

PMOC MINI MONTHLY REPORT

Second Avenue Subway Phase 1 (MTACC-SAS) Project
Metropolitan Transportation Authority
New York, New York

April 1 to April 30, 2010

PMOC Contract No. DTFT60-09-D-00007

Task Order No. 2, Project No. DC-27-5115, Work Order No. 01

Ops Referenced: OP20-OP26, OP33, OP34, OP37, OP40, OP 41, OP53, OP54

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

PMOC lead person's name, affiliation, Charles A. Halboth, PE

Length of time on project: 0 years

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EXECUTIVE SUMMARY

PROJECT DESCRIPTION

The Second Avenue Subway project will include a two-track line along Second Avenue from 125th Street to the Financial District in Lower Manhattan. It will also include a connection from Second Avenue through the 63rd Street tunnel to existing tracks for service to West Midtown and Brooklyn. Sixteen new ADA accessible stations will be constructed. The Second Avenue Subway will reduce overcrowding and delays on the Lexington Avenue line, improving travel for both city and suburban commuters, and provide better access to mass transit for residents of the far East Side of Manhattan. Stations will have a combination of escalators, stairs, and in compliance with the Americans with Disabilities Act, elevator connections from street-level to station mezzanine and from mezzanine to platforms.

Phase One of the project will include tunnels from 105th Street and Second Avenue to 63rd Street and Third Avenue, with new stations along Second Avenue at 96th, 86th and 72nd Streets and new entrances to the existing Lexington Av/63 Street Station at 63rd Street and Third Avenue.

COST BASELINE

FFGA \$4.87 billion (Federal = \$1.35; Local = \$3.52 billion including financing cost of \$817 million)

SCHEDULE BASELINE

Key Milestones:

- Preliminary Engineering (PE): December 2001
- Final EIS Record Of Decision (ROD): July 8, 2004
- FFGA: November 19, 2007
- Final Design: April 2006
- Original FFGA Revenue Service Date (RSD): June 30, 2014
- Current MTA RSD: December 30, 2016
- Current FTA RSD: February 2018

PROGRESS AND ISSUES

Final Design for Contract Packages 26010 (2B), Contract-26012 (5C) and 06/23/2010 have been delayed until September 2010, primarily due to the redesign of Ancillary #1 at the 86th Street Station. This delay is not currently expected to impact the overall completion of the project. Contract C26002 (C1) will start TBM mining activities in late May. After incurring early delays in the construction of the Launch Box, this activity has held schedule for the past several months. The next critical issue to overcome pertaining to this contract is the ground freezing at the east tunnel. Resolution of all technical issues, change order negotiation and execution and subsequent start of work need to be expedited to allow for adequate ground freezing to support the start of the east tunnel, currently forecast to begin on January 4, 2011. . The delay in replacing the 48 inch water main (C26005) has been resolved.

MINI MONTHLY UPDATE

The information contained in the body of this report is limited, in accordance with Oversight Procedure 25, to “inform the FTA of the most critical project occurrences, issues, and next steps, as well as professional opinions and recommendations.” Where a section is included with no text, there are no new “critical project occurrences [or] issues” to report this month

ELPEP SUMMARY

Status:

As of the end of April 2010, MTACC continued to work cooperatively with the FTA to produce Management Plans as called for in the Enterprise Level Project Execution Plan (ELPEP). In early April, the PMOC worked with FTA to finalize the TCC Implementation Plan and PMP Update Plan approval letter that was sent to MTACC on April 7, followed by a PMOC review with MTACC on April 23. MTACC is developing a flow chart to identify material decision points in order to implement the review. A working group meeting was held on April 6 to review the Schedule Management Plan in which PMOC comments were reviewed and a plan to develop flow charts to lay out the schedule development and update processes was agreed upon. A subsequent review of the flow charts was held on April 13 with specific comments provided regarding the draft flow charts. Revised flow charts will be reviewed during the first week in May. A Cost Contingency Management Plan Outline was submitted by MTACC on April 2, to which the PMOC provided comments on April 13, followed by a meeting to discuss the comments on April 15. Cost estimate flow diagrams are under development by MTACC, which will facilitate the finalization of the Plan. Four flow diagrams presently under development are: (1) Process Flow Chart for updating the Cost Contingency, (2) WBS Cost Integration and development of Baseline Cost Estimate, (3) Forecasting, and (4) Budget Adjustment Process. The PMOC/FTA reviewed the MTACC Draft Risk Mitigation White Paper and provided comments in a meeting held on April 8. MTACC sent a revised white paper to FTA on April 21, which is under review for further discussion.

The PMOC, FTA, MTACC and SAS staff held weekly update meetings on April 1, 8, 15, and 22, 2010. Based on the ELPEP effective date of January 15, 2010, the following items are scheduled to be completed in the next 30 days:

- MTACC will develop and finalize the Cost and Schedule Management Plans for the SAS project in conformance with ELPEP requirements.
- MTACC will develop and finalize the Cost and Schedule Contingency Management Plans for the SAS project in conformance with the ELPEP requirements.
- MTACC will demonstrate a functioning process for achieving the traceability of contract package scope from the design basis documentation through pre-construction planning into the contract package cost estimate and schedule through a contract package level WBS or functional equivalent for one active SAS contract package (4B). MTACC will provide FTA with a plan to demonstrate similar ELPEP conformance on all other un-awarded contract packages for both projects except for construction risk mitigation capacity.

Observation:

The ELPEP implementation process is behind the ELPEP schedule; however, the process has been successful in producing intermediate products that will improve the respective project management processes. The weekly workshops are beneficial in maintaining good progress of the ELPEP implementation. The use of focused group efforts outside the weekly update meetings to review and revise plans has been effective. This month, the SAS Project Team has been proactive in the support of the ELPEP implementation effort.

MTACC has produced draft intermediate deliverables for the Schedule Management Plan, the Cost Management Plan, Risk Mitigation and is in the process of producing intermediate deliverables for the TCC Implementation Plan reviews. The MTACC and the PMOC have discussed the overlap between the OP 53 task and the package review portions of the ELPEP implementation requirements with the objective of coordinating efforts on similar tasks.

The following summarizes the intermediate deliverables and final plans submitted during this update period:

April 2, 2010 – Cost Contingency Management Plan Outline;

April 13, 2010 – Revised Section 5 of the Schedule Management Plan;

April 13, 2010 – Draft Schedule Management Flow Charts;

April 21, 2010 – Revised Draft White Paper on Risk Mitigation Capacity;

Concerns and Recommendations:

The PMOC has recommended that MTACC pursue a strategy of producing flow diagrams to describe their schedule and cost estimate management processes in order to clearly define the process and facilitate the production of the final plans. Although this process will require additional effort and may seem to delay the production of the plans, in the long run, it should prove beneficial in mutual understanding in the development of the plans, and help expedite their approval. The PMOC recommends that the MTACC assure that required resources are available for the implementation of the plans such as the TCC and PMP Update and to provide continued support in achieving the ELPEP goals outlined above.

