PMOC MONTHLY REPORT

East Side Access (MTACC-ESA) Project

Metropolitan Transportation Authority

New York, New York

Report Period April 1 to April 30, 2012

PMOC Contract No. DTFT60-09-D-00007

Task Order No. 2, Project No. DC-27-5115, Work Order No. 03

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

TABLE OF CONTENTS

APPENDICES

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 March 31, 2012, the Engineering/Design effort was 95.6% complete (note: the ESA February 2012 Monthly Report erroneously reported 95.9% completion). The Stage 2 90% catenary design package was submitted to Amtrak for review on March 12, 2012, with a target date for approval by April 18, 2012. Amtrak approval-to-proceed to the 100% design was given on April 27, 2012.

For Contract CH057 (Harold Structures 3A), all design efforts except the catenary are completed. *The Stage 2 100% catenary design package is expected to be completed in May 2012 and submitted to Amtrak by June 1, 2012. The 100% design for this package (excluding the catenary) is under review by Amtrak. The ESA-PMT is planning to advertise the CH057 Package by June 1, 2012; with the Contract Package containing the 90% catenary design. Bidders will receive the 100% design via an addendum.*

Preliminary design efforts for the 48th Street entrance to GCT (CM015) continued in April 2012. Scope is finalized for the preparation of two contracts: CM015A, which entails clearing the spaces which will be retained by the building owner; and CM015, which entails the build out of

the entrance. *The design costs have been negotiated with the GEC and ratified by the major sub-consultants for submission at the May 2012 MTA Board meeting for approval.*

The 90% submittal for CH058 is scheduled for July 2012. The GEC has stopped progressing the design pending completion of review with the PMT of the feasibility of alternate construction methods and sequencing for the east bound reroute and B/C tunnel with the goal of reducing the overall construction schedule.

Notice-to-Proceed (NTP) to the GEC to begin development of the bid documents for Contract CM014B (GCT Concourse/Cavern Finishes) was given in January 2012. *A 60-day progress printing has been given to the railroads for review. An on-board review with MNR was held on April 25, 2012 and final comments are expected during the week of May 14, 2012. Two on-board reviews with LIRR are scheduled for May 11, 2012. The current ESA schedule forecasts completion of the bid set by July 1, 2012.*

b. Procurement

As of March 31, 2012, the total procurement activity on the project was reported to be 60.2% complete, with $4.69 billion in contracts awarded out of the $7.791B budget.

Only the first two years of the 2010 – 2014 MTA Capital Program had been funded by the NYS Capital Program Review Board (CPRB). The CPRB was to approve additional funding by December 31, 2011; however, this did not happen. The MTA will not be able to award the ESA contracts CM014B – GCT Concourse/Cavern Finishes; CS179 – Systems Package 1 (Facilities); and CS084 – Systems Package 2 (Tunnels) if this funding is not in place. There has been some progress in this area; allocation of $770 million in the NYS budget in March 2012 for the MTA Capital Program. Since there are three major contracts scheduled for award in 3Q12 that will require local funding to be in place, it remains to be seen if the allocation of funds to the ESA Project is adequate to allow for award of these major upcoming procurements.

The CM012 solicitation was cancelled in November 2011 after the ESA-PMT was informed by several potential bidders that it would be difficult, if not impossible, to submit a reasonable bid given the requirements in the bid package. The solicitation was reissued on March 12, 2012, with modifications to the Contract bid package based upon discussions with perspective bidders since the cancellation of the previous solicitation. *Bids were previously due on May 22, 2012; however, this date has been changed to May 30, 2012*. ESA is still forecasting NTP in August 2012, with construction to begin in January 2013. The PMOC believes that it will be difficult to start construction on this contract in January 2013 given the significant procurement delay.

[redacted] The Technical proposals were received on March 7, 2012*, and oral presentations for them have been held.* Schedule and cost proposal due dates slipped to April 24, 2012, and May 1, 2012 respectively (previous forecast for both was April 17, 2012). *Schedule proposals have been received, and MTACC is currently evaluating them.* Based on the delays mentioned above, and the time involved in a negotiated procurement (RFP), the PMOC believes that there is insufficient time to issue the NTP in August 2012 (as currently forecast).

Bids for the CM013A (55th Street Vent Plant) were opened on March 27, 2012, and preparation for award to apparent low bidder is underway. The lowest bid came in at about 9% over the engineers' estimate. The second lowest bidder submitted a bid protest which is being evaluated.

[redacted]

c. Construction

The total construction progress reached 45.7% complete vs. 67.2% planned, on a cost invoiced basis, which falls short of the planned construction progress for this period in accordance with MTACC's re-baselined budget of September 2009 [redacted]

MTACC continues to look for ways to improve contractor performance; however, based on its analysis, the PMOC believes that the lost time will not be recoverable.

Manhattan: CM009/019 Contracts – Manhattan Tunnels Excavation/Structures Part 1: *As of March 31, 2012, the total amount invoiced for CM009 was $374,151,000, which represents 91% of the Current Contract Value of $411,796,000. Thirty-five contract modifications for a total credit of $16,157,270 (including scope transfers) have been executed. Actual work performed, calculated with the re-baselined schedule, is 91% actual versus 91.8% planned.*

As of March 31, 2012, the total amount invoiced for CM019 was $603,486,000, which represents 78.2% of the Current Contract Value of $772,010,000. Forty-nine contract modifications for a total of $37,875,115 have been executed. Actual work performed, calculated with the re-baselined schedule, is 78.2% versus 76.9% planned.

