

PMOC MONTHLY REPORT

East Side Access (MTACC-ESA) Project

Metropolitan Transportation Authority

New York, New York

Report Period April 1 to April 30, 2014



PMOC Contract No. DTFT60-09-D-00007

Task Order No. 7, Project No. DC-27-5235, Work Order No. 2

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

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THIRD PARTY DISCLAIMER

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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. 007. 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 the end of March 2014, MTACC reported that the overall Engineering effort was 98.4% complete, a decrease of 0.4% from the previous month, apparently due to a recalculation of Awarded and Invoiced values. The derivation of the figures for that calculation are not clear to the PMOC given that the ESA Cost Report shows only 88.8% of the budgeted section titled "Design" as having been invoiced, and only 87.7% of the cost category named "EIS & Engineering".

Amtrak granted permission for GEC to sign and seal drawings for FHA04 (Harold Stage 4 Catenary).

The CM014B Contract will be procured as an RFP, and is planned for Advertisement on May 2, 2014. NTP for design of the new Concourse Entrance at 43rd Street has been issued to the GEC. Approval for the design of a second new Entrance, at 45th Street was approved at the April MTA Board meeting. A Proposed GEC Change Order for the design of the support of future Electronic Media into the Concourse, the 48th Street Entrance and the Cavern Station is under review by MTACC Procurement

Preparation of the CH057 bid package by the GEC has begun. Anticipated advertising date for this package is July 2014 (previously forecast for June 2014) with NTP forecast for September 2014. The GEC was issued NTP to produce a CH057C package in April 2014, which will be the second on-call contract to perform various track construction formerly designated to be performed by LIRR Force Account labor.

On December 20, 2013, the CCC approved the repackaging of the CH058 Contract and an alternate method for constructing the Eastbound Reroute tunnel to make better use of available extended track outages in the summers of 2015 and 2016. A modification to incorporate these changes into the GEC contract was approved at the March 2013 MTA Board meeting, and a design NTP is expected in early May 2014, with a 90% submission planned for August 2014.

The PMT issued a direction letter to the GEC for a revised scope of work to produce the CM007 Contract Package, as well as the hybrid concrete redesign associated with the GCT cavern upper and lower level walls. The redesign effort will be part of a GEC contract modification to be presented at the May 2014 MTA Board Meeting. The PMT also received comments from Metro North Railroad regarding the 90% level design package associated with the 45th Street elevators which are under review by the GEC. Mockups of the GCT cavern walls utilizing pneumatically applied concrete were also advanced in Queens under the existing CQ032 Contract. These mock-ups will be used as baseline samples if alternatives are proposed by industry. The CS284 scope of work is being repackaged. The track portion of the work will form the 4th part of the CM007 package. ESA's latest thinking is to bid the signal installation work as a separate package (CS086).

b. Procurement

As of the end of March 2014, the Cost Report showed total procurement activity on the project as 64.3% complete, with \$6,228 billion in contracts awarded out of the \$9.693 billion revised budget

Advertising date for CS084 (RFP) -Traction Power Substations is now forecast for May 2014 (previously forecast for April 2014); procurement dates for CS284 (track and signal installation) remains TBD given that the package will now be split into two separate packages, with the track work going into the CM007 package and the signal installation work bid as a stand-alone package, Contract CS086.

The Recommendation for Award for the VS086 (Signal Equipment) Contract package was presented and approved at the January 2014 MTA Board meeting. As of the end of April 2014, notice of award has not been issued.

CM014B will be procured by RFP, and is planned for Advertisement on May 2, 2014.

On September 17, 2013, the CCC approved creating a new package (CH057B) to construct the relocated LIRR tracks ML2 and ML4. This work was taken out of the CH057 package and will be performed by an MTA on-call track Contractor. Bids for this work were opened on April 3, 2014. NTP is anticipated for early May 2014.

c. Construction

The PMT reported in its March 2014 Quarterly Progress Report that the total construction progress reached 49.3% complete vs. 51.3% planned, an increase of 0.4% since the previous month (which is confirmed by a review of the ESA Expedition Cost Report).

Manhattan Contracts:

CM013A – 55th Street Vent Facility: MTACC reports that through March 31, 2014 the EAC increased to \$57.094 million from the previous \$56.41 million (due to allowance for traffic agents). Forecast Substantial Completion remains April 5, 2015. As of March 31, 2014, MTACC reported that the actual percent complete continues to track ahead of schedule at 34.3% vs. 30.6% planned.

Construction Progress:

Plenum: Completed the invert drainage, rebar & concrete slab placement in the East Plenum. Began installing rebar at the East Plenum lower walls and began installation of waterproofing on East Plenum bench and upper walls. Placed mud mat in the West Plenum, west of the shaft.

Cavern: Continued with the waterproofing of walls. Began installation of rebar, formwork and placing north & south cavern walls.

CM004 – 44th Street Building Demolition and Fan Plant Structure; 245 Park Avenue Entrance: MTACC reports that through March 31, 2014, the EAC had slightly decreased to \$55.19 million from the previous \$55.28 million. The Forecast Substantial Completion date for the CM004 Contract has been extended to May 15, 2014 from the previous April 1, 2014. Beneficial Use for the 245 Park Entrance was achieved October 21, 2013. The actual percent complete is 96.8% versus 100% planned.

