

PMOC MONTHLY REPORT

East Side Access (MTACC-ESA) Project

Metropolitan Transportation Authority

New York, New York

Report Period July 1 to July 31, 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

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. 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 June 2014, MTACC reported that the overall Engineering effort was 98.4% complete, a decrease of 0.2% from the previous month. The PMOC had questioned the derivation of the figures for that calculation but was recently informed that it is based on an Earned Value approach of the list of Contract Deliverables, and not cost based. However, although ESA reports Engineering Percent Complete, it relates solely to the Design portion. The ESA Cost Report shows only 90.5% of the budgeted section titled "Design" as having been invoiced.

NTP for design of the new Concourse Entrance at 43rd Street has been issued to the GEC for the CM014B Contract Package (although this package is already out on the street). The PMT has also executed mods for the design of a second new Entrance, at 45th Street and design support for future Electronic Media (digital signage) into the Concourse, the 48th Street Entrance, and the Cavern.

Under Construction Phase Services (CPS) the GEC is in the process of reviewing existing condition surveys for the approach tunnels and structures for the CM006 Contract, which could potentially lead to a change in the liner designs.

Anticipated advertise date for the CH057 package was previously forecast for July 2014 with NTP forecast for September 2014. The forecast advertise date has not been met. Signed and sealed drawings are now anticipated to be delivered by the GEC in August 2014, however this new date may not be met if the PMT gets concurrence from LIRR to add scope from FQA65 into this package as a series of eight options.

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 was issued on May 2014, with a 90% submission planned for August 2014, and a 100% submission by November 2014.

The PMT and GEC met with Long Island Rail Road working groups on July 14, 2014 to review the 60% design submittal for the GCT Station Cavern hybrid design for the CM007 package. The meeting consisted of an overview of the changes made since the CM12R was reconfigured, as well as a review of the 60% CM007B design submittal. Long Island Rail Road provided official comments on the 60% design deliverable on July 29, 2014. These comments were subsequently transmitted to the GEC for review. The next deliverable is the 90% CM007B design submittal, scheduled for delivery to the PMT by August 11, 2014.

The PMT is developing an estimate to have the GEC create a new CH061A Contract Package to complete the final segment of Tunnel A, and expects to complete negotiations with the GEC to begin work on this new package by the end of August 2014.

b. Procurement

As of the end of June 2014, the Cost Report showed total procurement activity on the project as 64.9% complete, with \$6.288 billion in contracts awarded out of the \$9.693 billion current reported budget (which will change to \$10.177 billion in the next reporting period).

CM014B was advertised as an RFP on May 6, 2014. Currently eight addenda have been issued and the final Addendum #9 is under development to be issued in early August 2014. The technical proposal submission due date for CM014B (GCT Finishes and Fit-out) Contract Package was further extended from July 31, 2014 to August 11, 2014 and the cost proposal submission date was extended to August 31, 2014. MTACC has scheduled a Vendor Outreach Meeting for the upcoming CM007 RFP on August 7, 2014.

The CS084 Contract was advertised and bid documents were available to the bidders on June 13, 2014. Bid opening is scheduled for August 21, 2014, and the pre-bid conference took place on July 15, 2014.

CH057C is a second on-call contract (derived from the initial CH057 package) to perform various track construction formerly designated to be performed by LIRR forces. Design has been completed and the package was sent to prospective bidders on June 3, 2014. Bids were received on June 20, 2014 and a qualifications hearing was held with the low bidder on June 25, 2014. The Contract was awarded and a construction kick-off meeting was held on July 24, 2014.

c. Construction

The PMT reported in its June 2014 Quarterly Progress Report that the total construction progress reached 50.1% complete vs. 52.0% planned, an increase of 0.4% since the previous month (the PMOC calculations from the Cost Report show percentage invoiced against the budget slightly higher).

CM004 – 44th Street Building Demolition and Fan Plant Structure; 245 Park Avenue

Entrance: MTACC reports that through June 30, 2014, the EAC is \$55.089 million, lower than the previous \$55.28 million, due to the removal of some previously anticipated contract modifications. The Forecast Substantial Completion date for the CM004 Contract has been further extended to August 15, 2014 from the previous July 15, 2014 due to delays in completing the street utility work. Beneficial Use for the 245 Park Avenue Entrance was achieved October 21, 2013. The actual percent complete was 98.8% versus 100% planned.

Construction Progress:

Vent Plant: Final cleanup continued. The Contractor has installed a temporary plywood wall and door on 44th Street creating controlled access into the vent building. The Contractor resumed work on the water line connection in E. 44th St.

245 Park Ave. Entrance: Portions of the failed terrazzo floor in the passageway continues to be an issue. The GEC has completed their investigation and report on the cause of the terrazzo problem and submitted their results to MTACC. GEC recommendations include repairing the floor control joint and installing a new trench drain. As the entrance is being used by the public, this repair work must be done at night and weekends. The PMOC forecasts that completion of this work will extend into the 4Q014.

