

PMOC MONTHLY REPORT

Second Avenue Subway Phase 1 (MTACC-SAS) Project

Metropolitan Transportation Authority

New York, New York

Report Period May 1 to May 31, 2012



PMOC Contract No. DTFT60-09-D-00007

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

Urban Engineers of New York, P.C., 2 Penn Plaza, Suite 1103, New York, New York 10121

PMOC Lead: Charles A. Halboth, PE, 212-736-9100; cahalboth@urbanengineers.com

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

TABLE OF CONTENTS

TABLE OF CONTENTS	2
THIRD PARTY DISCLAIMER.....	3
REPORT FORMAT AND FOCUS.....	3
MONITORING REPORT	3
1.0 PROJECT STATUS.....	3
a. Procurement	3
b. Construction.....	4
c. Quality Assurance and Quality Control (QA/QC).....	7
2.0 SCHEDULE DATA.....	7
3.0 COST DATA.....	13
4.0 RISK MANAGEMENT	16
5.0 ELPEP	17
6.0 SAFETY AND SECURITY.....	17
7.0 ISSUES AND RECOMMENDATIONS.....	18

APPENDICES

APPENDIX A – ACRONYMS

APPENDIX B – TABLES AND FIGURES

Table 1 - Summary of Schedule Dates

Table 2 - Schedule Contingency

Table 3 - 4th Quarter Schedule Milestone Comparison

Table 4 - Project Budget/Cost

Table 5 - Contingency Drawdown

Table 6 - Estimate @ Completion

Table 7 - Allocation of Current Working Budget to Standard Cost Categories

Table 8 - Core Accountability Items

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 an FTA Full Funding Grant Agreements (FFGA) 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 may change from month to month, based on relevant factors for the current month and/or previous months.

REPORT FORMAT AND FOCUS

This monthly 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 MTACC (Capital Construction) Second Avenue Subway (SAS) Mega-Project managed by MTACC and MTA as the grantee and financed by the FTA FFGA.

MONITORING REPORT

1.0 PROJECT STATUS

MTACC reported the final design phase of the SAS Project as 100% complete in late November 2010. *Subsequent to completion of final design, various departments within NYCT have requested additional changes. These changes to the scope of the project represent additional work for the design team and are being incorporated into the Design Consultant's (A/A) contract via Modification #67. The designer is in the process of issuing amplifying drawings for the architectural, electrical, mechanical, fire protection, and communication systems at multiple locations throughout the project. During May 2012, the Design Consultant continued supporting the construction phase by reviewing contractor's submittals, responding to RFI's, and providing dispositions for non-conforming material. These functions are generally proceeding in accordance with the Integrated Project Schedule (IPS), Current Working Budget (CWB) and applicable management plans.*

a. Procurement

Updates to Construction Procurement, which occurred during May 2012 include:

- **C-26010 (C2B): 96th Street Station Civil, Architectural, MEP – The Construction Contract** for Package 2B, 96th Street Station Shell Concrete, MEP, Finishes, Permanent Utilities and Street Restoration (Contract C-26010) is scheduled to be awarded to the low bidder, EE Cruz/Tully JV, on June 1, 2012.
- **Future Procurements:** The 72nd Street Station Finishes & MEP Package, C26011 (C4C) is scheduled for advertisement on July 31, 2012. Early procurement and technical “dustoff” activities required for Authorization to Advertise have started. The 86th Street Station Finishes & MEP Package, C26012 (C5C) is scheduled for advertisement on December 12, 2012.

b. Construction

As of May 31, 2012, there are still five (5) active construction contracts on the SAS Phase 1 Project. Contracts C1 and C5A are still in the close out process. Significant construction progress on the active contracts during this period includes:

- **Contract C-26005 (C2A) 96th Street Station Heavy Civil, Structural and Utility Relocation**
 - **Entrance 1 Slurry Wall and Secant Pile Work (Eastside of 2nd Avenue)**
 - *Slurry Wall: Six (6) out of seven (7) panels have been installed. Excavation for the seventh panel (P107) is still in progress.*
 - **Entrance 2 Slurry Wall Work (Eastside of 2nd Avenue)**
 - *Slurry Wall: Seven (7) out of seven (7) panels have been installed.*
 - **Eastside of 2nd Avenue**
 - *Slurry Wall: Twenty-one (21) out of forty-seven (47) panels have been installed.*
 - *Secant Pile: Thirty-three (33) out of thirty-four (34) piles have been installed (between 98th and 99th Streets)*
 - **Ancillary 1 Utility Conflict and Secant Pile Work**
 - *Con Ed: Feeder outage is scheduled for June 4, 2012 to June 15, 2012. Cable pulling at the South secant pile wall was completed.*
 - *Guide wall: Installation is still approximately 95% complete. The south wall will be completed after the old transformer is removed.*
 - *Secant Pile: Eighty-three (83) out of one hundred twenty-one (121) piles have been installed.*
 - **Turnover of Launch (S3 to CTJV)**
 - *Turnover including utilities was completed on May 17, 2012. CTJV will be responsible for maintaining the dewatering system for the launch box and tunnels with additional water treatment systems handle via an AWO.*

- o **Contract C-26006 (C3) 63rd Street Station Upgrade**
 - o *Surveying of the DMPs is ongoing.*
 - o *Special inspections at the steel fabrication plant (Ohio) and at the site (particularly structural steel) are ongoing.*
 - o *Continued with placing concrete curbs and equipment pads in the East Fan Plant.*
 - o *Continued with floor scarifying and scraping and priming walls in the West Fan Plant.*
 - o *Began constructing new Concrete Masonry Units (CMU) walls in the East Fan Plant.*
 - o *Completed hand demolition in multiple Area 5 mezzanines.*
 - o *Continued with temporary and permanent structural steel fabrication & installation at the platform and Lower 1st Mezzanine levels.*
 - o *Completed crack repair at tracks G3/G4.*
 - o *Continued with platform concrete.*
 - o *Began installation of the platform service carriers.*
 - o *Began installation on conduit at the G4 level.*
 - o *Continued with exploratory borings at Ancillary #1.*
- o **Contract C-26007 (C4B) 72nd Street Station Mining and Lining**
 - o *Through May 31, 2012, 147,983 cubic yards (cy) were mined representing 80.1% of the overall total 184,657 cy. Mining locations: Main Station Cavern between 69th and 72nd Streets.*
 - *Center Drift and West Slash; 100% complete*
 - *East Slash: 89.5% complete (16,042 cy of 17,932 cy)*
 - *Bench: 71.4% complete (20,619 cy of 28,871 cy)*
 - o *G3/S1 Cavern I & II: 100% complete*
 - o *G4/S2 Cavern I & II: 100% complete*
 - o *Horseshoe Tunnel: 100% complete*
 - o *63rd Street Stub: 100% complete*
 - o *Ancillary #1 (NW corner 69th Street and 2nd Avenue): 33.5% complete (4,747 cy of 14,150 cy)*
 - o *Ancillary #2 / Entrance #2 (NW/SW corner 72nd Street and 2nd Avenue): 41.0% complete (8,108 cy of 19,780 cy)*
 - o *Entrance #1 (NE corner 69th Street and 2nd Avenue): 80.2% complete (4,500 cy of 5,614 cy)*
 - o *Entrance #3 (SE corner 72nd Street and 2nd Avenue): 41.0% complete (2,982 cy of 7,270 cy)*