The progress of both contracts slipped considerably during the last 3 quarters of 2011 and into the first months of 2012, so much so that the MTACC undertook a schedule re-baseline effort in late 2011 to provide a revised forecast for CM009/019 contract completion. The result was that the Substantial Completion (SC) date was revised to August 31, 2012. MTACC-ESA management developed work plans with the contractor while the schedule was being re-baselined to allow follow-on contracts, such as CM012, earlier access to common work sites. Although the PMOC has previously noted that the contractor has made great construction progress during the last several months and has been able to keep up with its current construction schedule, the PMOC believes that there is simply too much lost ground for the contractor to make up to achieve any appreciable schedule recovery.

As of April 30, 2012, the contractor completed: concrete placement on the archway of the Eastbound Cavern, concrete repair work in the tail track tunnels, "cheek" excavation in tunnels T401 and T402, and excavation of the GCT4 East Wye and the inclined portion of Escalator Way #1. The contractor continued: shotcrete placement in GCT3 West Wye and excavation in GCT3 crossover and the benches in both caverns. The contractor began: Phase I excavation in the cross flue and 55th St. ventilation plant, invert lining in EB2, and excavation of benches in GCT 1

& 2 East and TT1. Although this work represents continued significant progress, the PMOC continues to be concerned that the CM009/019 contracts remain behind schedule

CM004 – 44th Street Demolition and Fan Plant Structure: *As of March 31, 2012, the total amount invoiced was $30,778,000, which represents 73% of the Current Total Contract Value. Forty-two contract modifications have been executed for a total of $1,269,729. Fourteen have been negotiated for a total of $2,778.245 and are awaiting approval. Actual work performed is 74.1% versus 100% planned.*

ESA's latest forecast for Substantial Completion of CM004 excavation in vertical Shaft #1 to the original contract invert of Elevation 282 continued at March 2012, but was actually completed in early April 2012. As a result, CM004 is now slightly over 9 months behind its baseline schedule for this contract work. The delays were due primarily to excessive equipment breakdowns and extensive architectural changes. The contractor has submitted the requested cost proposal to continue the excavation of Shaft #1 to the final upper elevation of the horizontal shaft in the caverns to approximately Elevation 233. This cost proposal is with MTACC for review and processing. *The added schedule time as a result of this proposed change cannot be determined at this time.*

Additionally, ESA has decided that the Gantry Crane will remain in place at the site to assist in future contract construction activity such as lining of the horizontal Shaft #1. This will require a "Leave Out" in the building for approximately the first 2 floors. The Gantry will be disassembled and removed as a part of the CM014B contract. The GEC prepared revised drawings and the contractor has submitted a cost proposal for the work. MTACC is reviewing and processing this cost proposal. The impact to the schedule related to this change cannot be determined at this time.

CM013 – 50th Street Vent Facility: *As of March 31, 2012, the total amount invoiced was $49,964,000 for CM013 and $21,448,000 for CM013R (work performed by the property owner), for a total of $71,412,000, which represents 60% of the Current Total Contract Value. Seventeen contract modifications have been executed for a total of $689,546. Actual work performed is 51.9% versus 54.6% planned.*

The blasting in the deep shaft was completed to the final invert Elevation 90' below the Vent Plant invert deck 60' below street level. During April 2012, the contractor completed waterproofing of the deep shaft. Conduit installation and rebar placement for the concrete slab in the deep shaft continued. In the Service Tunnel, the electric manholes, electric conduit, and placement of the structural slab were completed, and waterproofing is ongoing. Work on the vertical utility shaft at the existing building continued.

The MTACC and the contractor have agreed to add Milestone #5 to allow access to the site to interfacing contractors which is intended to lessen the impact to the project due to the delayed schedule. As of the ESA Quarterly (January to March 2012) Report, the forecast date for new Milestone #5 is August 27, 2012 and the Substantial and Final Completion dates have been extended 6 months.

Additionally, ESA has decided to modify the lining procedures for the deep shaft and the remaining walls of the Vent Plant. All of the deep shaft walls and the west, north and a portion of the south Vent Plant walls will be placed with Gunite in lieu of the originally specified cast-in-place concrete. This change was made to save time and make up for some of the lost time.

CM014A – Concourse and Facilities Fit-Out: The contract was awarded in November 2011, with a Notice-to-Proceed date of November 7, 2011. Substantial Completion is forecast for April 2013. *As of March 31, 2012, the total amount invoiced was $2,000,000, which represents 4% of the Current Total Contract Value. Actual work performed is 4.6% versus 4.1% planned.*

During April 2012, the contractor completed pilot holes to confirm the rock location in the garage. The contractor began fabrication of the electric structures, continued with site surveys and layout (this will be ongoing for some time); completed sawcutting and demolition of the column encasements (crash walls); and continued with trench excavation and air tunnel excavation.