CM005- Manhattan South Structures: The Estimate at Completion (EAC) for CM005 remained at \$208,955,761 during June 2014. The MTACC forecast for Substantial Completion (SC) remained at February 6, 2016. Actual construction progress for June 2014 was 15.8% versus 20.8% planned. Cumulative progress through June 30, 2014, was 36.0% actual versus 35.9% planned.

Construction Progress: The Contractor completed invert and sidewall concrete application in the sump pit at 38th St., continued to place archway concrete in Westbound Tail Track T403, began to place invert concrete in the Westbound Cavern, began invert re-bar installation in the GCT 1&2 West Wye Cavern, and completed the first lift of sidewall concrete in the GCT 1&2 East Wye Cavern.

CM006 – Manhattan North Structures: The Estimate at Completion (EAC) for CM006 remained at \$294,201,750 during June 2014. The MTACC forecast for Substantial Completion (SC) remained at November 30, 2016. The MTACC has not reported any cumulative construction progress to date.

Construction Progress: The Contractor began to apply smoothing shotcrete and waterproofing in the 50th St. ventilation plenum in July 2014, but this progress was not reported in the MTACC's June 2014 Monthly Report..

CM013 – 50th Street Vent Facility: The work for CM013 is 100% complete and as of June 30, 2014, MTACC is no longer reporting on CM013 as an active contract. However, as of the date of this PMOC report, the Code Compliance Unit (CCU) still has not completed sign-off of the

Pneumatically Applied Concrete (PAC) mockup for the vent building. This continues to prevent MTACC from declaring Substantial and Final Completion.

CM013A – 55th Street Vent Facility: MTACC reports that through June 30, 2014 the EAC is \$57.071 million, slightly lower than the previous \$57.086 million. Forecast Substantial Completion remains April 5, 2015. As of June 30, 2014, MTACC reported that the actual percent complete continues to track ahead of schedule at 49.8% actual vs 48.4% planned.

Construction Progress:

Plenum: Completed shoring, formwork, rebar and placement of roof concrete for a section of the East Plenum. Placement of the north and south upper walls in the West Plenum was completed.

Cavern: Completed placement of the north and south walls on the Facility Power Level. Placement of the Lower Fan Level slab was completed. Placement of the Lower Fan Level north wall was completed.

CM014A– Concourse and Facilities Fit-Out: MTACC reports that through June 30, 2014, the EAC was reduced to \$55.32 million from the previous \$55.91 million. MTACC reports that this is because existing contract modifications were removed, such as the ramp at the south end of the Concourse. Forecast Substantial Completion date has been extended to January 15, 2015 from the previous December 15, 2014. As of June 30, 2014, MTACC reported that the actual percent complete was 72.08% vs 87.40% planned. This is due to a lack of manpower and the Contractor's slow progress in executing the work, and the resultant delay impacts to the forecast for when Con Ed will energize the system for final testing and commissioning.

Construction Progress:

Concourse (Original Contract Work): Surveying and layout is ongoing. Installation of fire stopping continues and CMU wall erection and painting is ongoing. Erection of permanent stair in Shaft #2 continues and is nearing completion. Ductwork and piping installation continues in Zones #1 & #2. Sprinkler and fire standpipe installation continues. Branch feeder and conduit installation is ongoing throughout. Installation of the 16340 switchgear is nearing completion. Installation of the 16341 switchgear is scheduled to begin August 8, 2014. The electricians began pulling the MV feeders.

Concourse (Scope Transfer from CM014-B): The CM014-B scope transfer work is complete. For the ramp work, this has been removed from this contract due to significant utility interference that must be relocated by Metro North Railroad (MNR). This work has been placed back in the CM014-B scope of work.

CS179 – Systems Package 1

MTACC awarded this contract in March 2014. As of June 30, 2014, the Estimate at Completion for CS179 is \$550,388,000. The MTACC forecast for Substantial Completion is November 25, 2019.

Construction Progress: The Contractor is in the mobilization stage of the Contract and is currently finalizing the project organization. None of the overall project schedule documents have been submitted or approved as of the end of June 2014. The PMOC observes that the Contractor continues to struggle to fill its important positions and organize itself for this Contract. Several staff members that the Contractor intends to use on this Contract are still

involved with the other two ESA Contracts that the Contractor has and cannot be made available to begin work on CS179. This has a negative impact on the mobilization for this Contract.

Queens Contracts:

CQ032 – Plaza Substation and Queens Structures: The Estimate at Completion (EAC) for CQ032 increased during June 2014 from \$230,746,188 to \$236,776,188 due to scope transfer for work in the Yard Lead Tunnel from future contract CS284 into CQ032. The MTACC forecast for Substantial Completion (SC) remained at October 7, 2015. Actual construction progress for June 2014 was 6.3% versus 10.1% planned. Cumulative progress through June 30, 2014, was 59.3% actual versus 61.6% planned.

Construction Progress: The contractor removed the last temporary support strut in the Open Cut in July 2014. The contractor also began to erect structural steel for the Tunnel Exhaust/Intake Facility over area 1A and resumed steel erection for Plaza Substation levels C06 and C07 into the Q-Tip area. Additionally, the contractor continued to pour concrete slabs in the C07 level of the Open Cut and began to pour the concrete invert in Tunnel B/C. In the Bellmouth, the contractor continued to prepare for steel erection to extend the 63rd St. Tunnel eastward. The contractor also continued to make miscellaneous repairs in the ventilation facilities between 29th St. and Roosevelt Island.