- o *North Cross Over: 100% complete*
- o *South Cross Over: 100% complete*
- o *Ancillary #11: SOE walls and decking are complete, and excavation support is in progress.*
- o *Ancillary #2: Excavation continues to elevation 128.5 with standard routine of “bolting/shotcreting/drilling/blasting/mucking” in progress.*
- o *Entrance #3: Building demolition complete with removal of debris to be completed by June 1, 2012. Installation of tie-backs underway with final level in progress. Repair of chimney to adjacent building completed.*
- o **Contract C-26008 (C5B) 86th Street Station Cavern & Heavy Civil**
 - o *Drilling, blasting and muck removal continued at both the north and south shafts using a mobile crane until the muck systems are operational. Multiple production blasting is forecast to start in mid-June.*
 - o *At the North & South Muck Conveyance Systems steel erection at the North System is complete and near completion at the South System; the Gantry Crane installation for the North system is complete and testing is underway. Testing of the South Gantry is scheduled for early June 2012.*
 - o *Installation of the steel siding and roof station enclosure continued at the North muck station.*
 - o *In the South open cut area sewer line installation continued and the water line installation began.*
 - o *The temporary utility trench along east side of 2nd Avenue is ongoing.*
 - o *Rock excavation to Elevation 130 and support of excavation (SOE) continued at Ancillary #1.*
 - o *Drilling, blasting and muck removal is scheduled to begin in early June 2012 at Ancillary #1.*
 - o *ConEd completed deactivation of the old service and activation of the new service at Ancillary #2.*
 - o *Demolition of face brick is scheduled to begin in early June 2012 at Ancillary #2.*
 - o *Demolition of sub-basement slab and partial walls will begin in early June at Entrance #1.*
 - o *Excavation for gas work and test pit excavation for the 30” tie-in continued at Entrance #2 along with the water main tie-ins.*
- o **Contract C-26009 (C6) Systems – Tracks, Signals, Traction Power and Communications**
 - o *The second Job Progress Meeting was held on May 14, 2012.*

- o *Additional key contract staff members were submitted for approval (Systems Integration Manager, Systems Integration Specialist-Instrumentation & Controls and Site Security Supervisor).*
- o *Review of key contract staff members (quality, safety, systems integrator, construction manager, and scheduler) qualifications is ongoing by MTACC.*
- o *Surveys at 63rd Street Station are ongoing. The contractor completed the survey for the positive/negative cable connections at the 63rd Street Substation for both tracks.*
- o *Detailed Baseline Schedule with narrative was submitted and is currently being reviewed by MTACC.*
- o *There are still three critical items awaiting an MTACC response:*
 - *Embedded conduits in the track bed – MTACC and CSJV have had several discussions and exchanged correspondence regarding this issue. They have been unable to reach a mutually satisfactory resolution. Subsequently CSJV has requested that a Dispute Review Board be established pursuant to the Contract Terms and Conditions.*
 - *Cable tray under the 63rd Street Station platform – investigation is ongoing*
 - *RFI on conduit fill factor (60%) –investigation is ongoing*

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

MTACC continues to verify that the construction contractors are implementing their Quality Management Systems as specified in the General Requirements (Section 01 43 00). Ongoing oversight activities include: participating in contractor audits of major subcontractors and suppliers; conducting Quarterly Quality Oversight for all active contracts; participating in internal contractor audits; reviewing and providing comments on Contractors' Quality Work Plans; participating in Preparatory Phase Sessions; conducting surveillance of QA/QC process for Construction Design Support; and training of staff on the MTACC Project Process Procedures. A subcontractor audit is described below as an example of the ongoing Quality Oversight Processes.

On May 23, 2012, the PMOC attended the C5B audit of subcontractor Tectonic Engineering & Surveying Consultants (Tectonic), which provides material and special inspection services on the C5B Package. The PMOC considered this audit significant due to the intrinsic criticality of safety and durability of transit construction, and historical deficiencies and controversy involving concrete testing (not on SAS).

The audit of Tectonic's Contractor Quality Plan (CQP) focused on the 15 elements of the FTA's QA/QC Guidelines as applicable to Tectonic's CQP. An audit plan, prepared by the C5B General Contractor, was distributed prior to the start of the audit and contained detailed questions for each section. During the audit, a tour of Tectonic's Laboratory was given. A summary of findings from selected elements includes:

Element #1 – Management Responsibility: Tectonic displayed their Organization Chart for the Project to the satisfaction of STJV. STJV requested the missing resumes of the 12 Inspectors.

This was provided by Tectonic before the end of the audit.

Element #4 – Document Control: Tectonic explained their computerized data based system, to the satisfaction of MTACC, STJV and the PMOC. They went through all of the features of the system and had hard copies to illustrate what they were showing on the computer.

Element #7 – Process Control: Their Document Control system explained most of what was required here. Additionally, they showed hard copies of how their inspectors are informed of the testing requirements and how project communications are routed.

Element #8 – Inspection & Testing: As questioned by STJV, Tectonic traced inspections from the time they get the call to do an inspection until the material has been tested in their laboratory and the report is sent to the project team. Once again they were able to show how their computerized system helped them track the information.

Element #9 – Inspection, Measuring, and Test Equipment: Tectonic showed their equipment calibration form and explained that some of the equipment is assigned to the inspector and the office/ laboratory keeps a watch of when calibrations are due. The more sophisticated equipment is reserved by the inspector, and then he comes to the office signs the equipment out and is responsible to properly bring it to the inspection site and return it after use. Returned equipment is inspected before the inspector can transfer custody back to the office.

Element #11 – Nonconformance: STJV indicated that Tectonic is performing two types of inspection which could lead to nonconformances. Specifically, they are field inspecting & laboratory testing for contracted work and field inspecting & laboratory testing for STJV's design build temporary work. In both cases Tectonic discussed the tracing of nonconformance issue. They alluded to preferring to document the issues in their daily reports and resolve the issue on site before they leave for the day, thus, there are very few nonconformances as such.

Element #14 – Quality Audits: Tectonic indicated that they are audited yearly by NVLAP (National Voluntary Laboratory Accreditation Program), AASHTO (American Association of State Highway and Transportation Officials) and IAS (International Accreditation Service) numerous audits performed by contractors on public works projects.

Element #15 – Training: STJV questioned if employees are properly trained; Tectonic replied that their inspectors are trained based on the required credentials for their position and the required tests they must pass to obtain the specific credential all by an independent certification organization. They are also observed by Tectonic management during the course of the year.

