

## **PMOC MONTHLY REPORT**

### **East Side Access (MTACC-ESA) Project**

Metropolitan Transportation Authority

New York, New York

Report Period January 1 to January 31, 2013



PMOC Contract No. DTFT60-09-D-00007

Task Order No. 2, Project No. DC-27-5115, Work Order No. 04

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Length of time on project: Five years on project for Urban Engineers

## **TABLE OF CONTENTS**

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<b>COVER .....</b>	<b>1</b>
<b>TABLE OF CONTENTS .....</b>	<b>2</b>
<b>THIRD PARTY DISCLAIMER.....</b>	<b>3</b>
<b>REPORT FORMAT AND FOCUS .....</b>	<b>3</b>
<b>MONITORING REPORT .....</b>	<b>3</b>
<b>1.0 PROJECT STATUS .....</b>	<b>3</b>
a. Design .....	3
b. Procurement .....	4
c. Construction.....	5
d. Quality Assurance and Quality Control (QA/QC).....	11
<b>2.0 SCHEDULE DATA .....</b>	<b>11</b>
<b>3.0 COST DATA .....</b>	<b>12</b>
<b>4.0 RISK MANAGEMENT.....</b>	<b>12</b>
<b>5.0 ELPEP COMPLIANCE SUMMARY.....</b>	<b>13</b>
<b>6.0 SAFETY AND SECURITY .....</b>	<b>15</b>
<b>7.0 ISSUES AND RECOMMENDATIONS .....</b>	<b>15</b>

## **APPENDICES**

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### **APPENDIX A – ACRONYMS**

### **APPENDIX B – TABLES**

Table 1 – Project Budget/Cost Table

Table 2 – Summary of Critical Dates

Table 3 – Comparison of Standard Cost Categories: FFGA vs. CBB

Table 4 – Catenary Review Schedule

Table 5 – Core Accountability Items – January 2013

## **THIRD PARTY DISCLAIMER**

This report and all subsidiary reports are prepared solely for the Federal Transit Administration (FTA). This report should not be relied upon by any party, except FTA or the project sponsor, in accordance with the purposes as described below.

For projects funded through FTA Full Funding Grant Agreements (FFGAs) program, FTA and its Project Management Oversight Contractor (PMOC) use a risk-based assessment process to review and validate a project sponsor's budget and schedule. This risk-based assessment process is a tool for analyzing project development and management. Moreover, the assessment process is iterative in nature; any results of an FTA or PMOC risk-based assessment represent a "snapshot in time" for a particular project under the conditions known at that same point in time. The status of any assessment may be altered at any time by new information, changes in circumstances, or further developments in the project, including any specific measures a sponsor may take to mitigate the risks to project costs, budget, and schedule, or the strategy a sponsor may develop for project execution. Therefore, the information in the monthly reports will change from month to month, based on relevant factors for the month and/or previous months.

## **REPORT FORMAT AND FOCUS**

This report is submitted in compliance with the terms of the Federal Transit Administration (FTA) Contract No. DTFT60-09-D-00007, Task Order No. 002. Its purpose is to provide information and data to assist the FTA as it continually monitors the grantee's technical capability and capacity to execute a project efficiently and effectively, and hence, whether the grantee continues to be ready to receive federal funds for further project development.

This report covers the project management activities on the East Side Access (ESA) Mega-Project managed by MTA Capital Construction (MTACC) with MTA as the grantee and financed by the FTA FFGA.

## **MONITORING REPORT**

### **1.0 PROJECT STATUS**

#### **a. Design**

As of December 31, 2012, MTACC reported that the Engineering/Design effort was 96.3% complete (on a cost invoiced basis). The percent complete varies monthly and depends on the award of tasks to the GEC.

The Stage 3 90% catenary design package was approved by Amtrak on November 29, 2012 (target for completion of 90% design was October 5, 2012). The GEC has completed the 100% design submittal. The forecast date for submitting this to Amtrak was November 10, 2012 and the forecast date for getting approval from Amtrak was December 30, 2012; however these dates were not met. Amtrak has requested that the GEC submit a 30% design for the FHA03A package (which will provide electrification to additional tracks to facilitate Amtrak operations during Stage 3 and 4 work) along with the 100% design. Key milestone dates and status for catenary designs are shown in Table 4 in Appendix B.

The GEC has completed the 60% design submittal for CM015 (48<sup>th</sup> Street Entrance) and the Project Management Team (PMT) circulated it to the railroads (LIRR and MNR) and property owners for review and comments. The PMT is exploring the possibility of moving this scope

back into the CM014B contract (where it originally resided several years ago). Completion of the review of this submittal was previously forecast for January 2013; however this time frame was not achieved.

The CH057 (Harold Structures Part 3a) is being split into three separate packages. The installation of the track slab for the westbound bypass tunnel will be removed from the scope of CH057 and advanced separately as a change order to an existing contract (CH053) to take advantage of a 30-day continuous track outage scheduled to begin in July 2013. The Westbound Bypass work will be packaged and procured separately, and the remaining work will be procured as another new package.

The 90% submittal for CH058 (Harold Structures- Part 3b) had been previously forecast by ESA for mid-November 2012; however, this date was not met due to the GEC focus on the CH061 design. The design of the eastbound re-route structure is being revised to permit construction with minimum impact to railroad operations. This revision is underway and is anticipated to be completed by the end of February 2013.

Revisions to the 44<sup>th</sup> Street vent plant design in the CM014B package were completed in December 2012, and the transformer reconfiguration for the Biltmore Room is now anticipated to be completed by mid-February 2013, pending comments from Metro-North Railroad (MNR) (previous forecast was for the end of January 2013). Bid documents for the scope of work to be procured separately under the MTA Mentoring Program were provided to perspective bidders in January 2013.

The GEC is proceeding with the 100% design for the CH061 (Tunnel A) submission which is scheduled for completion in February 2013. The Change Control Committee (CCC) approved transferring the scope of work in this package via a contract modification to the existing CQ031 Contract on December 19, 2012. The PMT has provided the CQ031 Contractor with the 90% design drawings.

The GEC is currently providing support for the CM012R repackaging and re-bidding process. The current strategy for repackaging the CM012R Contract is to divide the scope into five change orders to be issued to existing Contracts; create three new smaller contract bid packages; and move the 63<sup>rd</sup> street tunnel rehabilitation and Manhattan bench walk work back into the CS179 Systems Package 1.