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

As of June 30, 2014, the Estimate at Completion (EAC) for CH053 increased slightly from \$302,302,658 to \$302,844,702 due to the MTACC's re-forecast of existing contract modifications. The MTACC forecast for Substantial Completion (SC) was extended by one month to February 27, 2015. Actual construction progress for June 2014 was 3.7% versus 6.0% planned. Cumulative progress through June 30, 2014, was 90.3% actual versus 95.5% planned.

Construction Progress: The contractor completed construction of the 43-S2 retaining wall between 43rd and 48th Sts. and micro-tunnel bore #1 adjacent to the new G02 Substation. The contractor also continued to excavate adjacent to the Tunnel A Approach Structure west of 39th St. for future manhole installation and install tie-backs in the approach structure itself.

CH054A – Harold Structures Part 2A: As of June 30, 2014, the Estimate at Completion (EAC) for CH054A increased slightly from \$61,293,505 to \$61,384,274 due to the MTACC's re-forecast of existing contract modifications. The MTACC's forecast for Substantial Completion (SC) was extended by one month to January 16, 2015. Actual construction progress for June 2014 was 9.7% versus 18.2% planned. Cumulative progress through June 30, 2014, was 81.3% actual versus 94.1% planned.

Construction Progress: The Contractor continued to install the storm sewer system between Queens Blvd. and the new G02 Substation and jacking and receiving pits for micro-tunnel bore #13, which is scheduled to begin in mid-August 2014.

CH057A – Part 3 Westbound Bypass: As of June 30, 2014, the Estimate at Completion (EAC) for CH057A increased from \$104,300,000 to \$105,209,688 due to an anticipated scope transfer for a signal bridge installation. The MTACC's forecast for Substantial Completion (SC) was extended 5 weeks to April 22, 2016. Actual construction progress for June 2014 was 1.2% versus 4.8% planned. Cumulative progress through June 30, 2014, was 3.1% actual versus 5.5% planned.

Construction Progress: The Contractor's field construction continues to be quite limited with the only actual progress being its preparations to install Signal Bridge #30 at Woodside Interlocking, although the Contractor continues to prepare submittals, apply for permits, and install instrumentation to measure track settlement.

CH057B – Part 3 Construction of LIRR Tracks: Contract CH057B was awarded to an ESA “on-call” contractor in mid-June 2014 and the contractor began construction in early July 2014. The scope of work was the construction of re-aligned LIRR tracks ML2 and ML4 (Main Line 2 and Main Line 4) between 43rd St. and a point between 48th St. and Woodside Interlocking, as well as the removal of old ML2 and ML4 once the realigned tracks are in service. The contractor prepared the subgrade and built the bodies of the tracks on final vertical horizontal and vertical alignments, after which LIRR Force Account personnel made/will make the final “cut and throw” connections. The MTACC did not include any EAC, SC, or construction progress information in its June 2014 Monthly Report for CH057B.

Construction Progress: As noted above, the CH057B contractor completed its construction of both of realigned tracks ML2 and ML4 during July 2014. LIRR Force Account personnel completed the “cut and throw” of ML4 Track on the weekend of July 25-27, 2014. ML2 is scheduled for the weekend of August 15-17, 2014.

Railroad Force Account:

FHA01 – Harold Stage 1 Amtrak: As of June 30, 2014, the Estimate at Completion (EAC) for FHA01 remained at \$18,824,861. The MTACC's forecast for Substantial Completion (SC) was extended by two weeks to March 8, 2016. Actual construction progress for June 2014 was 1.3% versus 1.3% planned. Cumulative progress through June 30, 2014, was 96.8% versus 96.8% planned.

Construction Progress: The Electric Traction Department continued to make limited catenary and signal wire transfers between Thomson Avenue and Substation 44 during July 2014.

FHA02 – Harold Stage 2 Amtrak: The June 2014 MTACC Monthly Report indicates two different Estimates at Completion for FHA02, \$41,683,606 and \$45,369,618. The PMOC will investigate the reason for this discrepancy and advise the FTA when it has an answer. The MTACC forecast for Substantial Completion was extended by 6 weeks to October 25, 2017. Actual construction progress for June 2014 was 4.7% versus 3.6% planned. Cumulative progress through June 30, 2014, was 83.0% actual versus 83.0% planned.

Construction Progress: Amtrak C&S personnel continued preparations for the installations and cutovers of the E34 and E35 signal bridges in Harold Interlocking during July 2014.

FHA03 – Harold Stage 3 Amtrak: The first phase of FHA03 was completed in August 2013 and it has since been de-activated until additional work is added to the scope. The PMOC will maintain this section in its monthly report as a “placeholder”.

FQA65 – Loop Interlocking Amtrak: As of June 30, 2014, the Estimate at Completion (EAC) for FQA65 remained at \$33,163,652. The MTACC forecast for Substantial Completion (SC) was extended by 2-1/2 months to October 27, 2018. Actual construction progress for June 2014 was 2.2% versus 2.7% planned. Cumulative progress through June 30, 2014, was 4.0% actual versus 4.2% planned.