Queens: CQ031 (Queens Bored Tunnels and Structures): *As of March 31, 2012, the EAC remained at $778.5 million. The forecast Substantial Completion date slipped one month from February 2013 to March 2013, a 6-month delay to the original date. Based on the latest data available from the grantee, cumulative actual percent complete is 72.0% versus planned 93.2% on a cost expenditure basis, and 86% of the contract time to Substantial Completion has elapsed. Fifty-five contract modifications (change orders) totaling $106.2 million have been approved and this represents 13.6% of the current EAC. The March 22, 2012 re-baselined IPS draft shows that Contract CQ031 is not on the critical path.*

The contractor commenced TBM mining of the Yard Lead Tunnel on May 17, 2011 and completed the tunnel on February 9, 2012. The TBM mining for the Track A Tunnel started on August 9, 2011 and was completed on December 22, 2011. The contractor commenced TBM mining of the Track D Tunnel on March 28, 2012 and has progressed excavation to 658 feet as of April 19, 2012.

During April 2012, the contractor continued substructure construction at the Yard Lead Emergency Exit; construction of final portions of the Yard Lead Approach Structure; construction of the C.O.8 Substation; re-assembly of the Yard Lead Tunnel TBM in the TBM launch area in preparation for the Track B/C Tunnel mining; and construction of the WBBY structure at the Honeywell Street bridge. The contractor started underpinning of the Harold CIL and Signal Hut 1A. The contractor's supplier has completed fabrication of the pre-cast concrete tunnel liner panels.

CQ032 Contract – Plaza Substation and Queens Structures: *As of March 31, 2012, the EAC remained the same at $162.1 million and the forecast Substantial Completion date remained unchanged at August 2014. As of March 31, 2012, based on the latest data available from the grantee, the cumulative actual percent complete is 4.2% versus planned 4.6% on a cost expenditure basis. The contractor has mobilized at the existing Roosevelt Island, Vernon Boulevard, 12th Street, 23rd Street and 29th Street ventilation facilities and continues asbestos and lead paint abatement, fencing installation, selective demolition work, installation of temporary power and lighting, removal of mechanical equipment and modifications to platforms, floors and stairways. The contractor continues preparation work for construction of the foundation for the B10 Substation. The March 22, 2012 re-baselined IPS draft shows that Contract CQ032 is not on the critical path.*

CQ039 Contract – Northern Boulevard Crossing: *As of March 31, 2012, the EAC remained at $101.0 million and the forecast Substantial Completion date remained at March 2013, a 7-month delay to the revised Substantial Completion date of August 2012 and a 17-month delay to*

the original date of October 2011. As of March 31, 2012, based on the latest data available from the grantee, the cumulative actual percent complete is 51.1% versus planned 78.7% on a cost expenditure basis, and 86% of the contract time to the current approved Substantial Completion date has elapsed. The contractor has completed construction of the Early Access Chamber down to the invert, installation of all freeze piping, thaw piping and monitoring pipe and waterproofing of the Plaza Invert Slab, and commenced ground freezing on November 28, 2011. The Contractor continued the ground freeze and completed construction of vertical support columns and installation of the tunnel access ramp for the sequential excavation work. There were problems achieving acceptable ground freeze that required additional grouting to seal groundwater leaks and caused an additional three months of delay. Tunnel mining commenced on April 30, 2012. The March 22, 2012 re-baselined IPS draft shows that CQ039 is not on the critical path.

Harold Interlocking:

CH053 Contract – Harold Structures Part 1 and G02 Substation: *As of March 31, 2012, the EAC remained the same at $200.2 million. The forecast Substantial Completion date slipped one month from November 2013 to December 2013, 23 months later than the current approved plan and 40 months later than the original plan. For this reporting period, based on the latest data available from the grantee, cumulative actual percent complete is 65.2% versus planned 100% on a cost expenditure basis, and 100% of the revised contract time to Substantial Completion has elapsed. For the January –March 2012 period, the actual percent complete was 2.9% versus planned 2.3%. The contractor completed support of excavation for the west abutment of the Westbound By-Pass bridge over 43rd Street and installation of the piles, pile cap and stem for the center pier of the ML4 bridge over 43rd Street. Construction work continued on the following: the civil portion of the 12kV duct bank and foundations for catenary poles and signal towers at various locations in Harold Interlocking; excavation for Retaining Wall 39-N1; erection of catenary poles and signal towers; fabrication of catenary poles and internal wiring and equipment testing for the G.O.2 Substation. Contractor started excavation of the jacking pit for Micro-tunnel Run 3-4.* Completion of work on the Tunnel A Approach Structure has been delayed due to late approval of associated re-designs for adjacent existing catenary and signal power structures. *The March 22, 2012 re-baselined IPS draft shows that CH053 is on the critical path.*

CH054A Contract – Harold Structures Part 2A: *The EAC remained the same at $38.1 million. The forecast Substantial Completion date remains May 2013, 29 months later than both the original and current approved plan date of December 2010.*

As of March 31, 2012, based on the latest data from the grantee, the cumulative percent complete was only 54.8% versus planned 70.8% on a cost expenditure basis and based on a forecast progress curve. Substantial Completion was to have been achieved in December 2010. The PMOC notes that the Contract has not been modified to reflect the current forecast Substantial and Final Completion dates.