2.0 SCHEDULE DATA

Integrated Project Schedule (IPS) Update #70 was received on June 6, 2012 and is based on a Data Date of May 01, 2012. Update #70 contained a narrative report, a schedule variance report, a schedule revision log and "PDF" versions of several schedule reports.

Schedule contingency along the primary critical path leading to the start of revenue operations increased by 7 Work Days (WD) [10 Calendar Days (CD)] where it now reflects a total of 64 WD versus the 57 WD reflected in Update #69. The additional Schedule Contingency is a result

of finalizing the tail end of the Operational Testing logic with MTACC IEC and NYCT DOS. MTACC forecasts completion of all construction and NYCT Pre-Revenue Training & Testing by October 3, 2016, with 80 calendar days (64 WD) of contingency when measured against MTACC's target Revenue Service Date (RSD) of December 30, 2016.

A summary of significant schedule accomplishments or issues for each active contract include:

- Contract C-26002 (C1): Construction complete.
- Contract C-26005 (C2A): MTACC's schedule initiative to provide an additional service crane in support of the concurrent slurry wall operations at Entrances 1 and 2, and the east side of 2nd Avenue has resulted in a 5 CD improvement in the forecast completion date of this package.
- Contract C-26006 (C3): Significant reduction (losses) in schedule float is noted across a broad range of activities on this package. Specific problem areas (structural steel detailing, Entrance 1 Access) do not seem to adequately explain many of the delays depicted on the updated IPS.
- Contract C-26007 (C4B): As a consequence of the slower-than-planned transition from rock excavation to concrete lining activity south of the 72nd Street Main Cavern, this package experienced a 10 WD delay during this update period. An additional 10 WD of schedule float was lost in the resolution of utility relocation issues at Entrance No. 1.
- Contract C-26008 (C5B): The Baseline Schedule for this package has been approved and incorporated in the IPS. The baseline forecasts the start of rock blasting and excavation in the main cavern in late April or early May 2012.
- Construction of the north and south muck handling systems experienced delays during this update period related to the furnishing of permanent power. Completion of the northern muck handling system is currently forecast for June 1st, 2012 with the south muck handling system to be completed approximately two weeks later. Despite the delayed completion noted above, blasting and rock excavation has commenced at both shafts. This work was not scheduled to start until June 5, 2012.
- Contract C-26009 (C6): Pre-construction activities have been started. There are no significant accomplishments or issues to report.

Project Critical Path: The project critical path consists of two independent, concurrent paths leading to C5B Milestone #1. "Path 1" is the previously reported critical path, starting with the C5B fabrication-delivery-installation of the South Muck Handling System (ACT. # C5B S110a). It then travels directly into the South Cavern Excavation from the South Shaft, continuing through completion of the C5B South Cavern mining and concrete operations (C5B Milestone No. 1). Upon achieving MS #1 in early March 2014, the critical path shifts to start and completion of Contract C5C mezzanine and platform concrete work, followed by the start of concrete work in early September 2014, then shifting to 1st and 2nd fix work in the 86th Street Station South Ancillary (No. 1), where it is handed over to C6 in April 2015. The critical path continues into C6 Systems Signal and Traction Power work for the next six (6) months within the 86th Street Station, followed by Integrated Testing of the Traction Power system beginning in mid-December 2015. Upon completion, this area is handed over for Pre-Revenue Operations

Testing beginning in late June 2016 and is forecast to complete by October 13, 2016. The MTACC's forecast RSD remains as December 30, 2016.

“Path #2” involves the demolition, underpinning, excavation (both cut-and-cover, and escalator tunnel) and structural concrete construction of Entrance #1. Heavy civil construction performed by C5B is transferred to C5C for finish construction via Milestone #1.

“Path #1” at the South Muck Handling Station is mirrored at the North Muck Handling Station. This path currently has +8 days of float, effectively resulting in three independent concurrent critical paths through most of the remaining duration of C5B.

Secondary Paths: *Construction involving the 86th Street Station (C5B -> C5C -> C6) occupies all secondary float paths between +8 and +65 work days (WD) (except as noted below). Major secondary float paths of significance to the overall status of the project include the following:*

+23 WD: NYCT Pre-Revenue Operation Activities, scheduled to start on August 18, 2014.

+63 WD: This path extends through the construction of the 96th Street Station (C2A -> C2B -> C6). It is initiated by Stage 5 (95th to 97th Streets) slurry wall installation, forecast for completion on approximately August 10, 2012. Following C2A deck installation, excavation and concrete invert construction this path moves to the C2B Station Finishes package in July 2013. Systems installation and testing (C6) at the 96th Street Station is forecast to start on September 15, 2014 and continue through October 20, 2015, at which time this path merges with the integrated system testing (critical) path.

C2A work also initiates major secondary paths with +97 and +101 days of float, reinforcing the conclusion that the 96th Street Station is currently the “second most critical” element of the project.

+66 WD: C4B, Ancillary #2 rock excavation and structural concrete. This work is currently underway. The path extends through C4B Milestone #1 to C4C Ancillary 2 construction.

+69 WD: *Mezzanine deck concrete installed by C4C starts in September 2013. This work is initiated via handoff from C4B (and not a truly independent path).*

+81 WD: Cost to Cure @ 301 East 69th Street and 1322 2nd Avenue. The start of construction of C4B, Entrance #1 is controlled by two building modifications/utility relocations. Ten days of schedule float were lost along this path during this most recent update period.

+84 WD: C6 contractor mobilization and preconstruction submittals. This preliminary schedule forecasts the completion of C6 preconstruction engineering and submittals by late 2012.

+97 WD: Procurement and award of Construction Contract C2B.

Quarterly Milestone Tracking: The initial tabulation of milestone schedule performance for the 2nd Qtr. 2012 is contained in the accompanying Table 3. Milestones not completed this Quarter will be “carried over” into the 3rd Quarter 2012 tracking log. A summary of schedule performance based on these milestone activities includes the following:

Summary	
# Calendar Days Elapsed	30
Average Δ from Baseline - all activities	39.8
Average Δ from Baseline - completed activities	-15.3
Average Δ from Baseline - ongoing activities	45.3
2nd Qtr. Milestone Summary	
# Activities Forecast this Qtr.	12
# Activities forecast to complete this Qtr.	9
# Activities completed this Qtr.	0
# Activities on/ahead of schedule	3
# Activities behind schedule	9
Average Δ from Baseline	8.2
Carryover Milestone Summary	
# Activities Carried Over	21
# Activities forecast to complete this Qtr.	12
# Activities completed this Qtr.	3
# Activities on/ahead of schedule	1
# Activities behind schedule	17

While schedule progress reported during May 2012, along the critical path and principal secondary float paths generally, was adequate to maintain the current schedule, delays have been experienced in several areas. Nine of the twelve “tracking milestones” added for Q2 2012 are behind schedule; in total, twenty-six of thirty-three “tracking milestones” are behind schedule.