Construction Progress: Amtrak C&S personnel continued to install signal trough and conduit east of Q Tower during July 2014.

FHL01 – Harold Stage 1 LIRR: As of June 30, 2014, the Estimate at Completion (EAC) for FHL01 remained at \$20,804,621. According to the MTACC’s June 2014 Monthly Report, the forecast for Substantial Completion was extended by 21 months until November 25, 2016 (the PMOC does not consider this to be significant due to ESA’s re-baseline of the entire Harold Interlocking program). Actual construction progress for June 2014 was 10.4% versus 13.0% planned. Cumulative progress through June 30, 2014, was 90.4% actual versus 87.8% planned.

Construction Progress: LIRR Force Account personnel made all signal revisions, installed third rail, and “cut and threw” both ends of the existing ML4 Track, above, into the new ML4 Track constructed by the CH057A contractor and placed the realigned ML4 Track in service during July 2014.

FHL02 – Harold Stage 2 LIRR: The June 2014 MTACC Monthly Report indicates two different Estimates at Completion for FHL02, \$71,189,359 and \$76,619,172. The PMOC will investigate the reason for this discrepancy and advise the FTA when it has an answer. The MTACC’s forecast for Substantial Completion (SC) remained at November 25, 2016. Actual construction progress for June 2014 was 13.9% versus 10.0% planned. Cumulative progress through June 30, 2014, was 41.1% actual versus 52.8% planned.

Construction Progress: During July 2014, LIRR C&S Force Account personnel completed “breakdown” testing of Signal Bridge 30, and continued to make circuit revisions and pre-test at the “H4” CIL in Harold Interlocking. LIRR Track personnel continued to assemble panel turnouts for installation this year. LIRR Communications personnel continued to install wood poles between 59th St. and Woodside Interlocking for an alternative power source.

FHL03 – Harold Stage 3 LIRR: The first phase of FHL03 was completed in September 2013 and it has since been de-activated until additional work is added to the scope. The PMOC will maintain this section in its monthly report as a “placeholder”.

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

ESA Project Quality Manual (PQM): The ESA Quality Manager has finalized Revision 7 to the Project Quality Manual. The MTACC Executive Management signed it in July 2014 and sent it to the PMOC for final review. The PMOC is currently reviewing it.

Submission of As-Builts: Most contractors had been deficient in submitting their as-builts on time and in the proper format. The ESA Quality Manager conducted an As-Built Process Audit on contracts CH053, CH054A, CQ032, CM004, CM014A, CM013, and CM013A. All of the aforementioned have shown improvement except for CM014A, which was not ready for the audit. An audit of CM005 will be scheduled later this year due to the Contractor’s scheduling conflicts. Contracts CH057A, CS179, and CM006 started recently and will be audited by the end of 2014.

CS179 (Systems Package 1 – Base Contract): The CS179 contractor had been very slow in producing their initial submittals and staffing a permanent Quality Manager and support staff. The contractor has hired a quality manager and a dedicated systems manager. Their initial submittals are improving.

Quality Training: The ESA Quality Manager will be giving workshops/training on as-builts, nonconformance reports, and close-out procedures to contractors on the new ESA contracts and on some of the existing contracts.

Process Audits: MTACC Quality has begun conducting Process Audits of the ESA Construction Management offices. The initial audit was conducted on the CM013 contract in July 2014. Results are forthcoming. The next audit is scheduled for late August 2014 on the CM013A contract.

2.0 SCHEDULE DATA

ESA submitted its IPS #59 data date July 01, 2014 and its variance report. The IPS shows a Revenue Service Date of September 10, 2021 with one year of contingency; however the report states that next IPS update will have the RSD of December 2022.

The most important 90 day look-ahead activity for the project at this point is CM007 advertisement which is scheduled for October 1, 2014. The Table below shows the significant 90-day look-ahead milestones:

Activity Name	Start	Finish	IPS-Contract
Milestone #5 - Microtunnels and Manhole Associated with G02 Substation		14-Aug-14	CH053
Milestone #1A Harold Access Bridge Balance of Work		1-Oct-14	CH053
Milestone #1A - Harold Access Bridge Surrounding		1-Oct-14	CH053
Milestone #4 - Church Parking Lot		24-Oct-14	CH053
CH057 - Advertise Date	29-Aug-14		CH057
CH057 - Bid Due Date		20-Oct-14	CH057
CH057A Milestone #1 - Signal Bridge 24 & 30		17-Aug-14	CH057A
Access Restraint #2 - Signal Bridge 16 South Foundation	01-Oct-14*		CH057A
CH057B - Substantial Completion	22-Aug-14		CH057B
CH057C - MS#1 - Site Grading MM2 (100+00~103+20) - NTP + 41		24-Aug-14	CH057C
CH057C - MS#2 - Site Grading MM2 (103+20~105+70) - NTP + 55		7-Sep-14	CH057C
CH058 - 90% Design Submission		1-Sep-14	CH058
CM004 - 44th St Vent Plant Contractual Substantial Completion (ML#1 Date 730 CDs from NTP)		15-Aug-14	CM004
Milestone #1 Escalator/Cavern Connections - Complete Wellways 1 thru 4 - MS30 (September 9, 2014)		8-Sep-14	CM005
CM006 - Access Restraint #1 (Eastbound 63rd St. Tunnel - 212 days from NTP (10/29/14)	29-Oct-14*		CM006
CM007 - Advertise	01-Oct-14*		CM007
Milestone #1 CM013A Completion @ TPSS-FPSS Level/Comm RM Level in Tunnel		30-Oct-14	CM013A
CM014 - Bid Due Date - Bid Opening		26-Aug-14	CM014B
CM014B - Notice of Award		1-Nov-14	CM014B