Railroad Force Account: *During February 2012, Amtrak replaced both its ESA Project Director and its Electric Traction (ET) Supervisor. Amtrak also made other necessary labor changes that have resulted in a substantial increase in the amount of ET support personnel available to the project on a daily basis. This change includes overlapping shift coverage. Both of these management actions have greatly mitigated problems which have plagued the project's*

third-party contractors, most specifically CH053, virtually since the beginning of their respective contracts.

As of March 31, 2012, the total amount invoiced for FHA01 was $13,967,000, which represents 83.0% of its Current Agreement Value of $16,825,000. Actual work performed was 72.9% versus 72.9% planned. There has been one amendment to the agreement for a budget increase of $1,500,000. Amtrak Force Account personnel completed: installation of the west end of the #771 crossover in "F" Interlocking, signal wire transfers between new Tower 25 and 33, repairs to signal power structure B-933W, installation of static wires on signal Tower 11, and transfer of catenary wires between poles B-926W and B-931W. Amtrak ET forces continued to provide support for third-party catenary pole installations on the main line.

As of March 31, 2012, the total amount invoiced for FHA02 was $13,758,000, which represents 97.7% of the Current Agreement Value of $14,090,000. Although there has been a recent increase in the Current Agreement Value, the corresponding Project Initiation (PI) between ESA and Amtrak has not been formally authorized yet. By mutual consent between the parties, however, Amtrak has continued to progress Stage 2 C&S construction on a "time and material" basis for the last several months. Amtrak Force Account personnel completed off-site assembly of 3 turnouts for "F" Interlocking and continued installation and termination of cables for signal conversion and the "F2 CIH" cutover, and other signal construction for "F" Interlocking.

As of March 31, 2012, the total amount invoiced for FHL01 was $17,204,000, which represents 82.8% of the Current Agreement Value of $20,782,000. Actual work performed was 72.2% versus 72.0% planned. LIRR personnel completed: installation of signal trough east of 48th Street and brackets on existing signal tower 33 for the power line relocation. LIRR personnel continued relocation of 3rd rail cables for the 12kV duct bank at Substation 44 and provided protection to Amtrak forces performing signal wire transfers.

As of March 31, 2012, the total amount invoiced for FHL02 was $12,546,000, which represents 83.5% of the Current Agreement Value of $15,024,000. Although there has been a recent increase in the Current Agreement Value, the corresponding Memorandum of Understanding (MOU) between LIRR and ESA has not been formally authorized yet. By mutual consent between the parties, however, the LIRR has continued to progress Stage 2 Signal and Communication construction on a "time and material" basis for the last several months. LIRR personnel completed the cutover and replacement of existing signal bridge 16 and continued various C&S construction activities in many different locations throughout Harold Interlocking.

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

One of the two new Quality Engineers who was recently hired by ESA was reassigned, leaving one vacancy. This position was advertised in April 2012. Another ESA Quality Engineer will be taking a three-month leave of absence in several months. The PMOC remains concerned that the QA/QC staffing levels may not be adequate to cover the entire project.

2.0 SCHEDULE DATA

The ESA-PMT is still in the process of finalizing its revised baseline schedule. Consequently, the IPS update #34 (data date March 1, 2012) was not updated but was only statused (i.e., some of the actual start and/or finish dates are updated, other activities are not). The ESA-PMT issued revision 3 of the revised baseline schedule (data date March 1, 2012) in March 2012. This

revision reflected a change in milestones, durations, and start dates for various contracts (CM012; CM013A; CM014B; CM015; and CS 179), but did not affect the new RSD. *This version served as the basis for a risk assessment that began on March 13, 2012. The results of this risk assessment were to have been finalized by the end of April 2012, with a goal of presenting the results at the May 2012 CPOC meeting. The risk assessment results have not been finalized as of the end of April 2012.*

Project Critical Path: The PMOC observed that the revised baseline schedule has the same two critical paths as the current project schedule. The critical path now runs through Harold. A second, near-critical path runs through Manhattan, Queens and Systems (note: this path is less than 25 days off the critical path). A significant driver of the second path is the work of the CM009/019 contracts. The finalized baseline schedule will reflect the key milestone dates in settlement agreement between the MTACC and the CM009/019 contractor. The summary of current project critical dates is shown in Table 2 in Appendix B of this report.

Schedule Contingency: Schedule contingency will be analyzed once the re-baselined schedule is finalized and issued.

3.0 COST DATA

Funding: There is no change in project obligated funding from the previous report.

Budget/Cost: MTACC reported that, as of *March 31, 2012*, the overall project completion was *51.1%,* based on the invoiced amount of *$3.743* billion in the MTA Board-Approved Budget of $7.328 billion (excluding financing costs). This amount also represents *48.0%* of the CWB of $7,791 million (including vehicles and excluding financing costs), representing a *0.9%* progress increase since the *February 2012* reporting period.

MTACC is in the process of evaluating its current project budget and future needs to completion, taking into account past project delays and risk considerations. On March 28, 2012, the PMT held its first meeting to present in a summary form the preliminary project revised cost. The PMT stated that the information provided was based on the December 2011 data, an RSD of December 2017, and without the risk consideration, which is still pending. This effort has been ongoing for the past several months and is expected to be finalized in May 2012.