ELPEP/SMP Compliance: In the opinion of the PMOC, SAS Phase 1 is in compliance with the metrics, deliverables and beneficial outcomes expressed in the Enterprise Level Project Execution Plan (ELPEP), dated January 15, 2010, and as further described by the Schedule Management Plan (SMP). Specifically:

- Forecast Revenue Service Date:
 - ELPEP Requirement: February 28, 2018
 - Current Forecast: December 30, 2016
- Minimum Allowable Float; ROW/Real Estate Activities:
 - ELPEP Requirement: 60 CD
 - Current Forecast:

- *All Real Estate Takings were completed as of November 1, 2011.*
- *Cost-To-Cure Activities*

<u>Pkg.</u>	<u>Location</u>	<u>Property</u>	<u>Sch. Float</u>
C4B	Entrance #1	301 E. 69 th Street 1322 2 nd Avenue	81 CD
C5B	Ancillary #2	Chase Bank Building	121 CD

- Minimum Allowable Secondary Float Path:
 - ELPEP Requirement: 25 Calendar Days
 - *Current Forecast: 92 CD (63 WD) through construction and fit-out of the 96th Street Station*
- Secondary Schedule Mitigation (critical path compression):
 - ELPEP Requirement: 125 CD
 - Current Forecast: Several opportunities are under consideration by the SAS Project Team that will improve the schedule primary and/or secondary paths. These opportunities are discussed in the next section of this report.
- Minimum Schedule Contingency along the Critical Path:
 - ELPEP Requirement: 240 CD measured against the “risk-informed” target RSD of February 28, 2018
 - Current Forecast: 513 CD
 - Note: MTACC has maintained its target RSD of December 30, 2016. IPS Update #70 identifies 90 CD (64 WD) of float measured against this target.

In addition to the metrics above, the MTACC continues to demonstrate that it is using the IPS to actively plan, organize, direct and control individual packages and the overall project, and to provide reliable forecasts of the SAS RSD and other major accomplishments. These beneficial outcomes are significant components of ELPEP/SMP compliance.

Schedule Improvement Opportunities:

The SAS Project Team continues to evaluate potential opportunities to compress the schedule critical or near-critical path(s) and improve the reliability of the IPS as a planning and coordination tool. As a practical matter, it should be noted that the multiple critical and near-critical paths described above make achieving any significant schedule improvement much more difficult.

Schedule improvement initiatives currently under active consideration include:

1. *During April 2012, the MTA implemented a plan to accelerate the C-26005 Contract schedule via concurrent slurry wall installation operations. This acceleration was facilitated by providing an additional service crane. MTA has realized approximately five (5) WD of float to date from this initiative.*

2. MTA continues to forecast approximately 30 days of schedule compression along the critical path resulting from the early start of production blasting and excavation at the 86th Street Station (C-26008). In order to realize this improvement, production excavation and blasting must start by early May 2012.
3. Consideration of transferring Mezzanine and Platform Concrete at the 86th Street Station from C5C (Finish Contract) to C5B (Mining/Heavy Civil Contract) will be revisited based upon the actual schedule benefit achieved via Item 2.
4. *The SAS Project Team has refined the IPS schedule logic representing integrated system testing activities and realized approximately ten (10) CD in added schedule contingency when measured against the RSD of December 30, 2016.*
5. It has been proposed that Package C4C contain an option for work at Entrance #1 that is currently delayed by real estate and cost-to-cure negotiations with building owners. Including this option in the C4C contract will provide an efficient contingency plan for transferring the scope of work if timely resolution of the current issues is not achieved.
6. The concept of reduction of the time period dedicated to Integrated Systems Testing in Contract C6 will be explored in detail during the development and approval of the C6 baseline schedule.

Schedule Contingency: *IPS Update #70 forecasts all Phase 1 construction and pre-revenue testing to be complete on October 4, 2016. This results in an 90 CD (64 WD) contingency when measured against the MTA target RSD of December 30, 2016 and a 513 CD contingency when measured against the FTA Risk-Informed RSD of February 28, 2018.*

3.0 COST DATA

Based upon financial expenditures reported by the MTACC during May 2012, SAS Phase 1 is approximately 39.6 % complete. The completion status of the active construction contracts through May 2012, also based upon reported expenditures through that date, is as follows:

- C26002 (Tunnel Boring) – 95.8%
- C26005 (96th Street Station) – 65.8%
- C26013 (86th Street Station – Sitework) – 99.9%
- C26008 (86th Street Station – Heavy Civil) – 13.67%
- C26006 (63rd Street Station) – 16.7%
- C26007 (72nd Street Station) – 45.7%
- C26009 (Systems – Track, Power, Signals and Communications) – 1.28%

Aggregate Construction % Completion:

- 68.9% of all construction work is under contract.
- 82% of all construction work has been bid.
- 55.86% of construction of active contracts (not including C6) is complete.
- 32.4 % of all construction is complete.

Based upon cost data received from MTACC for April 2012:

- *Value of construction in place this period = \$34,320,498*
- *Estimated value of construction remaining = \$1,827,561,205*
- *Target construction completion = 8/16/2016*
- *Number of months remaining = 51*
- *Rate of construction required to achieve target completion date = \$35,834,533/month*

The average progress (payments) achieved over the most recent six month period is \$35,120,517. Based on a review of cost data for May 2012, it appears that adequate overall progress was made on the project to achieve the RSD of December 30, 2016. A modest increase in the rate of overall project progress is forecast for the near future as C5B, and to a lesser extent C6 become more active.

Estimate-At-Completion (EAC): *The SAS Project Team has extended its risk-based contingency forecasting effort to the development of an EAC for all construction. To date, this effort is limited to construction cost only. The project EAC is a combination of the risk-based approach for construction cost and traditional estimating for soft costs.*

During May 2012, several items were identified that will impact the project EAC, including:

- *C2B bid results, which will be incorporated into the EAC upon contract execution.*
- *Forecast of additional community relations cost for the remainder of the project.*

Neither of these issues has been sufficiently developed for incorporation into the project EAC. Table 6 contains a summary of the current EAC, which is currently \$4,294,259,553, unchanged from last month.

