule; 92 of 110 buses have been delivered as of November 2021.

#### Sandy

Sandy Mitigation: St. George	Construction	Oct-21	Dec-21
		\$47.5	\$51.8

Project cost increased due to additional cost to dispose of Asbestos and repair a customer platform damaged during jet grout installation. Substantial completion has recently been delayed to December due to field conditions.

Project	Completion	Goal	Forecast
---------	------------	------	----------

### 17 NYCT/MTA Bus Red Completions (continued)

Red delays are beyond 2 months of goal.

#### Bus Purchases

Purchase 165 Hybrid-Electric Standard Buses	Bus Procurement	Sep-21	Mar-22
		\$150.7	\$145.9

Project completion schedule extended to account for COVID-19 impact on delivery schedule. Completion schedule has been adjusted due to technical delays.

Purchase 126 Hybrid-Electric Standard Buses	Bus Procurement	Oct-21	Feb-22
		\$107.9	\$107.9

Recent, additional delay until February 2022 is attributable to resources and parts shortages.

#### Miscellaneous/Emergency

Livingston Plaza: Facade & Perimeter Hardening	Construction	Aug-21	Jan-22
		\$33.5	\$33.5

Project completion delayed due to issues preventing the contractor from removing the scaffolding. Completion forecast was extended one month due to a roofing materials shortage and pending negotiations on an AWO.

#### Superstorm Sandy Repairs

Sandy: Rutgers Tube	Construction	Aug-21	Dec-21
		\$159.2	\$168.5

The completion delay is due to time needed to complete additional work orders (AWOs). The project's cost increase is primarily driven by the estimated cost for these AWOs. Project cost reflects latest estimate.

Sandy: Clifton Shop	Construction	Dec-21	Jun-22
		\$200.7	\$201.2

Substantial completion has been revised due to delays in gas activation and completion of other punch list work.

#### Staten Island Railway

Mainline & Clifton Yard Track and Switches	Construction	Sep-21	Dec-22
		\$77.3	\$77.1

Project completion delayed until 2022 due to new switches to Clifton Yard Tracks 5 through 7 which cannot be completed until the new Clifton Shop is placed in service; which is currently forecasted for June 2022.

## NYCT/MTA Bus Capital Projects – Completions – November 2021 – Schedule Variances

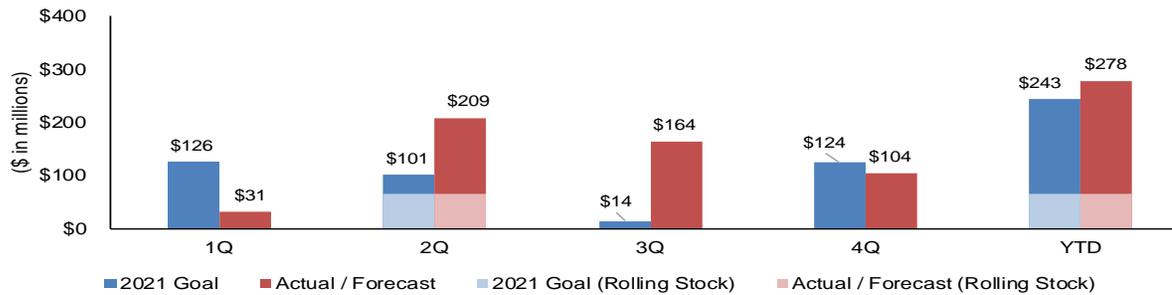
Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
<b>17 NYCT/MTA Bus Red Completions (1 new this month)</b>				<b>NYCT</b>			
<b>Red delays are beyond 2 months of goal.</b>				<i>Traction Power</i>			
<i>Signals &amp; Communications</i>				<p>New Substation &amp; CBHs: Maspeth Av-Humboldt St / Canarsie</p> <p>Construction</p> <p>May-21</p> <p>Oct-21 (A)</p> <p>\$59.2</p> <p>\$59.2</p> <p>Con Edison advised that due to emergency feeder outages caused by the ongoing Summer heat events, they could not immediately commit to a date for energization of the 2nd HT Feeder. Energization happened the first week of October 2021 and substantial completion was achieved.</p>			
CBTC Queens Blvd West - 50 St to Union Tpke: Ph 1	Construction	Aug-21	Jun-22				
		\$235.8	\$254.8				
<p>Project completion was initially delayed due to software reliability issues as well as additional time needed to monitor each section of the line's performance prior to entering beneficial use. The completion date was recently moved to 6/2022 due to stability issues with CBTC carborne software and late delivery of completed ATS system. Project cost increase in part due to additional force account support, additional work orders, as well as additional administrative services.</p>				<p>New Substation: Harrison Pl / Canarsie</p> <p>Construction</p> <p>May-21</p> <p>Dec-21</p> <p>\$51.3</p> <p>\$51.3</p> <p>Completion delayed pending Con Ed energization of substation; they could not immediately commit to a date for energization of the 2nd HT Feeder. Energization is now tentatively scheduled for mid December.</p>			
<i>Staten Island Railway</i>							
SIR: New Power Station: Clifton & New Dorp	Construction	Jun-21	Apr-22				
		\$49.8	\$50.4				
<p>Project completion rescheduled due to Fire Alarm acceptance testing and Con Ed delay in providing Low and High Tensions service. Project cost increase due to additional support services needed as a result of project duration increase. Substantial completion has been revised due to ongoing punch list work, tests and inspections.</p>				<i>Signals &amp; Communication</i>			
<i>Power</i>				<p>Upgrade SONET Rings A,C</p> <p>Construction</p> <p>Jun-21</p> <p>Jun-22</p> <p>\$29.4</p> <p>\$29.6</p> <p>Project completion continues to be delayed due to limited In-house resources to support the migration work. This most recent slip is from December 2021 to June 2022.</p>			
<b>Avenue Z Substation Renewal / CUL (New Item)</b>	Construction	Nov-21	Nov-22				
		\$28.9	\$28.9				
<p>The delay is due to an emerging water infiltration issue.</p>				<i>Depots</i>			
				<p>Bus Radio System - NYCT</p> <p>Construction</p> <p>Dec-21</p> <p>Jun-23</p> <p>\$195.4</p> <p>\$214.7</p> <p>Project completion delayed due to utility issues, poor contractor performance, conformed design issues, and delays related to the COVID-19 pandemic. Delays are being analyzed by MTA Legal and MTA C&amp;D Program Controls. Ongoing project cost increases reflect latest, revised cost estimates to complete the project.</p>			
				<i>Bus Company Projects</i>			
				<p>Bus Radio System</p> <p>Construction</p> <p>Dec-21</p> <p>Jun-23</p> <p>\$27.8</p> <p>\$32.1</p> <p>See Bus Radio System - NYCT explanation above.</p>			
				<p>Bus Radio System, Pt II</p> <p>Construction</p> <p>Dec-21</p> <p>Jun-23</p> <p>\$37.4</p> <p>\$39.5</p> <p>See Bus Radio System - NYCT explanation above.</p>			

LIRR Capital Projects – Completions – November 2021 – Budget Analysis and Schedule Variances

LIRR Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Goal	\$126	\$101	\$14	\$124	\$243
Actual / Forecast	\$31	\$209	\$164	\$104	\$278

2021 Goal (Rolling Stock)	\$0	\$65	\$0	\$0	\$65
Actual / Forecast (Rolling Stock)	\$0	\$65	\$0	\$0	\$65



Schedule Variances

Project	Completion	Goal	Forecast
---------	------------	------	----------

2 LIRR Amber Completions

Amber delays are within 2 months of goal.

Rolling Stock

Rolling Stock: M-9 Procurement	Fleet Procurement	May-21	Jun-21(A)
		\$64.8	\$64.8
Project was delayed due to workmanship issues and impacts related to the COVID-19 pandemic. The 24 cars assumed for 2021 were delivered in June.			

Other Track Improvements

Jamaica Capacity Improvements Phase 1	Construction	Dec-21	Feb-22
		\$19.1	\$19.1

Time extension for North/South cutover which proved to be best value realized during Design Review for potential to save money. It will now be done in two weekend cutover time frames. The new completion date incorporates these changes.

Project	Completion	Goal	Forecast
---------	------------	------	----------

1 LIRR Red Completion

Red delays are beyond 2 months of goal.

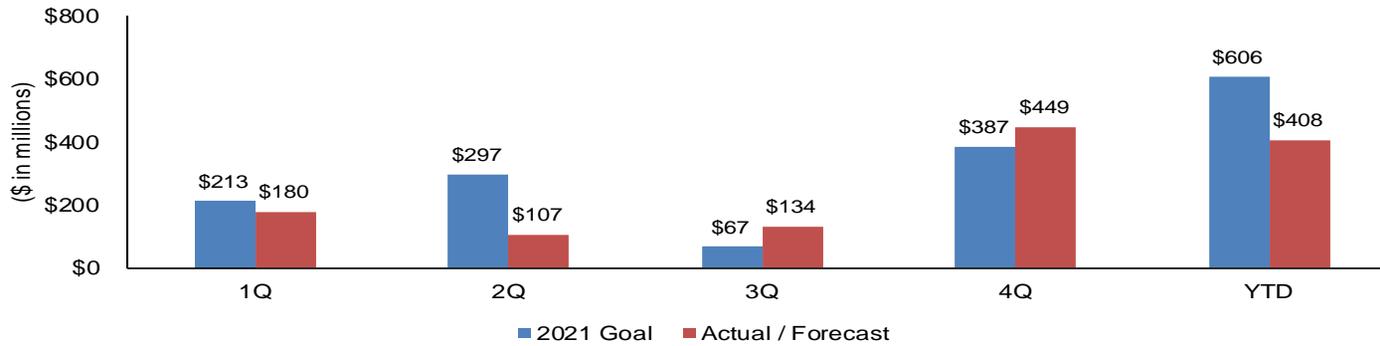
Shops and Yards

Diesel Locomotive Shop Improvements	Construction	Feb-21	Jul-21 (A)
		\$94.4	\$95.6
Project completion was delayed due to and extended process of acceptance of the Fire Alarm System.			

**MNR Capital Projects – Completions – November 2021 – Budget Analysis and Schedule Variances**

**MNR Budget Analysis**

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Goal	\$213	\$297	\$67	\$387	\$606
Actual / Forecast	\$180	\$107	\$134	\$449	\$408



**Schedule Variances**

Project	Completion	Goal	Forecast
---------	------------	------	----------

**2 MNR Red Completions**

Red delays are beyond 2 months of goal.

*Structures*

3rd Ave Bridge Replacement	Construction	Jun-21 \$14.4	Sept-21(A) \$14.4
There was a no cost time extension due to COVID-related delays in material and equipment.			