As of March 31, 2012, the ESA-PMT reported that the project expenditures increased by $66.9 million from February 2012, representing a monthly growth rate of 0.7% vs. 4.13% required. If this rate continues, the PMOC estimates that the project planned expenditure will only reach 76.0% by September 2016 (the currently MTA approved Revenue Service Date).

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 MTA's Current Working Budget (CWB) vs. the FFGA Baseline Budget in Standard Cost Categories (SCC).

Contingency:

As of March 31, 2012, MTACC reported that the overall project contingency was $399.9 million. This represents a decrease of $31.8 million from the previous reporting period resulting from the following:

- *Executed Contract Modifications: The total value for executed contract modifications for March 2012 falls within the allocated contingency for each of the active contracts. The*

adjustment for the active executed contract modifications decreased the contingency by $5.8 million.

[redacted]

- *Contract Closeout: The total increase in the overall contingency for contract close outs was $3.1 million.*
- *Contract Settlement: The total decrease in the overall contingency for contract settlement is $28.8 million.*

Change Orders: *In March 2012, MTACC reported that there were 6 additional change orders executed valued at $5.8 million for a total of $342.0 million, representing 7.3% of the total value of awarded contracts ($4,689.9 million). (PMOC note: the contract award value of $4,689.9 million is lower than the previous month of $4,702.5 million. ESA explained that this change is due to the credit modification issued to the Contract as part of the CM009/019 settlement which lowered the total awarded value).*

The following modifications were approved in March 2012:

- *For Contract CH053, two (2) modifications were executed for additional demolition and foundation work totaling $2.3 million. The contract contingency decreased from 15.26% to 13.81% since the last reporting period.*
- *For Contract CH054A, two (2) modifications were executed for foundation and crib wall changes totaling $0.2 million.*
- *For Contract CQ031, two (2) modifications were executed for revised bid item #8A for a total of $2.6 million. The contract contingency decreased from 3.45% to 3.10% since the last reporting period.*
- *For Contract CQ039, one (1) modification was executed for a relocation of an electrical panel and other utilities work totaling $0.7 million. The contract contingency decreased from2.45% to 1.77% since the last reporting period.*

4.0 RISK MANAGEMENT

Background Summary: An initial Risk Assessment was performed on the ESA project in 2004 in accordance with FTA Project Management Oversight Program Operating Guidance #22 (PG22). Prior to the signing of the FFGA in 2006, a more comprehensive Risk Assessment was performed in accordance with PG40, followed by an update in 2007/2008. In October 2008, the PMOC issued to the FTA the Technical Capacity and Capability analysis in accordance with PG31C. In early 2009, the ESA project team provided an updated project budget and schedule. The PMOC subsequently provided modified PG33 and PG34 reports with a focus on changes from FFGA to 2009 Budget and Schedule reports as well as assisting in the development of the Cost Risk Summary and PG47 support documents. From late 2009 through to the current period, MTACC and ESA-PMT, working with the FTA and PMOC, have concurrently progressed both the development and the implementation of the ELPEP. MTACC-ESA has also revised or rewritten most of the PMP sections/subplans/procedures associated with meeting the risk management requirements of the ELPEP.

2006 Risk Mitigation Commitments at FFGA: A detailed risk mitigation plan was developed in May 2008, based on the MTACC risk mitigation commitments made in 2006, just prior to the FFGA. The PMOC observes that many of the forecast risks were realized and the project also encountered new risks such as contract default (CQ028) and the need for extensive slurry wall repairs in the Queens Open-Cut Excavation Area. As a result, MTACC has missed all but one of the basic annual mitigation milestones from Q4-2006 through Q4-2011 for the following performance metrics: Design Completed; Contracts Awarded (based on current contract/package values); and Construction Completed (cost expenditure basis).

Current Risk Mitigation Commitments: The management baselines included in the ELPEP derive from the modified PG33 and PG34 reports, PG47 analysis and the Cost Risk Summary completed in 2009. Based on the ELPEP, MTACC-ESA has committed to the following: managing the project to the revised ESA cost and schedule baselines approved by the MTA Board in September 2009; establishment of risk baselines and a risk mitigation framework with milestones; adherence to minimum cost and schedule contingency requirements; development of cost and schedule risk mitigation capacity including secondary mitigation strategies required to offset reserved contingency drawdowns; and implementation of specific design development, geotechnical, real estate, utility and construction risk mitigation strategies. It is the PMOC's opinion that MTACC-ESA currently does not yet have a fully integrated approach, along with the required coordinated processes, to be fully compliant with the risk mitigation requirements in ELPEP. The PMOC notes that a number of the risks identified in the 2009 PG47 analysis have been realized and include: Stakeholder Risk (Amtrak on CH053 and CH054A); Construction Management Risk (CM019); Geotechnical Risk (potential - CQ039); Design and Pre-Construction Planning Risk (CH053 and CH054A); Schedule Delays (CM019, CH053, CH054A, CQ039); Differing Site Conditions (CH053, CH054A). The PMOC believes that MTACC's failure to effectively manage stakeholder, construction management and design/pre-construction planning risks has resulted in substantial schedule delays in both Manhattan and Queens. MTACC has, however, managed the potential schedule delay risks quite well on the CQ031 contract, but at a high cost.