Construction Progress:

Vent Plant: All work is finalizing with painting of stair corridors, fire standpipe and closing up street utility work. Final cleanup is ongoing.

245 Park: Portions of the terrazzo floor in the passageway exhibits heaving and has been removed. The Contractor advised the Project Office that their inspection has determined that there is a water problem at the site. This continues to be a punch list item.

CM013 – 50th Street Vent Facility: MTACC reports that through March 31, 2014, the EAC decreased slightly to \$96.60 million from the previous \$96.82 million. Forecast Substantial Completion date remained March 20, 2014. This substantial completion date was not achieved. As of the date of this report, the Project Office forecasts substantial completion for mid-May 2014. As of March 31, 2014, the actual percent complete was 97.4% vs. 100% planned.

Construction Progress: The punch list work throughout the building and the shaft continued, as did final cleanup throughout. The green fence along the 50th St. sidewalk was completed. Landscaping in the planters in the Public Plaza began.

CM014A– Concourse and Facilities Fit-Out: ESA reports that through March 31, 2014, the EAC is \$55.90 million. This includes \$54.71 million for original contract work and \$1.19 million for the CM014-B scope transfer work. Forecast Substantial Completion date remains December 15, 2014.

Through March 31, 2014, the actual percent complete reported was 57.4% versus 91.8% planned. The large gap between percent complete versus planned continues to be largely attributed to the Supervisory Control and Data Acquisition (SCADA) system redesign (based on

LIRR requirements), which resulted in a hold being placed on fabrication and delivery of all power system equipment until the redesign is completed. The delay also reflects scope transfer to this contract from the CM014-B contract. Given the amount of remaining work, the PMOC believes that ESA will change the forecast substantial completion date.

Construction Progress:

Concourse (Original Contract Work): Surveying and layout is ongoing. Installation of fire stopping continues and CMU wall erection is ongoing. Painting of CMU walls and vibration walls continues but is intermittent due to weather and difficulty in maintaining consistent ambient temperatures. Seismic clip and fire standpipe installation will resume on April 21. Branch feeder and conduit installation is ongoing throughout. The 16340 & 16341 switchgear will be delivered the week of May 5, 2014. The Contractor is preparing the rooms, which require 2 hour fire-rated enclosure.

Concourse (Scope Transfer from CM014-B): Some the utility work has been completed and the remaining is on hold pending resolution of the related changes in the work. Saw cutting of the crash walls is complete. Installation of the roll-up door in the UA wall is complete. For the ramp work, this still is slated to be removed from this contract due to significant utility interference that must be relocated by MNR.

CM005- Manhattan South Structures: The Contractor was given Notice to Proceed on September 9, 2013. ESA reports that the Estimate at Completion (EAC) is \$222.6 million. Forecast Substantial Completion date is set for February 6, 2016. Cumulative progress through March 31, 2014 was 20.2% actual versus 15.1% planned. MTACC continued to report delay for two milestones, MS #2 – North End of the East Cavern Slab, and MS #3 – Portion of West Cavern and Remainder of East Cavern Slab3, and MTACC states this has not impacted the forecast substantial completion date. The Contractor and Construction Manager continued to review the CPM Schedule in an effort to incorporate improvement. Review of rebar shop drawing submittals appears to be an issue, as the Contractor is concerned that time usage could end up affecting construction activity scheduling. The PMOC recommends that ESA investigate if lack of GEC resources is negatively impacting the duration of this review effort

Construction Progress: The Contractor continued to prepare submittals. Current ongoing work include: East and West Cavern pits rebar and concrete placement; East Cavern invert slab rebar installation; GCT 1&2 East Wye invert drainage and concrete placement; GCT 1&2 West Wye smoothing shotcrete and waterproofing; 38th Street Ventilation Facility walls waterproofing installation; and South Tunnel L402 arch concrete placement. The Contractor continued with a second work shift (swing). The Contractor continued to meet with the new CM006 Contractor regarding access coordination.

CM006 – Manhattan North Structures: The MTACC awarded the CM006 contract to Frontier-Kemper on March 31, 2014. The scope includes lining the tunnels north of the main caverns and finishing the other caverns between the 63rd St. tunnel and the main caverns. The Kick-Off meeting was conducted on April 2, 2014. During the Kick-Off meeting, the ESA CM explained that the value of the contract is approximately \$300 million and is scheduled to take 32 months. To date, the Contractor has performed some preliminary surveys, made submittals, and requested permits, but has not yet begun any field construction.

Construction Progress: The Contractor has not begun any field construction yet. The Contractor's 5 Week Look-Ahead Schedule indicates that they will continue to do preliminary surveys, make submittals, and apply for permits through the end of June 2014, after which field construction will begin.

Queens Contracts:

CQ032 – Plaza Substation and Queens Structures: The Estimate at Completion increased to \$227.8 million as of March 31, 2014. The MTACC forecast Substantial Completion date slipped to December 24, 2015, an extension of 2-1/2 months. Actual construction progress for March 2014 was 8.7% versus 10.2% planned. Cumulative progress through March 31, 2014, was 53.0% actual versus 82.5% planned. The ESA PMT and the Contractor have negotiated the re-baselined schedule and await the Contractor's final acceptance of the terms. The re-baselined schedule will account for the prior access delays, additional work in the 63rd St. tunnel, and time required for the Early Access Chamber re-design. The Contractor's Substantial Completion (SC) date included in the re-baselined schedule is December 4, 2015.