Table 1 - Project Budget/Cost Table

	FFGA			FFGA Amendments	MTA's Current Working Budget (CWB)		Expenditures as of April 30, 2010	
	(\$ Millions)	(%) Grand Total Cost	Obligated (\$ Million)	TBD	(\$ Millions)	(%) Grand Total Cost	(\$ Millions)	% of Grand Total Cost
Grand Total Cost:	4,866.614	100	1,599.773		5,489.614	100	953.701	17.37
Financing Cost	816.614	16.78			816.614	14.88		
Total Project Cost:	4,050.000	83.22	1,599.773		4,673.000	85.12	953.701	17.23
Total Federal share:	1,350.693	27.75	353.991		1,350.693	24.60	260.630	4.75
Total FTA share:	1,300.000	96.25	325.898		1,300.000	94.62	260.630	4.75
5309 New Starts share	1,300.000	100	325.898		1,300.000	94.62	258.170	4.70
Total FHWA share:	50.693	3.75	28.093		50.693	5.38	2.460	0.05
CMAQ	48.233	95.15	25.633		48.233	96.67	0	0
Special Highway Appropriation	2.460	4.85	2.460		2.460	3.33	2.460	0.05
Total Local share:	2,699.307	55.47	1,245.782		3,322.307	60.52	693.071	12.62
State share:	450.000	16.67	100.000		450.000	13.54		
Agency share:	2,249.307	83.33	1,145.782		2,872.307	86.46		
City share:	0	0			0	0		

Data for this table was obtained from the transportation electronic award management system (team) and MTACC's grant management department.

Table 2 - Revenue Operations Date

FFGA	Proposed FFGA as Amended	Forecast Completion		Actual Completion
		Grantee	PMO	
June 30, 2014	N/A	December 30, 2016 ⁽¹⁾	February 2018*	TBD

(1) SAS Phase 1 Integrated Construction Schedule, Revision 3, Update #29 dated January 13, 2009.

* From ELPEP

1.0 GRANTEE'S CAPABILITIES AND APPROACH

1.1 Technical Capacity and Capability

1.1.1 Organization, Personnel Qualifications and Experience

- a) Grantee's Organization**
- b) Staff Qualifications**
- c) Grantee Staffing Plan**

Status:

- *Interviews are ongoing to find a candidate to fill the open Quality Manager position. In the interim, the MTACC Director of Quality is acting as the SAS Quality Manager.*
- *A candidate for the position of Construction Manager for the 72nd Street Station has been identified. This position is anticipated to be filled by mid-May 2010.*

Observations:

Adequate support is being provided for the various activities occurring during this phase of the project. *It is noted that several senior members of the design and construction management teams are shared with other projects and are not completely dedicated to the Second Avenue Subway project.*

Concerns and Recommendations:

The PMOC recommends that the SAS staffing plan be updated to reflect the Grantee's support of the extension of the design activity (See Section 2.1).

This situation should be periodically reviewed to ensure that key staff is available in accordance with the needs of the project and that absences do not adversely impact or hinder the execution of this project.

- d) Grantee's Physical Resources**
- e) History of Performance, Adequacy of Management Systems**

1.1.2 Grantee's Work Approach, Understanding, and Performance Ability

- a) Adequacy of Project Management Plan and Project Controls**
- b) Grantee's Approach to FFGA and other FTA/Federal Requirements**
- c) Grantee's Approach to Community Relations, Asset Management, and Force Account Plan**
- d) Grantee's Approach to Safety and Security**

1.1.3 Grantee's Understanding of Federal Requirements and Local Funding Process Federal Requirements

- a) Uniform Property Acquisition and Relocation Act of 1970**
- b) Local Funding Agreements**

1.1.4 Scope Definition and Control

Status:

The scope of the SAS Project is defined in the FEIS, ROD and the FFGA. The scope was subsequently allocated into eleven contract packages. The MTACC subsequently combined the scope of work for two of the 72nd Street Station packages (4A and 4B) into one contract package (4B). This has resulted in a total of ten contract packages for the project.

Technical Memorandum No. 5 addressed changes to the 63rd Street Station entrances subsequent to the Record of Decision and was submitted for FTA review on February 16, 2010. It was approved by the FTA on April 27, 2010.

Technical Advisory Committee (TAC) Memorandums were prepared and are under active evaluation to mitigate and/or resolve delays encountered by several of the active construction contracts.

- *2010/111; 86th Street Station (C-26013) – Briefing and Approval of Re-Sequencing the Contract to Enable Installation of a Temporary 48-inch DIP Water Main at South Shaft Area during Current NYDEP Shut-Down Period.*
- *2010/114; Contract C26002 – Briefing and Approval for Pretreatment of the Rock Mass above the TBM-2 Alignment Immediately South of the Launch Box.*
- *2010/32; Revised Contract Packaging Recovery Plan for G3 Tunnel Construction (C-26007).*
- *2010/112; 86th Street Station Schedule Recovery Due to TBM Extension, Blasting restrictions and Contracts C-26002 and C-26013 Delays.*

These memos document scope changes and transfers between projects. They provide the engineering, schedule and financial information necessary to support and control scope changes.

Observation:

The SAS project team is actively pursuing and evaluating design and construction alternatives that will enhance project delivery without compromising scope or quality. The process of utilizing the Configuration Control Board (CCB), the change control process, the TAC and issuing Technical Memorandums appears to be an effective means to track scope changes and validate that all impacts of a proposed modification have been evaluated. Five Technical Memorandums have been issued to date.

Concerns and Recommendations:

The PMOC recommends continuing to monitor the use of this procedure to ensure uniform application to all relevant scope changes.

1.1.5 Quality

1.1.6 Project Schedule

1.1.7 Project Budget and Cost

Status:

Total project cost in the approved FFGA is \$4,866,614 million and is allocated into the Standard Cost Categories (SCC) as shown in Table 1-1.

Table 1-1–Standard Cost Categories

Standard Cost Category (SCC) #	Description	Year of Expenditure \$000
10	Guideway & Track Elements	612,404
20	Stations, Stops, Terminals, Intermodal	1,092,836
30	Support Facilities: Yards, Shops, Admin Bldgs.	0
40	Site Work & Special Conditions	276,229
50	Systems	322,707
60	ROW, Land, Existing Improvements	240,960
70	Vehicles	152,999
80	Professional Services	796,311
90	Unallocated Contingency	555,554
Subtotal		4,050,000
Financing Cost		816,614
Total Project		4,866,614

Table 1-2 lists the associated grants in the Transportation Electronic Award Management (TEAM) System with respective appropriated and obligated amounts as of April 30, 2010.