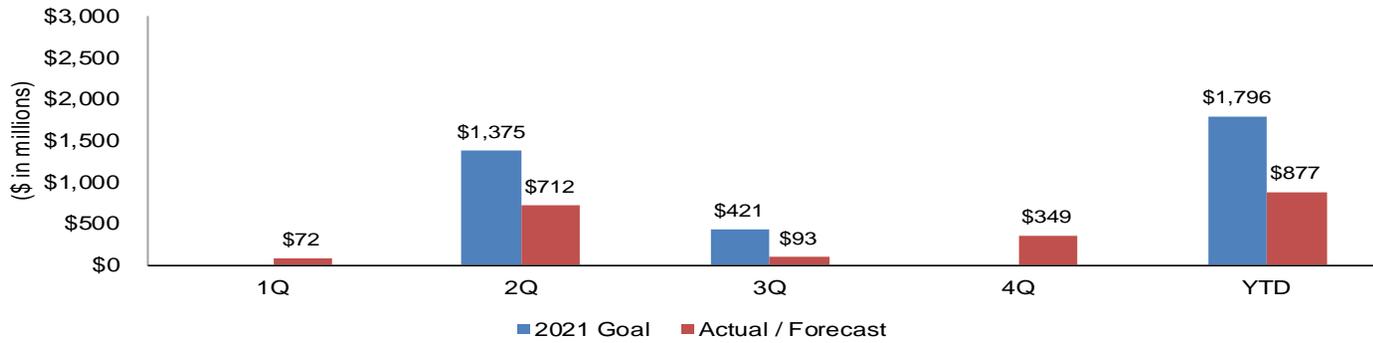
*Track*

2020 Cyclical Track Program	Construction	Dec-21 \$15.7	Dec-22 \$15.7
The 2020 Cyclical Track program has been put on hold while Metro-North Railroad attends to washouts, mudslides, and other damage inflicted by Tropical Storm Ida.			

MTA Expansion Capital Projects – Completions – November 2021 – Budget Analysis and Schedule Variances

MTA Expansion Budget Analysis

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Goal	\$0	\$1,375	\$421	\$0	\$1,796
Actual / Forecast	\$72	\$712	\$93	\$349	\$877



Schedule Variances

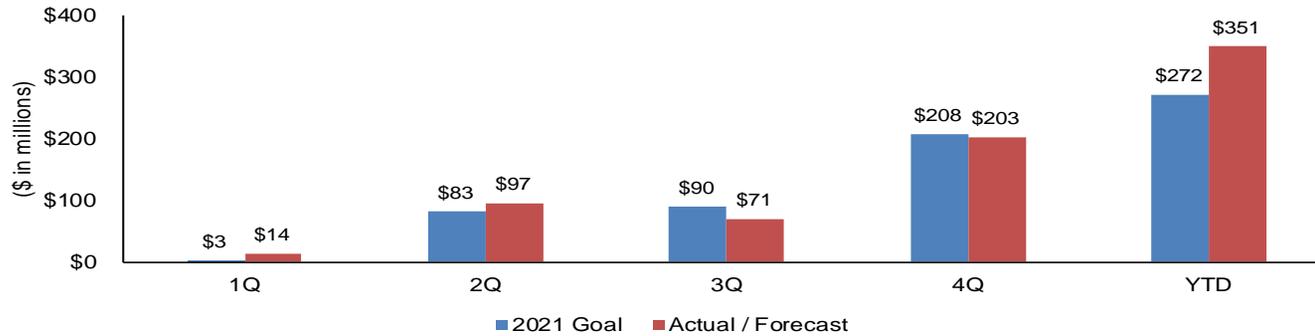
Project	Completion	Goal	Forecast
<b>4 MTA Expansion Red Completions</b>			
<b>Red delays are beyond 2 months of goal.</b>			
<i>East Side Access</i>			
B/C Approach	Construction	Apr-21 \$92.9	Sep-21 (A) \$92.9
Project substantial completion was extended to include Loop 1A trench excavation and catenary work. An additional, recent delay was due to receipt of Amtrak final acceptance.			
GCT Concourse & Facilities	Construction	Jun-21 \$574.5	Sep-22 \$574.5
Scheduled completion impacted by local systems testing delays. A more recent delay extending duration to 2022 is due to re-work required for escalator wellways 1-4. ESA is working with the contractor to mitigate.			

Project	Completion	Goal	Forecast
<i>East Side Access</i>			
Systems Package 2 - Tunnel Systems	Construction	Jul-21 \$72.0	Jan-22 \$72.0
Additional delays are due to permanent power delivery scheduling. Integrated systems testing is underway.			
Mid-Day Storage Yard	Construction	Jul-21 \$348.6	Dec-21 \$348.6
Scheduled completion was impacted by Signals/Systems integration testing delays.			

**B&T Capital Projects – Completions – November 2021 – Budget Analysis and Schedule Variances**

**B&T Budget Analysis**

Summary Chart Data	1Q	2Q	3Q	4Q	YTD
2021 Goal	\$3	\$83	\$90	\$208	\$272
Actual / Forecast	\$14	\$97	\$71	\$203	\$351



**Schedule Variances**

Project	Completion	Goal	Forecast
---------	------------	------	----------

**1 B&T Red Completion**

Red delays are beyond 2 months of goal.

*Structures*

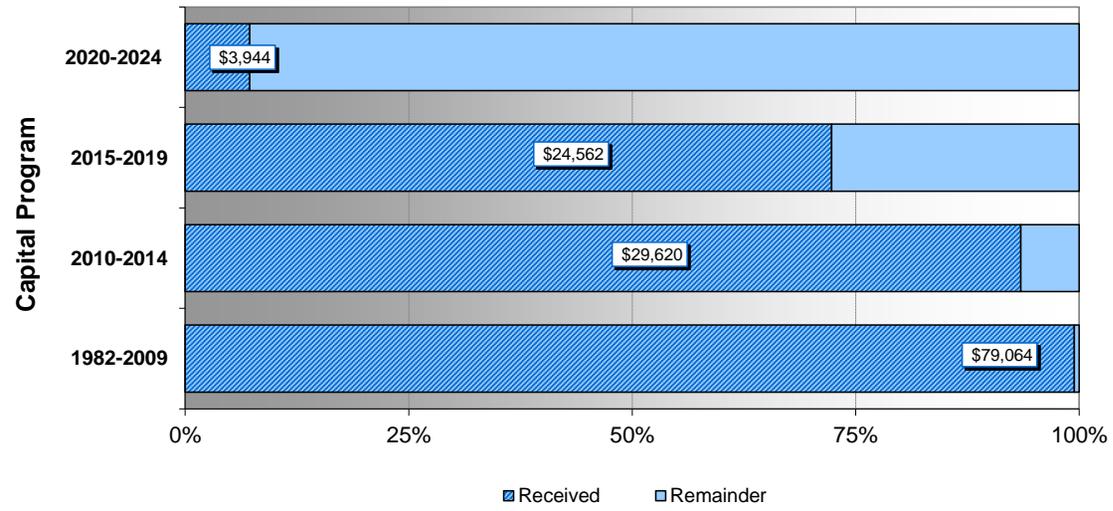
CB Scour Protect/Repair/Replace	Construction	Jul-21	Sept-21(A)
CB/MP Pier Fender		\$65.9	\$65.9

The project's completion schedule was delayed due to weather-related impacts.

---

## Status of MTA Capital Program Funding

### Capital Funding (November 2021) \$ in millions



**Capital Funding Detail (November 2021)**

\$ in millions

	Funding Plan		Receipts	
	Current	Thru October	This month	Received to date
<b>2010-2014 Program</b>				
Federal Formula, Flexible, Misc	\$5,862	\$5,857	\$ -	\$5,857
Federal High Speed Rail	173	173	-	173
Federal New Start	1,278	1,257	21	1,278
Federal Security	89	89	-	89
Federal RRIF Loan	-	-	-	-
City Capital Funds	719	608	-	608
State Assistance	770	770	-	770
MTA Bus Federal and City Match	132	113	-	113
MTA Bonds (Payroll Mobility Tax)	11,625	10,647	-	10,647
Other (Including Operating to Capital)**	1,270	1,124	-	1,124
B&T Bonds	2,022	1,844	-	1,844
Hurricane Sandy Recovery				
<i>Insurance Proceeds/Federal Reimbursement</i>	6,697	6,697	-	6,697
<i>PAYGO</i>	171	171	-	171
<i>Sandy Recovery MTA Bonds</i>	659	225	-	225
<i>Sandy Recovery B&amp;T Bonds</i>	230	23	-	23
<b>Total</b>	<b>31,696</b>	<b>29,599</b>	<b>21</b>	<b>29,620</b>

	Funding Plan		Receipts	
	Current	Thru October	This month	Received to date
<b>2015-2019 Program</b>				
Federal Formula, Flexible, Misc	\$6,681	\$5,528	\$ -	\$5,528
Federal High Speed Rail	\$122	\$122	-	\$122
Federal Core Capacity	100	-	-	-
Federal New Start	500	-	-	-
Federal Security	18	15	-	15
State Assistance	9,091	4,898	175	5,073
City Capital Funds	2,667	2,050	-	2,050
MTA Bonds	8,474	8,175	-	8,175
Asset Sales/Leases	943	315	-	315
Pay-as-you-go (PAYGO)**	2,156	1,572	-	1,572
Other	273	68	-	68
B&T Bonds & PAYGO/Asset Sale	2,942	1,644	-	1,644
<b>Total</b>	<b>33,969</b>	<b>24,387</b>	<b>175</b>	<b>24,562</b>

	Funding Plan		Receipts	
	Current	Thru October	This month	Received to date
<b>2020-2024 Program</b>				
Capital from Central Business District Tolling	\$15,000	\$ -	\$ -	\$ -
Capital from New Revenue Sources	10,000	461	-	461
MTA Bonds and PAYGO	9,792	202	-	202
Federal RIFF Loan	-	-	-	-
Federal Formula	7,435	2,799	-	2,799
State of New York	3,000	-	-	-
City of New York	3,000	120	-	120
Federal New Start (SAS Ph2)	2,905	-	-	-
Federal Flexible	275	51	-	51
Federal Other	71	56	15	71
Federal Security	10	10	-	10
B&T Bonds	3,327	231	-	231
<b>Total</b>	<b>54,814</b>	<b>3,929</b>	<b>15</b>	<b>3,944</b>

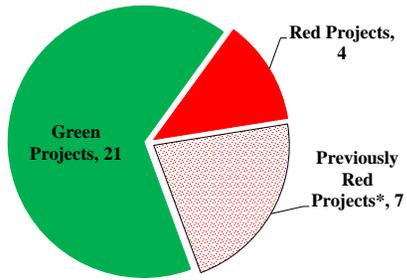


### 3<sup>rd</sup> Quarter 2021 Traffic Light Report on the MTA Capital Program

A total of 300 Projects were Reviewed for the 3<sup>rd</sup> Quarter 2021

The 300 active projects include 32 projects in Design, 9 in Post-Design to Construction Award, 259 in Construction

#### 32 of 300 Projects in Design

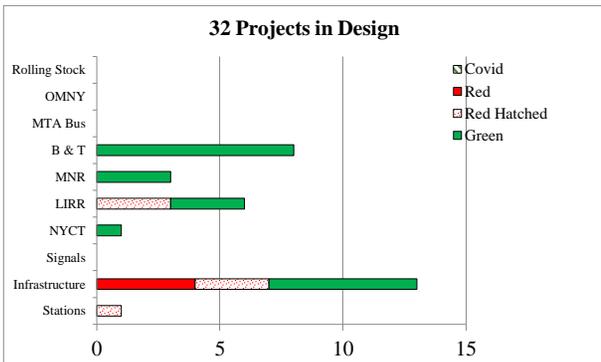


\* see Terms and Definitions page

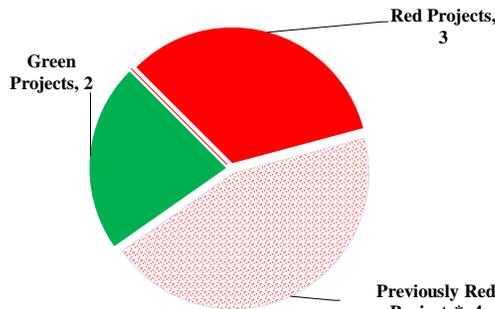
**Third Quarter:** 32 projects were reviewed in this phase with 21 designated green, 7 as previously red and 4 red. The 4 projects were red in part to repackaging of projects into Design-Build bundles.