Construction Progress: Continued to remove temporary struts in the Open Cut, erect structural steel and place concrete in the Plaza C06 and C07 substation levels, place re-bars for the invert of Tunnel D and the sump pit, and continued to make punch list repairs in the Roosevelt Island, Vernon Blvd., and 29th, 23rd, and 12th St. ventilation facilities.

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

As of March 31, 2014, the Estimate at Completion for CH053 increased to \$303.1 million due to a schedule re-baseline claim for \$55.0 million. This claim was as a result of additional time the contract has run (over its original schedule) and includes "emergency withdrawal" (claims for events which delayed construction through no fault of the contractor) and overhead expenses for the additional time. The terms of this claim have been negotiated and it is presently waiting formal contract modifications. The MTACC forecast Substantial Completion date remained at late December 2014 (December 23, 2014). Actual progress for March 2014 was 3.2% versus 0.0% planned (contract was supposed to be complete by now). Cumulative construction progress through March 31, 2014, was 87.6% actual versus 100.0% planned.

Additionally, the PMT and LIRR reported four instances of "sink holes" or ground depressions during April 2014 in addition to the 3 identified at the end of March 2014 which were preliminarily attributed to current and past excavations made by the CH053 Contractor. There were a total of seven instances reported, only one of which was near operating tracks (under the #845 crossover). The sink holes ranged from 2' to 5' in diameter and were between 2' and 9' deep. . All were discovered during inspections that were prompted by unusually heavy rains during late March and early April 2014. The railroad and the PMT took the appropriate precautionary and corrective actions required by their procedures with no resultant construction delays. Additionally, LIRR operations returned to normal immediately after each incident location was repaired.

Construction progress: The Contractor continued to install conduits in previously installed micro-tunnel #2, place concrete for the deck of the ML4 Bridge at 48th St. and the parapets and one approach slab at the Westbound Bypass Bridge, continued construction of the 43-S2

retaining wall, and continued construction of the motor generator (MG) facilities at Harold and Woodside Interlockings.

CH054A – Harold Structures Part 2A: As of March 31, 2014, the Estimate at Completion (EAC) for CH054A increased to \$64.3 million due to the inclusion of \$11.3 million in pending and potential contract change orders (the MTACC had not included these in the EAC projections for last several months). Actual construction progress for March 2014 was 10.2% versus 0.0% planned (contract was supposed to be complete by now). Cumulative progress through March 31, 2014, was 76.1% actual versus 100.0% planned.

Construction Progress: The Contractor completed construction of the 43-S1 retaining wall and fence, continued to install 12kV duct bank between Thomson Ave. and Sub 44, and continued construction of micro-tunnel run #s 13, 14, 15, and 16 during April 2014.

CH057A – Part 3 Westbound Bypass: As of March 31, 2014, the Estimate at Completion for the CH057A contract remained at \$103.3 million. The MTACC forecast for Substantial Completion slipped one month to February 25, 2016. To date, the Contractor has not begun field construction yet, but has begun to install survey prisms on main line tracks to monitor ground settlement.

Construction Progress: As noted above, the CH057A Contractor has not begun field construction yet, but continues to prepare submittals, apply for permits, mobilize, perform preliminary surveys, and install survey prisms for monitoring of movement.

Railroad Force Account:

FHA01 – Harold Stage 1 Amtrak: As of March 31, 2014, the Estimate at Completion for FHA01 remained at \$18.8 million. The MTACC's forecast for Substantial Completion also remained at February 25, 2016. Actual construction progress for March 2014 was 1.4% versus 1.3% planned. Cumulative progress through March 31, 2014, was 95.5% actual versus 95.5% planned.

Construction Progress: The Track Department surfaced the #771 crossover and the Electric Traction Department continued to make signal and catenary wire transfers in various locations between Thomson Ave. and Sub 44.

FHA02 – Harold Stage 2 Amtrak: As of March 31, 2014, the Estimate at Completion for FHA02 remained at \$41.7 million. The MTACC's forecast for Substantial Completion remained the same at September 6, 2017. Actual construction progress for March 2014 was 1.8% versus 2.9% planned. Cumulative progress was 78.3% actual versus 79.4% planned.

Construction Progress: Amtrak C&S personnel continued preparations for the installations and cutovers of the E34 and E35 signal bridges in Harold Interlocking as well as assist the LIRR Signal Department to prepare for the cutover of Point Interlocking, which was completed on the weekend of April 25-27, 2014.

FHA03 – Harold Stage 3 Amtrak: As of March 31, 2014, the Estimate at Completion for FHA03 remained at \$10.6 million. The initial phase of Stage 3 was completed during the summer of 2013 when Amtrak Force Account personnel reconstructed parts of Lines 2 and 4 in Harold Interlocking to allow the installation of the concrete track slab by the CQ031 Contractor. This slab was installed early to allow the CH057A Contractor to construct the Westbound Bypass Tunnel under Lines 2 and 4 at a later date. All construction for the initial phase of

FHA03 was completed by late August 2013. Cumulative progress for phase 1 of Stage 3 (through March 31, 2014) was 100.0% actual versus 100.0% planned.

Construction Progress: No additional construction has taken place for FHA03 since phase 1 was completed in August 2013.