Current Risk Mitigation Efforts: *Through April 2012, ESA-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:

- In response to continued delays experienced on the Queens contracts to date, ESA-PMT and the associated ESA construction managers continue to manage all Queens area work to the critical CQ031 milestones related to TBM mining of the remaining two rail tunnels.
- ESA-PMT worked with LIRR, Amtrak and the ESA-CMs to evaluate the impacts that the Amtrak planned capital improvements for the East River Tunnels (ERT) will have on the track outages needed for the Harold Interlocking work. This effort continued into early 2012. *However, Amtrak has experienced delays in their ERT program due to a broken rail situation and this continues to affect track outage coordination with the ESA project*.
- *ESA-PMT has done a 4-D model to assess the constructability of the jacked box tunnel in Contract CH057.*

- ESA-PMT is evaluating additional transfers of work scope in the Harold Interlocking from railroad force account to third-party contractors.

During March 2012, MTACC-ESA commenced the programmatic risk assessment of the revised cost and schedule baselines developed by ESA and this effort continued through April 2012. An independent outside consultant facilitated the ten-day risk workshop and will be developing and finalizing the "risk-informed" cost and schedule baselines based on the input collected during the workshop.

5.0 ELPEP

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 has discussed them with the FTA Region 2 Office. *The PMOC and the FTA met with MTACC in April 2012 to discuss the status of the consolidated comments. A working session to resolve comments will be planned for May 2012.* Also related to TCC compliance are two outstanding issues requiring MTACC action: MTACC completion of the final sub-plan elements, discussed above, and the need for MTACC to develop and implement the PMP training process.
- **Schedule Management Plan (SMP):** On November 3, 2011, the FTA confirmed that MTACC has responded to the Candidate Revisions identified in FTA's conditional approval letter, dated October 26, 2010, and that the SMP is fully approved. The PMOC continues to verify SAS substantial compliance with the SMP since August 2010. There were no additional updates during this period.
- **Cost Management Plan (CMP):** FTA conditional approval of the Cost Management Plan, including five (5) Candidate Revisions was received on September 1, 2011. MTACC has submitted its final revisions to the CMP, which incorporate its responses to those Candidate Revisions.
- **Risk Mitigation Capacity Plan (RMCP):** Drafts of the ESA and SAS Project Risk Management Plans were transmitted to FTA Region II during October 2011. MTA addressed all PMOC comments in its submittal of the RMCP on October 28, 2011. Resolution of any final comments to the RMCP will be coordinated and combined with a review of the ESA and SAS Project Risk Management Plans. *MTACC is reviewing final FTA/PMOC comments and this plan is expected to be approved in the near future.*
- **Conformance and Compliance:** *MTA's final conformance and compliance documentation is being prepared for submittal.*

6.0 SAFETY AND SECURITY

The contractor's safety performance statistics for the CM009/019 (Manhattan Tunnels Excavation/Structures Part 1) contracts continue to be poorer than the industry norm, despite senior management involvement from both the contractor and the MTACC. For March 2012 (the latest up-to-date report available), the injury ratio for CM009 was 3.19 lost time accidents, for CM019 it was 2.73 lost time accidents, and for CQ039 it was 5.52 lost time accidents per 200,000 hours worked. These contracts continue to trend above both the overall project rate of 2.54 lost time accidents; and national industry average of 2.20 lost time accidents per 200,000 hours worked (based on the Bureau of Labor Statistics).

In March 2012, OSHA announced that it would issue $48,000 in fines to the CM009/019 contractor for the runaway mine car incident resulting in injuries to two workers in the fall of 2011 (October). The OSHA investigation resulted in 11 safety findings of various kinds. The mine car incident was finding #10 and carries a suggested fine of $7,000. The reason the fine would be levied was shown as, "stored rail cars not properly chocked". The total amount of all 11 fines, if not appealed, would be $48,000.

7.0 ISSUES AND RECOMMENDATIONS

Harold Electrical/Catenary Design:

Progress has been made over the last several months in getting Amtrak approval on the ET design packages. The PMOC recommends that MTACC management continue to focus on the resolution of catenary design package approvals through better communication and coordination among the GEC, the 3rd party design checker, Amtrak and the ESA construction manager.

Contracts CM009/019: *The progress of both contracts slipped considerably during the last three quarters of 2011 and into the first months of 2012, so much so that the MTACC undertook a schedule re-baseline effort in late 2011 to provide a revised forecast for CM009/019 Contract completion. The result was that the Substantial Completion (SC) date was revised to August 31, 2012. MTACC ESA management developed work plans with the contractor while the schedule was being re-baselined to allow follow-on contracts, such as CM012, earlier access to common work sites. Although the PMOC has previously noted that the contractor has made significant construction progress during the last several months and has been able to keep up with its current construction schedule, the PMOC believes that there is simply too much lost ground for the contractor to make up to achieve any appreciable overall schedule recovery.*

Contract CQ039:

Continued difficulties with the ground freeze have caused significant schedule slippage that will delay the start of Contract CQ032 (Plaza Substation and Queens Structures) work in the Early Access Chamber area. Continued schedule slippage will delay turnover of the Milestone 1A Area and the start of Contract CQ032 (Plaza Substation and Queens Structures) work in the Early Access Chamber area.