Activity Name	Start	Finish	IPS-Contract
CM015- Bid Advertise	10-Oct-14		CM015
Milestone #4A1 - Roosevelt Island Facilities		4-Aug-14	CQ032
Milestone #8 - Complete MOD 32 (63rd St. Tunnel Eastbound Rehab)		1-Oct-14	CQ032
CS084 - Bid Due		7-Aug-14	CS084
CS084 - NTP	5-Sep-14		CS084
CS284 - Advertisement	31-Aug-14		CS284
Cutover #L-4 Service		21-Oct-14	FHL02
NTP FHL04 - LIRR Harold F/A Const Stage 4	23-Aug-14		FHL04
NTP VHA04 - Procure Materials Stage 4 - Amtrak	7-Sep-14		VHA04
NTP VHL04 - Procure Materials stage 4 - LIRR	5-Aug-14		VHL04

Project Critical Path: As of July 1, 2014, the East Side Access Program Critical Path begins with work that is currently being performed under CM005 Manhattan South Structures (specifically the GCT 1 & 2 structure), followed by CM007 constructing of GCT Caverns, north Back of House space, then cavern structures and fit out, and ends with CS179 Integrated System Testing and LIRR testing and commissioning. ESA has stated in its monthly report that Contract CM007's re-design changes will be incorporated into the IPS next month to reflect track work tied to CS084. Bids for this contract are expected in early 2015, with full on-site mobilization expected in early 2016. A baseline schedule is expected from the Contractor in early August 2014.

There will be some changes in Harold schedule due to Civil Speed Restrictions that could have an impact on planned long-term outages, and push completion of work in Harold out by as much as a year. Also, delay in the H4 cutover could impact the Harold schedule. Active Harold Contracts CH053 and CH054A are both forecasting Substantial Completion by 1Q 2015, and CH057A is forecasting Substantial Completion in 2Q 2016.

The Harold critical path has changed again, the new one goes through activities in Contracts CH058, FHL02, FHL03, and FHL04. The longest path in Harold is being driven by the 2016 long term track outage. Given the changes in the Harold scheduling and work planning over the several months, as well as the delays in cutovers of H4; H3; and H1/H2, the PMOC recommends that ESA evaluate the impact of these changes on the planned 2016 track outage.

Schedule Contingency: IPS#59 is based on RSD of September 2021 with one year of contingency; however the ESA has proposed the new RSD of December 2022 to MTA's CPOC. As state above, the current IPS does not reflect the December 2022 date and the 22 months of contingency included in that schedule.


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 the following: all the options in the CS179 Contract; CM007, CQ033, and CH058. The new \$10.177B [REDACTED] Budget presented to the CPOC in June 2014 will make the need for

additional funding even greater. The CPOC figure represented an increase of \$484M from the Re-Plan Budget presented in January 2014, and is \$1,932M greater than the 2012 Re-baseline Budget. The 2012 Re-baseline had included more than \$700M of un-funded scope that was to be addressed in the 2015-2019 MTA Capital Program.

Budget/Cost: The ESA June 2014 Progress Report shows the total project progress was 53.2% vs. 54.3% planned against the Current Baseline Budget (CBB) of \$9,693M and the construction progress as 50.1% vs. 52.0% planned, based on invoiced amount. In February 2014, ESA had recognized a range of possible costs, and \$9.693B was at the lowest point of that range. ESA has been reporting against that budget that has a series of small contingencies on varying areas of possible cost. The PMOC believes that this scattered distribution of contingencies will make it difficult to manage the drawdowns. In June 2014, MTACC presented a revised ESA budget of \$10,177M to the MTA CPOC.

Although ESA had told the PMOC that it had reassigned values to each of the SCCs as part of their Re-plan, they have not yet completed that realignment or demonstrated to the PMOC how the values are to be determined or that the structural problems in the SCC have been addressed. The most recent updated Package to SCC matrix provided to the PMOC (based on the \$9,693 million budget) still has several contract packages assigned to incorrect SCCs, as well as the inclusion of contract packages that no longer exist. It appears that the SCC matrix was not restructured to conform to the current CPP that ESA submitted in March 2014. The PMOC had 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.



