Capital Program Oversight Committee Meeting

July 2020

Committee Members
P. Foye, Chair
N. Zuckerman, Vice Chair
N. Brown
R. Glucksman
D. Jones
R. Linn
D. Mack
S. Metzger
J. Samuelsen
V. Tessitore
1. PUBLIC COMMENTS PERIOD

2. APPROVAL OF MINUTES JUNE 24, 2020
   - Minutes from June ‘20 - Page 3

3. COMMITTEE WORK PLAN
   - 2020 - 2021 CPOC Committee Work Plan - Page 4

4. C&D CAPITAL PROGRAM UPDATE
   - Update on East Side Access - Page 6
   - IEC Project Review on East Side Access - Page 40
   - Update on LIRR Expansion - Page 46
   - IEC Project Review on LIRR Expansion - Page 62
   - Update on Second Avenue Subway Phase 2 - Page 66
   - IEC Project Review on Second Avenue Subway Phase 2 - Page 72

5. CAPITAL PROGRAM STATUS
   - Commitments, Completions, and Funding - Page 76
Because of the ongoing COVID-19 public health crisis, the MTA Chairman convened a one-day, virtual Board and Committee meeting session on June 24, 2020, which included the following committees:

- Long Island Rail Road and Metro-North Railroad;
- New York City Transit;
- MTA Bridges and Tunnels;
- Finance; and
- Capital Program Oversight Committee.

To see a summary of the CPOC Committee meeting, please refer to the June 24, 2020 Board minutes in the July Board Book available here on the Board materials website:

https://new.mta.info/transparency/board-and-committee-meetings/july-2020
2020 - 2021 CPOC Committee Work Plan

I. Recurring Agenda Items

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

II. Specific Agenda Items

**September**
C&D Capital Program Update
- Stations
Quarterly Traffic Light Reports

**October**
C&D Capital Program Update
- Infrastructure
LIRR and MNR Update on Positive Train Control (PTC)
Update on Capital Program Security Projects (in Executive Session)

**November**
C&D Capital Program Update
- Signals and Train Control
Update on OMNY Program
Update on Minority, Women and Disadvantaged Business Participation
Update on Small Business Development Program

**December**
C&D Capital Program Update
- Integrated Projects
LIRR and MNR Update on Positive Train Control (PTC)
Quarterly Traffic Light Reports

**January**
Rolling Stock Procurement Update
February
C&D Capital Program Update
  •  B&T

March
C&D Capital Program Update
Quarterly Traffic Light Reports

April
C&D Capital Program Update
Update on Capital Program Security Projects (in Executive Session)

May
C&D Capital Program Update

June
Update on OMNY Program
Update on Minority, Women and Disadvantaged Business Participation
Quarterly Traffic Light Reports

July
C&D Capital Program Update
Project Benefits

- A new 8-track LIRR terminal beneath Grand Central Terminal

- Long Island Rail Road riders will now have faster, direct access to East Midtown, the heart of the Manhattan Central Business District

- Along with the Third Track and Double Track projects, ESA will enable MTA to support growth of Long Island’s workforce

- Saves commuters headed for Manhattan’s East Side up to 40 minutes per day, which adds up to 10 days per year of time saved

- Drives economic development – both in Manhattan and Long Island

- Modernization of Harold Interlocking will strengthen and expand regional rail network
East Side Access

**Project Scope**

1. New tunnels, a passenger concourse and 8 track train terminal beneath Grand Central Terminal.

2. New train yards and maintenance facilities in the Bronx for MNR and Queens for LIRR.

3. New and modernized vent facilities in Queens and Manhattan.

4. Harold Interlocking rebuilt to accommodate increased train movements and replace aging infrastructure.
April 2018 Comprehensive Replan

- New priority-based, detailed program scheduling methodology
- New Program Management Organization (PMO) to administer this new approach to schedule
- Dedicated team created to implement streamlined change order process, prioritizing schedule critical issues
- Reaffirmed 2022 project completion date
- Updated Estimate at Completion to $11.1B

*Manhattan – Terminal Pre-Cast Platform and Mezzanine Levels in April 2018*
Important Terms / Milestones

- **CS179 MS 12B14** – Track Integrated Systems Testing – Allows LIRR trains access under fully signalized traffic control through all portions of ESA network
- **CS179 MS 13** – Milestone for Substantial Completion – Includes all integrated testing (concourse, caverns, track). Final contract required for full LIRR takeover
- **ORD** – Operational Readiness – All regulatory issues satisfied (FRA, FTA Safety and Security Certification); all LIRR crew training completed (physical characteristics); and station personnel and maintenance personnel trained
- **RSD** – Revenue Service Date – LIRR ready to start revenue service
Construction Schedule Summary
East Side Access

ESA Program Revenue Service Critical Paths

1. **Critical Path (2/2022 MS 13)**
   - Building Management System (BMS) / Fire, Life, Safety, System Integrated Systems Testing (FLSS IST)

2. **Near Critical Path (7/2021 MS 12B14)**
   - Track Phase IST

**Schedule Risks:**
1. JP Morgan Chase (270 Park) Work & Testing
2. Installation Progress in the Tunnels by all contracts
3. Covid-19 Productivity
### East Side Access

#### Impacted Critical Path - Proposed JPMC Zone 4 Mitigation through CS179

<table>
<thead>
<tr>
<th>Caverns &amp; Concourse</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
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<tbody>
<tr>
<td><strong>JPMC (Tishman)</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pre-final structural</td>
<td>10/19</td>
<td>04/20</td>
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<tr>
<td>Pre-final 100% design</td>
<td>12/19</td>
<td>06/20</td>
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<tr>
<td>Shear wall work Col Line K/H</td>
<td>05/20</td>
<td>09/20</td>
<td>03/21</td>
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<tr>
<td>ESA Restoration at Col Line K/H</td>
<td>05/20</td>
<td>09/20</td>
<td>12/20</td>
<td>09/21</td>
</tr>
<tr>
<td>Shear wall work at Col Line SA/F</td>
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<tr>
<td>ESA Restoration at Col Line SA/F</td>
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</tr>
</tbody>
</table>

**Proposed Mitigations:**

1. CPR for 270 Park issued to TPC on 6/10/2020
2. Early access for CS179 to JPMC areas East and West of Column Line H (January 2021) required
3. Start of Fire Alarm by July 2021
4. Completion of Phase 3 BMS/FLSS IST and substantial completion of CS179 by November 2021
5. CS179 substantial completion improvement by 8 months

<table>
<thead>
<tr>
<th>ESA</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS179 (JPMC)</td>
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<tr>
<td>CS179 (JPMC) – East of H</td>
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<tr>
<td>CS179 (JPMC) – West of H</td>
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<tr>
<td>Fire Alarm IST</td>
<td>09/21</td>
<td>04/21</td>
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<tr>
<td>Phase 3 BMS/FLSS IST</td>
<td>07/21</td>
<td>09/21</td>
<td>11/21</td>
<td></td>
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<tr>
<td>CS179 Milestone #13 (Mitigated)</td>
<td>01/21</td>
<td>09/21</td>
<td>06/22</td>
<td></td>
</tr>
<tr>
<td>CS179 Milestone #13 (Unmitigated)</td>
<td>01/21</td>
<td>09/21</td>
<td>06/22</td>
<td></td>
</tr>
<tr>
<td>LIRR T&amp;C Facility (Mitigated)</td>
<td>02/22</td>
<td>06/22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIRR T&amp;C Facility (Unmitigated)</td>
<td>11/21</td>
<td></td>
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</tbody>
</table>