Table 1-2 – Appropriated and Obligated Funds

Grant Number	Amount (\$)	Obligated (\$)	Disbursement (\$) thru <i>April 30, 2010</i>
NY-03-0397	\$4,980,026	\$4,980,026	\$4,980,026
NY-03-0408	\$1,967,165	\$1,967,165	\$1,967,165
NY-03-0408-01	\$1,968,358	\$1,968,358	\$1,968,358
NY-03-0408-02	\$24,502,500	\$24,502,500	\$24,502,500
NY-03-0408-03	0	0	0
NY-03-0408-04	0	0	0
NY-03-0408-05	\$167,810,300	\$167,810,300	<i>\$167,810,300</i>
NY-17-X001-00	\$2,459,821	\$2,459,821	\$2,459,821
NY-36-001-00*	\$78,870,000	\$78,870,000	<i>\$56,941,476</i>
NY-95-X009-00	\$25,633,000	\$25,633,000	0
NY-95-X015-00	\$45,800,000	\$45,800,000	0
Total	\$353,991,170.00	\$353,991,170.00	<i>\$260,629,646.00</i>

* Denotes American Recovery and Reinvestment Act (ARRA) funds

A total of \$953,700,545 has been expended on the project through April 30, 2010, of which \$386,526,476 has been spent on design and \$286,873,498 on construction (MTACC's monthly financial input).

Observation:

Local funds totaling \$693,070,899 (\$953,700,545 – \$260,629,646) have been spent as of April 30, 2010.

Concerns and Recommendations:

1.1.8 Project Risk Monitoring and Mitigation

1.1.9 Project Safety

Status:

The *April 2010* OSHA recordable incident rate for the project is *1.2*, and the lost time accident rate is *1.26*. Both rates are well below the national averages of *4.2* and *2.2* respectively.

Observation:

SAS has an effective and proactive safety program.

1.2 FTA Compliance Documents

1.2.1 Readiness to Enter PE

1.2.2 Readiness to Enter Final Design

1.2.3 Record of Decision (ROD)

1.2.4 Readiness to Execute FFGA

1.2.5 Readiness to Bid Construction Work

1.2.6 Readiness for Revenue Operations

2.0 PROJECT SCOPE

2.1 Status & Quality: Design/Procurement/Construction

2.1.1 Engineering and Design

Status:

The following table summarizes Final Design Completion Dates as reported by the MTACC via the most recent update of the IPS and at the end of the previous quarter. Significant slippage (>6 months) has been reported for 3 contract packages. Two other packages have experienced moderate slippage (>3 months). Over this period, the design schedule has been maintained for only one contract.

		MTACC Monthly Report	IPS Update #45
Contract	Description	Q4 – 2009	Q1 - 2010
Contract -26010 (2B)	96 th Street Station Finishes and Mechanical, Electrical and Plumbing (MEP)	12/22/09	09/13/2010
Contract-26006 (3)	63 rd Street Station Modifications	04/16/10	04/19/2010
Contract-26011 (4C)	72 nd Street Station Finishes and MEP	01/14/10	05/14/2010
Contract-26008 (5B)	86 th Street Station Cavern Construction	12/30/09	07/2/2010
Contract-26012 (5C)	86 th Street Station Finishes and MEP	02/09/10	09/13/2010
Contract-26009 (6)	Systems –Track, Power, Signals and Communications	02/24/10	06/23/2010

Observation:

Design revisions are being incorporated into future construction contracts to address field conditions including changes to TBM and cavern mining sequences, results of the Fragile Building Survey, the revised cost-to-cure scope for the Chase Building and to address NYCT review comments.

Concerns and Recommendation:

The PMOC is concerned that design delays are impacting the procurement of construction services and may begin to impact the overall project schedule. The PMOC is also concerned that redesign and repackaging of construction contracts has become “standard operating

procedure.” The PMOC recommends that alternatives to extending the design period be carefully examined and that concurrent methods to reduce the overall design/procurement period be incorporated to mitigate the impact of the delays.

2.1.2 Procurement

Status:

The bid due date for Contract-26007 (4B), 72nd Street Station Cavern Construction was extended from March 25, 2010 to May 20, 2010. The extension has provided the design consultant time to *incorporate TBM and cavern mining sequence revisions*, answer the *numerous* questions received from the contractors and to issue addendums to the drawings and specifications as needed. *Fifteen (15) addenda have been issued to date.* Contract award is scheduled for July 6, 2010. *Remaining procurement “milestones” for 2010 are summarized as follows:*

<i>Activity #</i>	<i>Description</i>	<i>Date*</i>
<i>Contract C-26006: 63rd Street Station Upgrade</i>		
<i>C3 PR25</i>	<i>Procurement (IFB) Advertise & Bid</i>	<i>06/17/10</i>
<i>C3 PR30</i>	<i>Open Bids</i>	<i>08/16/10</i>
<i>C3 PR40</i>	<i>Award Contract C3</i>	<i>10/04/10</i>
<i>Contract C-26008: 86th Street Station Cavern & Heavy Civil</i>		
<i>C5B PR25</i>	<i>Procurement – Advertise C5B Bid Package</i>	<i>08/05/10</i>
<i>C5B PR35</i>	<i>Procurement (IFB) Open Bids</i>	<i>12/08/10</i>
<i>Contract C-26009: Systems</i>		
<i>SYPR 25</i>	<i>Procurement – Final Design Sign Off & Issue RFP</i>	<i>09/27/10</i>
<i>SYPR 30</i>	<i>Submit Proposals</i>	<i>11/23/10</i>
<i>* Note: All dates reference IPS Update #45</i>		

Observation:

As of the writing of this report, no advance notices for either the 63rd or 86th Street Station packages have been posted on the NYCT procurement web site.

Concerns and Recommendation:

Achieving the procurement milestones listed above will be a critical element in overall schedule execution. Additional delays to construction procurement resulting from design changes or scope transfers between packages must be avoided. The PMOC recommends that the MTACC evaluate alternatives and options for expediting the procurement process if necessary to maintain this schedule.