**Covid Impacts:** No projects in design were impacted by Covid-19 this quarter.

**Second Quarter 2021:** 32 projects were reviewed in this phase with 21 designated green, 7 as previously red and 4 red.



#### 9 of 300 Projects in Post-Design to Construction Award

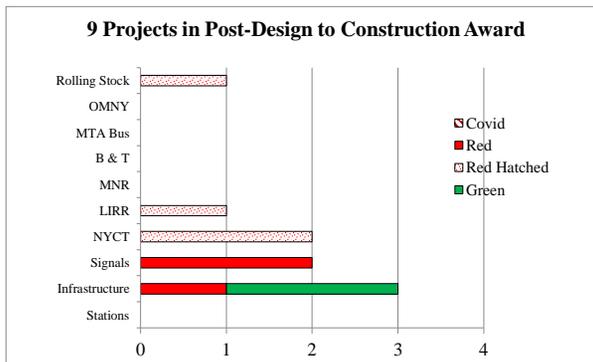


\* see Terms and Definitions page

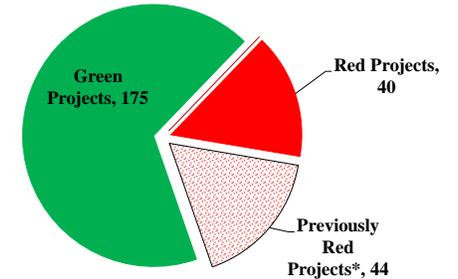
**Third Quarter:** 9 projects were reviewed in this phase with 2 designated as green, 4 previously red, and 3 red. The 3 projects were red due in part to revised drawings and change in project delivery method.

**Covid Impacts:** No projects in Post-Design to Construction Award were impacted by Covid-19 this quarter.

**Second Quarter 2021:** 9 projects were reviewed in this phase with 6 designated as previously red and 3 green.



#### 259 of 300 Projects in Construction

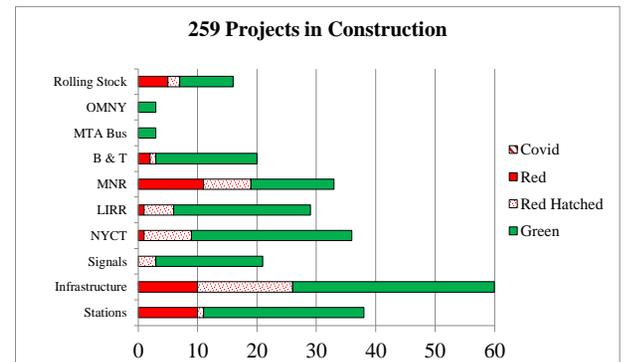


\* see Terms and Definitions page

**Third Quarter:** 259 projects were reviewed in this phase with 175 designated green, 44 previously red, and 40 red. The 40 projects were red due in part to contractor performance, added scope, unforeseen site conditions, and supply chain issues.

**Covid Impacts:** No projects in Construction were impacted by Covid-19 this quarter.

**Second Quarter 2021:** 287 projects were reviewed in this phase with 221 designated green, 42 previously red, and 24 red.



## Project Terms and Definitions

### 3<sup>rd</sup> Quarter 2021 Traffic Light Report

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

#### Project Terms and Definitions

##### **Projects in Design: 32**

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

##### **Projects in Post Design to Construction Award Phase: 9**

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

##### **Projects in Construction: 259**

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

**Projects impacted by Covid-19 (Temporary TLR Criteria): 0**

Projects in this category have triggered one or more reporting variances that are impacted by the Covid-19 pandemic. The Key Performance Indicators have exceeded one or more of the Traffic Light reporting thresholds this quarter, however, a project issue has been directly attributed to Covid-19. The issues may include; the implementation of safety protocols, new work rules and occupancy restrictions, travel limitations, reduced personnel availability, funding delays, etc. Covid-19 is a temporary imposition on the MTA's Capital Program and therefore a temporary TL has been developed for these projects.

 Red Lined: Cost Index - An increase of 1p0% (or index movement of 10% or more since the last Traffic Light Report).

 Red Lined: Schedule Variance - An increase of 3 months or more to substantial completion since the last Traffic Light Report.

 Previous Red: Previously indicated as Red Lined with no new substantial change since the last Traffic Light Report / A project in design, procurement or construction that has been designated Previous Red may be returned to Green when it has been in compliance with the two performance indicators for two consecutive quarters.

**Projects in Planning:**

➤ Projects in Planning are reviewed but not displayed in the TLR until the project reaches the design phase.

**Completed Projects:**

➤ Projects that were completed in previous quarters are not displayed in the current quarter's report but, continue to be maintained in the TLR database for historical reporting purposes.

**Report Index Formulas and Criteria:**

➤ Cost Index = Total Project EAC / Current Approved Budget.  
(Note: Current Budget is not Budget at Award)

➤ Cumulative Cost Variance = 3 consecutive quarters with a total cost index increase that cumulatively exceeds the TLR threshold of 10% over 3 quarters.

➤ Schedule Variance = Number of months of change in schedule since the last Traffic Light Report.

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

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

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

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Stations</b>									
<b>Stations - ADA Accessibility Program - Projects in Construction</b>									
T7041307	ADA: Times Square Complex, Ph 3 - Shuttle	Construction	\$217,662,913	82	1.00	■	0	■	G
T7041315	ADA: 149 Street-Grand Concourse Complex	Construction	\$114,670,181	22	.98	■	0	■	G
T7041331	ADA: Livonia Ave CNR	Construction	\$87,290,193	50	1.00	■	0	■	G
T7041332	ADA: 170 Street JER	Construction	\$62,229,252	79	1.00	■	0	■	G
T7041338	ADA: Tremont Ave BXC	Construction	\$54,345,378	22	.99	■	0	■	G
T7041350	Additional elevator 34 St BW7 PSNY-33rd	Construction	\$16,541,862	23	1.00	■	0	■	G
T8041303	ADA: Dyckman St (NB) BW7	Construction	\$21,579,539	26	1.00	■	9	▲	G
T8041317	ADA: Grand St CNR	Construction	\$28,958,238	26	1.00	■	6	▲	G
T8041319	ADA: 7th Ave CUL	Construction	\$40,867,099	26	1.00	■	0	■	G
T8041327	ADA: Lorimer St CNR	Construction	\$64,910,338	26	1.00	■	0	■	G
T8041328	ADA: Metropolitan Ave XTN	Construction	\$49,961,618	26	1.00	■	0	■	G
T8041332	ADA: East 149th St PEL	Construction	\$42,162,238	26	.97	■	1	▲	G
T8041337	ADA: Beach 67th St FAR	Construction	\$45,434,386	26	1.00	■	4	▲	G
S8070108	ADA: New Dorp SIR	Construction	\$36,957,704	26	.97	■	0	■	G
<b>Stations</b>									
<b>All Other Stations Projects</b>									
T6040706	Replace 2 Hydraulic Elevators at GCT LEX	Construction	\$21,420,939	5	.94	▲	0	■	G
T7040701	Replace 11 Hydraulic Elevators / Various	Construction	\$73,783,585	34	1.00	■	0	■	G
T7040702	Replace 12 Traction Elevators BW7	Construction	\$109,873,900	85	1.00	■	0	■	R
T7040703	Replace 8 Traction Elevators / Various	Construction	\$62,893,572	5	1.01	▲	0	■	G
T7040704	Replace 6 Traction Elevators 8AV	Construction	\$47,017,367	90	1.00	■	0	■	G
T7040708	Replace 2 Escalators: Pelham Pkwy WPR	Construction	\$15,816,293	8	1.00	■	0	■	G
T7040709	Replace 6 Escalators / Various	Construction	\$46,405,219	8	1.00	■	0	■	G

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Stations</b>									
<b>All Other Stations Projects</b>									
T7040712	Replace 3 Escalators: Main St FLS	Construction	\$28,424,912	95	1.03	■	0	■	G
T7040714	Replace 1 Hydraulic Elevator: Grand Central FLS	Construction	\$7,904,814	4	.57	■	0	■	G
T7041404	Reconstruction: Times Sq Complex, Ph3 - Shuttle	Construction	\$29,931,315	82	1.00	■	0	■	G
T7160729	RTO Facility Repair: 3 Avenue-138 Street PEL	Construction	\$15,540,733	90	1.01	■	3	▲	R
T8040705	Escalator Design	Construction	\$13,894,849	0	1.01	■	0	■	G
T8040707	Replace 3 Hydraulic Elevators: 34th BW7 PSNY-33rd	Construction	\$21,586,064	19	.99	■	0	■	G
T8041215	Design: Station Components DES	Construction	\$14,404,129	67	.98	■	0	■	G
T8041216	Platform Components: E Broadway 6AV	Construction	\$14,837,508	83	1.00	■	4	▲	R
T8050204	2020 Mainline Track Repl: Rutgers	Construction	\$18,600,588	83	1.00	■	4	▲	R
T7041322	ADA: 95 St 4AV	Design	\$50,019,153	25	1.42	■	0	■	R
<b>Infrastructure</b>									
T6100454	207th St. OH Shop: Boiler Upgrades & Site Remed	Construction	\$13,268,006	93	1.16	▲	0	■	R
T6120403	Replace Bus Radio System	Construction	\$236,691,942	62	1.13	▲	0	■	R
T6160611	Replace Fire Alarm Systems at 13 Locations	Construction	\$27,545,620	60	1.00	■	0	■	G
T6160717	Livingston Plaza Repairs	Construction	\$26,420,913	69	.51	■	2	▲	R
T7060503	Replace Supervisory Vent Controls - Var Locs	Construction	\$30,368,304	52	1.01	■	0	■	R
T7060506	Rehab Forsyth St Vent Plant	Construction	\$90,374,945	30	.99	■	0	■	R
T7070303	Struct Rehab: Livonia Yard Overpass & Retain Wall	Construction	\$27,083,332	59	1.00	■	0	■	R
T7070316	Overcoat: Broadway - End of Line MYR	Construction	\$58,258,534	47	.99	■	0	■	G
T7070317	Overcoat: 48 St - 72 St FLS	Construction	\$57,133,383	93	1.00	■	2	▲	G
T7070323	LSCR: Brooklyn (EPK)	Construction	\$82,731,099	36	.99	■	0	■	G
T7070344	Repairing 'A' and 'B' Column Base Conditions WPR	Construction	\$17,000,070	91	.97	■	0	■	R
T7080602	Upgrade Async Network to SONET, Rings A and C	Construction	\$31,035,437	77	1.00	■	0	■	R