## **b. Procurement**

As of the end of December 2012, the total procurement activity on the project was reported to be 56.5% complete, with \$4.917 billion in contracts awarded out of the \$8.708 billion revised budget.

Bids for the CM012R (Manhattan Structures Part 2) solicitation were received on October 24, 2012. Four bids were received, with the lowest bid coming in at approximately \$350 million above MTACC's estimate for the work. This presents a serious problem that could impact the current project cost and schedule baselines. MTACC cancelled the solicitation and continues working on a strategy for moving forward. The CM012R contract package is on the project critical path and has also impacted the CS179 (Systems Package 1) procurement, which depends upon completion of certain milestones in the CM012R package for access. MTACC briefed the FTA and PMOC on December 12, 2012 on its preliminary findings and strategy for moving

forward. The MTACC President stated at the meeting that he would make a presentation to the MTA CPOC in January 2013 on impacts of the bid cancellation on the ESA project, but would share early results with FTA/PMOC when they become available (approximately two weeks). These results were not made available to the FTA/PMOC in January 2013 and the presentation to the MTA CPOC has now been moved to March 2013. At present, it looks like the MTACC will go with three new packages for procuring the work.

The continuing slippage of awarding CS179 (Systems Package 1) remains a major concern. MTACC is still negotiating with three proposers; the Notice to Proceed (NTP) forecast date of December 1, 2012 was not met and is now forecast for April 1, 2013. The work in this package is contingent upon completion of key milestones in the CM012R contract. This complicates the finalization of procurement and will most likely require the proposers to re-evaluate their cost and schedule proposals. Also, the ESA PMT has asked proposers to submit an option which includes transferring the 63<sup>rd</sup> Street Tunnel Rehabilitation and Bench Walk back into the Contract, further complicating the procurement finalization. Contract CS179 is on the project critical path.

The previous forecasted advertise date of April 15, 2013 for the CM014B package has now been changed to TBD in the latest ESA IPS update.

The previous forecasted advertise date for CH057 package (February 1, 2013) is no longer valid, since the PMT is splitting this package into three separate packages as discussed in the design section of this report. The CCC approved the repackaging of this contract on December 19, 2012.

The advertise date for the CH058 package has now slipped from June 2013 to November 2013.

### **c. Construction**

MTACC stated in its December 2012 Monthly Progress report that the total construction progress reached 48.3% complete on a cost invoiced basis, in accordance with its re-baselined budget of May 2012. Details for active construction contracts are provided below. The data date for financial and progress figures on all reported contracts is December 31, 2012.

Although LIRR and Amtrak sustained significant non-ESA damage from Hurricane Sandy in late October 2012, which required dedicated ESA personnel from both railroads to repair, Force Account construction and contractor protection returned to pre-storm levels during the week of January 7, 2013. Harold contracts CH053 and CH054A were affected the most by the absence of support. Neither contract had major milestones scheduled to be completed during November and December 2012, but the PMOC believes that both contracts will nonetheless claim a 2 month delay due to the storm.

**Manhattan: CM009/019 – Manhattan Tunnels Excavation/Structures Part 1:** The EAC for the CM009 was re-baselined in January 2012 to \$413,415,000, and has remained unchanged since then. The Substantial Completion (SC) date established at the time of re-baseline was August 31, 2013, but the currently approved ESA forecast for SC is June 1, 2013 (4Q2012 MTACC Quarterly Report). As of December 31, 2012, the actual construction progress for December was 0.1% versus 0.0% planned (MTACC did not offer an explanation in its 4Q2012 Quarterly Report for why no work was planned). The cumulative project complete was 93.2% actual versus 95.9% planned.

The EAC for the CM019 contract was re-baselined in January 2012 to \$793,879,000, and has remained unchanged since then. The Substantial Completion date established at the time of re-baseline was August 31, 2013, but the currently approved ESA forecast for SC is June 1, 2013 (4Q2012 MTACC Quarterly Report). As of December 31, 2012, actual construction progress for December was 1.4% versus 1.4% planned. The cumulative project complete was 95.9% actual versus 91.9% planned.

The MTACC continues to report that the CM009/CM019 contractor is experiencing delays in completion of Milestone #2 (47 days), South End West Cavern, and Milestone #3 (35 days), West Cavern Shotcrete and Sump Channel Excavation, due to slow excavation and shotcrete application progress combined with after-effects from Hurricane Sandy. The MTACC is presently considering a Time Impact Analysis (TIA) for the storm delay that was submitted by the contractor. The PMOC does not believe, however, that either of these delays will have a negative impact on the overall SC date of June 1, 2013 for both contracts. The latest IPS has the CM009/19 Contract on the project critical path.

Construction Progress:

- Completed sump pit excavation in Eastbound Cavern;
- Continued shotcrete placement of Westbound Cavern walls and temporary invert, GCT 1&2 West bench excavation, GCT 1&2 East shotcrete placement, Phase 8 excavation at the 55<sup>th</sup> St. vent facility, and placed temporary invert in Tail Tunnel #1;
- Began punch list repairs for Milestone #s 2, 3, 1C, and 7.

**CM013 – 50<sup>th</sup> Street Vent Facility:** EAC remained unchanged at \$127.8 million. Forecast Substantial Completion date remains at July 31, 2013. The actual percent complete is 74.5% vs. 76.4% planned. This Contract is not currently on the project critical path.

Construction Progress:

- The MPT along 50th St. and 49th St. is ongoing and being maintained successfully.
- At the Service Tunnel, the waterproofing on the roof of the 2nd basement was completed and backfilling has begun up to the existing utilities.
- At the Vent Plant, work continues with the erection of structural steel framing and installation of metal decking.
- The concrete wall support for the D5 column was completed and preparations began for concrete slab placement.
- At the Loading Dock, the 1st floor formwork and embedded light installation were completed.
- The 4 floor levels in the deep shaft were completed and preparations are underway to begin the Access Tunnel lining and the concrete plenum. This work was previously a part of the CM019 contract.

**CM013A – 55<sup>th</sup> Street Vent Facility:** EAC remained unchanged at \$58.8 million. Forecast Substantial Completion date is April 5, 2015. As this project is just getting underway, the percent complete has not been calculated. This contract is not currently on the project critical path.