2.1.3 Construction

Status:

There are three active construction contracts on the SAS project. Construction progress on these contracts is as indicated below:

- **Contract-26002(1) –TBM tunnels from 92nd Street to 63rd Street**
 - *Delivered TBM components and trailing gear and commenced assembly of the TBM.*
 - *Completed drilling and blasting of Starter Tunnels and gripper walls for the western (TBM-2) Starter Tunnel.*
 - *Completed installation of rock anchors and rock bolts along east and west secant pile walls.*
 - *Completed soil excavation of launch box from 93rd Street to Db #71.*
 - *Continued placement of the mud slab from the South Bulkhead to 95th Street.*
 - *Continued installation of horizontal and vertical conveyors systems above and below deck.*
 - *Continued construction of electrical distribution system in Launch Box for the TBM.*
 - *Continued installation of muck bin and observation platforms.*
 - *Continued monitoring of buildings and dewatering wells.*
 - *Commenced façade tie work at buildings on the west side between 94th and 95th Streets.*
 - *72nd Street Shaft; completed drilling and blasting. Continuing to level via mechanical means.*
 - *69th Street Shaft; continued excavation to top of rock in preparation for blasting.*
- **Contract C-26005 (2A) -96th Street Station heavy civil, structural and utility relocation**
 - *Completed permeation/compensation grouting along the east side of 2nd Avenue between 95th and 96th Streets*
 - *Completed excavation for 18" sewer line and 30" gas main across 96th Street.*
 - *Completed installation of splice boxes on the east side of 2nd Avenue between 96th and 97th streets.*
 - *Completed demolition of Century Lumberyard building. Strain gauges mounted to the raker braces do not indicate any load. Dept of Buildings was informed of this finding; the Contractor will remove the bracing system shortly.*
 - *Started 18" sewer line excavation at NE corner of 95th Street and 2nd Avenue.*
 - *Installed 12" water main and backfilled 30" gas main on 96th Street and 2nd Avenue.*
 - *Excavated 30" gas main at NE corner of 97th Street and 2nd Avenue.*
 - *Installed 8 x 5" ductbank between 97th and 98th Streets.*
 - *Installed 30" gas main along 2nd Avenue in front of Metropolitan Hospital.*
- **Contract C-26013 (5A) 86th Street Station excavation, utility relocation and road decking**
 - *Completed manholes M-69276 at SE corner of 84th Street/2nd Avenue and M-63054 at NW corner of 87th Street/2nd Avenue.*
 - *Started installation of manholes M-14787 and M-60317 at the south side of 83rd Street/2nd Avenue.*
 - *Completed 12" gas line tie-ins (four total) at 83rd Street/2nd Avenue and 87th Street/2nd Avenue.*
 - *Completed excavation and removal of old 48" CI watermain on west side of 2nd Avenue for the south access shaft at 83rd Street.*
 - *Preparing to relocate work zone from west side to east side of 2nd Avenue at 83rd Street.*

a) Force Account (FA) Contracts

2.1.4 Operational Readiness

2.2 Third-Party Agreement

Status:

As previously reported, a meeting between MTACC's President, the SAS Program Executive, the new NYCDEP Commissioner and his assistant on February 19, 2010 was required to resolve the issue of replacing the 48-inch water main with a 60-inch water main. This work is expected to commence in May 2010.

Observation:

The MTACC reports a significant improvement in the working relationship with NYCDEP. However, at this time, the use of formal agreements to ratify agreed-upon capital improvements is not contemplated.

In a separate matter, MTACC reports executing a Memorandum Of Understanding with NYCDOT regarding Maintenance and Protection of Traffic (MPT) revisions.

Concerns and Recommendations:

The PMOC will continue to monitor the interface between MTACC and other agencies. The PMOC will continue to recommend that MTACC utilize some form of utility agreement to memorialize agreements and scopes of work. [Reference SAS-08-Jan10]

*All reference issue numbers are in Sections 7 (PMOC Concerns And Recommendations) and 8 (Grantee Actions From Quarterly And Monthly Meetings)

2.3 Contract Packages and Delivery Methods

Status:

Contract 4A and 4B have been combined thus reducing the total contract packages to 10. Package description and delivery method is as follows (note: checkmark indicates completion):

			Procurement	
No.	Contract	Description	Type	Status
C1	C-26002	TBM Tunnels from 92 nd St. to 63 rd St.	IFB	✓
C2A	C-26005	96th Street Station Structure and Heavy Civil	RFP	✓
C2B	C-26010	96th Street Station: utility restoration, construction of the above ground structure of the entrances and ancillary facilities, remaining invert slab, street, sidewalk and tree restoration finishes and installation of mechanical, electrical and plumbing equipment.	RFP	
C4A/C4B	C-26007	72nd Street Station: construction of the cavern and the G3/G4 tunnels to the existing 63 rd St. /Lexington Avenue Station. Also includes the demolition of existing buildings at Ancillary 1 and 2 and utility	IFB	

			Procurement	
No.	Contract	Description	Type	Status
		<i>relocation for support of excavation walls previously in contract 4A.</i>		
C4C	C-26011	<i>72nd Street Station: construction of ancillary finishes, installation of station finishes and mechanical, electrical and plumbing equipment.</i>	RFP	
C3	C-26006	<i>63rd Street Station: upgrade involving open-cut excavation for the construction of entrance and ancillary facilities, removal and upgrade of the structural elements within the existing tunnel, and traction power connection to the Lexington Avenue Station on the Q Line.</i>	IFB	
C5A	C-26013	<i>86th Street Station: utility relocation, open excavation and road decking that will prepare the site for construction.</i>	RFP	✓
C5B	C-26008	<i>86th Street Station: construction of the station cavern, entrances and access shafts.</i>	IFP	
C5C	C-26012	<i>86th Street Station: construction of the ancillary facilities and the installation of station finishes and the mechanical, electrical, and plumbing equipment.</i>	RFP	
C6	C-26009	<i>Systems, Power, Signals and Communications; includes the installation of the low-vibration track, aluminum rail, way-side signals, and all communication components, integration of the communication network with the NEP SCADA system and commissioning the system for revenue service.</i>	RFP	

Observation:

The project scope has been allocated in a logical manner to the various contract packages to facilitate effective construction in support of the project schedule and budget. *MTACC is implementing logical scope transfer adjustments in response to field conditions, regulatory requirements and unforeseen field conditions.*

MTACC's apparent preference for the RFP method of construction procurement is noted. This method does offer certain advantages over the IFB process. The RFP procurement typically requires a longer duration. The PMOC is concerned that it may result in higher bid prices as a result of less competition.

Concerns and Recommendations:

The PMOC recommends the MTACC periodically evaluate their construction procurement strategy to ensure it is responsive to the needs of the project and appropriate to the current market conditions.