FQA65 – Loop Interlocking Amtrak: Amtrak C&S Force Account personnel began construction of Loop Interlocking under work release FQA65 during 1Q2014. The Estimate at Completion is \$33.2 million. The MTACC’s forecast Substantial Completion date is September 1, 2018. Actual and cumulative construction progress through March 31, 2014, was 8.0% versus 8.6% planned.

Construction Progress: Amtrak C&S personnel continued to install trough and conduit and placed the location “A” signal case in the future Loop Interlocking during April 2014.

FHL01 – Harold Stage 1 LIRR: As of March 31, 2014, the Estimate at Completion for FHL01 remained at \$20.8 million. The MTACC’s forecast for Substantial Completion remained at January 30, 2015. The MTACC did not report any actual construction progress in its March 2014 report, although the PMOC is aware that LIRR Traction Power personnel did complete installation of all cables between poles HP-1 and HP-2 for signal power separation during April 2014 (the MTACC will report this in its April report). Cumulative progress reported through March 31, 2014, was 77.4% actual versus 77.4% planned.

Construction Progress: LIRR Traction Power personnel completed installation of all cables for between poles HP-1 and HP-2 for signal power separation.

FHL02 – Harold Stage 2 LIRR: As of March 31, 2014, the Estimate at Completion for FHL02 remained at \$71.2 million. The MTACC’s forecast for Substantial Completion remained at November 25, 2016. Actual construction progress for March 2014 was 2.4% versus 6.6% planned. Cumulative progress through March 31, 2014, was 33.4% actual versus 37.6% planned.

Construction Progress: LIRR C&S Force Account personnel completed the cutover of Point Interlocking during the weekend of April 25-27, 2014. Additionally, C&S personnel placed the CIL for “H5” location in Harold Interlocking, continued to make signal revisions and pre-test at the “H3” and “H4” CIL locations and continued to breakdown test the “H6” CIL.

FHL03 – Harold Stage 3 LIRR: As of March 31, 2014, the MTACC increased the Estimate at Completion for FHL03 to \$26.5 million, with the explanation that FHL03 is paid out of funding package FQL99, which funds several LIRR Force Account packages. The MTACC’s March 2014 report explains that \$26 million has been paid out of FQL99 to date. Nonetheless, the initial phase of FHL03 was completed during the summer outage of 2013 when LIRR personnel reconstructed portions of Lines 2 and 4 and installed 3 turnouts in Harold Interlocking when the CQ031 Contractor installed the concrete track slab for the Westbound Bypass Tunnel. A new Substantial Completion date for work that will be added to FHL03 in the future has not yet been determined. Cumulative construction progress for phase 1 of FHL03 through March 31, 2014, was 100.0% actual versus 100.0% planned.

Construction Progress: No actual construction progress has taken place for FHL03 since phase 1 was completed in September 2013.

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

ESA Project Quality Manual (PQM):

A Draft of Revision 7 to the PQM was prepared and sent to the PMOC for review in March 2014. The PMOC returned comments to the ESA Quality Manager that same month. Revision 7 is expected to be issued in May 2014.

Submission of As-Builts:

The construction Contractor working on the CH053, CH054A, and CQ032 contracts continues to be late in submitting As-Built drawings and they are not in the correct format. Practically every other Contractor is deficient in submitting their as-builts on time and in the proper format. The ESA Quality Manager plans to perform an audit/surveillance on a combination of as-builts and closeouts since as-builts are a component of the closeout process. These audits/surveillances will be initiated in mid-May 2014.

CH053/CH054A Special Inspector Certifications:

The MTACC Code Compliance Officer determined that the CH053/CH054A Contractor was using uncertified inspectors on Special Inspections (for field compaction tests) for the bridges it has installed and advised the Contractor to follow the New York State requirements. The ESA Quality Manager reported that the Contractor now has certified inspectors and the field compaction tests are being performed again.

2.0 SCHEDULE DATA

ESA submitted its IPS #56 data date April 1, 2014 and its variance report. The IPS shows a Revenue Service Date of September 10, 2021 with one year of contingency.

The Table below shows the significant 90-day look-ahead milestones:

Activity ID	Activity Name	Start	Finish	IPS-Contract
SUMFHA02-1540	Cutover - ZJ1/ZJ2 (747)		11-May-14	FHA02
FHL02.HT.57770	Complete HP1/HP2 Cable Pulls		11-May-14	FHL02
FHL02.MS.00025	MS - Cutover H4 CIL(2D)		22-Jun-14	FHL02
SUMFHA02-1650	Install DN2 Switch (743B)		29-Jun-14	FHA02
CM014-B5005	CM014 Bid Due Date - Bid Opening		10-Jul-14	CM014B
FHL02.TK.325	Cut & Throw ML4		20-Jul-14	FHL02
MTACC-1230	CH057 Advertise Date	21-Jul-14		CH057
FHL01-1010	Cut & Throw ML2/4		3-Aug-14	FHL01
FHL02.TK.57760	Cut & Throw ML2		3-Aug-14	FHL02

Project Critical Path

The project critical path goes through contracts CM005, CM007, CS179 (IST), then operation readiness. Additionally, the PMT integrated its baseline Harold schedule into the IPS. Harold critical path goes through contracts CH058, FHL03, FHL04. The longest path in Harold is being

driven by the 2016 long term outage; the H1/H2 CIL cutover is also important to overall progress in Harold.