#### Construction Progress:

- The Maintenance and Protection of Traffic (MPT) along 50th and 49th Street is ongoing and being maintained successfully.
- Began rock excavation for Support of Excavation pits.
- Continued with utility relocation trenching and installation.
- Continued working with the GEC and Con Ed to resolve unforeseen utility lines uncovered during trench operations.

**CM004 – 44<sup>th</sup> Street Demolition and Fan Plant Structure; 245 Park Avenue:** EAC remained unchanged at \$55.7 million. Forecast Substantial Completion date has been further extended to September 10, 2013 from the previous June 1, 2013. The actual percent complete is 86% versus 100% planned. This Contract is not currently on the project critical path.

#### Construction Progress:

- Completed the stacking of muck in Access Tunnel #1 awaiting removal by the CM019 contractor.
- Completed rock bolting and continued the shaft lining sequence.
- Began construction of the invert slab at the base of Shaft #1.
- Continued the shop drawings approval and steel fabrication process.
- Continued erection of basement structural steel.

44<sup>th</sup> Street north and south utility connections remain on hold awaiting permit approval from NY Department of Environmental Protection (DEP). The GEC completed the required documents. NYDEP is refusing to issue the permit(s) until MTACC completes a video of the existing sewer for their review and determination.

At 245 Park Avenue, the contractor continued to work on the updated punch list and MNR continued with their in-house work. MNR is responsible for the Establishment of Beneficial Occupancy.

**CM014A – Concourse and Facilities Fit-Out:** EAC remained unchanged at \$46.53 million. Forecast Substantial Completion date is now November 18, 2013 one month later than the previous forecast date of October 16, 2013 due to the delays in the Systems Control and Data Acquisition (SCADA) system redesign. The actual percent complete is 35.5% versus 49.6% planned. This Contract is not currently on the project critical path.

The PMOC has previously reported on the issues with the SCADA system redesign. As of this report, the CM014A Project Office has informed the PMOC that this issue has been resolved and the contractor has been issued a Notice to Proceed to resume the submittals and manufacturing process.

#### Construction Progress on the Concourse:

- Continued slab on grade concrete placement twice weekly in Zones 1 & 2.
- Underground plumbing installation is coming to a close in Zones 4 & 5.
- Forming of ductbanks continued in Zones 3, 4, & 5.

- Installation of FRE/RGS conduit for ductbanks continued in Zones 3, 4, & 5.
- Continued waterproofing of new air tunnel and ductbanks.

**Queens: CQ031 – Queens Bored Tunnels and Structures:** EAC remained unchanged at \$757.2 million. The forecast Substantial Completion remained the same at February 15, 2013. The actual cumulative percent complete is 89.8% versus 100% planned. This contract is not on the program critical path as reported in the last IPS update.

Construction Progress:

- Completed all work for WBBY structure and all work for the Track A, B/C, and D Tunnels.
- Continued construction of Yard Lead Tunnel cross-passage at the Yard Lead Emergency Exit (YLEE); steel erection for YLEE and B13 Substation; finish work on the Yard Lead Tunnel; punch list work; and contract close-out.

**CQ032 – Plaza Substation and Queens Structures:** EAC remained unchanged at \$187.7 million. The forecast Substantial Completion date slipped 5 weeks from May 27, 2015 to July 7, 2015. The actual percent complete is 14.9% versus 24.2% planned. This contract is not on the program critical path as reported in the last IPS update.

Construction Progress:

Progress continues on rehabilitation/reconstruction/modification of the five existing ventilation facilities along the 63<sup>rd</sup> Street Tunnel in Queens and on structural steel erection for the B10 Substation along Northern Boulevard. Contractor access to the west end of the Queens Open-Cut Excavation Area has been delayed due to slow progress of work on the Northern Boulevard Crossing tunnel by the CQ039 contractor. Similarly, contractor access to the east end of the Queens Open-Cut Excavation Area had been delayed several months by late de-mobilization by the CQ031 contractor, but as of late December 2012, CQ032 has obtained partial access and has commenced work in the Yard Lead Trench. Full access was anticipated by January 2013, but was delayed by late completion of the Yard Lead Emergency Exit cross passage under the CQ031 contract. These delay impacts are significant and are reflected in the current forecast Substantial Completion date that is now 11 months later than the original contract Substantial Completion date. The PMT reports that the turnover schedule controls the critical path of this contract. The CQ032 contract milestones will need to be adjusted accordingly.

**CQ039 – Northern Boulevard Crossing:** EAC remained unchanged at \$102.1 million. The forecast Substantial Completion remained the same at May 6, 2013. The actual percent complete is 80.8% versus 100% planned. This contract is not on the program critical path as reported in the last IPS update.

Construction Progress:

- Completed installation of the tunnel waterproofing system and all steel ring girders.
- Continued installation of reinforcing steel for permanent concrete tunnel lining system;
- Maintaining soil freeze operation.



### **Harold Interlocking: CH053 Contract – Harold Structures Part 1 and G.0.2 Substation:**

The EAC increased (by \$5.0 million, MTACC Budget Adjustment #534) to \$272.8 million due to transfer of several catenary pole installations from future contract CH057 into CH053 to expedite the planned July 2013 construction of the concrete slab under main line tracks Lines 2 and 4. The approved Substantial Completion (SC) date was January 16, 2012, although the current MTACC forecast SC is December 31, 2013. The actual construction progress for the December 2012 was 1.3% versus 0.0% planned (the MTACC did not offer an explanation for why no work was planned in its 4Q2012 Quarterly Report). The cumulative project completion, as of December 31, 2012, was 72.8% actual versus 100.0% planned. This Contract is not currently on the project critical path.

As of January 31, 2013, the CH053/CH054A contractor has installed 135 of a total of 170 catenary poles (79.4%). This total includes 16 catenary poles recently transferred from the future CH057 contract. The PMT estimates that all of the catenary poles, including the ones transferred from CH057, will be installed by late March/early April 2013.

#### **Construction Progress:**

- Completed installation of 11 catenary structures and construction of the west abutment of the Westbound Bypass bridge;
- Continued installation of 12kV ductbank and cable in various locations throughout the project site, construction of retaining walls 39-N1 and N2, construction of the Tunnel A Approach structure, and installation of piles for the west abutment of the ML4 bridge at 43<sup>rd</sup> Street;
- Began/resumed construction of the Hon-N1 retaining wall.