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Infrastructure</b>									
T7080603	PBX Upgrade	Construction	\$48,564,396	91	1.17	■	0	■	R
T7080604	Fiber Optic Cable Replacement Ph2	Construction	\$23,434,984	75	.81	■	0	■	G
T7080617	LiftNet Transition to Ethernet	Construction	\$15,792,305	100	.99	■	0	■	G
T7080649	COE at 88 Stations, Phase 3B-1 [SBDP]	Construction	\$7,067,767	89	1.00	■	0	■	G
T7080651	Help Point: Upgrades and CAI Removals	Construction	\$21,776,194	80	1.07	■	0	■	R
T7090202	Substation Renewal: Av Z CUL	Construction	\$32,172,288	88	.99	■	0	■	G
T7090203	Substation Rnwl & New Rectifier: Centr SS 6AV	Construction	\$43,504,282	74	1.00	■	0	■	G
T7090206	Replace HT Switchgear - Various Locs	Construction	\$30,476,773	77	1.00	■	0	■	G
T7090215	Supplemental Negative Cables QBL	Construction	\$53,023,972	100	1.00	■	-3	▼	G
T7090218	Install Low-Resistance Contact Rail QBL	Construction	\$48,128,349	80	1.00	■	-3	▼	G
T7090222	New Substation: Maspeth Av-Humboldt St CNR	Construction	\$46,240,962	99	.89	■	2	▲	R
T7090223	New Substation: Harrison PI CNR	Construction	\$52,773,517	99	.89	■	2	▲	R
T7090406	Rehab CBH # 85 & New Ducts: Bedfrd-N 6 St SS CNR	Construction	\$13,361,050	80	.99	■	2	▲	R
T7100401	DCE Shop Components Ph 1: 180 St, CI, PEL	Construction	\$33,887,572	100	.99	■	0	■	G
T7100402	207th St Maint & OH Shop Roof & Component Repl	Construction	\$59,951,102	58	1.00	■	3	▲	R
T7100403	DCE Shop Components Ph 2: 239 St, Concourse, ENY	Construction	\$49,241,158	89	1.07	▲	0	■	R
T7160716	RCC and PCC Power Upgrade	Construction	\$63,370,962	98	1.00	■	0	■	G
T8060505	Rehab Deep Wells & Control Upgrade Nostrand Line	Construction	\$22,995,247	0	1.03	■	0	■	G
T8060506	Rehab Fan Plant Damper Systems - 7 Locations	Construction	\$33,771,531	1	1.00	■	0	■	G
T8080605	Antenna Cable Replacement: Various Locations	Construction	\$23,916,350	10	.99	▼	0	■	G
T8080642	PA/CIS Electronics Replacement - Canarsie Line	Construction	\$7,544,786	8	1.00	▲	0	■	G
T8160706	EMD Facility: Hoyt-Schermerhorn FUL	Construction	\$14,001,893	25	1.00	■	0	■	G
S7070102	SIR Station Component Program	Construction	\$18,917,569	94	.99	■	0	■	G
S7070106	New Power Substation: New Dorp	Construction	\$24,976,307	95	1.02	■	2	▲	R

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Infrastructure</b>									
S7070107	New Power Substation: Clifton	Construction	\$30,646,073	95	1.00	■	2	▲	R
S7070111	Relocate HQ to Clifton Shop	Construction	\$9,127,751	92	.99	■	6	▲	R
S7070113	SIR Clifton Yard Track and Switch Replacement	Construction	\$17,070,406	74	.98	■	15	▲	G
S8070109	Track and Switch Rehab: SIR Mainline (Addtl Work)	Construction	\$48,921,650	79	3.16	▲	15	▲	G
U6030226	Bus Radio System	Construction	\$32,057,283	81	1.15	▲	0	■	R
U7030211	Bus Radio System - MTA Bus Share	Construction	\$39,516,593	62	1.05	■	0	■	R
T7070308	Rehab Emergency Exits (3rd Party) - Var Locs	Design	\$21,036,295	47	1.04	■	0	■	G
T8080601	Comm Network Upgrades: Various Locations	Design	\$185,044,145	61	.85	■	0	■	G
T8080603	Fiber Optic Cable Replacement: Various Locations	Design	\$47,194,595	54	1.00	■	0	■	G
T8090210	Substation Projects- Design	Design	\$18,324,179	12	1.00	▼	-4	▼	G
T8120303	Jamaica Depot Reconstruction	Design	\$375,541,493	80	.98	■	0	■	G
T8160601	Fire Alarms and Sprinklers: Various Locations	Design	\$105,942,301	80	1.01	■	2	▲	R
S8070102	Track and Switch Replacement	Design	\$74,800,000	70	.61	■	3	▲	R
S8070103	Bridge Structures: Various Locations	Design	\$54,447,052	4	1.01	■	2	▲	R
<b>Signals / Train Controls</b>									
T50803QB	CBTC QBL Phase 1	Construction	\$80,085,069	95	1.37	■	0	■	R
T6080319	CBTC Queens Blvd Ln West Ph 1	Construction	\$115,225,996	95	.97	■	-1	▼	R
T6080661	ISIM-B Module 3A RCC Build Out	Construction	\$25,405,019	69	1.00	■	2	▲	R
T7080301	CBTC: QBL West Ph2 (50 St - Union Tpke)	Construction	\$471,239,306	83	1.11	■	0	■	G
T7080304	CBTC: 8AV (59 St - High St)	Construction	\$219,828,312	31	.99	■	0	■	G
T7080307	Interlocking Modernization: Ditmas CUL	Construction	\$131,074,754	67	.98	■	0	■	G
T7080322	AC to DC Line Relay Upgrade BCT	Construction	\$25,168,851	46	1.00	■	0	■	G
T7080323	Signal Key-By Modifications, Ph4	Construction	\$18,429,499	100	1.00	■	0	■	G
T7080324	Code Cable Replacement BW7	Construction	\$41,314,985	28	1.00	■	0	■	G

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Signals / Train Controls</b>									
T7080326	Life Cycle Replacement of Code Systems	Construction	\$51,725,537	43	1.00	■	0	■	G
T7080327	Life Cycle Mod - Speed Enforcement Systems	Construction	\$65,429,183	18	1.00	■	0	■	G
T7080332	CBTC: CUL (Church Av to W8 St)	Construction	\$116,051,095	67	.99	■	0	■	G
T7080333	Interlocking Modernization: Ave X CUL	Construction	\$195,790,640	67	.97	■	0	■	G
T7080335	Interlocking Modernization: 30 St & 42nd St / 8AV	Construction	\$258,886,569	43	1.00	■	0	■	G
T7080342	CBTC: Carborne Equipment Purchase	Construction	\$85,108,224	16	1.00	■	0	■	G
T7080343	2018 M/L Switch Repl: 7 Switches CBTC CUL	Construction	\$39,229,364	67	1.20	▲	0	■	G
T7080344	2019 M/L Switch Repl: 10 Switches CBTC 8AV	Construction	\$27,563,382	43	1.00	■	0	■	G
T7080349	Signal Quality Enhancements (SAP)	Construction	\$18,195,000	52	1.00	■	0	■	G
T7080614	ISIM-B Module 3: Rail Traffic Systems	Construction	\$91,696,705	52	1.00	■	0	■	G
T8080313	CBTC: Flushing Line Equipment Removals	Construction	\$19,615,806	76	1.00	■	0	■	G
T8080314	Single Chip UWB Interoperability (Proof of Concept)	Construction	\$34,983,608	6	1.00	▲	0	■	G
<b>New York City Transit</b>									
T6040401	MetroCard-Electronic Components Replacement	Construction	\$16,340,035	89	1.00	■	0	■	R
T7041274	Station Lighting: 7 Locs / Various	Construction	\$7,686,619	48	1.00	■	0	■	G
T7041275	Station Ventilators: 2 Locs (2019)	Construction	\$5,571,319	82	.67	■	0	■	G
T7100409	Heavy Shop Equipment	Construction	\$14,729,150	47	1.00	■	0	■	R
T7120306	Generator: Yukon Depot	Construction	\$11,011,373	26	.93	■	0	■	G
T7120307	Roof, Office, HVAC: Fresh Pond Depot	Construction	\$15,240,139	31	1.00	■	0	■	G
T7120321	Artic Modification Windows/Façade: ENY Depot	Construction	\$18,061,652	36	1.00	■	1	▲	G
T8040404	Wide Turnstiles: Procurement/Installation	Construction	\$25,118,512	0	1.00	■	0	■	G
T8041223	Station Ventilators Ph 21 - 4 Locs/ Manh & BX	Construction	\$10,260,856	12	1.00	■	0	■	G
T8050205	Mainline Track Replacement 2020 / Queens	Construction	\$7,700,196	93	1.00	■	-5	▼	R
T8050206	Mainline Track Replacement 2020 / 8th Avenue	Construction	\$20,726,225	68	1.00	■	0	■	R

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>New York City Transit</b>									
T8050207	Mainline Track Replacement 2020 / Broadway-7th Ave	Construction	\$35,259,977	88	1.00	■	2	▲	G
T8050208	Mainline Track Replacement 2020 / Flushing	Construction	\$59,886,344	65	1.00	■	0	■	G
T8050209	Mainline Track Replacement 2020 / Lexington	Construction	\$27,318,000	85	1.24	■	3	▲	R
T8050210	Mainline Track Replacement 2020 / Brighton	Construction	\$15,212,679	14	1.00	■	0	■	R
T8050211	Mainline Track Replacement 2020 / Jamaica	Construction	\$28,061,426	42	1.00	■	0	■	G
T8050212	Mainline Track Replacement 2020/ Lenox-White Plain	Construction	\$16,778,668	88	1.00	▼	-2	▼	R
T8050213	Mainline Track Replacement 2020 / 6th Avenue	Construction	\$19,911,465	87	1.00	▼	0	■	G
T8050214	Mainline Track Replacement 2020 / Astoria	Construction	\$21,026,790	52	1.00	■	0	■	G
T8050215	Mainline Track Replacement 2020 / Dyre	Construction	\$7,765,213	31	1.00	■	0	■	G
T8050223	Continuous Welded Rail 2020	Construction	\$35,009,063	66	1.00	■	0	■	G
T8050227	Mainline Track Replacement 2021 / 11th st Cut	Construction	\$19,926,544	50	1.00	■	0	■	G
T8050230	Mainline Track Replacement 2021 / Concourse	Construction	\$15,611,732	10	1.00	■	0	■	G
T8050231	Mainline Track Replacement 2021 / Bway-7th	Construction	\$27,246,472	86	1.00	■	0	■	R
T8050232	Mainline Track Replacement 2021 / Jamaica	Construction	\$27,039,948	28	1.00	■	0	■	G
T8050234	Mainline Track Replacement 2021 / Jerome	Construction	\$8,621,107	23	1.00	■	0	■	G
T8050236	Mainline Track Replacement 2021 / Pelham	Construction	\$8,500,700	85	1.03	■	0	■	G
T8050237	Mainline Track Replacement 2021 / Lenox - WPR	Construction	\$8,079,477	0	1.00	▲	0	■	G
T8050243	Mainline Track Replacement 2021 / Lexington	Construction	\$19,122,747	59	1.00	■	0	■	G
T8050306	Mainline Track Switches 2020 / Queens	Construction	\$7,531,710	5	1.00	■	12	▲	G
T8050310	Mainline Track Switches 2020 / White Plains Rd	Construction	\$21,100,168	87	1.00	■	2	▲	R
T8050311	Mainline Track Switches 2020 / Broadway	Construction	\$12,433,728	86	1.00	■	1	▲	G
T8050317	Mainline Track Switches 2021 / Pelham	Construction	\$11,511,600	63	1.00	■	-3	▼	G
T8050318	Mainline Track Switches 2021 / 6th Ave / Culver	Construction	\$8,959,970	3	1.00	■	0	■	G
T8070320	Rehab of Emergency Exits	Construction	\$7,500,000	22	1.00	▲	0	■	G