As part of the Re-Plan, ESA indicated that it was eliminating the Allocated for MODs budget category, but has now substituted an Allowed for MODs category, which represents funds moved out of Contingency equal to the value of the Pending and Potential MODs. Funds for potential MODs that are not realized are then moved back into Contingency. The PMOC believes that this method of tracking will make it difficult for the ESA Project Control Group to accurately track remaining contingency at any given point in time.

Change Orders/Budget Adjustments: The PMT reported that over the last month, one (1) change order over \$100K was executed, with a net value of (\$132,000).

4.0 RISK MANAGEMENT

MTACC had planned to conduct a package level risk assessment for the CM014B (GCT Finishes) in June 2014, almost two months after it advertised the package. This risk assessment is now forecast for September 2014, after technical and cost proposals for the package are scheduled to be received. 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 (currently forecast for August 2014). Conducting the CM007 Risk Assessment before the RFP is advertised is even more critical in the PMOC's opinion, given the fact that ESA did not conduct an adequate constructability review for this package as called for in its management plans. The PMOC does not agree with the ESA position that conducting a Request for Expressions of Interest (RFEI) late last year eliminates the need for a constructability review.



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 June 19, 2014 ELPEP Quarterly Review Meeting, MTACC stated that the TCC Plan revisions are not yet completed pending finalization of the role, responsibilities and level of authority of the ESA Change Control Committee. As of July 31, 2014, the revised TCC Plan has not been submitted
- **Continuing ELPEP Compliance:** The following ELPEP components continue to need improvement or are deficient: Management Decision; Design Development; Change Control Committee (CCC) Process and Results; Stakeholder Management; Issues Management; Procurement; Timely Decision Making; Risk-Informed Decision Making.
- **Project Management Plan:** MTACC submitted PMP Rev. 10 to the FTA and PMOC on July 18, 2014. This revision incorporates changes stemming from FTA/PMOC comments on PMP Rev (9.0) provided in December 2013 as well as changes that resulted from the MTACC's Candidate Revision process. PMP Rev. 10 is currently under review by the PMOC.

The PMOC notes that since June 2013, the ESA project has continued to be non-compliant with ELPEP, and is not meeting some of the more important requirements of the SMP and CMP sub-plans to the PMP. The PMOC's opinion is that this is a serious deficiency and needs to be resolved immediately. The PMOC's major areas of concern include:

- **Cost/Schedule Contingency:** ESA has not calculated the cost and schedule contingency utilization curves for the new baseline budget and schedule presented to CPOC in June 2014. Given that the new budget and schedule have been put in place, the PMOC expects that MTACC will meet the ELPEP requirements for cost/schedule contingency drawdowns in the next reporting period.

- **Schedule Management Plan (SMP):** The ESA project is non-compliant with requirements for IPS Updating, Forecasting, and Schedule Contingency Management against a current baseline schedule. Given that the new budget and schedule have been put in place, the PMOC expects that MTACC will start meeting the requirements set forth in its SMP in the above reference areas.
- **Cost Management Plan (CMP):** The ESA project is non-compliant with requirements for Cost Estimating, Contract Level EAC Forecasting, Project Level EAC Forecasting, Project Level EAC Forecast Validation, Monthly Update Process, and MTACC Cost Contingency Management and Secondary Mitigation. Given that the new budget and schedule have been put in place, the PMOC expects that MTACC will start meeting the requirements set forth in its CMP in the above reference areas.

Revisions to the ELPEP Document: Although the 2014 Re-Plan budget number and Revenue Service Date were presented to CPOC on June 23, 2014, MTACC has not yet incorporated the budget and schedule details into its regular monthly reporting. The PMOC expects that these details will be available in the August/September 2014 time frame.

The most recent ELPEP Quarterly Review Meeting was held on June 19, 2014. The next ELPEP Quarterly Review Meeting with MTACC, FTA-RII, SAS and ESA projects and the PMOC is scheduled for September 25, 2014.

MTACC Project Procedures Audit Related to ELPEP: At the March 31, 2014 Quarterly ELPEP Compliance Meeting, MTACC advised that they will be conducting audits on 10 construction related project procedures for contracts CM005, CM013A, CQ032, CH053 and CH057A in the July/August 2014 time frame. The PMOC notes that these audits have commenced.

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 2.21 vs. 1.70 lost time accidents (LTA) per 200,000 hours. This is slightly higher than last reporting period (2.20). The CM005 Contract has an average of 3.32, trending higher than the project average and also higher than last month's LTA number of 2.44. In response to a PMOC question regarding the safety record at a Progress Meeting, the CM for the CM005 Contract did not have a plan for the remediation of this much higher than standard accident rate. The ESA CM will conduct weekly safety walk-throughs with the Contractor to address on-site safety issues on the CM005 Contract.

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

7.0 ISSUES AND RECOMMENDATIONS

Design: The PMOC remains concerned that the GEC and PMT continue to consistently miss target dates for remaining design activities on the project. In the PMOC's opinion, the continuing re-packaging and shifting of scope place a strain on available GEC resources. Re-scoping continues with the latest round of shifts including: transfer of CM007 lower cavern walls into CM005; development of a CHO61A package; and inclusion of scope from FQA65 into the CH057 package. 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 2Q 2014, 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, however there have been significant scope moves since the plan was issued. The PMOC believes that ESA should adhere to the current CPP and minimize any further scope shifts.