**CH054A – Harold Structures Part 2A:** The EAC remained unchanged at \$46.2 million. The forecast Substantial Completion date, however, slipped 3 weeks from November 25, 2013 to December 19, 2013, due to necessary re-design of the 12kV ductbank alignment caused by conflicts with re-designed catenary foundations. The actual construction progress for the month of December 2012 was 0.5% versus 2.3% planned. The cumulative project completion as of December 31, 2012, was 70.8% actual versus 97.7% planned. This Contract is not currently on the project critical path.

#### **Construction Progress:**

- Completed Thompson S-1 retaining wall;
- Continued storm sewer and 12kV ductbank installation at various locations throughout the project site.

### **Railroad Force Account:**

**FHA01 – Harold Stage 1 Amtrak:** The EAC for FHA01 remains at \$16.8 million. The Substantial Completion date forecast by MTACC also remains as April 2014. Actual construction progress for December 2012 was 0.4% versus 1.1% planned. The cumulative construction progress as of December 31, 2012, was 84.2% actual versus 83.9% planned. Amtrak contractor support and construction for the ESA project returned to its pre-Hurricane Sandy levels during the week of January 7, 2013.

#### Construction Progress for FHA01:

- Completed signal disconnect and transformer installations in “F1” and “F2” Interlockings and removal of switch feeder at catenary pole B-949C.
- Continued catenary wire transfers between Queens Blvd. and Sub 44 and signal construction for the cutovers of “F1” and “F2” Interlockings.

**FHA02 – Harold Stage 2 Amtrak:** The EAC for FHA02 remains at \$40.5 million. The Substantial Completion date is forecast to be August 2014. Actual construction progress for December 2012 was -0.2% versus 4.0% planned (the MTACC 4Q2012 Quarterly Report offers no explanation for the negative progress although limited Force Account construction was performed). The cumulative construction progress as of December 31, 2012, was 48.2% actual versus 60.7% planned. The remaining FHA02 scope includes the cutovers of Interlockings “F1” and “F2”, which continue on schedule for 3Q2013 and 2Q2013, respectively.

#### Construction Progress for FHA02:

- Completed colored light conversions of two signals and removed existing signals and express cable installation between the “F2” CIH and location “F2J”;
- Continued signal construction in preparation for the cutovers of “F1” and “F2” Interlockings.

**FHL01 – Harold Stage 1 LIRR:** The EAC for FHL01 remains at \$22.0 million. The MTACC has re-forecast the Substantial Completion date for May 2014, a 6-month reduction from its previous forecast. Actual construction for December 2012 was 0.0% progress versus 0.5% planned (the MTACC 4Q2012 Quarterly Report offers no explanation for why no progress was made although limited Force Account construction was performed). The cumulative construction progress as of December 31, 2012, was 74.0% versus 77.5%. Remaining work includes installation of track turnouts, signal apparatus installation for Harold and Point Interlocking cutovers, traction power relocation of the new signal power line, and traction power cable installation for the re-located GO2 Substation.

#### Construction Progress for FHL01:

- Continued signal power re-location between new pole #s 40 and 47 and signal construction for the cutovers of Harold and Point Interlockings.

**FHL02 – Harold Stage 2 LIRR:** The EAC for FHL02 remains at \$62.7 million. The Substantial Completion date has been forecast for October 2015, a 1-month decrease from previous reports. Actual construction for December 2012 was 1.0% versus 1.3% planned. The cumulative construction progress as of December 31, 2013, was 21.3% actual versus 23.5% planned. Remaining work includes the installation of 15 track turnouts, construction of two additional main line tracks, and all associated signal work.

#### Construction Progress for FHL02:

- Completed installation of cable for temporary power for Amtrak signal facilities at “F2E” and “F2” CIH, conduit installation for Point Interlocking permanent power supply, and foundation construction for the “H4” CIL and Battery hut;

- Continued signal trough installation between “H3” and “H2” CILs and communication cable installation between Point and Harold Interlockings.

#### **d. Quality Assurance and Quality Control (QA/QC)**

The current version of the ESA Project Quality Manual (PQM) is Revision 6, issued in February 2009. The ESA Quality Manager has committed to revise it by the end of February 2013 and incorporate changes to the ESA Quality System that have occurred since then.

Three contractors have been late in submitting their as-builts as required by contract, usually on a monthly basis. One contractor is working on the CH053, CH054A, and CQ032 contracts, a second contractor is working on the CM004 and CM014 contracts, and the third contractor is working on the CM013 contract. The ESA Quality Manager conducted surveillances of the CH053/CH054A/CQ032 contracts on January 11, 2013 and all three contracts had other documentation issues, besides being delinquent with submitting as-builts. The ESA Quality Manager and ESA Management will meet with the CH053/CH054A/CQ032 contractor’s management. No date has been scheduled. Surveillances of the other three contracts (two contractors) will be completed by March 2013.

## **2.0 SCHEDULE DATA**

ESA submitted the IPS #43, data date January 1, 2013, and its variance reports on January 31, 2013. The PMT stated that the IPS has not been updated for future Manhattan Contracts (new packages for CM012R work, and CM014B) and System packages (CS179; CS284, and VS086), which are on the IPS critical path, although Harold, Queens, and progress for ongoing Manhattan contracts have been updated in the IPS. Furthermore, the PMT has stated that “discussions on the packaging changes and schedule impact as a result from the rejection of the CM012R bids will be postponed until next month” (February 2013). The program contingency is TBD until the scheduling impacts are vetted.”

It is important to note that the PMT only updated its IPS completely four times (in July, August, September, and October of 2012) since the new baseline schedule was approved by the MTA CPOC in May 2012. This is a serious concern, since the impacts of the various procurement delays discussed elsewhere in this report on the overall project schedule cannot be properly evaluated. The PMOC further notes that the Schedule Management Plan requires that IPS updates be prepared and reviewed/approved by MTACC-ESA management on a monthly basis.

**Project Critical Path:** The IPS critical path is still shown as going through contracts CM009/019, CM012R (although this no longer exists), CS179 and the Integrated System Testing related to that Contract, and then operational readiness.