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>New York City Transit</b>									
T8130204	Purchase 27 Flat Cars	Construction	\$21,772,241	70	1.00	■	0	■	G
T8120402	Miscellaneous Depot Investments	Design	\$23,153,452	0	1.18	■	0	■	G
<b>Long Island Rail Road</b>									
L50304TQ	MLC-Hicksville North Siding	Construction	\$44,028,748	56	1.00	■	0	■	G
L60304TU	Jamaica Capacity Improvements - Phase One	Construction	\$302,153,240	88	1.00	■	0	■	R
L60701AR	Replacement of Richmond Hill Substation	Construction	\$16,617,791	85	1.00	■	1	▲	R
L70204VZ	Elmont Station	Construction	\$106,050,000	57	1.00	■	0	■	G
L70206EG	PSNY-33rd Corridor (Phase 2 Construction)	Construction	\$435,879,160	0	1.00	■	-6	▼	G
L70401BS	Bridge Waterproofing	Construction	\$8,048,756	22	1.00	■	0	■	G
L70502LN	Babylon to Patchogue	Construction	\$45,639,479	16	.99	■	0	■	G
L70601YG	DIESEL LOCOMOTIVE SHOP IMPROVEMENTS	Construction	\$101,965,000	100	.99	■	0	■	R
L70701XB	Substation Components	Construction	\$24,306,295	50	.66	■	0	■	R
L70701XU	Substation Repl Pkg 2: Construction	Construction	\$24,195,477	23	.99	■	0	■	G
L8020418	Mets-Willets EIC Relocation	Construction	\$208,700,000	0	7.27	■	4	▲	R
L8020604	PSNY-33rd Phase 2 LIRR 20-24 Plan Contribution	Construction	\$18,806,909	25	1.00	■	0	■	G
L8020701	GCT Facility Needs	Construction	\$19,250,157	1	.64	▼	0	■	G
L8030101	Construction Equipment & Geometry Cars	Construction	\$72,296,500	5	1.31	▲	9	▲	G
L8030102	Various Right of Way Projects	Construction	\$10,000,000	5	1.00	■	0	■	G
L8030105	2020 - Annual Track Program	Construction	\$148,445,459	6	.98	■	0	■	G
L8030106	2021- Annual Track Program	Construction	\$95,000,000	71	1.58	▼	0	■	G
L8030110	Concrete Tie Program	Construction	\$53,327,413	96	.96	■	-40	▼	G
L8050101	Comm. Pole Line	Construction	\$14,933,555	29	1.86	■	0	■	G
L8050102	Comm Component Replacement	Construction	\$15,066,667	0	1.88	■	0	■	G
L8050204	Centralized Train Control	Construction	\$50,000,000	0	1.00	■	0	■	G

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Long Island Rail Road</b>									
L8050205	Signal Replacement and Interlocking Improvements	Construction	\$30,093,456	0	.50	■	0	■	G
L8070102	Lighting Improvements	Construction	\$18,000,000	0	1.00	■	0	■	G
L8070103	Power Component Repairs and Replacements	Construction	\$35,000,000	5	.69	■	0	■	G
L8070104	3rd Rail Upgrades	Construction	\$43,000,000	2	1.00	■	0	■	G
L70204UO	East Yaphank Station	Design	\$18,540,829	95	.92	▼	4	▲	R
L70304WU	Jamaica Capacity Improvements Ph 2 DES	Design	\$42,490,000	76	1.00	■	0	■	R
L70502LH	Babylon Interlocking Renewal	Design	\$32,640,000	60	1.00	■	0	■	R
L80204DD	ADA Accessibility and Components 24 Stations DES	Design	\$10,000,000	2	1.00	■	0	■	G
L8060401	Rehabilitation of Employee Facilities - Various Lo	Design	\$34,207,149	0	.80	▼	0	■	G
<b>Metro-North Railroad</b>									
M6020208	Customer Communication / Connectivity Improvements	Construction	\$16,520,172	97	.98	■	0	■	R
M6040102	West of Hudson Signal Improvements	Construction	\$63,461,327	95	.93	■	0	■	G
M6050101	Substation Bridge 23 - Construction	Construction	\$41,452,052	98	.99	■	3	▲	R
M6050103	Harlem & Hudson Lines Power Improvements	Construction	\$44,262,469	95	1.04	■	0	■	R
M7010101	Locomotive Purchase	Construction	\$291,750,993	3	1.13	▲	38	▲	R
M7010102	M-8 Fleet Purchase	Construction	\$113,867,497	85	.97	■	0	■	G
M7020211	Customer Communication-Systems	Construction	\$12,702,514	92	.95	■	0	■	R
M7030109	Purchase MoW Equipment	Construction	\$19,796,793	66	1.02	■	0	■	R
M7030201	Overhead Bridge Program - E of H	Construction	\$64,728,002	100	.98	▼	4	▲	G
M7030203	Undergrade Bridge Rehabilitation	Construction	\$79,293,218	75	.95	■	0	■	G
M7030209	Harlem River Lift Bridge	Construction	\$9,577,878	50	.92	■	0	■	G
M7030303	Undergrade Bridge Rehabilitation	Construction	\$11,092,972	35	.92	■	0	■	G
M7040102	Harmon to Poughkeepsie SignalSystem	Construction	\$111,878,950	52	1.10	▼	9	▲	R

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Metro-North Railroad</b>									
M7040111	West of Hudson Signal Improvements	Construction	\$21,079,000	95	1.00	■	0	■	G
M7040112	Harlem Wayside Comm & Signal Improvements	Construction	\$72,344,852	80	1.38	▼	4	▲	R
M7050101	Replace MA's in Signal Substations	Construction	\$22,668,445	49	.93	■	12	▲	R
M7050104	Harlem & Hudson Power Rehabilitation	Construction	\$13,286,001	60	.88	■	0	■	G
M7050105	Harlem and Hudson Power Improvements	Construction	\$23,706,693	75	.95	■	7	▲	R
M7050113	H&H Power (86th St / 110th St)	Construction	\$12,741,984	95	1.12	■	0	■	R
M7060101	Harmon Shop Replacement - Phase V	Construction	\$426,422,756	45	.98	■	0	■	G
M7080113	Customer Communication-CM	Construction	\$15,185,854	97	.95	■	4	▲	R
M8010102	Locomotive Replacement	Construction	\$489,967,483	3	1.33	▲	38	▲	R
M8020302	Small Business Mentoring Program - Parking	Construction	\$4,388,919	10	.48	▼	0	■	G
M8030103	Turnouts - Mainline, GCT, & Yards	Construction	\$92,057,246	42	1.06	■	-36	▼	G
M8030108	2020 Cyclical Track Program	Construction	\$19,229,242	9	.99	■	24	▲	G
M8030110	2021 Cyclical Track Program	Construction	\$21,000,000	8	1.00	■	0	■	G
M8030211	Park Avenue Viaduct Interim Repairs	Construction	\$10,180,000	26	.95	■	0	■	G
M7030301	Rock Slope Remediation	Design	\$9,576,763	85	.74	■	0	■	G
M7060103	Brewster YD Improvements - Design	Design	\$5,129,117	60	.68	▼	0	■	G
M7060104	West of Hudson Capacity Improvements	Design	\$23,386,956	26	.96	■	0	■	G
<b>Bridges &amp; Tunnels</b>									
D701BW07	Fender Protection around Tower Piers (Const)	Construction	\$18,078,696	78	.85	■	0	■	G
D701CB18	CB Scour Protect/Repair/Replace CB/MP Pier Fender	Construction	\$57,108,371	93	.86	■	0	■	G
D701HH07	Structural Rehabilitation	Construction	\$34,453,303	61	.83	▼	4	▲	R
D701RK19	Seismic/Wind Retrofit & Structural Rehab Ph1	Construction	\$47,414,841	86	.83	■	0	■	G
D701RK70	Miscellaneous Structural Rehabilitation	Construction	\$28,488,082	64	.81	■	0	■	G
D701TN53	Approach Viaduct Seismic Retrofit/Structural Rehab	Construction	\$191,511,522	30	.85	■	0	■	G

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Bridges &amp; Tunnels</b>									
D701VN32	Steel Repair & Concrete Rehabilitation	Construction	\$35,805,892	65	.84	■	0	■	R
D702TN49	Replacement of Grid Decks on Suspended Span	Construction	\$285,533,443	60	.90	■	0	■	G
D702VN84	Reconstruction of VN Approach Ramps - Phase 1	Construction	\$189,680,145	66	.85	■	0	■	G
D704HC07	Rehabilitation of HCT Ventilation Systems	Construction	\$76,578,503	92	.87	■	0	■	G
D707HH30	Replacement of HHB Overcoat System	Construction	\$16,736,311	80	.85	■	4	▲	R
D707TN49	Painting of Suspended Span	Construction	\$17,644,527	60	.82	■	0	■	G
D707VN49	Paint Suspended Span Upper & Lower Level Steel	Construction	\$72,751,527	80	.98	■	0	■	G
D801RK70	Structural Repairs/Flag Repairs	Construction	\$56,698,020	20	.91	■	0	■	G
D805HC80	Rehabilitation of HCT Ventilation/Service Bui	Construction	\$4,554,708	48	.17	■	0	■	G
D806MPX1	Operational Improvement	Construction	\$9,440,661	0	.83	■	0	■	G
D806VNX1	Install Safety Fencing on Both Levels of the VNB	Construction	\$36,581,353	5	.83	▼	0	■	G
D807MPPT	MP Facility-Wide Painting Program	Construction	\$17,397,727	3	.83	■	0	■	G
D807RKPT	RK Facility-Wide Painting Program	Construction	\$75,238,057	18	.95	■	0	■	G
D801CB30	Structural Rehabilitation of CBB	Design	\$30,201,080	8	.75	■	2	▲	G
D801RK04	Ward's Island/Queens Anchorage Rehabilitation	Design	\$127,962,248	8	.74	▼	-8	▼	G
D801RK19	Suspended Span Retrofit	Design	\$139,134,110	5	1.01	■	0	■	G
D801TN52	Miscellaneous Structural Rehabilitation	Design	\$24,376,962	10	.89	■	0	■	G
D804BW96	Lighting, Power Redundancy & Resiliency Imprv	Design	\$38,743,773	28	.70	■	0	■	G
D804VN12	Misc. Bridge Lighting & Electrical Improvemen	Design	\$23,402,937	22	.89	■	0	■	G
<b>MTA Bus</b>									
U6030232	HVAC Upgrade at College Point Bus Depot	Construction	\$9,521,950	70	1.00	■	0	■	G
U7030207	Storerooms and Depot Reconfiguration: LaGuardia	Construction	\$7,418,500	7	1.00	■	0	■	G
U7030209	Rehab and Facility Upgrade: College Point	Construction	\$9,364,126	32	1.00	■	0	■	G