Schedule Contingency:

IPS#56 indicates that the ESA's RSD is September 10, 2021 with one year of contingency; however this update is based on a currently unapproved baseline. Additionally the PMOC recommends that the PMT produce a contingency draw-down plan to show how the contingency will be managed, as required by the SMP.

3.0 COST DATA

Funding: The MTA funding request for the 2015 – 2019 Capital Program will be submitted to the NYS Capital Program Review Board (CPRB) in September 2014. ESA will need to obtain funding from the 2015-2019 Capital Program to award: all the options on the CS179 Contract Package; the CM007 Contract Package; the CQ033 Contract Package; and the CH058 Contract Package.

As of the end of April 2014, the funding for this package has not been identified to the best of the PMOC's knowledge.

Budget/Cost: The ESA March 2014 Progress Report shows the total project progress was 51.7% vs. 53.7% planned, against the Current Baseline Budget (CBB) and the construction progress as 49.3% vs. 51.6% planned, based on invoiced amount. As of February 2014, the CBB was adjusted to a new baseline value of \$9.693 billion, but MTACC expects to finalize the number before the June 2014 CPOC meeting. ESA recognizes a range of possible costs, and \$6.693B is at the lowest point of that range. The current budget has a series of small contingencies on varying areas of possible cost however the PMOC believes that this scattered distribution of contingencies will make it difficult to manage the drawdowns. Although ESA reassigned values to each of the SCCs as part of their Re-plan, they have not demonstrated to the PMOC how the values were determined or that the structural problems in the SCC are addressed. The PMOC has recommended that ESA re-evaluate its SCC structure going forward and establish a more properly aligned structure at the Re-plan to avoid such discrepancies.

MTACC has stated that the Re-plan Budget and Schedule for ESA will be finalized in time to present to the MTAC CPOC at the June 2014 meeting.

Change Orders/Budget Adjustments: The PMT reported that over the last month, seven (7) change orders each over \$100K were executed, with a net value of \$3.6M for Construction Changes and \$118.8M for CM and PM Changes.

4.0 RISK MANAGEMENT

MTACC previously conducted a comprehensive four-day Risk Assessment Workshop for the remaining construction at Harold in March 2014, as a well as limited risk assessment for the remaining Manhattan/Systems Contracts in January 2014. In lieu of a full Programmatic Risk Assessment (which the PMOC recommended) MTACC decided to combine the results of the Manhattan/Systems and Harold Risk Workshops to determine total Program Risk. A meeting was held on April 30, 2014, to present the results of this effort. Results of the combined risk models were presented: For the schedule, the model indicated that there is an 80% probability of achieving RSD by August 2021, and a <1% chance of achieving the IPS date of March 2020. For the cost, the model indicated that there is an 80% probability that the total cost for the project would not exceed \$9,826M, which is \$133M more than the Re-plan number of \$9,693M. Given that the methodology for merging the results of the two separate risk assessments was not presented at the meeting, and the number of open questions that the PMOC has regarding the Manhattan/Systems Risk Workshop, the PMOC cannot attest to the validity of the presented results.

MTACC is planning to conduct a package level risk assessment for the CM014B (GCT Finishes) in June 2014, two months after it plans to advertise the package. The PMOC has commented in the past about the timing of package level risk assessments, and the necessity to perform them before the packages are advertised for bid. MTACC has stated that they plan to perform a package level risk assessment for CM007 once the design is finalized.

5.0 ELPEP COMPLIANCE SUMMARY

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

- **Technical Capacity and Capability (TCC).** The PMOC had previously noted that a TCC review might be warranted given the significant personnel changes to many key upper management level positions, including the Program Executive that occurred in 4Q-2013 and 1Q-2014. The FTA has requested MTACC to update its TCC Plan in response to the FTA/PMOC comments that were generated in November 2013. At the March 31, 2014 ELPEP Quarterly Review Meeting, MTACC stated that the TCC Plan revisions will be completed upon finalization of the new ESA organization.
- **Continuing ELPEP Compliance:** The following ELPEP components continue to need improvement or are deficient: Management Decision; Design Development; CCC Process and Results; Stakeholder Management; Issues Management; Procurement; Timely Decision Making; Risk-Informed Decision Making.

A workshop was held on February 27, 2014 to address the FTA and PMOC's concerns regarding ELPEP compliance. Although regularly scheduled cost review meetings have been held; ESA has only recently agreed to start holding regular schedule review meetings.

Revisions to the ELPEP Document: The FTA and MTACC had agreed to hold working meetings to progress development of a revised ELPEP. These meetings had been expected to start during 2Q2013 but were delayed pending agreement on how to proceed without the revised ESA cost and schedule baselines, which are needed to provide a comprehensive revision to the ELPEP document that will include the new cost and schedule contingency values. Although the MTA has not approved the current re-planned cost and schedule baselines, MTACC has stated

that the schedule and budget to be presented to the MTA CPOC will not be significantly different than the current working budget and working IPS. With completion of MTACC's "equivalent" programmatic risk evaluation, the PMOC believes that MTACC should be in a position to address cost and schedule contingencies in May or June 2014 time frame. The next ELPEP Quarterly Review Meeting with MTACC, FTA-RII, SAS and ESA projects and the PMOC has been scheduled for June 9, 2014.