The Harold work critical path goes through contracts FHL02, FHL03, FHA04, and FHL04, although ESA has not addressed the issue of contingency usage in the Harold contracts yet resulting from delays in the F2 and F1 cutovers. In addition the following Contracts are near critical (< 60 days of float): CM013 (37 days), CM014B (33 days), CH053 (34 days), CH057 (53 days), and CH058 (10 days). Please note that these amounts of float do not include consideration for delay in the awards of contracts CM012R and CS179.

**Schedule Contingency:** The latest IPS update indicates that project contingency is TBD. The PMT previously showed two months of contingency usage, noting that it was a placeholder until

the actual contingency usage resulting from the cancellation of the CM012R procurement and the delays to award of the CS179 and CM014B contracts could be calculated.

### 3.0 COST DATA

**Funding:** The MTACC announced at the May 2012 CPOC meeting that an additional \$720 million will need to be identified in the MTA 2015 – 2019 Capital Plan to cover the new project baseline budget. The funding request for the 2015-2019 Capital Program will be submitted to the NYS Capital Program Review Board (CPRB) in September 2014.

**Budget/Cost:** ESA has reported that as of December 31, 2012, the actual total project progress was 52.5% vs. 53.2% planned progress resulting from the July 2012 re-baseline and the actual construction progress was 48.3% vs. 49.3% planned based on invoiced amount.

As of December 31, 2012, the Current Baseline Budget (CBB) is \$2M above the re-baseline budget of \$8.7B but has not highlighted that this has occurred. As can be seen in Table 3 in the Appendix, there was a \$3M decrease in SCC #20 (Gateways & Track) but a \$2M increase in SCC #40 (Site work) and \$3M in SCC #50 (Systems). While SCC #50 is below the Rebaseline value it has increased from the previous month. SCC #20 (Stations, Stops, Terminals) did not increase this month but is currently \$61M above the Rebaseline value. The PMT does not provide explanations for the changes in SCC values. Also, despite the rejection of the October 2012 low bid for CM012R because it was approximately \$350M above the expected value, the PMT has maintained its pre-bid estimate value in the CBB, making it inaccurate. In addition, the PMT has continued to make changes to the Standard Cost Category (SCC) projections such that the re-baseline values for SCC #20 and #40 have been exceeded.

The current Budget and Cost data is shown in Table 1 in Appendix B of this report. Table 3 in Appendix B of this report shows a comparison of the FFGA Baseline Budget in Standard Cost Categories (SCC).vs. the MTA's Current Baseline Budget (CBB).

**Change Orders/Budget Adjustments:** The PMT reported that during December 2012, there were 3 change orders executed over \$100K, with a net value of \$6.4M.

### 4.0 RISK MANAGEMENT

**Background Summary:** On January 29, 2013, the PMT initiated the first Risk Management Meeting, which was attended by MTACC, MTA IEC, FTA and PMOC. These meetings are intended to be held monthly and be an open forum to discuss the ESA risk process, risk assessments and mitigations. The initial kick-off meeting provided the FTA and PMOC a general overview and status of the high-end risks that the ESA Risk Team is tracking and managing. The PMT conducted 3 constructability reviews and 4 peer reviews in 2012 as part of its risk identification and management efforts, and currently carry 297 active risks in the Risk Register. While these monthly Risk Management Meetings will concentrate on the major risks to the Program and planned mitigations, the PMT will hold other internal risk meetings and will conduct several contract-level risk assessment meetings during 2013..

MTACC-ESA conducted an overall project-wide internal Risk Assessment in the spring of 2012, completed its initial analysis and issued the draft report on May 15, 2012. The risks identified have been incorporated into the current Risk Register.

**Current Risk Mitigation Efforts:** Through January 2013, the PMT continued its efforts to identify and mitigate specific risks that may adversely affect the program's cost and schedule performance. Ongoing and significant new risk mitigation initiatives include the following:

- CM012R Re-Packaging – A number of contracting options are under review. Various CM012R portions of the scope have been identified for potential transfer to existing and ongoing ESA Construction Contracts. The MTACC and Independent Engineer reviews are ongoing. Currently, the PMT is considering three new contract packages (discussed in the design section of this report). This approach will be presented to the CCC for approval. Risks to the Program will be determined based on the approved contract packaging scheme.
- CH057 Re-Packaging – This scope adjustment involves splitting the current CH057 package into three separate construction packages (as discussed above in the design section) to take advantage of a long-term track outage opportunity in the summer of 2013 and to better schedule third-party construction with on-going Force Account packages. The PMOC believes that it is advantageous to move the slab work up to the summer of 2013 to take advantage of the extended track outage.
- CH061 Execution Strategy – The CCC approved the transfer of the CH061 design package (Tunnel A Structure – Sta. A1199+05 to A1204+82) to the existing CQ031 (Queens Bored Tunnel and Structures) contract by an executed modification. The CQ031 contractor is currently on the site and has performed similar work under its Contract. The work could commence earlier than waiting for a full procurement cycle to start and conclude. Advancing this work could potentially reduce risks to subsequent Harold construction.
- The PMT will advance construction of selected work from Contract CM014B (GCT Concourse and Facilities Fit-Out) to the existing CM014A Contract. The goal is to achieve early completion of work that would interfere with the work train operations under Contract CM014B, and to complete repairs to the existing structural steel in Metro-North Railroad's Madison Yard area. This will reduce coordination and work access issues during construction under the CM014B contract. The PMOC believes that this approach will result in improved worksite logistics, provided that this does not delay the Notice-to-Proceed (NTP) for the CM014B contract.

## **5.0 ELPEP COMPLIANCE SUMMARY**

The current status of each of the main ELPEP components is summarized as follows:

- **Technical Capacity and Capability (TCC):** The PMOC has completed its review of the Candidate Revisions for the ESA-PMP and discussed them with the FTA-RII Office. MTACC issued ESA PMP Revision 8.1 on September 27, 2012 and is planning to issue Revision 9.0 by June 30, 2013. The PMOC has completed its review of Revision 8.1 of the PMP and in January 2013 recommended that the FTA-RII Office accept the document. MTACC has stated that it has implemented the PMP training process. PMOC

discussions with the head of MTACC QA/QC in January 2013 indicate that although some training has begun on sub-procedures; there has been no formal training on the PMP itself as of this report. The PMOC is following up on this with the head of MTACC QA/QC.