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Cross Agency</b>									
<b>One Metro New York Program</b>									
T7040401	New Fare Payment System, Phase 2	Construction	\$463,323,580	42	1.00	■	0	■	G
L70204UV	NEW FARE PAYMENT SYSTEM	Construction	\$8,920,000	42	1.00	■	0	■	G
M8020206	New Fare Payment Equipment	Construction	\$25,000,000	0	1.00	▲	0	■	G
<b>Rolling Stock</b>									
T7010101	Purchase 440 B-Division Cars	Construction	\$1,402,231,935	11	1.00	■	0	■	G
T7010102	Purchase 20 Open Gangway Prototype Cars	Construction	\$79,905,106	8	1.00	■	0	■	G
T7030203	Purchase 165 Standard Hybrid Buses (Nova)	Construction	\$146,178,179	51	.96	■	1	▲	R
T7030206	Purchase 50 Express Buses	Construction	\$34,002,485	57	1.00	■	2	▲	G
T7030223	Purchase 110 Standard Hybrid Buses (New Flyer)	Construction	\$99,287,668	35	1.00	■	0	■	G
T7030224	AEB Charging Infrastructure - Support of 5 Depots	Construction	\$47,498,004	2	.95	■	0	■	G
T7130208	Purchase 12 3-Ton Crane Cars	Construction	\$32,211,961	23	1.00	■	0	■	G
T7130211	Purchase Locomotives	Construction	\$256,092,473	17	1.00	■	0	■	G
T7130215	Conversion of 10 R77E Locomotives	Construction	\$34,272,847	24	1.00	■	0	■	G
T8030208	Purchase 126 Hybrid (Nova)	Construction	\$107,949,896	3	1.00	■	3	▲	R
T8030209	Purchase 209 Standard Diesel (Nova)	Construction	\$141,211,796	3	1.00	■	4	▲	R
T8030210	Purchase 84 Hybrid-Electric (New Flyer)	Construction	\$71,210,653	0	1.00	■	0	■	G
T8030211	Purchase 139 Standard Diesel (New Flyer)	Construction	\$98,808,397	0	1.00	■	3	▲	R
U7030202	Purchase 257 Express Buses	Construction	\$166,665,518	23	1.00	■	4	▲	R
L60101MA	M-9 Rolling Stock Procurement - 92 cars	Construction	\$364,796,113	41	.99	■	0	■	R
L70101ME	M-9 PROCUREMENT	Construction	\$611,800,000	43	1.00	■	6	▲	R
<b>Construction &amp; Development</b>									
<b>Stations</b>									
ET050210	Track: Rutgers Tube	Construction	\$10,763,493	83	1.00	■	4	▲	R

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Stations</b>									
ET060214	Tunnel Lighting: Rutgers Tube	Construction	\$7,984,298	83	1.00	■	4	▲	R
ET060232	2 Pump Rooms: Rutgers Tube	Construction	\$20,955,350	83	1.00	■	4	▲	R
ET060233	1 Fan Plant (#6375): Rutgers Tube	Construction	\$10,438,868	83	1.00	■	4	▲	R
ET080213	Signals: Rutgers Tube	Construction	\$14,068,069	83	1.00	■	4	▲	R
ET090219	Comm/Power Cable Repl: Rutgers Tube	Construction	\$47,719,147	83	.99	■	4	▲	R
ET060332	Sandy Resiliency: 3 Pump Rooms (53rd St Tube)	Construction	\$25,405,141	85	1.56	▲	4	▲	R
ET040339	Sandy Mitigation: 138 St / JER	Construction	\$8,288,679	16	.98	■	0	■	G
<b>Infrastructure</b>									
ET100211	Power Cable/Comm. Equipt. Repl- Coney Island Yard	Construction	\$164,562,094	67	1.00	■	0	■	G
ET100307	Coney Island Yd: Long Term Perimeter Protection	Construction	\$339,437,463	67	.97	■	0	■	G
ET100209	Power Cable Replacement- 148th Street Yard	Construction	\$14,570,909	98	1.00	■	0	■	G
ET100309	Long Term Perimeter Protection: 148th St Yard	Construction	\$74,272,313	98	.96	■	0	■	G
ET100210	Power Cable Replacement- 207th Street Yard	Construction	\$42,710,741	63	1.10	▲	0	■	R
ET100219	Sandy Repairs: 207 St Yard Track	Construction	\$62,722,733	90	1.03	■	0	■	G
ET100220	Sandy Repairs: 207 St Yard Switches	Construction	\$30,984,884	74	.62	■	0	■	G
ET100310	Long Term Perimeter Protection: 207th St Yard	Construction	\$170,689,699	57	1.01	■	0	■	G
ET100312	Sandy Mitigation: 207th Street Yard Portal	Construction	\$54,881,539	68	2.02	■	0	■	G
ET100314	Sandy Mitigation: 207th Street Sewers	Construction	\$153,283,849	22	1.08	▼	0	■	R
ET090304	Mitigation: Montague Substations - Various Locs	Construction	\$8,954,494	24	.87	■	0	■	G
ET120307	Flood Mitigation at 4 NYCT Depots	Construction	\$26,191,643	91	1.00	■	3	▲	R
ES070211	Flood Repairs- Clifton Shop (Long-Term)	Construction	\$34,657,710	92	.99	■	6	▲	R
ES070302	SIR Mitigation: Clifton Shop / Yard	Construction	\$160,856,190	92	.98	■	6	▲	R
ES070303	SIR Mitigation: St. George	Construction	\$55,667,130	97	1.03	■	1	▲	R
ET070209	Sandy Repairs: Rockaway Line Wrap Up	Construction	\$48,367,404	2	1.02	▼	0	■	G

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Infrastructure</b>									
ET060336	Sandy Resiliency: 4 Pump rooms(Jerome/Pelham Tube)	Design	\$2,866,204	35	.24	■	0	■	G
ET070310	Rockaway ROW Debris Shielding	Design	\$70,183,580	20	2.92	▲	3	▲	R
ET070311	Sandy Mit: New Crossover at Beach 105th St. / RKY	Design	\$130,057,621	20	2.20	▲	3	▲	R
ET070313	Rockaway Park Yard Compressor Room (ROW)	Design	\$16,437,137	20	2.13	▲	3	▲	R
ET090308	Sandy Mitigation: Deployable Substations	Design	\$50,230,069	100	1.06	■	0	■	R
ET070308	Sandy Mitigation: Steinway Portal	Post Des to Const Awd	\$28,179,162	100	1.41	▲	0	■	G
ET090307	Hardening of Substations at 24 Locations	Post Des to Const Awd	\$98,317,710	30	1.00	■	3	▲	R
ET090310	Sandy Mitigation: Back-up Power Control Center	Post Des to Const Awd	\$14,162,517	5	.83	▼	4	▲	G
ET100218	Sandy Repairs: 207th St Yard Signals	Construction	\$298,018,139	52	.99	■	0	■	G
ET040317	Upgrade Emergency Booth Comm System (EBCS)	Construction	\$77,911,980	69	.99	■	0	■	G
<b>Signals / Train Controls</b>									
ET080207	Signals: 200 St - 207 St / 8th Ave	Post Des to Const Awd	\$80,466,051	100	1.75	■	3	▲	R
ET050217	Sandy Repairs: ML Track 200-207 St/8AVE	Post Des to Const Awd	\$54,605,778	0	.68	▼	3	▲	R
<b>New York City Transit</b>									
ET160310	Sandy Mitigation: Consolidated Revenue Facility	Post Des to Const Awd	\$11,278,804	100	.75	▲	1	▲	R
ET160312	Sandy Mitigation: Tiffany Central Warehouse	Post Des to Const Awd	\$26,225,217	100	1.04	■	1	▲	R

**3rd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

▲ = Index increase: Trending indicates condition worsening since last quarterly report  
 ▼ = Index decrease: Trending indicates condition improving since last quarterly report  
 ■ = No Change since last quarterly report

ACEP	Description	Phase	Total Project EAC	% Phase Complete	Cost Index	Cost Trend	Schedule Variance (Months)	Schedule Trend	Traffic Light
<b>Construction &amp; Development</b>									
<b>Long Island Rail Road</b>									
EL0303ZH	Emergency Management Equipment Mitigation	Construction	\$30,000,000	63	1.00	▲	0	■	Ⓡ
EL0602ZD	West Side Storage Yard Restoration	Construction	\$41,440,916	53	.94	■	0	■	Ⓢ
EL0402ZA	East River Tunnel Signal Sys & Infra Restoration	Design	\$179,871,202	90	1.00	■	0	■	Ⓢ
EL0603ZS	Long Island City Yard Resiliency - CR	Post Des to Const Awd	\$37,581,253	59	1.42	■	0	■	Ⓡ
<b>Metro-North Railroad</b>									
EM040205	Comm & Signal Infrastructure Restoration-Ph. 1 & 2	Construction	\$110,496,673	79	1.12	▲	9	▲	Ⓡ
EM040301	Power and Signals Mitigation Phase 1	Construction	\$53,348,130	79	1.62	■	9	▲	Ⓡ
EM040302	Hudson Line Power and Signal Resiliency	Construction	\$38,373,937	79	1.09	■	9	▲	Ⓡ
EM050206	Power Infrastructure Restoration-Ph. 1 & 2	Construction	\$182,291,940	79	1.03	■	9	▲	Ⓡ
EM050208	Power Infrastructure Restoration-Substations	Construction	\$47,835,734	95	1.04	■	2	▲	Ⓡ
EM050209	Power Infrastructure Restoration-HRLB	Construction	\$8,209,735	95	.98	■	11	▲	Ⓡ
<b>Bridges &amp; Tunnels</b>									
ED010307	BWB Mitigation - Flood Wall & Other	Design	\$8,302,575	0	1.00	■	0	■	Ⓢ
ED040308	Power Resiliency at RFK Bridge: Substation Upgrade	Construction	\$33,165,923	72	.89	■	0	■	Ⓢ
<b>Cross Agency Rolling Stock</b>									
ET060317	Sandy Resiliency: Conversion of 2 Pump Trains	Post Des to Const Awd	\$30,056,595	100	1.12	▲	0	■	Ⓡ

**Stations Business Unit Response to the IEC Traffic Light Report****Stations Program Overview**

The Stations Business Unit currently oversees 219 active projects, including 40 projects in construction, with a budget of \$10.2B. Notable projects under construction include ADA: 8 Stations on the Staten Island Railway, A, F, G, L, 1, and 6 lines, ADA and Reconstruction of Times Square Shuttle, and Replacement of 12 Traction Elevators at the 191<sup>th</sup> Street, 181<sup>st</sup> Street, and 168<sup>th</sup> Street Stations on the 1 Line.

The IEC's Traffic Light Report currently tracks 57 ACEPs in the 2020-2024 program. Of those, 10 ACEPs were flagged red, representing 2 projects. The description below describes why these ACEPs were flagged, and what C&D is doing to remediate.

**ET050210: Track: Rutgers Tube**

**ET060214: Tunnel Lighting: Rutgers Tube**

**ET060232: 2 Pump Rooms: Rutgers Tube**

**ET060233: 1 Fan Plant (#6375): Rutgers Tube**

**ET060332: Sandy Resiliency: 3 Pump Rooms (53<sup>rd</sup> St Tube)**

**ET080213: Signals: Rutgers Tube**

**ET090219: Comm/Power Cable Replacement: Rutgers Tube**

**T8041216: Platform Components: East Broadway 6 Av**

**T8050204: 2020 Mainline Track Replacement: Rutgers Tube**

The project provides for rehabilitation of systems and components within the Rutgers Tube to achieve a State of Good Repair and make those systems and components more resilient to extreme weather events. There are nine ACEPs which seven ACEPs are completed on time as per the contract milestones. The remaining two ACEPs triggered a variance this quarter which are associated with the Rutgers Tube fan plant and the 53<sup>rd</sup> Street Tube tasks. C&D Stations issued the 53<sup>rd</sup> Street Tube Project as a change order to the Rutgers Tube Contract. This change order is to upgrade three tunnel pump rooms and all associated mechanical, electrical, communication systems and relocate pump controls outside of the flood zone. Due to unforeseen site condition, additional repairs to components are required, including replacement of a switch gear, causing the overall project schedule slippage.

To mitigate this, C&D Stations will proceed with a contract modification to mitigate further project delays, allowing the contractor to complete the project in two (2) phases. Phase 1, Rutgers Tube, project slipped 4 months and is forecast to be completed December, 2021, pending on availability of Con Edison to re-energize the switchgear, and Phase 2, 53<sup>rd</sup> St Tube, project is forecast to be completed in the June 2022.