Cost Growth: *For the period ending May 31, 2012, the total cumulative Additional Work Order (AWO) exposure was reported to be \$105,292,728, an increase of \$5,359,199 (5.48%) over the \$99,933,529 exposure reported for period ending April 30, 2012. Executed AWOs as documented on AWO tracking logs totaled \$64,724,585, an increase of \$372,702 from the \$64,351,882 reported for the period ending April 30, 2012.*

The change in AWO exposure was driven by the following:

1. *Contract C1: AWO exposure increased by a total of \$5,148,107. This increase is primarily due to the increased exposure associated with AWO #115 – Launch Box Delays.*
2. *Contract C2A: AWO exposure reduced by a total \$87,458.*
3. *Contract C3: AWO exposure increased by a total of \$377,000. This increase is attributable to the addition of AWOs 10 through 13 during this update period.*
4. *Contract C4B: AWO exposure reduced by a total of \$412,684. Reductions in the exposure values of AWOs 32, 34 and 40 account for this overall decrease.*

5. *Contract C5B: AWO exposure increased by a total of 336,234. Increased exposure is due to the initial valuation of AWOs 4, 8, 10 and 26. It is noted that there remain 22 AWOs where “\$0” is the potential exposure value.*

The change in Executed AWO Value was driven by the following:

1. *Contract C2A: Execution of AWOs with net value of \$148,710.*
2. *Contract C4B: Execution of AWOs with net value of \$99,500.*
3. *Contract C5A: Execution of AWOs with net value of \$118,000.*

ELPEP/CMP Compliance: *The PMOC has expressed concern that the MTA’s financial management of the project has not incorporated the community relations effort. Significant funds have been expended for this effort; however, the MTA Current Working Budget (CWB) does not contain an identifiable item where budget and actual cost for community relations expenses can be logically tracked. The PMOC acknowledges that work is underway to address this concern; however, until the community relations program is incorporated into the project financial system and subject to the same review and control as other budget items, it is the PMOC’s opinion that SAS cannot be considered “in compliance” with the CMP.*

The PMOC has observed a significant number of AWOs (Pkgs. C1, C2A, C5B) where “Exposure Values” do not exist in the respective logs. AWO “Exposure Values” are important to the overall cost and cost contingency management effort. The PMOC recognizes that a reasonable exposure value may require some time to develop; the AWO Logs should be periodically reviewed to ensure this value is reasonable up to date.

Cost Contingency: *On April 24, 2012, the MTA received a favorable bid result for Contract Package C2B. During May 2012, this package was not approved by the MTA Board. Consequently, the change in available contingency resulting from the C2B procurement has not been included in the contingency calculations contained within this report.*

During May 2012, contingency changes were limited to routine incorporation of AWOs into the individual project and overall program reporting systems. No other significant changes in the SAS construction program have been reported that materially affected the forecast cost contingency baseline against which the current contingency balance is measured. Any contingency changes associated with the C2B contract will be incorporated after contract approval by the MTA Board.

The PMOC has updated its contingency drawdown and utilization model to reflect changes made this period. The current contingency balance is greater than the Planned Balance and exceeds the ELPEP Required Balance.

	<u>April 2012</u>	<u>May 2012</u>
<i>Required Balance (ELPEP):</i>	<i>\$220,000,000</i>	<i>\$220,000,000</i>
<i>Planned Contingency Balance:</i>	<i>\$336,316,868</i>	<i>\$334,105,967</i>
<i>Actual Contingency Balance (PMOC):</i>	<i>\$378,200,802</i>	<i>\$372,841,603</i>
<i>Actual Contingency Balance (MTA):</i>	<i>N/R</i>	<i>TBD</i>

4.0 RISK MANAGEMENT

Risk Mitigation Meeting No. 16 was held on May 30, 2012. Recent risk management activities reviewed include:

- *Established schedule for C4C and C5C Risk Analysis Workshops.*
- *Completed April EAC forecast for monthly budget presentation.*

Risks reviewed and updated during this meeting include:

- 1) **Contract Interfaces (Risk CNS 4 (C6))**: *Managing contractual interfaces during construction. The interface manager presented recent updates to the draft “Major Interface Tracking Table”, and the sample “C2A/C2B Mitigation Plan”. These reports identify inter-contract interfaces and their respective float values based upon the IPS. Float “trigger values” and the focus of various report elements were discussed. The C2A/C2B interfaces will continue to be used as a test case to refine and enhance the process.*

The concept of using 4-D modeling is being considered as an additional tool to coordinate contractual and technical interfaces. The SAS Project Team has decided to implement this approach at the 63rd Street Station (C3/C6) as a test case through which the tool’s overall value to the Project will be evaluated.

- 2) **System Safety Certification (Risk CNS 8 (C6))**: *MTA’s Chief of Quality, Safety & Security is developing a training program for the CM field staff that will assure that all parties understand their role, responsibility and function in the safety certification process. The 63rd Street Station CM staff will receive the first training on June 27, 2012.*

It has been difficult to set up a meeting with OSS/NYCT and NYS to present the SAS System Safety Certification Process for their review, familiarization, and hopeful approval. It was suggested that a session of the System Safety Certification Committee (SSCC) be scheduled for this purpose.

- 3) **Shop Drawing Processing (Risk ID TBD)**: *At the previous meeting, tabulations of submittal turnaround times for Contracts C2A, C3, C4B and C5B through April 20, 2012 were reviewed. At that time, it was recognized that the turnaround time data included “Submittal for Information” items, and that these items could erroneously affect the data. When “Submittal for Information” items were filtered from the tabulations, it was determined that virtually no net impact to the average turnaround times occurred.*

In reviewing this risk, it has been determined that the contract threshold value of turnaround within 20 WD has been exceeded on numerous occasions, but that no harm (schedule delay) has resulted. Further review is unlikely to reveal any new, relevant information at this time. It was determined that this risk would continue to be monitored and revisited should circumstances warrant.

- 4) **Cost-To-Cure Utility Relocations (Risk C4B 77 and C4B C14)**: *Relocating utilities that service buildings adjacent to Entrance No. 1 (301 East 69th Street, 1322 Second Avenue) may delay construction at this location. Current forecast of seven (7) months to complete the work will not adversely impact on the C4B schedule.*

- 5) **C4C Procurement (Risk C4C 79):** The SAS Project Team recognizes the importance of timely procurement of the remaining construction station finish packages (C4C, C5C). Of the two packages, C5C is more likely to have an impact on the project critical path. As such, resources are being allocated to ensure procurement activities for this package are expedited to the greatest extent possible.

In the PMOC's opinion, the SAS Project Team is actively working to avoid and contain the effect of retained risks and controlling the overall growth of the total project cost.

5.0 ELPEP

There were no ELPEP meetings held during May 2012. With respect to SAS, the current status of each of the main ELPEP components is summarized as follows:

- **Technical Capacity and Capability (TCC):** *The PMOC completed its review of the Revision 8 SAS PMP and has verified incorporation of all Candidate Revisions with FTA. The PMOC recommendations regarding approval were forwarded to FTA in February 2012.*
- **Schedule Management Plan (SMP):** *The PMOC continues to monitor and verify SAS substantial compliance with the SMP. The process of transferring the compliance verification process to the MTACC is discussed below.*
- **Cost Management Plan (CMP):** *FTA conditional approval of the Cost Management Plan, including five (5) Candidate Revisions was provided on September 1, 2011. The PMOC is monitoring and verifying compliance with this plan.*
- **Risk Mitigation Capacity Plan (RMCP) and Risk Management Plan (RMP):** *On February 2, 2012, the FTA/PMOC consolidated comments on the SAS Risk Management Plan were forwarded to the MTACC. PMOC recommendations regarding approval were forwarded to FTA.*
- **Conformance and Compliance Demonstration:** *A target date for the transfer of compliance verification to MTA of July 1, 2012 was established. FTA and the PMOC will meet separately to develop the plan to monitor/validate ELPEP compliance.*

The SAS Project Team has implemented the majority of the principles and requirements embodied in the ELPEP. The procedural changes instigated by the ELPEP have become an integral part of the management of the project.