2.4 Vehicles

Status:

The decision to utilize 60 foot rail cars on the SAS project is being reevaluated. The reevaluation is part of an initiative by the new president of NYCT to optimize the entire NYCT rail fleet and infrastructure. *The most recent information received unofficially from the NYCT is that the next rail car procurement replacing the R-44 fleet will be the 60 foot vehicles, with the 75 foot car question deferred to the next rail car procurement.*

2.5 Property Acquisition and Real Estate

Status:

Real estate acquisition and tenant relocation is being performed in accordance with the approved SAS Real Estate Acquisition Management Plan and Relocation Plan. These plans address Title 49 CFR Part 24, which implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and FTA real estate requirements 5010.1C. *The tenants in 43 of the 48 residential units have been relocated. The remaining residential tenants have been contacted by MTACC's relocation consultant, O.R. Colan Associates. Title vesting for properties required for Contracts 4B and 5B occurred in April 2010. MTACC held a public hearing on April 20, 2010, pursuant to Article 2 of the New York State Eminent Domain Procedure Law, on the proposed acquisition of permanent and temporary property interests and the termination of rights for certain sidewalk encroachments in properties to support Contracts 3, 4B, 5A and 5B. MTACC is currently developing responses to questions received at this public hearing.*

2.6 Community Relations

3.0 PROJECT MANAGEMENT PLAN AND SUB-PLANS

3.1 Project Management Plan

3.2 PMP Sub Plan

3.3 Project Procedures

Status:

MTACC has contracted Jacobs (CCM) to prepare approximately 85 new project procedures. The exact number is somewhat in doubt due to the requirement for the MTACC to comply with ELPEP provisions, which are still under development. To date, the MTACC has released 44 approved procedures, which the PMOC has reviewed. The MTACC has also developed a schedule for the development of the remainder of the procedures. They will be complete and approved by June 30, 2010, with intermediate milestones that the PMOC will monitor to evaluate continued progress. *The MTACC has suffered a relapse in their development of the project procedures. They were only able to approve one additional procedure during April 2010. The MTACC has assured the PMOC, however, that this lapse is recoverable and will be spread out over the remaining two months of their commitment.*

Observations

The PMOC has performed a thorough review of 44 of the procedures that the MTACC has approved and released to date. A complete list of our comments is on file in the PMOC's office

for review. The PMOC met with MTACC on March 22, 2010 to discuss our review and present our comments. In general, although a few of the procedures contained glaring errors (which the MTACC will correct), and the priorities the MTACC has placed on the order of their development are arguable, it is the PMOC's opinion that the new procedures will be adequate for their intended purposes.

In informal meetings with ESA personnel, however, the PMOC has become aware that, although MTACC has approved and implemented these 44 procedures, they are not yet in widespread use on either the ESA or SAS Projects. The entire task will not be complete until all procedures are fully in use on all MTACC projects.

Concerns and Recommendations

Although it now appears as if the MTACC has made a sincere commitment to develop and approve these new procedures, the second half of the task, the implementation, has yet to fully materialize. The PMOC is concerned that the implementation will be sporadic among all the various MTACC projects, and this will therefore tend to defeat the purpose of the procedures and the ELPEP. The PMOC recommends that the MTACC develop a process to assure itself that all of these procedures are in use on all of its projects. An example of such a process would be a new procedure distribution system that would require the recipients (the individual Project Managers) to acknowledge receipt of each new procedure as it is released for implementation. This system could be monitored by the parent MTACC to assure implementation across all its organizations and provide it with the opportunity to correct any non-conformances as they develop. [Reference SAS-11-Jan10].

4.0 PROJECT SCHEDULE STATUS

4.1 Schedule Status

Table 4-1 Revenue Operations Date

FFGA	Proposed FFGA as Amended	Forecast Completion		Actual Completion
		Grantee	PMO	
June 30, 2014	N/A	December 30, 2016 ⁽¹⁾	<i>Feb 2018*</i>	TBD

** From ELPEP*

4.2 90 Day Look - Ahead

Based on the Integrated Project Schedule (IPS) Update # 45, which was received this period, major activities that can be anticipated over the upcoming 90 days include the following:

Table 4.2 -- 90 Day Look - Ahead

Activity ID	Start	Finish
C1- TBM Construction - Tunnel 96th Box (91st to 95th)		
TBM 1 st Run – Mine West Tunnel from 96 th Street Launch Box to 65 th Street	05/14/10	10/29/10
Complete Design for Freeze Plant/Issue to S3	03/31/10A	06/30/10
C3 - 63rd Street Station Upgrade (IFB)		
Bid Advertisement	06/17/10	
Bids Due		08/16/10
C4B – 72nd St. Station Existing Demo/Mining & Lining (IFB)		
Bid Opening		05/20/10
Notice of Award		6-Jul-10
C6 – Systems (RFP)		
RFP Available	09/27/10	
CM1188 – Design Services MOD #57		
PE/FD for Ancillary #2 @ 86 th St Station; Contract 5A	05/03/10	06/07/10
PE/FD for Ancillary #2 @ 86 th St Station; Contract 5B	05/03/10	08/03/10
PE/FD for Ancillary #2 @ 86 th St Station; Contract 5C	05/03/10	07/13/10
Systems	05/03/10	08/03/10

4.3 Critical Path Activities

IPS Schedule Update #45 was received on April 23, 2010 and is based on a Data Date of April 1, 2010. Update #45 did not contain any narrative report, schedule variance report, or similar documentation. The following table summarizes the critical path as calculated in this schedule.

Critical Path Activities: IPS Update #45

Activity ID	Original Duration	Start	Finish
Contract Modification for CM1188 (Design Contract)	170	30-Apr-10	31-Dec-10
MOD52 - 86 th /63rd Street Station Building Inspections	165	31-May-10	31-Dec-10
MOD57 - PE & FE for Ancillary #2 at 86th Street	147	30-Apr-10	30-Nov-10

Critical Path Activities: IPS Update #45

Activity ID	Original Duration	Start	Finish
C1-TBM Tunnel & 96th Box (91st to 95th)	397	16-Mar-10 A	13-Sep-11
Construction - Tunnel	397	16-Mar-10 A	13-Sep-11
C5-86th Street Station	1280	17-Feb-11	13-Jan-16
C5A - 86th Station - Excavation & Utility Work	158	17-Feb-11	29-Sep-11
C5B - 86th Station - Mining & Lining	646	18-Aug-11	6-Feb-14
C5C - 86th Station - Architectural & MEP Finishes	643	29-Jul-13	13-Jan-16
C6 - System Installation (86th Street Station)	200	24-Mar-15	28-Dec-15
C6-Systems (Track, Signal, Traction Power & Comm.)	269	27-Oct-15	4-Nov-16
C6 – Construction	269	27-Oct-15	4-Nov-16
NYCT Pre-Revenue Operation Test/Revenue Service	85	5-Sep-16	30-Dec-16
NYCT Pre-Revenue Operation Test & Revenue Service	0	30-Dec-16	30-Dec-16
Phase 1 Substantial Completion	0	30-Dec-16	30-Dec-16

Update #45 retains the embedded “hand-off” activities which represent MTACC’s approach to incorporating contingency time within the schedule. The PMOC has previously discussed its concerns with respect to this approach. To aid in our analysis of the schedule, the PMOC has reduced the duration of all “hand off” activities and associated relationship “lags” to zero, effectively eliminating the MTACC’s contingency from the schedule. The resulting critical path is summarized in the following table.