**T7160729: RTO Facility: 3<sup>rd</sup> Avenue-138<sup>th</sup> Street PEL**

This project converts the underutilized back-of-house space at the 3<sup>rd</sup> Avenue-138<sup>th</sup> Street station into an Employee Facility, for the Department of Subways. Part of the scope of work is for the in-house staff Infrastructure Capital Construction and Electronic Maintenance Division (ICC and EMD) to provide a communications closet, which requires the procurement of communications equipment. The substantial completion slipped 3 months to December 2021 was due to the current supply chain issues and the delay in acquiring the equipment. Team is working to mitigate further delays and secure the needed equipment as soon as possible.

## **Infrastructure Business Unit Response to the IEC Traffic Light Report**

### **Infrastructure Program Overview**

The C&D Infrastructure Business Unit is responsible for all infrastructure construction projects on the NYCT and SIR – Staten Island Railway network, including line structures (e.g., tunnels, bridges), line equipment (e.g., lighting, pumps, ventilation plants), power substations and cabling, shops and yards, depots, and other facilities that are essential to NYCT’s and SIR’s operation.

The Infrastructure Business Unit currently oversees 543 active projects, including 106 projects in construction, with a budget of \$3.7B.

Notable projects under construction include upgrading MTA’s bus radio system, flood mitigation at the 207 Street Yard and the Coney Island Yard, rehabilitating the Forsyth Street Fan Plant, upgrading the Power Control Center & Rail Control Center, and rehabilitating HVAC systems at College Point.

The IEC-Independent Engineering Consultant’s Traffic Light Report currently tracks tasks (ACEPs) in the Infrastructure program. Of those, 21 tasks were flagged red, representing 13 projects.

The Infrastructure Business Unit continues to identify and remediate issues at the program level. Several projects, for instance, were flagged red because of COVID 19 and Con Edison delays. Project leadership has developed mitigation strategies to make back the time / keep projects within budget. For Con Edison delays, regular meetings are scheduled with Con Edison management. For some of the cost triggers, PCEOs are working with Capital Planning & Budget to correct the budget amounts.

### **ES070211: Flood Repairs-Clifton Shop (Long-Term) ES070302: SIR Sandy Mitigation: Clifton Shop / Yard S7070111: Relocate HQ to Clifton Shop**

Staten Island’s Clifton Shop services the entire Staten Island Rail and diesel locomotive fleet. The facility flooded in Hurricane Sandy, and its location, in a marshy area, makes it vulnerable to flooding in the long term. This project is to fortify infrastructure and equipment against heavy rainfall and/or storm surges. The project entails constructing a brand-new maintenance facility to replace the existing obsolescent buildings. This is a Design/Build project which is split into 3 contracts.

The beneficial use of the new facility has slipped 1 month, from November 2021 to December 2021, and the substantial completion has slipped 6 months, from December 2021 to June 2022. The delays were due to third-party delays in obtaining permanent electrical service and supply chain issues related to COVID 19. C&D is mitigating the delays by:

- Focusing on the critical path items necessary for the beneficial use.
- Minimizing change orders during the testing and commissioning period.
- Performing multiple start-ups of systems.
- Performing multiple system trainings concurrently.
- Phase 4 – Started ACM – Asbestos Containing Material placard process in advance of work.

The risk of additional schedule delays remains high due to unforeseen conditions during the existing building demolition.

**ET070310: Rockaway ROW-Right of Way Debris Shielding****ET070311: Sandy Mitigation: New Crossover at Beach 105<sup>th</sup> St. / Rockaway****ET070313: Rockaway Park Yard Compressor Room Flood Mitigation (ROW)**

The three projects described below will be bundled with another project – ET070312 Rockaway Line Long Term Protection project to provide the hardening of the substations in the flood prone area in the Boroughs of Manhattan and Queens.

1. **Rockaway ROW Debris Shielding** project will provide flood mitigation measures of debris shielding along the Rockaway ROW – Right of Way. The location is the South end of the Howard Beach station to the North end of the Broad Channel station and the South end of the Broad Channel station to Hammels Wye.
2. **New Crossover at Beach 105<sup>th</sup> St. / Rockaway** project will upgrade the Beach 105<sup>th</sup> station. The area is located on an elevated structure which is well above the Design Flood Elevation (DFE).
3. **Rockaway Park Yard Compressor** project will provide flood mitigation measures for the Rockaway Park Yard Compressor Room at the Howard Beach Station to Beach 116<sup>th</sup> Station/Rockaway Park Rail Yard.

Design Completion milestone dates have been extended three months due to the complexity in the Project Requirements & Design Criteria and drawing reviews. A Request to Advertise has been submitted for all of the above projects. Subsequent to the reporting period, the design completion has been slipped to December 2021 and the award has been pushed out to June 2022.

**ET090307: Hardening of Substations at 24 Locations**

This project will provide hardening of the 24 Substations in the flood prone area in the Boroughs of Manhattan and Queens. The award date has slipped three months, from December 2021 to March 2022, to accommodate the timeline for the two-step Design / Build procurement process of awarding the project. Subsequent to the reporting period, the award has been pushed out further to June 2022.

**ET100210: Power Cable Replacement 207<sup>th</sup> Street Yard**

NYCT's 207<sup>th</sup> St Yard is the main storage and repair facility for the rolling stock on the A and C Subway Lines and the number 1 line in Manhattan. This project will replace the power cable at the 207<sup>th</sup> Street Yard. This quarter, the estimate at completion (EAC) was increased by \$5M to accommodate change orders for field conditions: existing system was not up to code; conduits were in bad shape or non-existent and additional cable lengths were required.

**ET120307: Flood Mitigation at 4 NYCT Depots: Casey Stengel, MJ Quill, Castleton Bus Depots**

This project will provide short- and long-term flood mitigation for three bus depots:

1. MJ Quill
2. Castleton
3. Casey Stengel

The project could not proceed as there was a stop work order on the installation of a flood roller gate at MJ Quill Depot. The stop work order was issued to address concerns of the coach buses which recently introduced to the depot have a turning radius too wide to use of the flood roller gate, by approximately 6 inches.

C&D in concert with Dept. of Buses, designer, contractor and fabricator developed design, manufactured and proceeded with installation of modified widened flood roller gate.

#### **T6120403 Replace Bus Radio System NYCT U6030226 Bus Radio System MTA Bus**

The project encompasses designing, furnishing and installing a new digital radio system in the 700/800 MHz bands to be used by NYCT Department of Buses and MTA Bus Company. The project includes retrofitting 6,250 buses and support vehicles with new mobile radios and providing 1,250 portable radios.

This quarter, the EAC was increased by approximately \$22.1M due to a budget modification for NYCT Engineering Force Account (EFA), Transit Authority Labor (TAL) and Consultant Construction Manager (CCM). These additional resources are required to address the Substantial Completion being pushed out.

#### **T6160717 Livingston Plaza Façade**

This project includes upgrading the façade, roofing, and installing sidewalk bollards and wedge barriers (on street level) at the 130 Livingston Plaza building.

Substantial Completion slipped to January 2022 due to the supply chain issues (roofing material shortage) and site condition. The final delivery of roofing materials was received in early November 2021.

#### **T7100402 207<sup>th</sup> Street Maintenance & Overhaul Shop Roof & Component Replacement**

This project is to provide the replacement of the roofing assembly on the overhaul and maintenance shop at the 207th Street Yard in Manhattan, one of the largest, busiest, and most productive shops for NYCT. Additional, incidental mechanical, facade, and drainage repairs are also part of the project. The contract's Substantial Completion date slipped three months, from April 2022 to July 2022 due to a time extension related to the contractor notifying the MTA of delays in getting roofing material (supply chain issues) which could further impact the Substantial Completion date. MTA C&D will evaluate any additional claim of delay when a delay is established and substantiated.

#### **T6100454 207<sup>th</sup> St. Overhaul Shop: Boiler Upgrades & Site Remediation**

This project will upgrade the boiler system at the 207<sup>th</sup> Street Yard. Work will take place inside the Boiler House and in the Overhaul Shop. The Site Remediation will take place in the open yard area east of the Boiler House and north of the Overhaul Shop. The EAC was increased by \$1.8M this quarter to address the additional approved change orders.

**T8160601 Fire Alarms and Sprinklers: Various Locations**

This project will replace and bring up to new standards Fire Alarm system at 23 Department of Subways locations, and upgrade Central Alarm Monitoring System (CAMS) software.

During the design review, MTA-IT found an opportunity to improve the design by changing the CAMS network connectivity from Enterprise/Corporate network to a direct connection from EMD – End User / Maintainer network. However, with the design improvement, the design completion date was pushed out by 2 months.

**Signals and Train Controls Business Unit Response to the IEC Traffic Light Report****Signals and Train Controls Program Overview**

The Signals & Train Control Business Unit currently oversees 35 active projects, including 17 projects in construction, with a budget of \$2.6 B. Notable projects under construction include CBTC QBL West, Culver and 8<sup>th</sup> Avenue.

The IEC's Traffic Light Report currently tracks 20 ACEPs in the Signals program. Of those, 2 ACEPs were flagged red, representing 1 project. The description below describes why these project tasks (ACEPs) were flagged, and what C&D is doing to remediate.

**ET050217: Sandy Repairs - Mainline Track 200<sup>th</sup> – 207<sup>th</sup> St - 8<sup>th</sup> Ave Line (Procurement)****ET080207: Signals 200<sup>th</sup> – 207<sup>th</sup> St - 8<sup>th</sup> Ave Line (Procurement)**

This project will replace all signal equipment and field cables at the 207th Street and 200th Street Interlockings on the IND 8th Avenue (A) Line, damaged during Superstorm Sandy. The design shall include installing equipment where flooding is not possible; installing equipment in cases that can be made watertight (when equipment must be installed trackside), and other mitigations.

The contract award date slipped three months, from September 2021 to December 2021, due to the issuance of addenda. Since the advertisement of the project on August 18, 2021, there have been 9 addenda to the contract, the latest one on November 18, 2021, delaying the bid opening to November 22, 2021.

**NYCT Department of Subways Response to the IEC Traffic Light Report****T8050209: 2020 Mainline Track Replacement - Lexington Line (construction phase)**

This project is red due to a three-month schedule slippage, from September 2021 to December 2021. This project consists of four jobs at two locations, S/O Canal Street on tracks MM-1, MM-2 & MM-3 and N/O Borough Hall on track M-2. The initial scope of work was based on the 2018 Condition Survey and identified 300 track-feet of Type II-IIM and 600 track-feet of Ekki-Hilti, at the three Canal street jobs, to be replaced. During a 2020 inspection, it was discovered that water infiltration caused an extensive amount of broken and missing concrete, necessitating the repair of the concrete before the track work could commence.

In addition to the added scope, the N/O Borough Hall location required additional GOs due to limited track access to the tube area. The tube area is a high traffic location and therefore track access is not easily granted. The timeframe of each GO only allows track construction to complete up to 300 track-feet of work.

**LIRR Business Unit Response to the IEC Traffic Light Report****LIRR Program Overview**

The LIRR Business Unit currently oversees 115 active projects, including 44 projects in construction, with a budget of \$2.5B. Notable projects under construction include Jamaica Capacity Improvements, Ocean Avenue Substation, Queens Interlocking, and the Annual Track Program. Non C&D LIRR projects tracked by the LIRR Business Unit include 38 active projects (7 in construction) with a budget of \$1.4B.

The IEC's Traffic Light Report currently tracks 73 ACEPs in the LIRR program. Of those, 1 ACEP was flagged red, representing 1 project. The description below describes why the project task (ACEP) was flagged, and what C&D is doing to remediate.