- **Risk Mitigation Capacity Plan (RMCP):** FTA-RII provided its conditional acceptance of the RMCP in its May 24, 2012 letter to MTACC. The PMOC has verified RMCP final acceptance based on its incorporation into the RMP.
- **Conformance and Compliance:** The PMOC started reporting in its December 2012 comprehensive report to the FTA the project's ELPEP compliance based on the its review of the 4Q2012 performance.
- **Risk Management Plan (RMP):** MTACC submitted Rev. 2 of the RMP, which addressed previous FTA/PMOC comments in August 2012. The PMOC completed its review of the RMP and has recommended conditional approval based on MTACC correcting an error and expanding discussion of certain risk and mitigation topics.

MTACC, FTA-RII and the PMOC attended the ELPEP Quarterly Review Meeting on December 12, 2012. The current ELPEP compliance checklist completed by MTACC is in review by the PMOC. The next ELPEP Quarterly Review Meeting is scheduled for March 13, 2013.

- **Continuing ELPEP Compliance**
  - Management Decisions
    - Status: Performance is adequate.
  - Design Development
    - Status: IMPROVEMENT NEEDED.
  - CCC Process and Results
    - Status: Performance is adequate.
  - Stakeholder Management
    - Status: IMPROVEMENT NEEDED.
  - Issues Management
    - Status: Performance is adequate.
  - Procurement
    - Status: Decision process for procurement methodology has improved in 2012, however additional improvement is needed.
  - Timely Decision Making
    - Status: Performance is adequate.
  - Risk Informed Decision Making
    - Status: IMPROVEMENT NEEDED.

## 6.0 SAFETY AND SECURITY

Project safety statistics for lost time accidents continue to trend above the Bureau of Labor Statistics (BLS) national average at 2.42 vs. 2.20 lost time accidents per 200,000 hours. Although there has been some improvement in the overall project safety statistics (2.42 vs. 2.47 during last reporting period); several contracts continue to perform below the average for the project: for the CM009 contract, the lost time accidents continue to trend above the ESA Program average (2.73 vs. 2.42 lost time accidents per 200,000 hours). For the CM004 contract, the lost time accidents are trending above the ESA Program average (3.78 vs. 2.42 lost time accidents per 200,000 hours). On the CQ039 contract, the lost time accident statistics continue to trend well above the ESA Program average (5.04 vs. 2.42 lost time accidents per 200,000 hours). Related to security, the CH053 contractor reported three incidents of theft during January 2013 that resulted in the loss of approximately \$40,000 of material.

## 7.0 ISSUES AND RECOMMENDATIONS

**Design:** The PMOC is concerned that GEC and PMT continue to consistently miss all of their target dates for remaining design activities on the project, not just catenary design.

**Procurement:** The major concern regarding procurement remains the repackaging and re-solicitation of the work that was previously included in the cancelled CM012R package. As of this report, the strategy for moving forward has not been finalized nor presented to the CCC. Given that the lowest bid on the CM012R package came in at \$350 million over the ESA budgeted amount for the contract; and the package was on the project critical path; with impact on the overall project contingency beginning January 1, 2013; this repackaging effort is critical. The PMOC is also seriously concerned about delays to other significant procurements; namely Systems Package 1 (CS179); GCT Concourse and Facilities Fit-out (CM014B); and the remaining Harold Structures Contracts (CH057, which is being split into separate packages; and CH058). In addition, the stability of the Contract Packaging Plan strategy is of concern. The PMT continues to shift and split scope among different packages; making it difficult to fully understand the impact of these changes on the overall ESA Program. The PMOC recommends that the PMT produce an updated Contract Packaging Plan and adhere to it for the remainder of the project.

**Contract CM013:** The additional work from the CM019 contract (Final Lining for Approach Tunnel), once negotiated, will extend current milestones in the contract. The Contract Mod is currently with MTACC upper management to be executed.

**Contract CM004:** The PMOC notes that the Substantial Completion date for the 44<sup>th</sup> Street Vent Plant has been extended to September 10, 2013 from the previous June 1, 2013 due to the change in the structural steel fabricator (new subcontractor). The contract has also experienced some delay as a result of Hurricane Sandy. The PMOC remains concerned with the continued extension of the Substantial Completion date for this project and will continue to monitor the fabrication and delivery process of the building structural steel, as well as impact of delays in completing this Contract on the overall project schedule.

**Contract CM014A:** SCADA re-design delay is currently driving the critical path in the Contractor's schedule update. Although the design issue has been resolved, the schedule will continue to slip until the new submittals have been approved and the contractor can confirm new



fabrication and delivery dates from the manufacturer. These issues have resulted in a slip in the previous forecasted Substantial Completion date of October 16, 2013 to November 18, 2013.

**Contract CQ032:** The contractor continues to make progress but is now 9.3% behind the planned completion goal as compared with 6.2% behind the previous month. Actual progress continues to lag planned progress at an increasing rate. Over the last four months of 2012, the difference between the actual and planned progress has increased from 2.7% to 9.3%. The PMOC is concerned about this trend and the contractor's ability to recover schedule delays. Future planned progress is at a higher rate but will be constrained by late access to the work area at the west end of the Queens Open-Cut Excavation (turnover from CQ039) and this delay is impacting the contract critical path. The cumulative forecast delay due to this late turnover from CQ039 and the two previous late turnovers now totals 11 months.

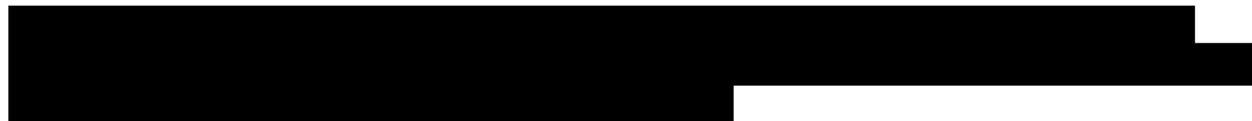
**Contract CQ039:** The PMOC believes that the contractor will be challenged to complete the remaining 19% of the contract work, by cost, in the next 4 months to meet the forecast Substantial Completion date of May 6, 2013. Late completion of this contract has delayed turnover of the Milestone 1A Area, originally scheduled for July 30, 2012, and the start of Contract CQ032 work in the Early Access Chamber area (CQ032 Access Restraint #1, August 24, 2012) at the west end of the Queens Open-Cut Excavation Area. The PMOC notes that ESA has reported this late turnover as a critical ESA program interface.