Critical Path Activities: Update #45 (w/o “Hand-Off” Activities)

Activity ID	Original Duration	Start	Finish
C1-96th Street Station	1469	23-Oct-09 A	15-Jul-15
C2A-Site Work & Heavy Civil	945	23-Oct-09 A	5-Jul-13
C2B-Station Conc., Utilities, Street Restoration	227	20-May-13	9-Apr-14
C6-System Installation (96th Street Station)	330	10-Apr-14	15-Jul-15
C5-86th Street Station	410	31-Mar-10	1-Nov-11
Design-86th Street Station, Architectural + ME	132	31-Mar-10	30-Sep-10
C5C-86th Station - Architectural & MEP Finishes	278	1-Oct-10	1-Nov-11
C6-Systems (Track, Signal, Traction Power & Comm.)	1625	21-Apr-10	13-Jul-16
C6-Systems Design	111	21-Apr-10	22-Sep-10
C6-Procurement / Award	218	18-May-10	21-Mar-11

Critical Path Activities: Update #45 (w/o “Hand-Off” Activities)

Activity ID	Original Duration	Start	Finish
C6 - Construction	1372	21-Mar-11	13-Jul-16
NYCT Pre-Revenue Operation Test/Revenue Service	85	11-May-16	6-Sep-16
NYCT Pre-Revenue Operation Test & Revenue Service	0	6-Sep-16	6-Sep-16
Phase1 Substantial Completion	0	6-Sep-16	6-Sep-16

Observations:

- *It is the opinion of the PMOC that eliminating the embedded contingency results in a more accurate forecast of the actual project critical path(s).*
- *Removing the embedded contingency results in a forecast Revenue Service Date (RSD) of September 6, 2016.*
- *It is the PMOC’s opinion that the difference between this forecast RSD and December 30, 2016 is the true measure of schedule contingency currently available.*
- *The difference between September 6, 2016 and December 30, 2016 is 115 calendar days.*
- *This alternate critical path differs substantially from that contained within the IPS. The PMOC acknowledges that MTACC is actively engaged in managing issues relevant to these activities. However, the PMOC is concerned that the MTACC’s embedded contingency approach may distract attention from the schedule-related issues requiring the most attention.*
- *Contract 1 (C-26002) TBM Tunnels initiates the critical path on both updates. Over the reporting period of one month, this contract lost 31 work days to the turn over to 86th Street Station. The reason for this is the adjustment to the planned work and the addition of 2209 LF of additional tunnel boring.*
- *Update #44 indicates the start of TBM activity on March 10, 2010. The actual forecast date for the start of this activity in update #45 is May 14, 2010. This slip in the start date is a contributing factor in the overall loss of time on the program. The data entered into the IPS is an estimation by the MTACC for the work and is not a reflection of the contractors analysis. S3 Tunnel Constructors is still developing the schedule modification and will submit it to the MTACC for approval.*
- *The MTACC has been utilizing negative lags in the schedule to prevent the RSD from pushing to a later date. The early program loss in production on critical items directly affects the RSD. While alternative work plans are being developed and to maintain the RSD, the MTACC chose to use the negative lags.*
- *Substantial Completion/Revenue Service Date was held at December 30, 2016. This was accomplished through consumption of project level float embedded in the project*

schedule by the MTACC. There is 117 work days of float imbedded into the critical path but a negative lag of 18 work days effectively reduces this to 99 work days.

The IPS is undergoing a major change in structure. Because Contract 1 is late and because of recently discovered geotechnical issues, the working plan for the TBM has been adjusted. In addition, major scope concepts have been modified. The following list identifies some of the major IPS adjustments being made. In cases where the contract modification has not been executed, MTACC has adjusted the IPS based upon best information available.

- *Contract 1 will bore the west tunnel first instead of the east tunnel as the combination of reduced rock cover and poor rock quality at the start of the east bore will not provide suitable support to allow the unsupported operation of the TBM. Ground improvements are needed. This was not discovered until it was exposed during excavation. The TBM first run was altered in order to provide time for the ground improvement to be initiated.*
- *The MTACC will extend the Contract 1 first TBM run from the North crossover to 65th Street (approx an additional 2,209 lf). This was done in order to increase excavation production and mitigate earlier schedule delays. This additional TBM work is on the critical path of the project.*
- *The MTACC transferred the installation of the concrete tunnel liner between 72nd and 86th Street Stations from Contract 1 to Contract 5B; the Contract 1 durations were adjusted to account for installation of the concrete tunnel liner 86th Street to 96th Street.*
- *The Contract 5B schedule activities and durations must also be adjusted to account for this change. This is new type of work for Contract 5B. It has not been confirmed if the IPS was adjusted to account for this additional work.*
- *The IPS was adjusted to account for the decreased rock excavation quantity for Contract 4B, 72nd Street Station (decreased quantity because it was removed by the TBM in C1). The main cavern and G3 tunnel durations were adjusted to account for the 2,209 lf mined by the TBM.*
- *The development of the 69th & 72nd Street Shafts is performed "off critical path" or before Notice Of Award + 7 Months for Contract 4B.*
- *Because of safety reasons, the schedule added "down time," for mining of the C4B cavern to allow safe egress for work crews on the TBM Run #2. Drill and blast operations will be suspended but mechanical excavation may continue. The concurrent operations of the Drill & Blast and TBM are prohibited.*
- *The MTACC adjusted durations for the Contract 5B cavern based on the revised quantities (lower) than what was reflected in IPS update 44 Rev3. Previous quantity estimates for C5B were derived from the 72nd Street cavern two track layout which included additional rooms and passageways. The MTACC recently determined the excavation quantity for C5B independently and adjusted the IPS.*
- *The plan is to mine Contract 5B at two headings. The IPS was adjusted to reflect a re-balancing of C5B activity durations to account for the updated mining sequence.*
- *The IPS adjusted durations for shaft development to account for mechanical mining while awaiting completion of C1 TBM Run #2.*

- *The MTACC adjusted the Contract 5A and Contract 5B schedule logic to account for both mechanical mining and drilling & blasting of the North and South Access Shafts. The critical path mining durations will be adjusted within the IPS update 46 once the Contract 5A contractor completes the final logic changes and it is approved by the MTACC.*
- *The MTACC adjusted Contract 5A logic to account for the revised sequence due to deletion/removal of work related to the 48" water at the North Pit. The adjusted logic will be substituted upon final submission by the Contract 5A Contractor.*
- *In several instances, PMOC notes that negative lags are used to maintain the RSD and are not reflective of actual work relationships.*
- *Minor logic adjustments to Contract 3 to account for turnover of the LAN from C6 to C3.*

Recommendations:

As previously discussed, MTACC should provide a report on contingency consumption with the monthly IPS update as a means of validating its RSD forecast of a December 30, 2016.