MTACC Project Procedures Audit Related to ELPEP: At the March 31, 2014 Quarterly ELPEP Compliance Meeting, MTACC advised that they have completed their audit of 22 ELPEP-related project procedures and the CMP, SMP and RMP Sub-Plans for ELPEP compliance. Audit findings have been reviewed by the ESA project, revised language has been approved for the CMP, SMP and RMP and the MTACC Quality Department will verify incorporation of the revised language. MTACC planned to audit 11 additional Project Procedures in April 2014 however this target was not met. MTACC is now forecasting conducting these audits in the June/July 2014 time frame.

6.0 SAFETY AND SECURITY

Project safety statistics for lost time accidents on active construction contracts continue to trend above the Bureau of Labor Statistics (BLS) national average at 2.22 vs. 1.70 lost time accidents per 200,000 hours. This average has remained constant since November 2013. The PMT performed safety assessments during the 1Q 2014 which are currently being finalized, and continues to track trends on daily hazard logs.

The PMT did not report any significant security issues during April 2014.

7.0 ISSUES AND RECOMMENDATIONS

Design: The PMOC remains concerned that the GEC and PMT continue to consistently miss all of their target dates for remaining design activities on the project. The level of effort for the GEC will increase significantly given the development of the CM007 Contract Package and the remaining design in the CH058 package (due to scope shifts and restructuring of the package), making the timely achievement of design milestones even more critical in maintaining the project schedule. The PMOC continues to recommend that the PMT develop a tracking sheet with firm dates for interim milestones as a tool to augment the design management process.

Procurement: The lack of stability in the contracting strategy and Contract Packaging Plan remains a concern. The PMT continued to shift and split scope among different packages during 1Q2014, making it difficult to fully understand the impact of these changes to the overall ESA Project. An updated draft Contract Packaging Plan (revision 10.0) was submitted on March 28, 2014. ESA should adhere to it without shifting scope for the remainder of the project.

The PMOC remains concerned that MTACC has delayed NTP for the CM007 Contract Package out to July 2015 due to funding constraints and that it will be limited to the procurement of pre-cast concrete panels. Full NTP will not be issued until April 2016, pending funding availability. CM007 is a critical package and the delay in the procurement due to funding constraints remains a concern. The PMOC also remains concerned about delays to other significant procurements, namely: Systems Package 1 (CS179) (awarded almost two years after proposals were received); CS184 (Tunnel Systems which has now been split into two packages); VS086 (Signal

Equipment), still not awarded since Board approval was received in January 2014, and CM014B (GCT Concourse and Fit-out), now forecast to be advertised in May 2014.

Contract CM014A: The PMOC has previously reported that the Project Office was not preparing the required Safety & Security Checklist (SSC) for this contract. During a recent progress meeting the Project Office presented to the PMOC their current updated SSC which will remain in progress throughout the duration of the contract. The PMOC considers this concern closed. The PMOC continues to recommend that MTA direct MNR to prioritize removal/relocation of the obstructing utilities to the new ramp, stairs and escalator in the south concourse area. Continuing deference of this work by MNR could impede the ability to do this work in the upcoming CM014-B contract.

Contract CM013: The Project Office continues to advise the PMOC regarding the partial Stop-Work-Order issued by the Code Compliance Unit (CCU). The CCU must still hire a new independent engineer to sign off on the coring results of the pneumatically applied concrete mockup. This will be finalized during Project Closeout and will not affect substantial completion.

Contract CQ032: The PMOC remains concerned about the gap between actual and planned construction progress for CQ032. Although the monthly actual construction progress has kept pace with planned construction for the past several months, the historical gap remains relatively stable at 29.5%. The Contractor submitted its re-baselined schedule and the ESA PMT and the Contractor negotiated the related change order, which presently awaits the contractor's execution. The PMOC recommends that the Contractor complete its review of the final Contract change order and execute it as quickly as possible.

Contracts CH053/54A: The PMOC remains concerned that the CH053/CH054A contracts continue to have a potential for additional construction delays and increased cost due to their high degree of dependence upon the railroads' Force Account support, which has been historically erratic. Although the Contractor continues to progress its construction as rapidly as possible, important tasks continue to be postponed due to lack of proper Force Account protection. The ESA PMT is responsible for allocating a fixed amount of railroad personnel to the various contracts, but continues to place lower priority on CH053/CH054A tasks than for other contracts. To avoid further schedule slippage, the PMOC recommends that the ESA PMT place a greater priority on the CH053/CH054A work tasks.

Railroad Force Account: The LIRR cutover Point Interlocking during the weekend of April 25-27, 2014. This puts the LIRR on schedule to complete the remainder of its 2014 LIRR construction, which includes installation of 9 turnouts, cuts and throws of ML2 and ML4 Tracks in Harold Interlocking, and cutover of the signal power separation system. The PMOC remains concerned about LIRR's short range planning capability to keep pace with the aggressive track work schedule needed to install the turnouts and make the track realignments. The PMOC therefore suggests that the LIRR complete development of the work plans for the first two 2014 tasks by May 31, 2014 in order to stay ahead of all the plans that will be needed.