**Contracts CH053/54A:** The PMOC remains concerned that costs may continue to increase significantly in response to continuing delays to the Substantial Completion date. The adverse impacts of the CH053 and CH054A construction schedules and budgets have already been significant. The PMOC is also concerned about the potential adverse impacts to the successor follow-on contracts for Harold Interlocking contract CH057 caused by late completion of CH053/CH054A construction, even though the MTACC PMT is attempting to mitigate such impacts. CH053/CH054A share several potential access and work area conflicts, as well as increased demand for scarce railroad resources, with the CH057 successor contracts (see discussion of CH057 scope split in Design section of report). The PMOC continues to recommend that ESA prioritize the GEC construction support of these contracts, expedite resolution of utility interferences, and prioritize the contractor's requests for track outages and Force Account support.

**Railroad Force Account:** The PMOC was previously concerned about the length of time that it would take for Amtrak and LIRR Force Account personnel to return to the ESA project after they were diverted due to Hurricane Sandy. As of the week of January 7, 2013, all Force Account support for the project returned to its pre-storm levels. Although no critical project milestones were missed to date; the PMOC believes that there are milestones that may be affected later this year. The first milestone that may be affected is the cutover of the F2 CIL forecast for May 2013 which requires Amtrak Force Account labor; followed by LIRR Force Account crossover installation during the Line 2/Line 4 concrete slab construction in the Harold Interlocking in July 2013.

**Project Funding/Budget:** The PMOC remains concerned about the results of the CM012R bid. The lowest bid came in at approximately \$350 million over the MTACC estimate. The solicitation was cancelled and MTACC is currently looking at ways to repackage the work with the hope of reducing the \$350 million difference. [REDACTED]





**Project Schedule:** The PMOC is concerned that the IPS has not been fully updated since October 2012 making it impossible to ascertain the impacts of the CM012R bid cancellation as well as delays to other major procurements including: all of the Systems Packages (CS179; CS284 which is TBD; and VS086 which is also TBD); the remaining Manhattan Contracts (CM012R repackaging which is TBD; and CM014B, also TBD) and delays to the remaining Harold Structures Contracts (CH057, which has been split into several new packages; and CH058) on the overall project schedule.

Since CM012R was on the critical path, along with CS179, and project contingency is impacted beginning on January 1, 2013 for both of these contracts, it is highly likely, in the PMOC's opinion, that most, if not all, of the 365 days of project contingency will be used up, thus effectively eliminating the project's ability to mitigate future schedule risk events.

## **APPENDIX A – ACRONYMS**

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ARRA	American Recovery and Reinvestment Act
BA	Budget Adjustment
BAFO	Best and Final Offer
C&S	Communications and Signals
CBB	Current Baseline Budget
CCC	Change Control Committee
CCM	Consultant Construction Manager
CD	Calendar Days
CM	ESA Construction Manager (assigned to each contract)
CMP	Cost Management Plan
CIL	Central Instrument Location
CPOC	Capital Program Oversight Committee
CPRB	Capital Program Review Board
CPP	Contract Packaging Plan
CWP	Construction Work Plan
EAC	Estimate at Completion
ELPEP	Enterprise Level Project Execution Plan
ERT	East River Tunnel
ESA	East Side Access
ET	Electric Traction
FA	Force Account
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
GCT	Grand Central Terminal
GEC	General Engineering Consultant
IPS	Integrated Project Schedule
LIRR	Long Island Rail Road
MNR	Metro-North Railroad
MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
NATM	New Austrian Tunneling Method

NTP	Notice to Proceed
NYCT	New York City Transit
NYSPTSB	New York State Public Transportation Safety Board
OSHA	Occupational Safety and Health Administration
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PMT	ESA's Project Management Team
QA	Quality Assurance
RAMP	Real Estate Acquisition Management Plan
RFP	Request for Proposal
RMP	Risk Management Plan
RMCP	Risk Mitigation Capacity Plan
ROD	Revenue Operations Date
RSD	Revenue Service Date
SC	Substantial Completion
SCADA	Systems Control and Data Acquisition
SCC	Standard Cost Category
SEM	Segmental Excavation Method
SMP	Schedule Management Plan
SSMP	Safety and Security Management Plan
SSPP	System Safety Program Plan
SWP	Safety Work Plan
TBM	Tunnel Boring Machine
TCC	Technical Capacity and Capability
VE	Value Engineering
WBBY	Westbound Bypass
WBS	Work Breakdown Structure

**APPENDIX B – TABLES****Table 1 – Project Budget/Cost Table**

	FFGA (as of December 18, 2006)			MTA's Current Baseline Budget (CBB) (December 31, 2012)		Expenditures as of December 31, 2012	
	(\$ Millions)	(% of Grand Total Cost)	Obligated (\$ Millions)	(\$ Millions)	(% of Grand Total Cost)	(\$ Millions)	(% of CBB)
<b>Grand Total Cost</b>	<b>7,386</b>	<b>100</b>		<b>9,824</b>	<b>100</b>	4,618.8	47.0
Financing Cost	1,036	14.0		1,116	11.4	417.9	37.4
Total Project Cost	6,350	86.0	4,107	8,708*	88.6	4,200.9	48.2
<b>Federal Share</b>	<b>2,683</b>	<b>36.3</b>	<b>1,148</b>	<b>2,699</b>	<b>27.5</b>	<b>1,847.1</b>	<b>21.2</b>
5309 New Starts share	2,632	35.6	1,098	2,436.6	27.6	1,589.6	18.3
Non New Starts grants	51	0.7	50	67	0.8	62.0	0.7
ARRA	0	0	0	195.4	2.2	195.4	2.2
<b>Local Share</b>	<b>3,667</b>	<b>49.6</b>	<b>2,959</b>	<b>6,009</b>	<b>61.2</b>	<b>2,353.8</b>	<b>27.0</b>

\* CBB represents current MTA Board approved \$8,245 million budget [REDACTED].