The use of “negative lags” to artificially maintain logic or chronological relationships should be minimized. Instances where “negative lags” are used to temporarily replicate incomplete schedule modifications should be clearly identified.

Intermediate fluctuation in milestones should be explained along with the method of resolution. The alternative is to consume handoff durations with the proper explanations.

Mitigation of ongoing delays and schedule improvement alternatives should be considered for Contract 1. Delays to this initial package are impacting the entire project. TBM progress, along with anticipated schedule acceleration must be monitored closely or a more accurate forecast cut into the IPS.

Clarification of the relationship between the end of the first tunnel drive and the start of the second tunnel drive should be clarified. A negative lag is not a transparent or verifiable means of modeling changes to construction logic on the critical path.

Procurement process included in IPS Update #44 may not accurately model the intended procurement process for Contract 6. PMOC recommends a detailed review of the intended process and subsequent update of the IPS. Timely execution of all elements of this Contract has the potential to directly impact the RSD. [Reference SAS-12-Jan10]

5.0 PROJECT COST STATUS

5.1 Budget/Cost

The FFGA baseline budget and current re-baselined budget is broken down into Standard Cost Categories in year of expenditure dollars as follows:

Table 5.1 – Standard Cost Categories

Category	Description	SAS Proposed Budget		Delta
		FFGA	February 2009	FFGA to Revised
		\$ M	\$ M	\$ M
10	Guideway & Track Elements	\$612	\$769	\$157
20	Stations, Stops, Terminals	\$1,093	\$1,392	\$299
30	Support Facilities; Yards, Shops,	\$0	\$0.6	\$0.6
40	Sitework, Special Conditions	\$276	\$420	\$144
50	Systems	\$323	\$252	-\$71
60	ROW, Land, Existing Improvements	\$241	\$292	\$51
70	Vehicles	\$153	\$213	\$60
80	Professional Services	\$796	\$886	\$90
90	Unallocated Contingency	\$556	\$579	\$23
	Subtotal	\$4,050	\$4,804	\$754

"Note: SAS does not update this information quarterly"

Status:

MTACC is currently updating the standard cost categories to reflect its current working budget of \$4,673M (exclusive of financing). Update will be finalized prior to the request for FFGA amendment.

Updated Additional Work Order (AWO) Tracking Logs for each active construction contract were received from MTACC on April 30, 2010. These logs are summarized as follows:

Contract	Award	Est. % Complete		AWOs **		Exposure ***		Contingency	
		Billing	Time	\$	% of Award	\$	% of Award	Allocated	Current
C26002 (1)	\$337,025,000	67%	80%	\$12,040,652	3.57%	\$37,423,988	11.10%	\$16,851,250	(\$20,572,738)
C26005 (2A)*	\$323,143,614	16%	14%	\$809,158	0.25%	\$3,164,879	.98%	\$16,250,000	\$13,085,121
C26013 (5A)	\$34,070,039	27%	19%	\$252,415	0.50%	\$1,200,842	3.52%	\$5,110,500	\$3,909,658

* Contract Option 1 added to award value for reporting consistency

** Includes only contract modifications approved and reported through 4/30/2010

*** Includes both approved AWOs and open AWOs

Observation:

Total executed AWOs plus AWO Exposure exceeds the allocated construction contingency for C26002 (1). *The substantial increase in Exposure this month (\$10,546,959) is the net result of AWOs 92, 96, 97 and 98. The reduced cost of cavern mining in Contract C4B is anticipated to cover the increase in TBM expenditures. Corresponding savings will be realized when C4B bids are opened on May 20, 2010.*

Concerns and Recommendations:

Review the construction Estimate at Completion (EAC) to incorporate updated AWO information and experience. Specifically:

- For each active construction contract, approved AWOs and current AWO exposures should be incorporated in the EAC. Additional contingency funds consistent with the Risk Assessment and remaining work should be allocated to the contract as appropriate.
- Experience and Lessons Learned from AWOs on C26002 (1) should be applied to future contracts. Technical revisions and/or contingency modifications for these contracts should be considered as deemed appropriate by MTACC.

5.2 Cost Variance Analysis

5.3 Project Funding Status

6.0 PROJECT RISK

6.1 Initial Risk Assessment

Status:

MTACC has developed a Risk Management Program through various workshops and mutual cooperation. The PMOC has documented the efforts of the Risk Assessment Team in various draft Spot Reports. The MTACC and FTA have identified and documented the risk mitigation initiatives in a scoping document for incorporation into the PMP.

Observation:

The SAS Project Team and the FTA's Risk Assessment Team have worked to address issues which could impact the success of the project. The FTA/PMOC has been meeting with MTACC regularly to effectuate a revised schedule and cost estimate that will be acceptable to all parties.

Concerns and Recommendations:

The PMOC's recommendation that a Financial Management Oversight Contractor (FMOC) review the MTACC's financial capacity to fund the SAS project has been implemented and is in process.

6.2 Risk Updates

6.3 Risk Management Status

Status:

As part of MTACC's process for Risk Management, regular Risk Mitigation meetings are held to discuss any risks that are either currently being experienced or anticipated in the near future. Each risk is discussed and ownership of the individual risk is assigned to an SAS Team member. Any issue that cannot be resolved is then elevated to the Project Executive for handling. The

Risk Mitigation meeting was held on April 6, 2010 and the attendees discussed the following risks:

Continuing risks from the previous meeting

- *Risk 15B: DEP out-of scope betterments*
- *Risk 21A: Differing and/or unforeseen sub surface conditions*
- *Risk 28: Planning and design project utility relocation*
- *Risk 29: Ineffective interfacing between contract packaging results in inefficient management*
- *Risk 64A: Excessive cavern over-break*

New risks added to the agenda

- *Risk 35: Building Settlement*

Observation:

MTACC's current Risk Mitigation process should provide early warning of problems and give the agency ample time to react and solve risks before they delay the project. The Risk Mitigation group includes the top management of the SAS project and involves the CCM, the Designer and MTACC. Regular meetings are being held to stay current with potential risks and the Decision Makers are in attendance.

The PMOC considers the Risk Mitigation Meetings to be part of the implementation of processes described in the ELPEP.

During this period the PMOC continued to review the grantee's compliance with 2006, 2007, 2008 and 2009 risk mitigation commitments.

Concerns and Recommendations:

The PMOC recommends that the decision makers consider this process to be a top priority and attend every meeting to stay on top of potential problems.

The PMOC is still concerned that the SAS project contingency did not start at the FTA recommended level and that SAS projections originally brought it below the Cost Contingency Curve. The PMOC recommends that SAS closely monitor their cost contingency to ensure that there is sufficient mitigation capacity and/or contingency funding available to cover the impact of projected drawdown and the possible realization of identified risks.