Schedule updated 6/24/20 based on JPMC’s recovery position paper
### Identify Mitigations to Improve Interim CS179 Milestones:
1. Local HVAC in Comm Rooms
2. Optimize tunnel access and in-tunnel work
### CS084 Schedule Accelerated to Start Track IST 4 Months Early

<table>
<thead>
<tr>
<th>CS084 Traction Power</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<tbody>
<tr>
<td><strong>C05</strong></td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td><strong>C08</strong></td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td><strong>C06</strong></td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td><strong>C07</strong></td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td><strong>C04</strong></td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td><strong>C02</strong></td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td><strong>C01</strong></td>
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<tr>
<td>Unmitigated Mitigated</td>
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<tr>
<td><strong>C03</strong></td>
<td></td>
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</tr>
<tr>
<td>Unmitigated Mitigated</td>
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</tbody>
</table>

### MS 6 – All Work & LST Complete

- Unmitigated Ready to Start Track IST
- 11/20
- 12/20
- 4/21

### Legend:
- Milestone
- Unmitigated Schedule
- Mitigated Schedule

- All work and LST to be completed by Dec 2020
- 3 months average substation schedule recovery
- EJ currently working to the recovery schedule
- Testing at C05, C08 and C04 underway
- Accelerates Start of Track IST by 4 Months

- Schedule Negotiated; MOD to follow
- Contractor working to the accelerated schedule; C08/C05 to be energized in July

July 2020 Energization On Target
East Side Access

CS086 Schedule Recovery

<table>
<thead>
<tr>
<th>Project</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<tr>
<td>CS086 Signal Installation</td>
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<tr>
<td>GCT-4 Central Instrumentation Room (CIR)</td>
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<tr>
<td>Unmitigated</td>
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<tr>
<td>Proposed Mitigation</td>
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<tr>
<td>GCT-3 CIR</td>
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<td>Unmitigated</td>
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<tr>
<td>Proposed Mitigation</td>
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<tr>
<td>GCT-5 CIR</td>
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<tr>
<td>Unmitigated</td>
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<td>Proposed Mitigation</td>
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<tr>
<td>GCT-6 CIR</td>
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<td>Unmitigated</td>
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<tr>
<td>Proposed Mitigation</td>
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<tr>
<td>Plaza CIR, Room 1D and 4G36</td>
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<tr>
<td>Unmitigated</td>
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<tr>
<td>Proposed Mitigation</td>
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<tr>
<td>Remote Testing &amp; Signal FIAT</td>
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<tr>
<td>Unmitigated</td>
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<tr>
<td>Proposed Mitigation</td>
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</table>

Accelerates Signal Field Installation Acceptance Testing (FIAT) by 7 Months (Proposed)

- Draft recovery schedule received
- Contractor currently working to the accelerated schedule
- CS086 JV proposal submitted 6/9/2020; Negotiations target completion July
Risk Mitigation
## Risk Mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Issue</th>
<th>Impact</th>
<th>Mitigation</th>
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<tbody>
<tr>
<td><strong>270 Park Avenue (JPMC)</strong></td>
<td>JPMC’s construction of shear walls for its new headquarters at 270 Park Avenue within the GCT Concourse is falling behind schedule</td>
<td>A delay to the shear wall construction could impact the start of restoration work and subsequent installation of devices by the facilities systems contractor (CS179). The completion of integrated systems testing for fire life safety systems will also be delayed.</td>
<td>ESA has demanded JPMC submit a recovery schedule that shows a recovery of time to support the interim and final milestones of the integrated schedule in the construction agreement. Additional shifts, as well as, additional drill rigs and other equipment pertinent to the shear wall foundation work are being required to recover lost time.</td>
</tr>
<tr>
<td><strong>Delay to Local Testing (CS179)</strong></td>
<td>CS179 has fallen behind in the completion of the installation of facility and tunnel systems (power, ventilation, drainage, HVAC, etc.) along the tunnel alignment in Queens and Manhattan</td>
<td>A delay to the installation of the tunnel and facility systems in Queens and Manhattan creates a delay to the start and completion of the local testing of the systems, required for start integrated systems testing (IST) for Phases 1 and 2.</td>
<td>ESA daily compares planned and actual work by the contractor and notifies the contractor in bi-weekly letters regarding the findings. The notifications point out noncompliance with planned work per contractor monthly schedule; deviations from the contractor’s six week look-ahead schedule; and shortfalls in staffing to allow execution of the work as planned. Advancing the installation work will allow the contractor to improve local testing performance and achieve the milestones required to move to IST.</td>
</tr>
<tr>
<td><strong>Positive Train Control (PTC)</strong></td>
<td>The rack reconfiguration and Backbone Communication System (BCS)-PTC Layer 2 Virtual Private LAN Service (VPLS) Interface testing is currently scheduled to occur after the completion of Track IST (MS 12B-14). There is also subsequent LIRR testing with test trains required, which brings the PTC cutover date to February 2022.</td>
<td>The operational readiness date, when MTA C&amp;D hands over the tunnels and track systems to LIRR, is currently at the end of February 2022. Any delay to the PTC rack reconfiguration and associated testing delays the operational readiness date and impacts LIRR training period with an active PTC.</td>
<td>Ensure that all PTC installations by CS084, CS086 and VS086; and the required networks by CS179 are completed in time to start PTC reconfiguration and testing by July 2021. Verify that durations for rack configuration, associated testing and cutover are sufficient to complete the work by operational readiness in February 2022. Utilize qualified contractor to execute work in time and minimize impact to BCS network.</td>
</tr>
<tr>
<td><strong>Rail Replacement</strong></td>
<td>Approximately 60,000 linear feet are corroded and need to be replaced, prior to LIRR taking over the tunnels and proceed with physical characteristics training.</td>
<td>Due to the quantity of rail required to be replaced, a replacement prior to the completion of Track IST cannot be done without delaying the Track IST completion date in June 2021.</td>
<td>MTA C&amp;D is negotiating with LIRR to exchange the corroded rail in a condensed period of time between completion of track integrated systems testing (IST) and start of physical characteristics training. This would be a 7-day per week, 24-hour per day work window with unimpeded access for the rail contractor to perform the work.</td>
</tr>
</tbody>
</table>
East Side Access

Financial Status

<table>
<thead>
<tr>
<th>Description</th>
<th>May 2020 Forecast</th>
<th>May 2020 Invoiced</th>
<th>Remaining (incl. Contingency)</th>
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<tr>
<td>3rd Party Construction</td>
<td>$ 7,077,982,112</td>
<td>$ 6,361,499,305</td>
<td>$ 716,482,807</td>
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<td>Force Account</td>
<td>$ 938,813,178</td>
<td>$ 752,877,369</td>
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<td>$ 2,198,302,763</td>
<td>$ 1,866,198,113</td>
<td>$ 332,104,650</td>
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<td>OCIP</td>
<td>$ 457,352,296</td>
<td>$ 383,577,843</td>
<td>$ 73,774,453</td>
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<td>Rolling Stock</td>
<td>$ 202,000,000</td>
<td>$ 338,723</td>
<td>$ 201,661,277</td>
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<tr>
<td>Contingency</td>
<td>$ 258,867,900</td>
<td>-</td>
<td>$ 258,867,900</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$ 11,133,318,249</strong></td>
<td><strong>$ 9,364,491,353</strong></td>
<td><strong>$ 1,768,826,900</strong></td>
</tr>
</tbody>
</table>