6.0 SAFETY AND SECURITY

The Lost Time Accident Rate and OSHA Recordable Accident Rate from the start of construction until April 30, 2012 are 2.02 and 4.92, respectively. The Lost Time Accident rate is still trending below the national average of 2.2. The OSHA Recordable Accident rate is still trending above the national average of 4.2. The cumulative construction time worked since the project inception is 3,657,788 hours. Cumulative lost time injuries since project inception is 37 and the cumulative recordable injuries are 53. The majority of the recordable (16) and lost time (32) injuries are associated with the C1 tunnel boring contract.

During May 2012, the monthly project-wide safety meeting was held, with representatives from MTACC, OCIP, PMOC and each construction contract safety manager being present. Specific details of the injuries that occurred during the month were discussed so lessons learned could be shared.

Security – Contractors continued implementation of their site security plan with no incidents being noted during this reporting period.

7.0 ISSUES AND RECOMMENDATIONS

Organization Issues: *Several details within the “SAS Organization Chart” contained in the MTA Quarterly Report to the FTA (1st Quarter 2012), do not appear to accurately represent the manner by which the project team functions or is managed. The organization of the construction management team is of particular concern. As depicted, it can be inferred that the management of the 63rd Street Station Modification (C3) and Systems Package (C6) are not fully integrated with the management of the other construction packages. The PMOC recommends a review and clarification of this organizational structure via an update of Section 2.0 (Organization and Staffing) of the SAS PMP. The SAS Project Team should generate a Candidate Revision to track the update.*

Staffing Issues: *During April 2012, the SAS Quality Manager resigned his position. The Construction Manager position for C2B remains unfilled. In both cases, there are no readily qualified internal replacements. Both positions are very important to the project. Additional time will be required for external candidate(s) to become familiar with the project. The PMOC recommends that the organization chart be updated to better reflect the manner in which the SAS team actually operates. The update will require a revision to Figure 3 (Second Avenue Subway Project – Organization) in the SAS PMP. The SAS Project Team should generate a Candidate Revision to track the update.*

Multi-Contract Coordination: *The SAS Project Team is aware that management of the contract interfaces is one of the keys to executing this project successfully. To date, interfaces between contract packages have been managed effectively, albeit on a somewhat ad hoc basis. The SAS Project Team has identified interfaces and developed tools that should assist in managing this challenge. The tools are important but, to date, an overall strategy for interface management has not been formalized. The number of interfaces and potential for delay is extremely large and the associated technical and administrative issues varied. SAS management has responded to the PMOC’s recommendation to develop an interface management process that will leverage staff resources effectively and allow senior management to focus on problematic or critical interface issues. An Interface Manager has been added to the staff and is refining the process. Status updates are being presented during the monthly Cost and Schedule Meeting. The PMOC will continue to monitor this process.*

Third Party Utility Payables: *Actual construction progress indicated that more utilities had been relocated than reflected in the \$21.7 million expenditure associated with the 3rd Party Construction (Utility Relocations) budget. During the month of April 2012 the SAS Project Team addressed the disparity in progress vs. payment for utility relocations. Payments totaling \$12.0 million were processed which brought the disbursements to \$33.7 million of the \$75.3 million budget for 3rd Party Construction (Utility Relocations). During May 2011,*

disbursements of \$1.8 million were made bringing the total disbursements for 3rd Party Construction (Utility Relocations) to \$35.47 million. The PMOC consider this issue to have been adequately addressed and is closed.

Safety Certification: The safety certification process had been identified a risk to project completion. This risk is currently identified in the C6 contract Risk Register as ID # CNS8. The PMOC was concerned that consistent progress would not be achieved until adequate, dedicated resources were available to clarify

During April 2012, safety certification process flow charts were developed which show the relationship between sub-system installation, system integration, and test observation by the Certification Committee and the NYCT Office of System Safety (OSS). The outline of the actual means by which this task will be accomplished has been developed. Refinement of the process is underway and will be first implemented on the 63rd Street Station Modification (C3) contract. A kick off meeting is scheduled for June 27, 2012. The Chief – Quality, Safety, and Security Manager is leading the effort to identify the resources necessary to carry the effort forward.

Design Changes: Subsequent to completion of final design, numerous changes have been requested by various NYCT user groups. Some of these changes are being incorporated into the project design and will impact the architectural, electrical, mechanical, fire protection, and communication systems within each of the four stations. The PMOC is concerned about the potential impact on the project's current working budget and schedule and as such recommends a comprehensive analysis be performed with a TAC paper issued to report the results.

AWO Exposure Value: Section 5.3 of the SAS Cost Management Plan states that each entry in the AWO Log will include an estimated cost. As a practical matter, this may not always be possible; the scope/cost may take some time to become fully identified and developed. However, the PMOC has observed that a very large number of SAS AWOs do not have estimated cost exposures included in the log. This is particularly evident for Contract C5B, where the May 31, 2012 AWO Log contains a total of 26 AWOs and only four (4) have a cost exposure listed. EAC forecasting is an important element of the SAS Cost Management Plan. Without reasonably complete forecasts of cost exposure, the value of this management tool is seriously compromised.

Cost Management: In the PMOC March 2012 Monthly Report, the PMOC expressed concern that the MTACC's financial management of the project has not incorporated the community relations effort. Significant funds have been expended for this effort; however, the MTA Current Working Budget (CWB) does not contain an identifiable item where budget and actual cost for community relations expenses can be logically tracked. To address the PMOC's concern the SAS's Senior Director of Budget/Administration/Accounts is accumulating the expenditures associated with community relations on each construction contract. The PMOC will meet with the Director to best determine how these expenses should be incorporated into the financial reporting system.