Project Funding/Budget: As stated in the Risk Management Section below, the PMOC believes that funding presents a significant risk to the project. In the February 2014 Report, ESA changed its Budget to \$9.693BM, up from \$8.245B. [REDACTED]

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remains significantly below the IEC's projection of \$9,981M and the PMOC's \$10,309M [REDACTED] at a medium level of mitigation. The PMOC projected cost at the more probable low degree of mitigation is an additional \$146M. ESA has stated is Budget is Preliminary and will be finalized in time for approval at the June 2014 MTA CPOC meeting. MTACC has not made it clear at this point how it will reconcile the difference between its cost estimate for the project and that of the IEC and PMOC; however based on discussions with MTACC, it appears that no reconciliation will occur, but rather a deterministic number will be put forth for approval by the CPOC. The FTA has stated it supports the PMOC's Low Level of Mitigation number. The funding plan to ensure adequate funds are in place to award scheduled Contracts is contingent upon adequate funding being made available in the MTA's 2015-2019 Capital Program, and the PMOC believes that funding delays may affect future contract awards.

Project Schedule: The PMT presented its re-planned Project Schedule in a meeting with the FTA/PMOC/MTACC/ and MTA OCO in December 2013. The RSDs developed by the PMOC, IEC, and SIR are at least a year or more beyond the PMT's date presented at the MTA CPOC meeting in January 2014. MTACC has not made it clear at this point how or if it will reconcile the difference between its schedule forecast for the project, and that of the IEC and PMOC, nor how it will incorporate the results of its combined risk assessments for Manhattan/Systems and Harold into the base schedule. MTACC is stating that at this point, it is planning to finalize the schedule in time to present to the MTA CPOC in June 2014.

Risk Management: The PMOC is concerned about the continuing failure to fully follow the risk management processes in the Risk Management Plan (RMP). The last monthly risk meeting with the PMOC was held in July 2013. The PMT has also not provided updated risk registers on a regular basis as required. This in combination with lack of regular risk meetings with PMOC makes it difficult to determine the effectiveness of the ESA Risk Management process and its integration into the Program.

Funding availability continues to be a major risk on the ESA project, and is a significant concern. Funding uncertainty has resulted in: the PMT's delay of CM007 contract award until July 2015 with a limited NTP due to budget constraints; and the restructuring of the CS179 contract by splitting it into a base contract with seven options, based predominately on access restraints imposed by the CM005; CM006; CM007; and CM014B packages, which will significantly increase the interface risks. This segmentation of construction packages has resulted in 63 inter contract interfaces and milestones. The probability of a successfully achieving of all of them is marginal in the PMOC's opinion, and leads to the possibility of a ripple effect of delays and coordination difficulties between contracts. There is little room for contractors to make up time. Managing inter-contract handoffs and interfaces will be challenging. Schedule risks will be exacerbated if funding is not in place to award the options in the CS179 Contract Package as planned. The PMOC remains concerned about the "coordination risk" retained by MTACC on the completion of the work in Manhattan, especially with regard to the construction and testing interface management for the systems work. When combined with the extensive scoping re-configuration changes anticipated for the Harold Interlocking work, the PMOC believes that this will create significant changes to the overall project risk profile.

APPENDIX A -- ACRONYMS

AFI	Allowance for Indeterminates
ARRA	American Recovery and Reinvestment Act
BA	Budget Adjustment
CBB	Current Baseline Budget
C&S	Communication and Signals
CCC	Change Control Committee
CCM	Consultant Construction Manager
CM	ESA Construction Manager assigned to each contract
CMP	Cost Management Plan
CPOC	Capital Program Oversight Committee
CR	Candidate Revision
CSSR	Contact Status Summary Report
CIL	Central Instrument Location
CPRB	Capital Program Review Board
CPP	Contract Packaging Plan
DCB	Detailed Cost Breakdown
ELPEP	Enterprise Level Project Execution Plan
EPC	Engineering-Procurement-Construction
ERT	East River Tunnel
ESA	East Side Access
ET	Electric Traction
FA	Force Account
FAMP	Force Account Management Plan
FHACS	“F” Harold Alternate Control System
FFGA	Full Funding Grant Agreement
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GCT	Grand Central Terminal
GEC	General Engineering Consultant
HTSCS	Harold Tower Supervisory Control System
IEC	Independent Engineering Consultant (to MTA)

IFB	Invitation for Bid
IPS	Integrated Project Schedule
IST	Integrated System Testing
LIRR	Long Island Rail Road
MNR	Metro-North Railroad
MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority Capital Construction
N/A	Not Applicable
NTP	Notice-to-Proceed
NYAR	New York and Atlantic Railroad
NYCDEP	New York City Department of Environmental Protection
NYCDOB	New York City Department of Buildings
NYCT	New York City Transit
NYSPTSB	New York State Public Transportation Safety Board
OCO	Office of Construction Oversight (MTA)
PAC	Pneumatically Applied Concrete
PEP	Project Execution Plan
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PMT	ESA Project Management Team
PQM	Project Quality Manual
PWE	Project Working Estimate
QA	Quality Assurance
RAMP	Real Estate Acquisition Management Plan
RFP	Request for Proposal
RMCP	Risk Mitigation Capacity Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROW	Right of Way
RSD	Revenue Service Date
SC	Substantial Completion
SCC	Standard Cost Category

SMP	Schedule Management Plan
SSMP	Safety and Security Management Plan
SSOA	State Safety Oversight Agency
SSPP	System Safety Program Plan
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Technical Capacity and Capability
VE	Value Engineering
WBS	Work Breakdown Structure
WBY	Westbound Bypass Tunnel

APPENDIX B – TABLES

Table 1: 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	September 2021 (F)	April 2022(F)**
Revenue Service	December 2013	September 2021 (F)	April 2022 (F)

* Source – Grantee forecast Revenue Operations Date per information presented to PMOC in December 2013

**Source –Based on PMOC 2013 trending analysis representing a high degree of mitigation

Table 2- Project Budget/Cost Table (as of March 2014)

(Despite ESA statement that they are using their Re-plan budget, this chart provided by ESA still uses the earlier budget).