Contingency Description

- Allocated Contingency: $ 255,779,806
- Unallocated Contingency: $ 258,867,900
- **Total Contingency**: $ 514,647,706

3rd Party Expenditures

- **April 2018 Plan**: $ 6,491,994,936
- **Actual**: $ 6,361,499,305

- ESA Budget of $11.133B is now fully funded as a result of the approved 2020-2024 MTA Capital Plan (which added $798M to the budget).
- Program cost forecasts include $515M in allocated and unallocated contingency
- Total program invoiced amount through May 2020 is $9.364B.
- Total 3rd Party construction invoiced amount is $6.361B (approximately 90%).
Progressing During the Pandemic
COVID-19 Impacts

- 36 positive cases to date
- Concourse and caverns shut down on March 17th – 23rd for cleaning
- Reduced contractor workforce for 15 weeks
- Potential costs are being tracked. ESA brought on a forensic accounting firm who specializes in FEMA claims to help identify all potentially eligible costs.
- MTA is currently treating claims due to COVID-19 as Force Majeure, which provides for time but no money.
- Pandemic impacts within each contract are being tracked and quantified in a dedicated risk matrix.
- CH063 Procurement Delayed: Scope transfers from CH063 to CH058A are allowing the work to be scheduled as planned and avoid impacts to the Harold program.
Completed concrete work for the walls of the B/C Approach Structure – June 2020

Working on the B/C Approach Structure – June 2020
Installation of architectural details in the future LIRR passenger terminal – June 2020
Installation of terrazzo in the future LIRR passenger concourse – June 2020
CQ033 – Mid-Day Storage Yard Facility

Installation of Substation B15 & B17 – May 2020

Completion of tracks in Harold Interlocking – March 2020
Testing and installation of electrical equipment – May 2020
CS086 – Systems Package 2: ESA Signal Installation

Installation of a signal head and case mock-up in the tunnels – January 2020
CS179 – System Package 1: Facilities Systems

Testing and installation of electrical equipment – June 2020
Capital Program Oversight Committee Report
Appendix
East Side Access, July 2020
Construction Progress – Systems Fabrication and Installation

As of June 1st, 2020

% completion based on earned value
- current plan either contract baseline schedule or re-baselined schedule, except for traction power and CS086, where proposed acceleration schedule is used.
Local Systems Testing – Progress

As of June 1st, 2020

- CM007: 91% Planned, 40% Actual
- CM014B: 99% Planned, 27% Actual
- CS179: 77% Planned, 34% Actual
- CQ033: 87% Planned, 3% Actual
- CS084: 14% Planned, 14% Actual
- CS086: 0% Planned, 0% Actual

• % completion based on schedule activities
• current plan for CM007, CM014B and CS179 based on re-baselined schedule
• current plan for CQ033 based on contract schedule
• current plan for CS084 and CS086 based on proposed acceleration schedule
Active Construction Progress: Planned vs. Invoiced Amount

As of May 2020

Data reflects all contract work (ESA, Regional investment and other). Plan values for each contract derived from baseline or re-baselined schedule.
Active Construction Progress: Forecast vs. Invoiced Amount

*Cumulative values include all 3rd Party Construction Costs (ESA Only) from the beginning of the project until December 2022

As of May 2020
Financial Performance: Cost Contingency

- Allocated contingency: $456 million ($256 million)
- Unallocated contingency: $267 million ($259 million)
- Total EAC Contingency: $723 million ($515 million)

*Please note April to May '20 Transition

<table>
<thead>
<tr>
<th></th>
<th>April 2018</th>
<th>May 2020</th>
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<tbody>
<tr>
<td>Allocated contingency</td>
<td>$456 million</td>
<td>$256 million</td>
</tr>
<tr>
<td>Unallocated contingency</td>
<td>$267 million</td>
<td>$259 million</td>
</tr>
<tr>
<td>Total EAC Contingency</td>
<td>$723 million</td>
<td>$515 million</td>
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As of May 2020
### East Side Access

#### Schedule Performance: Schedule Contingency

<table>
<thead>
<tr>
<th>Category</th>
<th>October 2019 Total</th>
<th>Forecasted May 2020 Total</th>
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<tbody>
<tr>
<td>Program Contingency – Manhattan/Systems (Critical Path)</td>
<td>8 months</td>
<td>7 months</td>
</tr>
<tr>
<td>Program Contingency – Harold (5 months off Critical Path)</td>
<td>15 months</td>
<td>12 months</td>
</tr>
<tr>
<td>Program Contingency – Mid-Day Storage Yard (4 months off Critical Path)</td>
<td>16 months</td>
<td>11 months</td>
</tr>
</tbody>
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*As of May 2020*
**East Side Access**

**150-Day Look Ahead**

**Harold & Queens**
- Completion of CQ033 substation deliveries.
- Complete detention piping and sanitary sewer.
- Complete Yard Services Building.
- Continue track/switch installations in Mid-day Storage Yard.
- Complete 39th Street Bridge re-transfer.
- Completion of BC Structure per CH058A Milestone #7.

**Systems (CS179, CS084, VS/CS086)**
- Energize traction power substations C05 and C08 in Queens and C04 in Manhattan.
- Fire Alarm at Queens available for IST.
- Finish local testing at Plaza, Roosevelt, Vernon, 12th, 23rd, 29th, Tunnels A and D.
- Install local, express signal cables, Vital, Non-Vital fiber, Wayside equipment installation & CIR rooms completion.
- BCS local testing complete.
- Progress FA & Security related CPR work in Concourse/Caverns
- Fabricate and deliver emergency power generator set.
- B01/02 energized in JAN/FEB 2020. B20/30 recertification is in progress.
- Continue Wayside equipment installation, cable pulls and terminations for CS086.
- Energize B03 & B04
- Complete TVF installation @ 23rd, 50th & 2nd Ave + Local testing, Complete TVF Air flow testing
- Complete FA devices installation in Zones1,2,3, Caverns and start local testing

**Tunnels, Terminal & Concourse**
- Complete local testing for cavern equipment.
- Complete track work.
- Complete Chiller On and HVAC conditioning of Zones 1, 2 and 3. Originally forecasted for December 2019. It's now being forecasted July 2020.
- Turnover substation Units 5 and 6 for local testing and CS179 integrated system testing.
- Connections and terminations complete for substation Units 7, 8, 9 and 10.
- Mechanical and electrical systems testing.
- Completion of digital signage installation in Concourse.
- 50th Street Vent Plant equipment ready for balancing.
- Trackwork was completed. Installation of lubricators, switch rods, and impedance bonds and switch machine testing continues.
July 2020
Independent Engineering Consultant
Project Review

East Side Access
Cost and Schedule Review

- **Cost**
  - The Independent Engineering Consultant’s (IEC’s) analysis indicates the current budget of $11.133B, with the established allocated and unallocated contingencies, remains sufficient to complete the work required for Revenue Service.