Contract CQ031: Due to late completion of relocation of existing catenary and signal tower poles along the Track A alignment by the CH053 Contractor, the Track A Tunnel TBM drive was terminated approximately 300ft. short of its original location at the western end of the Track A Approach Structure being constructed by CH053. [redacted] PMOC notes that this may be closer to a 500ft. long structure due to the horizontal curve added to the tunnel to move the TBM extraction pit off the tangent alignment to avoid interference with the existing Amtrak 12kV duct bank. The existing duct bank is still in service because completion of the new replacement duct bank by the CH053 contractor is significantly behind schedule. *The PMOC further notes that no work in this area can be done until the existing 12kV duct bank is de-energized and de-commissioned after completion and commissioning of the new replacement 12kV duct bank later this year or early in 2013.*

Contracts CH053/54A: *Given that continuing major problems remain unresolved and additional problems, such as the Amtrak labor unions claim to CH053 work (in March 2011), continue to arise, the PMOC does not believe that any schedule recovery is possible on this contract, despite the notable productivity gains in late March and early April 2012. The PMOC remains very concerned about the continuing adverse impacts to the CQ031 contract, as well as the follow-on Harold Interlocking contracts CH057 and CH058. The PMOC is concerned that costs may continue to increase dramatically in response to continuing delays to the Substantial Completion date, and in response to mitigating delays to the one remaining critical CH053/CQ031 interface milestone, identified in Q3-2010, due to late completion of critical CH053 work.* In addition, continuing late completion of construction work under the CH053 contract is creating new interferences with the CQ031 contract work that causes schedule delays and increased costs. The PMOC has similar concerns about Contract CH054A (Harold Structures Part 2A) as the concerns discussed above for Contract CH053. The adverse impacts to the CH053 and CH054A construction schedules and budgets have been significant. *In addition; the March 22, 2012 re-baselined IPS shows that CH053 is on the critical path.* The *PMOC continues to recommend that ESA prioritize the GEC construction support to this contract, expedite resolution of utility interferences, and prioritize the contractor's requests for track outages and force account support.*

Railroad Force Account: *Amtrak announced at the Harold Part 2 Risk workshop held on April 11, 2012 that because of upcoming Amtrak projects (Moynihan Station, Brookfield, NJHSR, and Wilmington track re-alignment), the availability of Amtrak ET resources may be significantly reduced over the next several years. This turn of events has the potential to significantly impact the schedule for Harold work over the next several years.*

Procurement: In the PMOC's opinion, MTACC has not effectively managed the procurement process. The continued procurement delays consume valuable schedule time before contract award and deprive individual contract packages of needed schedule float during construction.

As it now stands, the PMOC believes that the proposed NTP date of August 1, 2012 for the Systems Package 1 (CS179) is not achievable, given the fact that the schedule proposals were not received until late April 2012, and cost proposals are due in the first week of May 2012. In order to award on schedule, a selection must be made in time for presentation to the July 2012 MTA Board meeting for approval. Also, the CM012 bid due date has slipped from May 8, 2012,

to May 30 2012. Continuing procurement delays may have significant impacts on the entire ESA project schedule.

Project Funding: In 2011, the MTA proposed a revised financial plan that identified some additional funding streams including a potential Railroad Rehabilitation and Improvement Funding loan from the Federal Railroad Administration (FRA) for $2.2 billion. *The NYS legislature allocated $770 million in the NYS budget in March 2012 for the MTA Capital Program. The allocation of this funding among the projects in the MTA Capital Program (including ESA) remains to be finalized.*

Project Schedule: *The ESA-PMT issued revision 3 of the revised baseline schedule (data date March 1, 2012) in March 2012*. This revision reflected a change in milestones, durations, and start dates for various contracts (CM012; CM013A; CM014B; CM015; and CS 179), but did not affect the new RSD. *This version served as the basis for a risk assessment of the new project baseline schedule; however it is not clear whether or not this revision will be the final project baseline going forward.* [redacted]

Property Acquisition and Real Estate: [redacted]

The Project has gained access to 335 Madison Avenue to further designs for the easements associated with the construction and operation of 1) an employee elevator that will connect the ESA/LIRR Station Master's Office on the ESA concourse level to the GCT Terminal Management Center on the GCT concourse level and 2) the public elevator in the Biltmore room. [redacted]

APPENDIX A – ACRONYMS

ARRA	American Recovery and Reinvestment Act
BA	Budget Adjustment
CCC	Change Control Committee
CCM	Consultant Construction Manager
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
CWB	Current Working Budget
CWP	Construction Work Plan
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
RMCP	Risk Mitigation Capacity Plan
ROD	Revenue Operations Date
RSD	Revenue Service Date
SC	Substantial Completion
SCC	Standard Cost Category
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
WBS	Work Breakdown Structure