APPENDIX A - ACRONYMS

A/A	AECOM/Arup.
AFI	Allowance for Indeterminates
ARRA	American Recovery and Reinvestment Act
AWO	Additional Work Orders
BA	Budget Adjustment
CCM	Consultant Construction Manager
CD	Calendar Days
CMP	Cost Management Plan
CSSR	Contact Status Summary Report
CIL	Central Instrument Location
CPRB	Capital Program Review Board
CPP	Contract Packaging Plan
CWB	Current Working Budget
CY	Cubic Yards
DCB	Detailed Cost Breakdown
DMP	Deformation Monitoring Points
EAC	Estimate at Completion
ELPEP	Enterprise Level Project Execution Plan
EPC	Engineering-Procurement-Construction
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
GO	General Outage
IPS	Integrated Project Schedule
MPT	Maintenance Protection of Traffic
MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
N/A	Not Applicable
NOA	Notice of Award
NTP	Notice to Proceed
NYCT	New York City Transit

NYSPTSB	New York State Public Transportation Safety Board
OSS	NYCT Office of System Safety
PE	Preliminary Engineering
PEP	Project Execution Plan
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PQM	Project Quality Manual
QA	Quality Assurance
RAMP	Real Estate Acquisition Management Plan
RMCP	Risk Mitigation Capacity Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROW	Right of Way
RSD	Revenue Service Date
SAS	Second Avenue Subway
SCC	Standard Cost Category
SMP	Schedule Management Plan
SOE	Support of Excavation
SSCC	Safety and Security Certification Committee
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
WD	Work Days

APPENDIX B – TABLES

Table 1 - Summary of Schedule Dates

	FFGA	Forecast Completion	
		Grantee	PMOC
Begin Construction	January 1, 2007	03/20/2007A	03/20/2007A
Construction Complete	December 31, 2013	August 30, 2016	October 2017
Revenue Service	June 30, 2014	December 30, 2016	February 2018

A = Actual

Table 2 - Schedule Contingency

IPS Update #	64	65	66	67	68	69	70
Data Date	11/01/11	12/01/11	01/01/12	02/01/12	3/01/12	4/01/12	5/01/12
Contingency (CD)							
RSD=12/31/2016	67	67	80	80	80	80	90
RSD=02/28/2018	490	490	503	503	503	503	513

Table 3 – 2nd Quarter 2012 Schedule Milestone Comparison

Pkg.	Act.	Description	Baseline	M-1	Δ
3rd Qtr 2011 Tracking Milestones (Carryover)			1-Jul-11	1-May-12	
C4B	72C1185	Excavate Top Heading Area 2	30-Jun-12	6-Apr-12 A	-85
4th Qtr 2011 Tracking Milestones			1-Oct-11	1-May-12	
C2A	A117	Complete ANC #1 Secant Piles	11-Jul-12	23-Jul-12	12
C2B	PR40	Award C2B Contract	30-Apr-12	1-Jun-12	32
C3	LP025	Complete Demo – Lower Platform	31-May-12	20-Sep-12	112
	UP040	Complete Demo – Upper Platform	11-Apr-12	16-Aug-12	127
C4B	72C1225	Excavate Cavern Bench	9-May-12	10-May-12	1
1st Qtr 2012 Tracking Milestones			1-Jan-12	1-May-12	
C2A	6S235	Start Invert Inst. 93rd -> 95th Streets	8-Feb-12	2-Apr-12 A	54
C3	005	Complete Sub/App Struct. Steel Shop Dwgs	20-Jul-12	21-Sep-12	63
	A1010	Begin Demo - Ancil #1	2-May-12	1-Aug-12	91
	EN105	Begin Structural Work - Ent #1	22-May-12	24-Sep-12	125
	MZB05	Compl. Asbestos/Lead Abatement - Fan Plant	27-Mar-12	26-Jun-12	91
	010	Begin Elevator Fab	7-Mar-12	18-Jul-12	133
C4B	SCC1000	South Crossover Excavate	31-Jul-12	9-May-12	-83
	G3S11060	G3 TBM F/P/S Tunnel Invert	28-Mar-12	25-Jul-12	119
	C4B ENT1200A	Contractor (Start) Cost to Cure Work	2-Mar-12	11-Jul-12	131
	ETA1000	Ent #2 Adit Excavation Complete	11-Jan-12	3-May-12	113
	E3C1010	Ent #3 Bldg Demo Complete	29-Mar-12	25-Jun-12	88
C5B	S110a	Complete Installation of Mucking Sys-South	25-Apr-12	24-May-12	29
	S110a	Complete Installation of Mucking Sys-North	10-Apr-12	31-May-12	51
	S150	N. Cavern Exc: Development & Top Heading	11-Apr-12	7-May-12	26
	S110b	S. Cavern Exc; Development & Top Heading	26-Apr-12	11-Apr-12 A	-15
2nd Qtr 2012 Tracking Milestones			1-Apr-12	1-May-12	
C2A	E226	Install Stage 4 SOE Slurry Panel - Ent #2	29-May-12	27-Jun-12	29
	E105	Relocate MEP @ Rainbow Hardware (AWO98)	25-Jun-12	16-May-12	-40
C3	MZB15	Start Interior Work/Finishes M6 Utility Rms	5-May-12	17-Jun-12	43

Pkg.	Act.	Description	Baseline	M-1	Δ
	MZC01/MZC05	<i>Asbestos/Lead Abatement & Demo-Lower Mezz</i>	27-Apr-12	14-May-12	17
	MZ5001/010/015	<i>Lead Abatement/Demo -M1->M6</i>	10-Jul-12	19-May-12	-52
	UP025	<i>Begin Structural const; CBH Control Rm</i>	2-Apr-12	17-May-12	45
C4B	72C1430	<i>Start Main Cavern Invert F/R/P/S</i>	24-Jul-12	3-Aug-12	10
	NCC1035	<i>Start North X-Over Invert WP</i>	9-May-12	4-Jun-12	26
	63S1050	<i>Complete 63rd St Stub Cavern Invert F/R/P/S</i>	8-Jun-12	22-Jun-12	14
C5B	AN100	<i>Compl. Ancil 2;SOE (Piles & Lagging)</i>	13-Apr-12	14-May-12	31
	E210/240/242	<i>Complete Entrance 2; Utility Relocations</i>	4-Oct-12	27-Aug-12	-38
	E110	<i>Complete Entrance 1; Structural Demo</i>	26-Jun-12	9-Jul-12	13

Table 4 - Project Budget/Cost 

	FFGA			FFGA Amend	MTA Current Working Budget (CWB)		Expenditures as of May 31, 2012	
	\$ Millions	% of Total	Obligated* (\$ Million)	TBD	\$ Millions	% of Total	\$ Millions	% of Total
Grand Total Cost:	4,866.614	100	4,375.76		5,267.614	100	1,762.484	33.46
Financing Cost	816.614	16.78			816.614	15.55		
Total Project Cost:	4,050.000	83.22	4,375.76		4,451.000	84.50	1,762.484	33.46
Total Federal:	1,350.693	27.75	866.760		1,350.693	25.64	566.580	10.75
Total FTA share:	1,300.000	96.25	792.867		1,300.000	24.68	555.468	10.54
5309 New Starts share	1,300.000	100	792.867		1,300.000	24.68	555.468	10.54
Total FHWA share:	50.693	3.75	73.893		50.693	0.96	11.112	0.21
CMAQ	48.233	95.15	71.433		48.233	0.92	8.652	0.16
Special Highway Appropriation	2.460	4.85	2.460		2.460	0.04	2.460	0.05
Total Local share:	2,699.307	55.47	3,509.000**		3,509.000**	66.61	1,195.904	22.70
State share	450.000	16.67	100.000		450.000	8.20		
Agency share	2,249.307	83.33	1,145.782		3,059.000	55.72		
City share	0	0			0	0		

* Obligated amounts obtained from the Transportation Electronic Award Management (TEAM) system and MTACC's Grant Management Department.