- **Schedule**
  - Based on the project’s risk informed program schedule (Master Coordinated Schedule), the IEC forecasts 3.5 months of program contingency remaining to the December 2022 Revenue Service Date, a reduction of 2.5 months since the last report.
  - The project team has developed mitigation strategies for JP Morgan Chase related work, signal and traction power, which have the potential to recover some of the program contingency.
  - The IEC concurs with the project team and LIRR on prioritizing the rail systems (track, signal, and traction power) to be handed over to LIRR prior to the completion of all Integrated Systems Testing (IST), to mitigate the impact to the program.
  - LIRR and the project team need to finalize the agreement on the requirements and criteria for LIRR takeover of ESA.
  - Contractor performance on installation, local testing, and IST remains a schedule risk to the program. Continued delays to this work may add schedule pressure to LIRR takeover of the caverns and concourse and risk further consumption of program contingency.
Program Observations

- Management
  - As recommended by the IEC in December 2019, the project team is making efforts to improve efficiency and strengthen its Quality, Program Management, Construction Management and Testing and Commissioning groups by realigning existing resources, hiring signal and test engineers and establishing a Rail Director Team.
  - Efforts have advanced in developing planning, monitoring and reporting tools for systems installation and testing work, which are intended to supplement the program schedule.
  - Challenges remain in finalizing and utilizing the local testing and IST tracking tool across all contracts, which hinders the management and reporting of testing work against plan.
  - The IEC recognizes the project team’s success in managing the CH058A Harold Structures - B/C Approach contract, which continues to achieve milestones ahead of schedule.
  - The project team has been successful in prioritizing work, enabling the contractors to work through the COVID-19 pandemic, and minimizing the impact to the program.
**Systems Observations**

- Traction power installation (CS084) and signal installation (CS086) work, required to start local testing, have improved over the last quarter as a result of:
  - Progress on negotiations for acceleration and milestone revisions
  - Improved tunnel coordination
  - Remediation work for water infiltration and traction power monuments

- Since the May 2019 Acceleration/Settlement Agreement for the Facilities Systems and Integration contract (CS179), the installation and local testing progress of critical work is behind plan, 33% and 42% respectively, based on the project’s risk informed program schedule.

---

**CS179 Systems contract critical activities are lagging behind the May 2019 plan**

<table>
<thead>
<tr>
<th></th>
<th>Installation</th>
<th>Local Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Critical</td>
<td>Completed</td>
</tr>
<tr>
<td>5/19 - 1/20</td>
<td>1,032</td>
<td>672</td>
</tr>
<tr>
<td>5/19 - 2/20</td>
<td>1,282</td>
<td>869</td>
</tr>
<tr>
<td>5/19 - 3/20</td>
<td>1,583</td>
<td>1,108</td>
</tr>
<tr>
<td>5/19 - 4/20</td>
<td>1,944</td>
<td>1,332</td>
</tr>
<tr>
<td>5/19 - 5/20</td>
<td>2,327</td>
<td>1,556</td>
</tr>
</tbody>
</table>

Note: Chart reflects the activities required to be complete within the indicated duration.
Several milestones established in the May 2019 Acceleration/Settlement Agreement for the CS179 contract have been missed and the upcoming milestones for the remaining year indicate delays up to 10 months.

<table>
<thead>
<tr>
<th>Milestone*</th>
<th>Description</th>
<th>Milestone Date</th>
<th>Status</th>
<th>Achieved/Forecast Date (1)</th>
<th>Variance (mo.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12A-1</td>
<td>Tunnel SCADA Network FAT</td>
<td>30-May-19</td>
<td>Achieved</td>
<td>30-May-19</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Submit a Revised Contract Schedule</td>
<td>06-Aug-19</td>
<td>Achieved</td>
<td>06-Aug-19</td>
<td></td>
</tr>
<tr>
<td>12A-8</td>
<td>Fire Alarm Network Installation</td>
<td>03-Oct-19</td>
<td>Achieved</td>
<td>02-Oct-19</td>
<td></td>
</tr>
<tr>
<td>12A-2</td>
<td>Local Testing Group 1</td>
<td>29-Nov-19</td>
<td>Achieved-Partial</td>
<td>29-Nov-19</td>
<td></td>
</tr>
<tr>
<td>12A-7</td>
<td>Backbone Communication System FAT</td>
<td>15-Jan-20</td>
<td>Achieved</td>
<td>12-Jan-20</td>
<td></td>
</tr>
<tr>
<td>12A-10</td>
<td>Local Testing Signal Power System</td>
<td>03-Feb-20</td>
<td>Delayed</td>
<td>30-Jun-20 (2)</td>
<td>5</td>
</tr>
<tr>
<td>12A-3</td>
<td>Local Testing Group 2</td>
<td>09-Mar-20</td>
<td>Delayed</td>
<td>19-Sep-20</td>
<td>6</td>
</tr>
<tr>
<td>12A-4</td>
<td>Local Testing Group 3</td>
<td>23-Apr-20</td>
<td>Delayed</td>
<td>13-Feb-21</td>
<td>10</td>
</tr>
<tr>
<td>12A-6</td>
<td>Local Testing Group 5</td>
<td>05-May-20</td>
<td>Delayed</td>
<td>4-Aug-20</td>
<td>3</td>
</tr>
<tr>
<td>12A-9</td>
<td>Local Testing of Building Level Network</td>
<td>29-May-20</td>
<td>Achieved</td>
<td>18-May-20</td>
<td></td>
</tr>
<tr>
<td>12A-5</td>
<td>Local Testing Group 4</td>
<td>17-Jun-20</td>
<td>Delayed</td>
<td>13-Feb-21</td>
<td>8</td>
</tr>
<tr>
<td>12B-4</td>
<td>Backbone Communication IST Complete</td>
<td>19-Aug-20</td>
<td>Delayed</td>
<td>21-Jan-21</td>
<td>5</td>
</tr>
<tr>
<td>12B-7</td>
<td>Power SCADA Network IST Complete</td>
<td>04-Nov-20</td>
<td>Delayed</td>
<td>07-Jan-21</td>
<td>2</td>
</tr>
<tr>
<td>12B-5</td>
<td>Tunnel SCADA IST Complete, Tunnel Ventilation and Tunnel Drainage System</td>
<td>16-Nov-20</td>
<td>Delayed</td>
<td>01-May-21</td>
<td>6</td>
</tr>
<tr>
<td>12B-6</td>
<td>Fire Alarm IST Complete</td>
<td>24-Nov-20</td>
<td>Delayed</td>
<td>07-Jul-21</td>
<td>7</td>
</tr>
<tr>
<td>12B-12</td>
<td>Phase 4 IST Complete</td>
<td>04-Dec-20</td>
<td>Delayed</td>
<td>27-Apr-21</td>
<td>5</td>
</tr>
</tbody>
</table>

Notes: (1) Reference: 5/1/2020 Master Coordinated Schedule
(2) Date provided during the 5/28/2020 Project Review Meeting
* Not all the contract milestones are reflected in this table.

IST has been delayed by contractors’ performance, late handovers from predecessor contracts, JPMorgan Chase work in the concourse, quality issues and change orders. This has added schedule pressure to LIRR takeover activities, in particular the concourse and caverns, and consumed some of the program contingency.
Program and Systems Risks

- Risk of further delays to the systems installation and local testing work, resulting from lack of contractors’ performance and execution of change order work, can impact Integrated Systems Testing and subsequent LIRR takeover of ESA.

- LIRR, ESA and contractor resources required to perform and witness local testing and IST across all contracts may be insufficient due to the high volume of concurrent activities.