In addition to the scope shifts mentioned in the above section, the ESA PMT is also still considering moving south and north back-of-house work that is currently in CM007, into the existing CM005 and CM006 packages, and is also considering placing the signal installation work in the CS284 package into yet another new Contract package (TBD)

Contract CM014A: 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 deferral of this utility removal/reconstruction work by MNR could impede the ability to the identified south concourse area work in the upcoming CM014-B Contract.

Contract CM013: The continuing delay of the CCU in signing off on the PAC mockup is negatively impacting the Contractor. The physical work is 100% complete but this issue is preventing official sign-off on both substantial and final completion, preventing return of retainage and bond obligations.

Contract CS179: The PMOC observes that the Contractor continues to struggle to fill its important positions and organize itself for this Contract. Several staff members that the Contractor intends to use on this Contract are still involved with the other two ESA Contracts (CH053/54A; CQ032) that the Contractor has and cannot be made available to begin work on CS179. This has a negative impact on the mobilization for this Contract. The PMOC recommends that ESA and the Contractor work together to develop a program to finish the other contracts as soon as possible and/or determine which individuals can be relieved of their prior commitments to the benefit of CS179.

Contract CQ032: The previous gap between actual and planned construction progress was alleviated earlier this year when the Contractor and the MTACC agreed to execute the contract modification for the re-baselined schedule. Although the documentation is still not complete, both parties have incorporated the parameters of the contract modification into their respective schedules. As a result, the PMOC will no longer report about this issue unless a schedule delay relapse becomes apparent.

Contracts CH053/54A: The PMOC remains concerned that the CH053/CH054A Contracts continue to have delays, with 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 inconsistent. 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 Harold work. 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: Due to the re-baseline schedule for Harold, the LIRR scope of work for the 2014 production season was reduced to the installation of eight turnouts, realignments of ML2 and ML4 Tracks, cutover of the signal power system, and cutover of one Central Instrument Location (CIL), all located in the Harold Interlocking. This is a reduction of one turnout installation and one CIL from the previous program. To date, the LIRR has successfully addressed the PMOC's concern, i.e. its ability to produce Site Specific Work Plans (SSWPs) to keep up with the rapid pace of planned weekly production. The LIRR produced three SSWPs during July 2014 for the first three weekend outages and the PMOC is reasonably confident that it will be able to produce the 4th SSWP in time for the realignment of ML2 Track on the weekend of August 15-17, 2014. As a result, the PMOC's concern has been alleviated to a great extent, although the PMOC will continue to monitor LIRR's SSWP production.

Project Funding/Budget: As stated in the Risk Management Section below, the PMOC believes that funding presents a significant risk to the project. The timing of funding has impacted the CS179 package (restructured with options due to funding availability) and the CM007 procurement (moved out to 2015 with limited NTP and 2016 with full NTP). The PMOC has recommended to the ESA Project Controls Group that a cash flow projection be developed along with a funding availability projection to assess the risks to the project should funding not be available in the necessary time frame.

The PMOC is also concerned about the amount of time it is taking to develop and implement its new cost reporting system (Unifier). This effort began almost one year ago and as of the end of July 2014, the ESA still has a considerable way to go to have a fully functional system that will be useful as project controls tool. The PMOC recommended at the July 2014 Cost Review Meeting that the Project Controls Group develop a set of target interim milestones for completing the system.

Project Schedule: The MTA's Independent Engineering Consultant (IEC) engaged a systems specialist via the Supplemental Independent Reviewer earlier this year to review the ESA Integrated Systems Testing (IST) schedule and produce an independent schedule for IST activities. This review uncovered several significant flaws and inconsistencies in the project's IST schedule related to IST schedule logic and duration of uninterrupted access for completion of the IST process. Based on these findings, the independent consultant's IST schedule shows the start of IST activities five months later than project schedule; and IST activities ending 21.5 months beyond the project's forecast IST duration. ESA has addressed this issue by embedding five months of schedule contingency into the IST schedule and 22 months of schedule contingency into the program schedule, resulting in a RSD forecast of December 2022. The PMOC believes that the issues surrounding IST will utilize a significant amount of program contingency, thus impacting the ability to effectively mitigate other program schedule risks.

The PMOC is also concerned about potential delays in the re-planned Harold schedule and has requested a workshop at the July 2014 FTA/MTACC Executive Meeting presenting the issues and potential schedule impacts surrounding the work at Harold.

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. The PMOC recommends that ESA adhere to the processes defined in its Risk Management Plan. At the July 2014 Schedule Review Meeting, the ESA Risk Manager stated his intention to start holding regular risk meetings again.

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 multiple inter-contract interfaces and milestones. The probability of successfully achieving 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 associated with the Harold Interlocking work, the PMOC believes that this will create significant changes to the overall project risk profile.

The PMOC also recommends that MTACC and ESA utilize the results obtained from the Manhattan/Systems and Harold Risk workshops held earlier this year to develop mitigation plans and strategies for the top schedule and cost risks identified.