**L8020418: Extraordinary Interior Cleaning (EIC) Relocation (construction phase)**

This project will relocate the Extraordinary Interior Cleaning (EIC) Operation from Mets-Willets Point Station to Ronkonkoma Yard. The four-month schedule slip, from December 2021 to April 2022, is due to extended delivery time for a prefabricated storage facility because of supply chain issues. Subsequent to the reporting period the substantial completion date slipped further to August 2023 for the same reason as mentioned above.

**Metro-North Railroad Business Unit Response to the IEC Traffic Light Report****Metro-North Railroad Program Overview**

The MNR Business Unit currently oversees 74 active projects, including 31 projects in construction, with a budget of \$2.4B. Notable projects under construction include the Superstorm Sandy Power and C&S Restoration project, Harmon Shop Improvements, and the Grand Central Trainshed project.

The IEC's Traffic Light Report currently tracks 74 ACEPs in the C&D Metro-North program. Twelve of those 74 ACEPs were flagged red, representing eight projects. The description below describes why these project tasks (ACEPs) were flagged, and what C&D is doing to remediate.

**EM040206: Comm & Signal Infrastructure Restoration – Ph. 1 & 2****EM040301: Power and Signals Mitigation Phase 1****EM040302: Hudson Line Power and Signal Resiliency****EM050206: Power Infrastructure Restoration – Ph. 1 & 2**

The four ACEPs are part of the same project to restore and provide resilient power and signal infrastructure to the Hudson Line damaged during Super Storm Sandy. Most of the remaining work in this project is within interlockings. Interlocking work outages are currently available during weekend nights only with 4-5 hours of contractor productivity. The work also requires extensive force account support from the Track, Power, Communication & Signal Departments, many of which are experiencing staff shortages leading to the nine-month schedule slip, from December 2021 to September 2022. Damage along the Hudson Line due to Hurricane Ida also contributed to the delay since MNR forces were involved with the restoration of the right-of-way. C&D is mitigating this situation by concurrently performing work in multiple locations during available weekend nights. Additionally, discussions and coordination with the Metro-North Transportation Department to prioritize track outages and daily coordination for in-house support (track, power, C&S and flagging) are on-going.

**M7040102: Harmon to Poughkeepsie Signal System**

This project provides for the installation of express cable on the Hudson Line from Croton Harmon to Poughkeepsie. The 9-month schedule slip, from June 2022 to March 2023 was due to the delayed delivery of the plow train, impacts from Hurricane IDA, and insufficient track outages for cable plowing. Subsequent to the reporting period, the plow train was delivered. Extensive testing and commissioning has been performed to make sure the plow train is compatible with MNR's Positive Train Control (PTC) installation and Metro-North territory and tracks. Additional shifts have been added to the schedule to recover time lost. MTA C&D is in discussion with the MNR Transportation Department to request priority outages for further plowing activities.

**M7040112: Harlem Wayside Communication & Signal Improvements**

This project provides for the installation of express cable on the Harlem Line from CP112 located south of the Woodlawn passenger station to CP154 located north of the Southeast passenger station. The four-month project delay from November 2021 to March 2022 was due to the re-design for the replacement and installation of 288 poles. The re-design was required due to the conditions the existing poles were in,

most were deteriorating rather rapidly. Additionally, the project is currently restricted to very short weeknight track outages. MTA C&D is in discussion with the MNR Transportation Department to request priority outages for removal and installation of new poles.

**M7050101: Replace MA's in Signal Substations**

This project provides for the replacement of two motor-alternator (MA) sets along with related equipment which are located in Mott Haven Yard Substation S-5. The decommissioning and construction of Substation S-5 work cannot start until a backup mobile substation is online to feed signal power to the Railroad. The mobile substation completion is pending a ConEd inspection and a necessary feeder outage to connect ConEd power, which has delayed the project's substantial completion 12 months, from October 2021 to October 2022. The project team and ConEd are coordinating closely to expedite approval of all documentation for the inspection process to mitigate a further schedule delay.

**M7050105: Harlem & Hudson Power Improvement – City Water Substation (construction phase)**

This project includes the construction of a new power substation near Mount Kisco to mitigate existing undervoltage conditions on a section of the Harlem Line. Substantial completion has slipped 7 months from November 2021 to June 2022 due to a delay in obtaining an Army Corps of Engineers' permit to install a dewatering system to remediate the water leaks in the substation vault as well as a ConEd delay in the inspection and approval process for the final power energization process. The project team continues to follow up with the Army Corps of Engineers to expedite permit approvals, and with ConEd for scheduling inspection, testing and document approvals for final feeder connection.

**M7080113: Customer Communication – CM**

This project provides the construction management services, supporting and managing the construction of the Customer Service Initiative (CSI) Program. The CSI program consist of seven construction contracts. However, in late August 2021, one of the construction contracts executed a change order resulting in a 4-month time extension, from August 2021 to December 2021. Therefore, this project, construction services, had to be extended to continue the support of the construction to the close out of all 7 construction contracts.

**M7010101: Locomotive Purchase****M8010102: Locomotive Replacement**

This project was awarded on February 2021 for the design, construction, testing and delivery of twenty-seven dual mode diesel/DC electric locomotives. This quarter's increase in the Estimated at Completion (EAC) is a result of the project management team developing an engineering estimate of actual work required to successfully complete this project.

**Bridges and Tunnels Business Unit Response to the IEC Traffic Light Report****B&T Program Overview**

The B&T Business Unit currently oversees 57 active projects, including 24 projects in construction, with a budget of \$3.2B for all active projects. Notable projects under construction include Installation of Fender Protection and Fire Standpipes at the Bronx-Whitestone Bridge Towers, Rehabilitation of Hugh Carey Tunnel Ventilation Systems, Reconstruction of Verrazano-Narrows Bridge Approach Ramps - Phase1, and Replacement of the Suspended Span Deck at the Throgs Neck Bridge.

The IEC's Traffic Light Report currently tracks 61 tasks (ACEPs) in the 2015-2019, Sandy and 2020-2024 programs. Of those, 2 tasks were flagged red, representing 1 project. The description below describes why these project tasks (ACEPs) were flagged, and what B&T is doing to remediate.

**D701HH07: Structural Rehabilitation of Henry Hudson Bridge (HHB)****D707HH30: Replacement of HHB Overcoat System**

This project's scope includes work on the upper level pier columns, spandrel arch columns, steel repair and full overcoating of the steel span of the Henry Hudson Bridge. The substantial completion date slipped four months, from March 2022 to July 2022, due to limited access and required coordination with another ongoing construction project. B&T has worked with the contractor to identify mitigation measures, including increased manpower and longer work shifts which have since been implemented. It is expected that the schedule can be fully recovered and the project completed by the March 2022 contractual substantial completion date.

**Bus Procurement Response to the IEC Traffic Light Report****Bus Procurement Project Descriptions****U7030202: Purchase 257 Express Buses**

The purpose of this project is for the purchase of 257, 45-foot, diesel express buses to be operated by MTA Bus. The buses will be used for the replacement of the over-aged fleet throughout the City that are beyond their useful life. The express buses will be designed to operate in revenue service for a useful life of 12 years or 500,000 miles and will meet Environmental Protection Administration emission standards as well as Americans with Disabilities Act (ADA) standards.

The four-month schedule slip this quarter, from March 2022 to July 2022, is due in part to the effect of COVID-19 on the supply of resources and manufacturing parts. The schedule was adjusted according to the manufacturers' scheduled arrival estimates of the needed parts and resources. All Buses are expected to be delivered by July 2022.

**T8030208: Purchase 126 Hybrid (Nova) (construction phase)****T8030209: Purchase 209 Standard Diesel (Nova) (construction phase)****T8030211: Purchase 139 Standard Diesel (New Flyer) (construction phase)**

The purpose of this project is for the purchase of 348, 40-foot, diesel transit buses and 126 Hybrid buses to be operated by MTA Bus. The buses will be used for the replacement of the fleet throughout the City that are beyond their useful life. The buses will be designed to operate in revenue service for a useful life of 12 years or 500,000 miles and will meet Environmental Protection Administration (EPA) emission standards as well as Americans with Disabilities Act (ADA) standards.

This quarter all three projects slipped either three or four months, with new milestone completion/delivery dates of February 2022, August 2022 and October 2022 respectively. The delivery of buses has been delayed due to supply chain and COVID 19 related issues at both Nova and New Flyer.

To mitigate the issue, protocols have been implemented at both Nova and New Flyer. The contractors are working with their vendors to secure materials in advance along with attempts to procure alternate vendors. A weekly coordination meeting between NYCT and contractors has been implemented to mitigate future issues as they arise.

**Rolling Stock Project Descriptions****L70101ME: M-9 Car Procurement**

The M-9 Contract, which was awarded to Kawasaki Rail Car in September 2013, has a Base Order of 92 Cars for LIRR and exercised option for 110 additional LIRR cars. These base and option car total of 202 cars are intended to replace LIRR's current fleet of aging M-3s (180-cars) and support ESA service (22-Cars).

This quarter the delivery schedule slipped six months from December 2021 to June 2022. Subsequent to the reporting period, car 202 is now forecast to be Conditionally Accepted in October 2022. The slippage in the delivery schedule is due to several workmanship issues and failures discovered during on-site testing at LIRR. These issues require adjustments, repairs or complete parts and system replacement prior to LIRR granting a car a Conditional Acceptance.



**Projects in CPOC’s Risk-Based Monitoring Program  
(3<sup>rd</sup> Quarter 2021 Traffic Light Report – Period Ending September 30, 2021)**

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

<b>Projects in CPOC's Risk-Based Monitoring Program</b>		
<b>Capital Program</b>		<b>Project</b>
<b>2010-14</b>	<b>2015-19</b>	
<b>Integrated Capital Projects</b>		
	X	Second Avenue Subway - Phase 2
X	X	East Side Access & Regional Investments
	X	Penn Station Access
	X	LIRR Expansion Project – Mainline Third Track - Floral Park to Hicksville
<b>Signals and Communications</b>		
X		Communications Based Train Control - Queens Blvd. West- Phase 1
	X	Communications Based Train Control - Queens Blvd. West- Phase 2
	X	Communications Based Train Control – Culver Line
X	X	Integrated Service Information and Management B Division
X	X	Replace Bus Radio System
<b>Subway Car, Bus and Rolling Stock Procurement</b>		
X	X	New Subway Car Procurement
X	X	New Bus Procurement
X	X	Commuter Rail Road Rolling Stock Procurement
<b>Passenger Stations Program</b>		
	X	ADA Reconstruction Times Square Station – 42 Connection Project
	X	New Fare Payment System – Phase 2
	X	ADA 149 <sup>th</sup> St/Tremont Ave Stations
	X	ADA Accessibility Package A



**Projects in CPOC’s Risk-Based Monitoring Program  
(3<sup>rd</sup> Quarter 2021 Traffic Light Report – Period Ending September 30, 2021)**

<b>Capital Program</b>		<b>Project</b>
<b>2010-14</b>	<b>2015-19</b>	
<b>Shops and Yards</b>		
	X	Harmon Shop Replacement Phase V, Stage 2
	X	Morris Park Diesel Locomotive Shop
<b>Line Structures and Track</b>		
X		Jamaica Capacity Improvements Phase 1
<b>Bridges and Tunnels</b>		
	X	Throgs Neck Bridge Replace Suspended Span Deck
<b>Sandy Program</b>		
Sandy Program		Reconstruct Clifton Repair Shop
Sandy Program		Coney Island Yard Long Term Perimeter Protection
Sandy Program		207 <sup>th</sup> Street Yard Long Term Perimeter Protection