- Rail remediation work may add schedule pressure to LIRR training of Train and Engine (T&E) crews, and risk consumption of program contingency.
  - This work has yet to be incorporated in the program schedule.

- Potential refinement of LIRR’s Positive Train Control (PTC) final design, and delays to the execution of the ESA PTC change order work remain a schedule risk to the program.

- COVID-19 regulations and CDC guidelines for social distancing pose a schedule risk to the remaining work in confined areas.
# Construction Schedule Summary

## 1. PARKING LOTS & PARKING GARAGES
- Harrison Mineola Parking Structure
- Westbury North Parking Garage
- 2nd Street Mineola Parking Structure
- Mineola Parking and Kiss-And-Ride Area at Main Street
- New Hyde Park Rd Surface Lot

## 2. BRIDGES & VIADUCTS
- Floral Park Viaduct
- Cherry Lane Bridge
- South Tyson Ave Bridge
- Nassau Boulevard Bridge
- Plandome Ave Bridge
- Glen Cove Road Bridge
- Meadowbrook Highway Bridge
- Denton Ave Bridge
- Eliminate rail crossing at Deer
- Eliminate rail crossing at Covert Ave
- Eliminate rail crossing at New York Parkway
- Eliminate rail crossing at School St
- Eliminate rail crossing at Willis Avenue
- Eliminate rail crossing at 1st St
- Eliminate rail crossing at 5th St

## 3. GRADE CROSSINGS ELIMINATIONS

## 4. SUBSTATIONS
- New Cassel Substation
- Floral Park Substation
- New Hyde Park Substation
- Cable Place Substation
- Hicksville Substation
- Mineola Substation
- Westbury Substation
- Merrick Substation
- Cable Place Station
- Merrick Ave Station
- Floral Park Station (New Elevation)
- Mineola Station
- New Hyde Park Station
- Westbury Station

## 5. STATIONS
- Retaining & Sound Walls Block 1
- Retaining & Sound Walls Block 2
- Backbone Jamaicato Floral Park
- Backbone Hempstead Branch
- Backbone Oyster Bay
- Motor Generator 0-5
- Motor Generator 10
- Queens Tower to Nassau II Signal System
- Park 1 Interlocking/Signal System
- Nassau II 2 to Divide Tower Signal System
- Park 2 Interlocking/Signal System
- Divide 4 Switch Install/Modifications
- Divide 5 Signal System
- Nassau II Signal System

## 8. INTERLOCKINGS/SIGNALS

## 9. TEMPORARY UTILITIES RELOCATIONS
- Installation of Third Track

---

*Third Track, On The Mainline*
### Financial Summary

#### 1. 2020-24 Capital Plan approved in Jan 2020
- NTP for the Design-Build Completion Option issued on 2/3/2020
- NTP for the PMC Contract Extension issued on 4/3/2020

#### 2. Project remains under budget:
- In negotiations - addl ± $5M that includes credits and debits

#### 3. DB Project is on schedule:
- 46.5% project progress – verified work
- All project elements proceeding on schedule
- Off right-of-way elements overall advancing on schedule with some negative variances observed in Willis Avenue area
- On right-of-way elements advancing per schedule, with schedule slippages addressed on an ongoing basis (Nassau-1 cutover date forecast: January 2021)
- Advancing two under-grade crossings and two substations early

---

#### Total Program

<table>
<thead>
<tr>
<th>Total Program</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build – Current Contract</td>
<td>$1,767,183,215</td>
</tr>
<tr>
<td>LIRR/Force Account</td>
<td>$340,066,701</td>
</tr>
<tr>
<td>Project/Other</td>
<td>$292,857,046</td>
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<tr>
<td>Contingency</td>
<td>$188,425,730</td>
</tr>
<tr>
<td><strong>Total Budget with Contingency</strong></td>
<td><strong>$2,588,532,692</strong></td>
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</table>

#### Expenditures

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected</td>
<td>$1,135,761,017</td>
</tr>
<tr>
<td>Actual</td>
<td>$1,053,909,488</td>
</tr>
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</table>

#### Change Orders

<table>
<thead>
<tr>
<th>Change Orders</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executed</td>
<td>$3,307,950.68</td>
</tr>
<tr>
<td>In Negotiations</td>
<td>±$5M</td>
</tr>
<tr>
<td>Remaining Contingency</td>
<td>$185M - $190M</td>
</tr>
</tbody>
</table>

*Actuals through May 2020.
### Change Orders / Risk Control

**“Ball in Court” Tracker (as of June 11, 2020)**

#### Change Order Summary to Date:
- 23 changes orders have been approved
- 6 additional change orders have been negotiated and are pending final approval
- 13 change orders are active

#### Out of 13 active change orders:
- 5 credits and 1 scope reduction
- 3 new specs
- 2 improved efficiency, 1 improved safety, 1 missed scope
<table>
<thead>
<tr>
<th>Risk</th>
<th>Issue</th>
<th>Concern</th>
<th>Mitigation</th>
</tr>
</thead>
</table>
| Temporary / Permanent Utility Relocations | Extent of temporary / permanent utility relocations and no outage window during PSEG summer moratorium | Utility relocations may take longer than allocated in the schedule                                                                               | • Weekly coordination between PMT and Design-Build team to develop integrated solution  
• Re-sequenced work to avoid outage requirement during summer months  
• Dedicated personnel appointed to enable quick decision making  
• Established protocol to quickly elevate major issues to senior management (3TC/PMT/Utilities) for resolution |
| Interlocking Cutover          | Complicated coordination and scheduling of all work elements prior to cutover | If completion of any one of the work elements is delayed it may impact the cutover schedule                                                       | • Weekly task force meeting to discuss the path to first Interlocking cutover at Nassau 1  
• Developed detailed task list with BICs and deadlines, schedule fragnets and DCS logic revisions to ensure all work elements will be completed prior to the cutover date |
| Work Sequencing at Mineola    | Construction at Mineola area is the most complicated part of the corridor | Significant unknowns on constructability, restricted working area and temporary traffic plans                                                       | • Regular coordination meeting with Design-Build team to develop workable phasing plans  
• Developing a detailed phasing plan to ensure scope is defined and properly scheduled  
• Working with Mineola Mayor to ensure construction staging matches local needs and expectations |
| Supply Chain Disruption       | Supply chain disruption due to COVID-19 pandemic                       | If material supply and material delivery is disrupted, it may impact the construction schedule                                                   | • Established tracking system to monitor material suppliers status. Identify alternative supplier if necessary  
• Regular discussions with Design-Build team to ensure material delivery is on schedule                                                                                                                |
Key Performance Indicators

Overall Submittal Turnaround Status

Submittals through June 14
Progressing During the Pandemic
COVID-19 Guidance

• Following State and Local directives and guidance
• Implementing robust safety protocols and reporting requirements
• Using video conferencing in lieu of in-person meetings
• Beginning phased return of project staff to Westbury field office
COVID-19 Guidance

Adjusting safety briefings, using PPE and social distancing in the field where possible
"This global pandemic has tested all of us, but none more so than the front-line hospital staff who are tasked with duties that save lives every day. Without fail, these brave women and men have reported to duty, at all hours, day and night, to provide care to those in need. Having access to reliable and safe public transportation is necessary for them to do their jobs, and we are pleased that the Mineola Station will remain open even as major improvements are underway.” – Justin Burke, NYU Winthrop
Virtual Progress Tour
Jamaica Central Control Migration

Block tower operations on the Main Line... 
...have migrated to Jamaica Central Control
Bridge Replacements & Modifications

Glen Cove Road Bridge

Plainfield Avenue Bridge
Stations

Floral Park Station

Carle Place Station

Merillon Avenue Station
Grade Crossing Eliminations

New Hyde Park Grade Crossing

School Street Grade Crossing
Progress Continues

- Sound Wall Installation
- Westbury N. Parking Garage
- Meadowbrook Pkwy Bridge
- Willis Ave Grade Crossing
July 2020 CPOC Independent Engineering Consultant Project Review

Long Island Rail Road Expansion
Schedule Review

- The project has met all 2020 milestones to date. The IEC’s review verifies that the project’s Substantial Completion date remains on schedule.