** Current MTA Board approved budget.

Table 5 - Contingency Drawdown

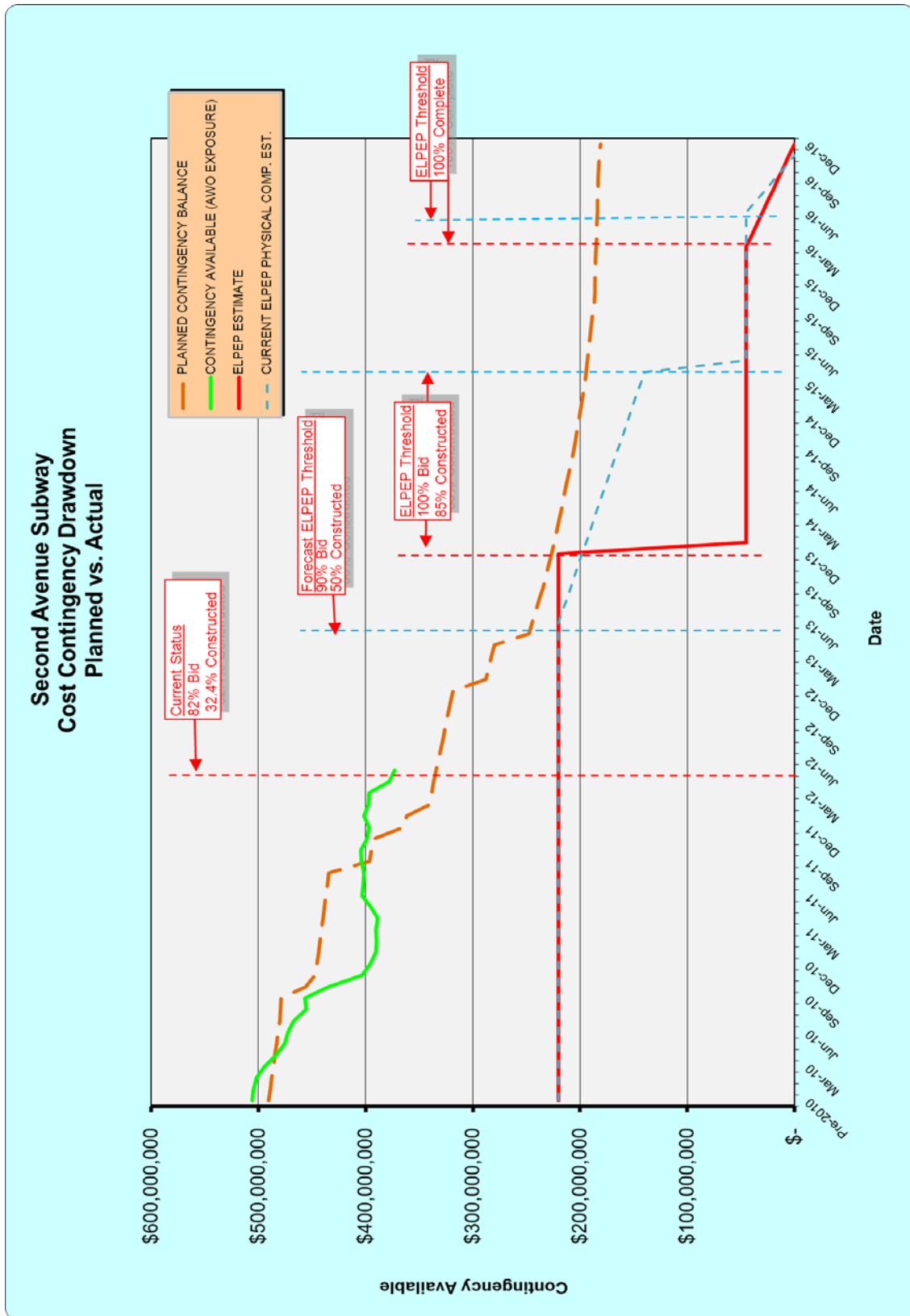


Table 6 - Estimate @ Completion

Description	Budget	Forecast		
	Current Working Budget	PMOC EAC Forecast (April 2012)	MTA EAC Forecast (March 2012)	Notes
Total Construction	\$2,728,172,492	\$3,011,500,000	\$3,039,961,181	
Engineering Services Subtotal	\$576,541,264	\$591,338,287	\$591,338,287	
Third Party Expenses	\$534,800,000	\$534,800,000	\$534,800,000	
TA Expenses	\$125,160,085	\$128,160,085	\$128,160,085	
Contingency	\$321,104,648			
Executive Reserve	\$160,000,000			
Subtotal	\$4,451,000,000	\$4,265,798,372	\$4,294,259,553	

Table 7 - Allocation of Current Working Budget to Standard Cost Categories

Std. Cost Category (SCC)	Description	FFGA	MTA's Current Working Budget
10	Guideway & Track Elements	\$612,404,000	\$728,617,000
20	Stations, Stops, Terminals, Intermodal	\$1,092,836,000	\$1,276,632,000
30	Support Facilities	0	\$562,000
40	Site Work & Special Conditions	\$276,229,000	\$537,621,000
50	Systems	\$322,708,000	\$247,627,000
60	ROW, Land, Existing Improvements	\$240,960,000	\$292,000,000*
70	Vehicles	\$152,999,000	0**
80	Professional Services	\$796,311,000	\$885,941,000
90	Unallocated Contingency	\$555,554,000	\$482,000,000
Subtotal		\$4,050,000,000	\$4,451,000,000
Financing Cost		\$816,614,000	\$816,614,000
Total Project		\$4,866,614,000	\$5,267,614,000

* Includes \$47M Cost-to-Cure.

** FTA Region II has accepted MTACC/NYCT's assertion that recent services reductions will provide ample spare vehicles for the SAS Phase I Project.

* MTA’s Current Working Budget				
Table 8 - Core Accountability Items				
** Enterprise Level Project Execution Plan (ELPEP), reflecting median level of risk mitigation				
Project Status:		Original at FFGA	Current*	ELPEP**
Cost	Cost Estimate	\$4,050M	\$4,451M	\$4,980M
Contingency	Unallocated Contingency	\$555.554M	\$336M	\$220M
	Total Contingency (Allocated plus Unallocated)	\$555.554M	\$378M (April 2012)	\$220M
Schedule	Revenue Service Date	June 30, 2014	December 30, 2016	February 28, 2018
Total Project Percent Complete	Based on Expenditures	38.7%		
	Based on Earned Value	N/A		
Major Issue		Status	Comments	
Organization and Staffing		Open	Certain relationships on the current Org. Chart do not reflect actual structure and function of project team. Need to fill two open positions ASAP.	
Safety and Security Certification		Open	Detailed planning and organizational prep for safety & certification process needs to continue. Current lack of dedicated staff may impede progress.	
Date of Next Quarterly Meeting:		TBD		

All data based on February 28, 2012 reporting