APPENDIX B – TABLES

Table 1 – Project Budget/Cost Table

	FFGA (as of December 18, 2006)			FFGA Amendments	MTA's Current Working Budget (CWB)		Expenditures as of *March 31, 2012*	
	($ Millions)	(% of Grand Total Cost)	Obligated (Millions)	TBD	($ Millions)	(% of Grand Total Cost)	($ Millions)	(% of CWB)
Grand Total Cost	**$7,386**	**100**			**$8,827**	**100**	*$3,564.8*	*40.4*
Financing Cost	$1,036	14.0			$1,036 (FFGA est.)	11.7		
Total Project Cost	$6,350	86.0	$4,107		$7,791*	88.3	*$3,564.8*	*45.8*
Federal Share	$2,683	36.3	$1,148		$2,699	30.6	*$1,647.6*	*21.1*
5309 New Starts share	$2,632	35.6	$1,098		$2,436.6	27.6	*$1,401.8*	*18.0*
Non New Starts grants	$51	0.7	$50		$67	0.8	$50.4	0.6
ARRA	0	0	0		$195.4	2.2	195.4	2.5
Local Share	$3,667	49.6	$2,959		$5,092	57.7	*$1,917.2*	*24.6*

* CWB represents MTA Board approved $7,791 budget exclusive of financing cost (September 2009).

Table 2 – Summary of Critical Dates

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

* Source – Grantee forecast Revenue Operations Date per updated MTA approved schedule information in September 2009 and July 2011 IPS update (the most recent complete IPS update).

**Source – ELPEP baseline.

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

Standard Cost Category (SCC) No.	Description	FFGA baseline ($)	MTA's Previous Reporting Period CWB ($) *(February 29, 2012)*	MTA's CWB ($) (*March 31, 2012*)	% Change from FFGA to CWB
10	Guideway & Track Elements	1,988,741	*2,691,161*	*2,608,387*	*31.2*
20	Stations, Stops, Terminals, Intermodal	1,168,655	*1,434,089*	*1,527,225*	*30.7*
30	Support Facilities: Yards, Shops	356,264	*352,271*	*349,489*	*[1.9]*
40	Site Work & Special Conditions	205,105	*367,214*	*366,381*	*78.6*
50	Systems	619,343	*632,769*	*627,338*	*1.2*
60	ROW, Land, Existing Improvements	165,280	*203,639*	203,639	23.2
70	Vehicles	493,982	*674,372**	674,372*	36.5
80	Professional Services	1,184,000	*1,435,485*	*1,434,170*	*21.1*
90	Unallocated Contingency	168,529	0	0	0
Subtotal		**6,349,899**	**7,791,000**	**7,791,000**	**22.7**
100	1,036,104	1,036,104**	1,036,104**	1,036,104**	0
Total Project Cost (10 – 100)		**7,386,003**	**8,827,104**	**8,827,104**	**19.5**

* Rolling Stock ("Vehicles") includes passenger revenue vehicles, construction locomotives, and construction flat cars.

** Current Budget Finance Charges are estimated at the same value as the FFGA.

Table 4 – *April 2012*
ESA: 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	8/26/11 10/06/11 (A)
STAGE 2			[redacted] 11/16/11 (A)	[redacted] 2/29/12 (A)	[redacted] 3/9/12 (A)	[redacted] [redacted] 4/27/12 (A)	[redacted] [redacted] 4/28/12 (A)	[redacted] 6/01/12
STAGE 3	[redacted] 12/14/11 (A)	[redacted] 2/29/12 (A)	[redacted] [redacted]	[redacted] 5/24/12	3/9/12 6/20/12	[redacted] 7/30/12	5/18/12 8/17/12	6/18/12 9/18/12
FQA65	[redacted] 12/14/11 (A)	[redacted] 2/29/12 (A)	11/25/11 [redacted]	1/06/12 [redacted]	2/10/12 6/11/12	3/20/12 7/18/12	4/20/12 8/3/12	5/26/12 9/4/12

A = Actual

[redacted].

[redacted]

Project Status:		Original at FFGA	Current*	[redacted]
Cost	Cost Estimate	$7.386B	$7.791B	[redacted]
Contingency	Unallocated Contingency	$168.5M	$0	[redacted]
	Total Contingency (Allocated plus Unallocated)	$855M	*$400M*	[redacted]
Schedule	Revenue Service Date	December 31, 2013	*TBD*	[redacted]

Total Project Percent Complete	Based on Expenditures	*51%*
	Based on Earned Value	NA

Major Issue	Status	Comments
Availability of local funding	NYS approved $770 million for MTA Capital Program in March.	Funding allocation for ESA work has to be finalized.
Re-baseline (cost and schedule)	Cost and schedule re-baselines were to be finalized in February 2012. As of end of April 2012, neither cost nor schedule final baseline has been received.	MTA initially committed to having new baselines completed by the end of December 2011, and presented to the MTA CPOC in February 2012.
Amtrak East River Tunnel Work	Amtrak original plan for two tunnel outages during 2012 has been changed to one tunnel.	ESA re-baseline is based on two tunnel outages. Impact (if any) on new baseline has to be evaluated.
Completion of Risk Assessment	Risk workshop was held March 13-22nd as part of MTACC programmatic risk assessment. Results must be finalized by end of April 2012 in order to present to at May CPOC meeting.	PMOC has not received final results of risk assessment as of the end of April 2012 The PMOC believes that it will be difficult to have a comprehensive risk assessment completed in time for presentation to CPOC in May 2012.
Date of Next Quarterly Meeting:	TBD	

* MTA's Current Working Budget (as of March 31, 2012).

[redacted]