- The critical path goes through the design and construction of Divide 1 and Nassau 2 interlockings.

- The IEC has observed that the latest project schedule (data date 6/01/2020) has pushed out the following major work activities, thereby compressing the scheduled work in 2021:
  - Nassau 1 interlocking has been re-sequenced from November 2020 to January 2021.
  - Underpass construction of Willis Ave. for the Main Line and Oyster Bay Lines have been re-sequenced from October 2020 to March 2021.
Budget Review

- An analysis for the design, construction and soft costs to verify the project’s estimate at completion (EAC) was performed. Based on this analysis, the IEC concludes the project EAC is within budget and contingency expenditures have been minimal.

- The average burn rate during the first half of 2020 has been below previous forecasts, supporting IEC observation of schedule compression becoming a challenge in 2021.
The top project risks are:

- **Long lead items**: Design, procurement and delivery of long-lead items, e.g. signal and substation equipment, track, switches and concrete ties.

- **Utility relocations**: Temporary and permanent utilities at Mineola, e.g. underground utilities including signal, power, and overhead electrical lines need to be relocated before the installation of retaining walls then followed by the raising of tracks.

- **Force Account support availability**: LIRR projects compete for common services and have similar substantial completion dates.

In the opinion of the IEC, based on cost, schedule and risk reviews, the agency continues to take appropriate steps to mitigate risks associated with achieving milestones.
MTACC Report to CPOC
Second Avenue Subway Phase 2

- July 22, 2020
Delivering on Promises

• Serves Transit-Dependent Community
  • Over 70% of residents use public transportation to get to work vs. 55% city-wide

• Improves Access to
  • Jobs
  • Health care options
  • Educational institutions

• Improves Service Beyond SAS
  • Improves reliability by reducing crowding along the Lexington Avenue Line - among the busiest transit lines in America
  • Connection to Metro North Railroad

Dismantling of Second Ave. Elevated Line in the 1940’s

NO CHANGES FROM DECEMBER SLIDE
Federal Funding

Project Development

- NEPA Re-evaluation SEA (Supplemental Environmental Assessment) completed and FONSI (Finding of No Significant Impact) issued Nov. 2018.
- Project received Medium-High rating from FTA in February 2020

Engineering

- Received FTA’s Risk & Readiness Workshop results: August 28, 2019
- Submitted revised Request to Enter Engineering on September 5, 2019
- Need FTA approval to Enter Engineering Phase of New Starts Program. Goal previously Q1 2020. New date TBD.
- 2020-2024 Capital Plan includes remainder of funding for SAS Phase 2.

Funding Agreement

- Submit request for an FFFGA (Full Funding Grant Agreement) Previous Goal: April 2020. New date TBD.
- Project team is sharing documents with FTA consultant to expedite FFFGA after project enters Engineering Phase.

SAS Phase 2 will provide better value per Federal dollar on a cost per rider basis compared to other applicants in New Starts pipeline.
Cost Containment

• Previous Cost Containment Efforts have already reduced project cost by up to $1B.

• Joint NYCT/Project Team Task Force
  • NYCT operational & engineering staff and project design team collectively developed over 70 innovative cost containment ideas covering all major systems.
  • Up to $80 M in savings will be incorporated into the project.
  • Items totaling up to an additional $100 M still being assessed as part of the MEP & Systems ongoing design effort.

Example of Cost Containment Idea
Deferment of Traction Power Substation at 105th Street until it is needed during Phase 3 and 4. Up to $19 M savings.
**Design Progress**

- **Advanced Works (Contract 1)**
  - Design completed.

- **Civil/Structural Design/Build (DB) (Contracts 2 & 3)**
  - Contract documents being updated to incorporate additional cost containment and based on developer coordination at 125th Street.

- **MEP, Systems, and Arch. Fit-out Design/Build (DB) (Contract 4)**
  - Development of contract documents ongoing.
    Anticipated completion: Q2 2021

- **Ongoing coordination with Developers at 125th Street Station**
Public Outreach Update

- The Second Avenue Subway P2 Outreach team has kept East Harlem Elected Officials and stakeholders apprised of project status during COVID-19 NY PAUSE
- Continued to engage with property owners and survey teams to advance property survey work
- Continued to engage with property owners in support of advancement of design and engineering for early utility work
- Community Outreach Center is currently closed to public but will reopen in the near future.
- Since opening the Community Information Center, in 2017, the Outreach team had interacted with over 11,000 visitors, and engaged another 12,200 at pop-up events. These activities will need to be refined post-COVID.
Cost and Schedule Review

- A comprehensive cost containment proposal was completed in January 2020 by the Project Team in partnership with Transit User Group staff.
  - Up to $180 M in additional savings identified
  - Lessons Learned from Phase 1 played a major role

- Current schedule plan shows a 93 month duration from award of first construction contract to start of Revenue Service.
  - FTA Risk Assessment recommended an additional 16 months contingency.
  - Advertisement of first contract pending commitment for Full Funding Grant Agreement for Federal share.
Risk Review

The top risks to the project’s success include:

- Current uncertainty with Federal funding commitment
- Market conditions for large Design-Build contracts
- Systems integration & testing issues
- Unanticipated geotechnical conditions

The Project Team is developing mitigation strategies accordingly.
Recommendation

- MTA C&D should set a timetable for completing agreements on cost containment that supports the planned completion of the Mechanical, Electrical, Plumbing, Systems and Architectural Fit-Out Contract documents.
- This agreement is needed for efficient progressing of remaining design.
MTA Capital Program
Commitments & Completions

through
June 30, 2020
In 2020, agencies have a goal of $13.5 billion in overall commitments. 50 major commitments are included; 28 for NYCT, eleven for LIRR, four for MNR, one for B&T, four for Network Expansion, and two for MTA Bus.

The MTA’s Chairman Pat Foye announced at the March 25th Board meeting that capital work commitments will be considered on an exception basis. This action has impacted commitments since then.

Through June, agencies have committed $2.5 billion versus a $5.2 billion YTD goal. The shortfall is mainly due to slips of seventeen major commitments pursuant to the moratorium on new commitments announced by the MTA Chairman. The seventeen major slips are explained on the following page.

The MTA’s $13.5 billion 2020 commitment plan is under review.