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
CCU	Code Compliance Unit
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
SIR	Supplemental Independent Reviewer
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	December 2022 (F)	September 2023(F)**
Revenue Service	December 2013	December 2022 (F)	September 2023 (F)

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

**Source –Based on PMOC 2014 schedule trending analysis representing a medium degree of mitigation. The FTA has not yet formally accepted additional projections by the PMOC.

Table 2- Project Budget/Cost Table

	FFGA			MTA's Current Baseline Budget CBB		Expenditures	
	(Millions)	(% of Grand Total Cost)	Obligated	(Millions)	(% of Grand Total Cost)	(Millions)	(% of CBB)
Grand Total Cost	\$7,386	100.00%	\$4,724	\$10,729	100	\$5,631.30	52.49%
Financing Cost	\$1,036	14.00%	\$617	\$1,036		617.6	59.61%
Total Project Cost	\$6,350*	86.00%	\$4,107	\$9,693	90.3	\$5,013.70	51.72%
Federal Share	\$2,683	36.30%	\$1,148	\$2,699	27.8	\$1,958.50	20.21%
5309 New Starts share	\$2,632	35.60%	\$1,098	\$2,436.60	25.1	\$1,696.50	17.50%
Non New Starts grants	\$51	0.70%	\$50	\$67	0.7	\$66.60	0.69%
ARRA	0	0.00%	0	\$195.40	2	195.4	2.02%
Local Share	\$3,667	49.60%	\$2,959	\$6,994	72.2	\$3,055.20	31.52%

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 \$)	May 2014 SSC (YOE \$) M	June 2014 SSC (YOE \$) M	May 2014 % of Re-baseline	May '14 to June '14 Change \$M	CBB Variance from FFGA %
10	1,989	2,943	3,363	3,362	99.97%	-1	47.91%
20	1,169	1,514	2,169	2,163	98.02%	-6	26.95%
30	356	388	502	502	100.26%	0	9.27%
40	205	488	517	520	106.56%	3	153.66%
50	619	698	616	617	100.00%	1	12.76%
60	165	204	204	204	100.00%	0	23.64%
70	957	674	34	34	100.00%	0	-29.57%
80	1,184	1,649	1,922	1,922	100.00%	0	39.27%
█	█	█	█	█	█	█	█
Subtotal	6,813	8,708	9,693	9,693	100.00%	0	27.84%
100	1,036	1,116	1,036	1,036	100.00%	0	7.72%
Total Project Cost (10 - 100)	7,849	9,824*	10,729	10,730	100.00%	1	25.19%

Table 4 – ESA Core Accountability Items

Project Status:		Original at FFGA	Current*	ELPEP **
Cost	Cost Estimate	\$7.368B	\$10.177B	\$8.119B
Schedule	RSD	December 31, 2013	December 2022	April 30, 2018
Total Project Percent Complete	Based on Expenditures	53.2 ***		
	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. On CM007, design work for a hybrid design (pre-cast and cast in place concrete) based on input from RFEI, is at the 60% design level, with 90% design completion forecast for August 2014.	The PMT continues working on developing the remaining contract package (CM007). ESA developed a cost estimate for this package; MTACC engaged an independent estimator to also produce an estimate. The PMOC requested a meeting to discuss the estimate and its reconciliation with the project estimate however this meeting has not been set up as of the end of July 2014.	
Major Procurements Delays		A recommendation for award of VS086 (Signal Equipment) was also made to the MTA Board in January 2014; award was made in June 2014. CM014B was advertised in May 2014; Technical proposals are currently due in August 2014 (one month slip from last reporting period). The CS084 (Traction Power) Contract Package was advertised in June 2014. The bid opening is currently set for August 7, 2014	Partial NTP for the CM007 Package cannot be made before July 2015 due to budget constraints. The Project continues to experience protracted procurement cycles which are not adequately taken into account in the Project Schedule.	
Project Schedule		MTACC presented a new baseline schedule to the MTA CPOC in June 2014, with an RSD in December 2022. This schedule incorporates five months of contingency within the	Although MTACC has added an additional five months of contingency into the IST duration in the schedule; the PMOC believes that the issues uncovered by the SIR with IST	

	IST portion of the schedule and 22 months of Program level contingency.	will result in the utilization of much of the Program Contingency. As such the PMOC believes that the RSD of December 2022 does not have a high probability of being met.
Integrated Systems Testing	The MTA's Independent Engineering Consultant (IEC) engaged a systems specialist to review the current Integrated Systems Testing (IST) and produce an independent schedule for IST activities. Findings indicated the start of IST activities five months later than project schedule; and IST activities ending 21.5 months beyond the project's IST duration.	The PMOC notes that findings of the independent consultant are consistent with previous findings of the PMOC regarding the validity of the IST schedule. Although ESA has added an additional five months of contingency in the IST duration, all of the findings of the IEC special reviewer were not adequately addressed in the PMOC's opinion, leaving a considerable amount of risk remaining in IST.

* 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. PMOC has re-forecasted budget and schedule however date and budget number has not been finalized for reporting purposes as of the end of June 2014.

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