**Table 2 – Summary of Critical Dates**

	FFGA	Forecast (F) Completion, Actual (A) Start	
		Grantee*	FTA**
Begin Construction	September 2001	September 2001(A)	September 2001(A)
Construction Complete	December 2013	August 2019	September 2019
Revenue Service	December 2013	August 2019	September 2019

\* Source – Grantee forecast Revenue Operations Date per information presented to MTA CPOC on May 21, 2012

\*\*Source –Based on PMOC 2012 risk assessment results.

**Table 3 – Comparison of Standard Cost Categories: FFGA vs. CBB**

Standard Cost Category (SCC) No.	FFGA SCC baseline (YOE \$) M	July 2, 2012 Re-baseline (YOE \$)	December 2012 SSC (YOE \$) M	December 2012 % of Rebaseline	November '12 to December '12 Change \$M	CBB Variance from FFGA %
10	1,989	2,943	2,899	98.50%	-3	45.75%
20	1,169	1,514	1,575	104.03%	0	34.73%
30	356	388	389	100.26%	0	9.27%
40	205	488	501	102.66%	2	144.39%
50	619	698	669	95.85%	3	8.08%
60	165	204	204	100.00%	0	23.64%
70	957	674	674	100.00%	0	-29.57%
80	1,184	1,649	1,649	100.00%	0	39.27%
<b>Subtotal</b>	<b>6,813</b>	<b>8,708</b>	<b>8,710</b>	<b>100.02%</b>	<b>2</b>	<b>27.84%</b>
100	1,036	1,116	1,116	100.00%	0	7.72%
<b>Total Project Cost (10 – 100)</b>	<b>7,849</b>	<b>9,824*</b>	<b>9,826</b>	<b>100.02%</b>	<b>2</b>	<b>25.19%</b>

\*This total amount does not include Regional Investment amount of \$590,732,003.

**Table 4 – Catenary Review Schedule**

Catenary Package	30% Submittal HNTB/Amtrak Review		60% Submittal HNTB/Amtrak Review		90% Submittal HNTB/Amtrak Review		100% Submittal HNTB/Amtrak Review	
	Submit	Return	Submit	Return	Submit	Return	Submit	Return
STAGE 1							8/8/11 (A)	8/26/11 10/6/11 (A)
STAGE 2			9/7/11 11/16/11 (A)	9/21/11 2/29/12 (A)	10/28/11 3/9/12 (A)	12/1/11 4/18/12 4/27/12 (A)	1/6/12 4/27/12 5/10/12 (A)	2/6/12 6/1/12 5/30/12 (A)
STAGE 3	10/14/11 12/14/11(A)	11/18/11 2/29/12 (A)	12/23/11 4/18/12 4/27/12 (A)	1/30/12 5/24/12 8/13/12 (A)	3/9/12 6/20/12 8/17/12 (A)	4/15/12 7/30/12 11/29/12 (A)	5/18/12 8/17/12	6/18/12 9/18/12
FQA65	9/29/11 12/14/11(A)	10/21/11 2/29/12 (A)	11/25/11 4/3/12 4/13/12 (A)	1/06/12 5/10/12 7/13/12 (A)	2/10/12 6/11/12 8/01/12 (A)	3/20/12 7/18/12 10/12/12 (A)	4/20/12 8/3/12 11/20/12 (A)	5/26/12 9/4/12

A = Actual

Note: yellow highlights denote missed target dates.

**Table 5 -- Core Accountability Items -- January 2013**

<b>Project Status:</b>		<b>Original at FFGA</b>	<b>Current*:</b>	<b>ELPEP **</b>
<b>Cost</b>	Cost Estimate	\$7.386B	\$9.824B	\$8.119B
<b>Schedule</b>	Revenue Service Date	December 31, 2013	September 2019	April 30, 2018
<b>Total Project Percent Complete</b>	Based on Expenditures		52.5	
	Based on Earned Value		NA	
<b>Major Issue</b>		<b>Status</b>	<b>Comments</b>	
Major Upcoming Procurements		CM012R (Manhattan Structures 2) bids were received on October 24, 2012. Lowest bid was approximately \$350 million above MTACC estimate and the solicitation was subsequently canceled. Work in this package is on the project critical path.	Results of this procurement have a major impact on project cost and schedule baseline. ESA is currently working on repackaging the work and has made a preliminary estimate of a two month drawdown on schedule contingency.	
Major Upcoming Procurements		Procurement of CS179 (Systems Package 1 continues to slip. NTP forecast date of December 1, 2012 was not met. New forecast date for NTP is April 1, 2013	This package is on the project critical path and current delay will impact project schedule contingency. Impact of CM012R on this procurement is still being evaluated.	
Major Storm Impacts Queens Work (Hurricane Sandy)		A major storm hit NYC on October 29, 2012. While ESA project infrastructure did not suffer significant damage, Railroad force account resources required to support 3 <sup>rd</sup> party Harold contracts were diverted to deal with storm recovery activities on both LIRR and Amtrak.	LIRR force account resources were assigned back to ESA by the end of December 2012. All of the Amtrak resources were back on the project in early January 2013.	
Amtrak East River Tunnel Work		Amtrak original plan for two tunnel outages during 2012 was changed to one tunnel due to a track replacement program initiated by Amtrak as a result of a broken rail Schedule impact	ESA re-baseline was initially based on two tunnel outages. Impact (if any) on new baseline has to be evaluated and impact of ERT shutdowns as a result of the storm will also have to be	

	review has not yet been submitted to the FTA. Work on the tunnels ceased at the end of October 2012 as a result of hurricane Sandy and will resume in early February 2013.	evaluated. ESA is currently scheduling work around one tunnel outage.
Amtrak Integrated Master Schedule	Develop an integrated master schedule that will lay out the upcoming Amtrak projects (Moynihan, ERT Track Rehab., Brookfield, etc.) and overlay the ESA work at Harold. This schedule has not yet been provided to the FTA.	MTACC reported at the June 2012 Executive Meeting that work on this schedule would begin shortly; however there is no indication at this time that development of the schedule has begun. This issue was discussed at the November 8, 2012 Quarterly Review Meeting and at the January 24, 2013 FTA/MTACC Executive Meeting
<b>Next Quarterly Meeting:</b>	February 2013 (tentative)	

\* Note that \$9.824B (finance included) and the September 2019 RSD are the MTA cost and schedule baselines in the FFGA amendment.

\*\* 2010 Enterprise Level Project Execution Plan (ELPEP) reflecting medium level of risk mitigation. ELPEP to be updated.