---

**Capital Projects – Major Commitments – June 2020**

**Budget Analysis**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020 Annual Goal ($ in millions)</th>
<th>2020 Forecast</th>
<th>Forecast Left to commit</th>
<th>$13,497</th>
<th>89%</th>
<th>79%</th>
<th>($9,565)</th>
</tr>
</thead>
</table>

**Year-to-Date Major Commitments**

- **GREEN** = Commitments made/forecast within Goal
- **YELLOW** = Commitments delayed beyond Goal (already achieved)
- **RED** = Commitments delayed beyond Goal (not yet achieved)

<table>
<thead>
<tr>
<th>Count</th>
<th>Percent</th>
<th>Change from Prior Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12%</td>
<td>↑ 3</td>
</tr>
<tr>
<td>17</td>
<td>65%</td>
<td>↑ 4</td>
</tr>
<tr>
<td>26</td>
<td>100%</td>
<td>↑ 7</td>
</tr>
</tbody>
</table>

**Year-to-Date Agency Breakdown**

- **New York City Transit**
  - GREEN: 6
  - YELLOW: 3
  - RED: 17
  - Prior month variance: +2 GREEN, +1 YELLOW, +1 RED

- **Long Island Rail Road**
  - GREEN: 2
  - YELLOW: 1
  - RED: 3
  - Prior month variance: +1 GREEN, +1 YELLOW, +1 RED

- **Metro-North Railroad**
  - GREEN: 1
  - YELLOW: 1
  - RED: 3
  - Prior month variance:  |

- **Bridges and Tunnels**
  - GREEN: 1
  - YELLOW: 1
  - RED: 3
  - Prior month variance:  |

- **Capital Construction Company**
  - GREEN: 1
  - YELLOW: 1
  - RED: 3
  - Prior month variance: +2 RED

- **MTA Bus Company**
  - GREEN: 1
  - YELLOW: 1
  - RED: 3
  - Prior month variance:  |

- **MTA Police Department**
  - GREEN: 1
  - YELLOW: 1
  - RED: 3
  - Prior month variance:  |
## Capital Projects – Major Commitments – June 2020 – Schedule Variances

### Project Commitment Goal Forecast

### LIRR

- **PSNY 33rd St Corridor - Phase I A**
  - Construction Award: Jun-20 to Sep-20
  - Goal: $24.0
  - Forecast: $24.0
  - The award is the balance of Phase I and II support costs. The award is delayed to reflect timing of Phase II award.

### PSNY

- **PSNY 33rd St Corridor - Phase II (New Item)**
  - Construction Award: Jun-20 to Sep-20
  - Goal: $380.0
  - Forecast: $380.0
  - The award is delayed due to extended procurement period to finalize cost negotiations, expect to bring to September board.

### Rolling Stock

- **M-9 Rolling Stock Procurement - 54-Car (Option) (New Item)**
  - Construction Award: Jun-20 to Sep-20
  - Goal: $243.0
  - Forecast: $243.0
  - The LIRR continues to negotiate with the vendor. Board approval is required to exercise this option.

### M NR

- **Harlem River Lift Bridge**
  - SuperStructure/Pier Repair
  - Construction Award: Mar-20 to Jul-20
  - Goal: $15.0
  - Forecast: $15.0
  - The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic.

- **Harlem River Fender**
  - Construction Award: Mar-20 to Jul-20
  - Goal: $6.0
  - Forecast: $6.0
  - The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic.

### Stations

- **Harlem Line Station Improvements**
  - Construction Award: Apr-20 to Aug-20
  - Goal: $16.3
  - Forecast: $16.3
  - The award is delayed due to temporary and permanent easement issues as well as the overall amount of technical requests for information.
## Capital Projects – Major Commitments – June 2020 – Schedule Variances

<table>
<thead>
<tr>
<th>Project</th>
<th>Commitment</th>
<th>Goal</th>
<th>Forecast</th>
<th>Project</th>
<th>Commitment</th>
<th>Goal</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MTA Bus</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>MTA Bus</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Bus Company Projects</em></td>
<td></td>
<td></td>
<td></td>
<td>*<em>Harold Interclocking Catenary Work – 3rd Party (New Item)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depot Rehab – College Point</td>
<td>Construction Award</td>
<td>Mar-20</td>
<td>Jul-20</td>
<td>$9.5</td>
<td>$9.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic.</td>
<td></td>
<td></td>
<td></td>
<td><strong>MTACC</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Side Access</td>
<td>Construction Award</td>
<td>Jun-20</td>
<td>Sep-20</td>
<td>$367.0</td>
<td>$367.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The request for proposals was modified to maximize competition and as a result the associated negotiations have extended the procurement phase.</td>
<td></td>
<td></td>
<td></td>
<td><strong>NYCT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rolling Stock Procurement M-9 A Cars (New Item)</strong></td>
<td>Construction Award</td>
<td>Jun-20</td>
<td>Sep-20</td>
<td>$63.9</td>
<td>$63.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The award is delayed due to an extended RFQ period to permit more time for proposers to assemble qualified teams and obtain more competitive bidders, the addition of contract modification to include the CH064 scope for the Mid-Day Storage Yard connections and additional track work, and COVID-19 related procurements pause.</td>
<td></td>
<td></td>
<td></td>
<td><strong>3 All-Agency Yellow Commitments (3 New Item)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NYCT</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>LIRR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Line Structures</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>PSNY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Parkway (Line Structures) (New Item)</td>
<td>Construction Award</td>
<td>Apr-20</td>
<td>Jun-20(A)</td>
<td>$135.6</td>
<td>$77.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The original award was delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Completion date was advanced as part of the MTA’s acceleration program. Cost decrease reflects favorable bids.</td>
<td></td>
<td></td>
<td></td>
<td><strong>PSNY 33rd St Corridor-Phase 1A (New Item)</strong></td>
<td>Construction Award</td>
<td>Mar-20</td>
<td>May-20(A)</td>
</tr>
<tr>
<td>This award is the first half of Phase I support costs. The balance of Phase I and II support costs is delayed to September to reflect timing of Phase II award.</td>
<td></td>
<td></td>
<td></td>
<td><strong>PSNY 33rd St Corridor-Phase 1B (New Item)</strong></td>
<td>Construction Award</td>
<td>Mar-20</td>
<td>Jun-20(A)</td>
</tr>
<tr>
<td>A Memorandum of Understanding (MOU) was executed with NYS for its contribution to the project budget.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In 2020, agencies have a goal of $5.4 billion in overall completions. 40 major completions are included, including 19 for NYCT, eight for the LIRR, seven for MNR, four for B&T, one for Network Expansion, and one for MTA PD.

Through June, agencies have completed $875 million versus a $1.6 billion YTD goal. The shortfall is primarily due to slips of nine major completions explained on the following page.