	FFGA			MTA's Current Baseline Budget	Expenditures	
	(Millions)	(% of Grand Total Cost)	Obligated (Millions)	(CBB)	(Millions)	(% of CBB)
				(Millions)		
Grand Total Cost	\$7,386.0	100.0%		\$10,729	\$5,495.00	51.2%
Financing Cost	\$1,036.0	14.0%		\$1,036	617.6	59.6%
Total Project Cost	\$6,350.0	86.0%	\$4,107.0	\$9,693	\$4,877.40	50.3%
Federal Share	\$2,683.0	36.3%	\$1,148.0	\$2,699	\$1,942.00	72.0%
5309 New Starts share	\$2,632.0	35.6%	\$1,098.0	\$2,436.60	\$1,684.50	69.1%
Non New Starts grants	\$51.0	0.7%	\$50.0	\$67	\$62.10	92.7%
ARRA	\$0.0	0.0%	\$0.0	\$195.40	195.4	100.0%
Local Share	\$3,667.0	49.6%	\$2,959.0	\$6,994	\$2,935.40	42.0%

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 \$)	February 2014 SSC (YOE \$) M	March 2014 SSC (YOE \$) M	Mar 2014 % of Rebaseline	Jan '14 to Mar '14 Change \$M	CBB Variance from FFGA %
10	1,989	2,943	3,073	3,363	99.97%	290	47.91%
20	1,169	1,514	1,396	2,169	98.02%	773	26.95%
30	356	388	325	502	100.26%	177	9.27%
40	205	488	519	517	106.56%	-2	153.66%
50	619	698	717	616	100.00%	-101	12.76%
60	165	204	204	204	100.00%	0	23.64%
70	957	674	674	34	100.00%	-646	-29.57%
80	1,184	1,649	1,650	1,922	100.00%	272	39.27%
■	■	■	■	■	■	■	■
Subtotal	6,813	8,708	8,708	9,693	100.00%	985	27.84%
100	1,036	1,116	1,116	1,036	100.00%	0-80	7.72%
Total Project Cost (10 - 100)	7,849	9,824*	9,824	10,729	100.00%	905	25.19%

Notes:

Reasons for Changes to SCC Codes: This is the first presentation of the SCCs for the Re-Plan Budget

For reasons that ESA has not yet provided explanation, their projected Finance Costs have been reduced from \$1,116M to \$1,036 at the same time the budget has increased and the Project duration has been extended.

Table 4 – ESA Core Accountability Items—April 2014

Project Status:		Original at FFGA	Current*	ELPEP **
Cost	Cost Estimate	\$7.368B	\$10.156B	\$8.119B
Schedule	RSD	December 31, 2013	September 2021	April 30, 2018
Total Project Percent Complete	Based on Expenditures	51.7 ***		
	Based on Earned Value	NA		
Major Issue	Status	Comments		
Impact of CM012R solicitation cancellation, scope repackaging and re-bidding.	Scope from CM012R (Manhattan Structures 2) solicitation was split among existing and three new contract packages (CM005; CM006; CM007). CM005 and CM006 packages have been awarded and are underway. Design work for a hybrid design (pre-cast and cast in place concrete) based on input from RFEI is underway for CM007.	The PMT continues working on developing the remaining contract package (CM007). A preliminary cost estimate for this package has been developed, however that may change due to change in design from resulting from information received from the contracting community in the RFEI process.		
Major Procurements Delays	The CS179 package was awarded in March 2014, almost two years after proposals were received. A recommendation for award of VS086 (Signal Equipment) was also made to the MTA Board in January 2014, but award has not been made as of the end of March 2014. Advertise date for CM014B is now forecast for May 2014. Advertise date for the CS084 (Traction Power) Package is now forecast for May 2014.	Partial NTP for the CM007 Package cannot be made before July 2015 due to budget constraints. ESA changed the structure of the CS179 Package to include a base contract and seven options. The ESA PMT has also stated that it only has funding in place to award the base contract for CS179 at present.		
Project Schedule	ESA does not have an official baseline schedule as of April 2014. The latest IPS update, shows an RSD in September 2021 (with 12 months of contingency/risk included).	PMOC does not agree with the critical path logic in the current base schedule. This schedule has not been approved by the MTA CPOC		

* Current Budget has not been formally approved by MTA CPOC ** 2010 Enterprise Level Project Execution Plan (ELPEP) reflecting medium level of risk mitigation, excluding financing cost of \$1,116 million. ELPEP is to be updated.

*** Expenditure percentage based on dividing ESA Invoiced" figure by "Current Baseline Budget" figure excluding Rolling Stock Reserve.