Although the pace of work slowed for some projects already under construction, the MTA still anticipates meeting its overall completions goal in 2020.
# Capital Projects – Major Completions – June 2020 – Schedule Variances

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9 All-Agency Red Completions (3 New Items)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NYCT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandy Mitigation: 9 Stations (9 Stns BK/Q Initiative)</td>
<td>Construction Apr-20 Jul-20</td>
<td>$56.2</td>
<td>$56.2</td>
</tr>
<tr>
<td>Sandy Mitigation: 9 Stations (9 Stns BK/Q Initiative)</td>
<td>Construction May-20 Sep-20</td>
<td>$34.1</td>
<td>$34.1</td>
</tr>
<tr>
<td>Sandy Mitigation: 14 Fan Plants, LT - 4 Locations</td>
<td>Construction May-20 Nov-20</td>
<td>$33.1</td>
<td>$33.1</td>
</tr>
<tr>
<td>ADA: 86 Street / 4th Avenue</td>
<td>Construction Jun-20 Sep-20</td>
<td>$32.6</td>
<td>$32.7</td>
</tr>
<tr>
<td>ADA: Bedford Park Boulevard / Concourse (New Item)</td>
<td>Construction May-20 Nov-20</td>
<td>$32.3</td>
<td>$32.7</td>
</tr>
<tr>
<td>Project completion delayed due to material delivery delays as a result of the COVID-19 pandemic.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project completion delayed due to material delivery delays as a result of the COVID-19 pandemic.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project completion delayed due to the COVID-19 pandemic.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project completion delayed due to the COVID-19 pandemic.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LIRR**

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Track</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massapequa Pocket Track</td>
<td>Construction Feb-20 Dec-20</td>
<td>$19.6</td>
<td>$19.6</td>
</tr>
</tbody>
</table>

The cutover of the signal systems was completed on schedule. Additional work remains to resurface and realign track before putting this asset into service. A schedule for addressing this work is under development, but a delay to December has been forecast.

**Rolling Stock**

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock: M-9 Procurement</td>
<td>Rolling Stock Purchase May-20 Dec-20</td>
<td>$300.8</td>
<td>$300.8</td>
</tr>
</tbody>
</table>

Project completion delayed due to issues in testing first cars and the production facility temporarily closing due to the COVID-19 pandemic.

**Shops and Yards**

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel Locomotive Shop Improvements</td>
<td>Construction May-20 Oct-20</td>
<td>$89.8</td>
<td>$94.4</td>
</tr>
</tbody>
</table>

Project completion delayed due to the design and fabrication of a diesel fire pump and emergency generator as well as delays related to the COVID-19 pandemic. The durations of these delays are pending resolution/conclusion of the COVID-19 pandemic.

**MNR**

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hurricane Sandy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Infrastructure Restoration - Substations (New Item)</td>
<td>Construction Jun-20 Nov-20</td>
<td>$43.8</td>
<td>$43.8</td>
</tr>
</tbody>
</table>

Project completion delayed due to the recent power failure during the cutover/energization at Riverdale and impacts to be realized under the COVID-19 pandemic.

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substation Bridge 23 - Construction (New Item)</td>
<td>Construction Jun-20 Sep-20</td>
<td>$41.7</td>
<td>$41.7</td>
</tr>
</tbody>
</table>

Project completion delayed due to the COVID-19 pandemic.
### Capital Projects – Major Completions – June 2020 – Schedule Variances

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 All-Agency Yellow Completions (1 New Item)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NYCT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Buses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase 15 Articulated Electric Buses and Depot Chargers <em>(New Item)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus Purchase</td>
<td>Mar-20</td>
<td>Jun-20(A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$32.9</td>
<td>$32.9</td>
<td></td>
</tr>
</tbody>
</table>

There was a delay due to the COVID-19 pandemic and the related reduced workforce at New Flyer Industries. All buses have been delivered.
Status of MTA Capital Program Funding
Capital Funding (June 2020)
$ in millions

Capital Program

- 2020-2024: $41
- 2015-2019: $16,814
- 2010-2014: $28,252

0% 25% 50% 75% 100%

Received
Remainder
### Capital Funding Detail (June 30, 2020)

<table>
<thead>
<tr>
<th>Funding Plan</th>
<th>Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
</tr>
<tr>
<td>1982-1991 Program</td>
<td>15,391</td>
</tr>
<tr>
<td>1992-1999 Program</td>
<td>18,095</td>
</tr>
<tr>
<td>2000-2004 Program</td>
<td>21,668</td>
</tr>
<tr>
<td>2005-2009 Program</td>
<td>24,409</td>
</tr>
</tbody>
</table>

### 2010-2014 Program

<table>
<thead>
<tr>
<th>Funding Plan</th>
<th>Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
</tr>
<tr>
<td>Federal Formula, Flexible, Misc</td>
<td>$5,853</td>
</tr>
<tr>
<td>Federal High Speed Rail</td>
<td>295</td>
</tr>
<tr>
<td>Federal New Start</td>
<td>1,257</td>
</tr>
<tr>
<td>Federal Security</td>
<td>189</td>
</tr>
<tr>
<td>Federal RRIF Loan</td>
<td>0</td>
</tr>
<tr>
<td>City Capital Funds</td>
<td>719</td>
</tr>
<tr>
<td>State Assistance</td>
<td>770</td>
</tr>
<tr>
<td>MTA Bus Federal and City Match</td>
<td>132</td>
</tr>
<tr>
<td>MTA Bonds</td>
<td>11,483</td>
</tr>
<tr>
<td>Other (Including Operating to Capital)</td>
<td>1,519</td>
</tr>
<tr>
<td>B&amp;T Bonds &amp; Cash</td>
<td>2,026</td>
</tr>
<tr>
<td>Hurricane Sandy Recovery</td>
<td>6,329</td>
</tr>
<tr>
<td>PAYGO</td>
<td>81</td>
</tr>
<tr>
<td>Sandy Recovery MTA Bonds</td>
<td>758</td>
</tr>
<tr>
<td>Sandy Recovery B&amp;T Bonds</td>
<td>229</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>31,639</strong></td>
</tr>
</tbody>
</table>

### 2015-2019 Program

<table>
<thead>
<tr>
<th>Funding Plan</th>
<th>Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
</tr>
<tr>
<td>Federal Formula, Flexible, Misc</td>
<td>$6,722</td>
</tr>
<tr>
<td>Federal Core Capacity</td>
<td>100</td>
</tr>
<tr>
<td>Federal New Start</td>
<td>500</td>
</tr>
<tr>
<td>Federal Security</td>
<td>3</td>
</tr>
<tr>
<td>State Assistance</td>
<td>9,064</td>
</tr>
<tr>
<td>City Capital Funds</td>
<td>2,667</td>
</tr>
<tr>
<td>MTA Bonds</td>
<td>7,968</td>
</tr>
<tr>
<td>Asset Sales/Leases</td>
<td>1,017</td>
</tr>
<tr>
<td>Pay-as-you-go (PAYGO)</td>
<td>2,156</td>
</tr>
<tr>
<td>Other</td>
<td>595</td>
</tr>
<tr>
<td>B&amp;T Bonds &amp; PAYGO/Asset Sale</td>
<td>2,925</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33,717</strong></td>
</tr>
</tbody>
</table>

### 2020-2024 Program

<table>
<thead>
<tr>
<th>Funding Plan</th>
<th>Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
</tr>
<tr>
<td>Capital from Central Business District Tolling</td>
<td>$15,000</td>
</tr>
<tr>
<td>Capital from New Revenue Sources</td>
<td>10,000</td>
</tr>
<tr>
<td>MTA Bonds and PAYGO</td>
<td>9,792</td>
</tr>
<tr>
<td>Federal Formula</td>
<td>7,500</td>
</tr>
<tr>
<td>State of New York</td>
<td>3,000</td>
</tr>
<tr>
<td>City of New York</td>
<td>3,000</td>
</tr>
<tr>
<td>Federal New Start (SAS Ph2)</td>
<td>2,905</td>
</tr>
<tr>
<td>Federal Flexible</td>
<td>275</td>
</tr>
<tr>
<td>B&amp;T Bonds (Self-Funded)</td>
<td>3,327</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54,799</strong></td>
</tr>
</tbody>
</table>