6.4 Risk Mitigation Actions

Status:

The addition of Risk 35, Building Settlement, addresses concerns connected to the underground work for Contracts 3, 4B and 5B, the 63rd Street, 72nd Street and 86th Street Stations, respectively. This is part of the ongoing investigation of Fragile Buildings by MTACC's design consultant in conjunction with the Memorandum of Understanding with New York City Department of Buildings.

Observation:

MTACC is using a lesson learned on Contract 1 to avoid similar problems on future contracts. By making the initial strengthening work part of their contract, MTACC will avoid possible delays from a third party and minimize schedule delays. In addition to inspecting buildings adjacent to open cuts, MTACC is looking at any Fragile Buildings along the entire Right-Of-Way.

6.5 Cost and Schedule Contingency

6.5.1 Cost Contingency

Status:

The MTACC has agreed to the requirements of the ELPEP to develop a Cost Contingency Management Plan. Development of the plan is in process.

Observation:

The ELPEP requires the MTACC to develop a Cost Contingency Management which will address all the requirements identified in Section IV a. of the ELPEP. The plan will define such processes as how the MTACC will forecast required contingency funds, manage and transfer all project cost contingency and how the minimum level of contingency will be maintained. MTACC has agreed to maintain a minimum contingency of:

- *\$220 million through 90% Bid and 50% Construction.*
- *\$140 million through 100% bid and 85% Construction*
- *\$45 million through Start Up and Pre-Revenue Operations*

Concerns and Recommendations:

To date, construction contract awards have significantly exceeded estimated cost. Significant cost increases during construction have been incurred as a result of unforeseen field conditions. Favorable bid results for Contract 4B (May 20, 2010), Contract C3 (October 4, 2010) and Contract C5 (December 8, 2010) will be critical in maintaining adequate contingency funds.

6.5.2 Schedule Contingency

Status:

The MTACC has agreed to the requirements of the ELPEP to develop a Schedule Contingency Management Plan. Development of the plan is in process.

Observation:

The ELPEP requires the MTACC to develop a Schedule Contingency Management, which will address all the requirements identified in Section IV b. of the ELPEP. The plan will define such processes as how the MTACC will manage the distribution, transfer and use of all project schedule contingency and how the minimum level of contingency will be maintained.

Concerns and Recommendations:

Based on the PMOC's forecast Revenue Service Date of February 2018 for the SAS project, the MTACC has agreed to maintain a minimum level of schedule contingency of 240 days through

Q3 2016 at which time the schedule contingency minimums will be updated as mutually agreed. Failure to meet this requirement will trigger the requirement for a recovery plan.

Significant discussion of this subject has continued between the PMOC and MTACC this period. We anticipate the submission of an updated Schedule and Contingency Management Plan that will substantively conform to the ELPEP requirements during the upcoming period as well as the incorporation of enhanced reporting and analysis of schedule contingency in the upcoming IPS update.

7.0 LIST OF ISSUES AND RECOMMENDATIONS

Priority in Criticality column

1 – Critical

2 – Near Critical

Number with Date Initiated	Section	Issue/Recommendation	Criticality
SAS-07-Jan10	2.1.2 Procurement	<p>The PMOC is concerned about the utilization of the IFB process for Contract 4B because of its estimated value. The scope of the contract might limit the number of responsive and responsible bidders, which would extend the procurement process. This contract is on the near critical path and any slippage could have a major impact on the project.</p> <p><u>PMOC Recommendation:</u> The PMOC recommends that the MTACC develop a contingency plan if an insufficient number of responsive and responsible bids are received.</p>	2
SAS-08-Jan10	2.2 Third Party Agreements	<p>The PMOC is concerned that in several cases agreed upon design and scope of work has been revised when later reviewed by other personnel within the agencies.</p> <p><u>PMOC Recommendation:</u> The PMOC recommends that MTACC consider utilizing utility agreements on future projects to preclude problems of this nature.</p>	2

Number with Date Initiated	Section	Issue/Recommendation	Criticality
SAS-09-Jan10	3.1 PMP	<p>The PMP and its sub-plans must be updated to reflect the new management processes and strategies of the ELPEP.</p> <p><u>PMOC Recommendation:</u> Update the PMP and its sub-plans within the timeframes established in the ELPEP.</p>	2
SAS-10-Jan10	3.2 PMP Sub-Plans	<p>MTACC is required to develop and finalize a Cost and Schedule Management Plan, and a Cost and Schedule Contingency Management Plan for the SAS in conformance with ELPEP requirements within 60 days of January 15, 2010. The PMOC is concerned that the 60 day requirement may not be met.</p> <p><u>PMOC Recommendation:</u> PMOC recommends the continuation of the workshops.</p>	2
SAS-11-Jan10	3.3 Procedures	<p>The PMOC is concerned whether the new procedures will actually be utilized by the different operating agencies within the MTACC, given that NYCT will implement SAS, and the procedures of the SAS PMP reflect the NYCT quality management system.</p> <p><u>PMOC Recommendation:</u> The PMOC recommends that the MTACC develop a process to assure itself that all of these procedures are in use on all of its projects. An example of such a process would be a new procedure distribution system that would require the recipients (the individual Project Managers) to acknowledge receipt of each new procedure as it is released for implementation. This system could be monitored by the parent MTACC to assure implementation across all its organizations and provide it with the opportunity to correct any non-conformances as they develop.</p>	2
SAS-12-Jan10	4.2 Critical Path Activities	<p>The MTACC should investigate the detailed relationships between construction contracts to determine a precise amount of hand-off time. The strategy for the late performance of construction is to consume hand-off</p>	1

Number with Date Initiated	Section	Issue/Recommendation	Criticality
		duration downstream. Significant amounts of hand-off could be consumed because of the late performance of Contract 1. The hand-off time is contingency time and should only be consumed in prescribed fashion. <u>PMOC Recommendation</u> : PMOC recommends a detailed review of the intended process and subsequent update of the IPS.	
SAS-13-Jan10	4.2 Schedule Performance Analysis	There is a contractual milestone for the turnover of work from Contract 1 to the 86 th Street mining Contract 5B. This relationship is likely to be critical or near critical. Currently, delays in achieving this milestone are of no consequence to Contract 1. Significant logic and activity durations changes are being implemented to Contract 1 as a result of ongoing delay in mitigation efforts. <u>PMOC Recommendation</u> : PMOC will revisit this issue after these changes are implemented and assess potential causes of action.	1

8.0 GRANTEE ACTIONS FROM QUARTERLY AND MONTHLY MEETINGS

Priority in Criticality column

1 – Critical

2 – Near Critical

Number with Date Initiated	Section	Grantee Actions	Criticality	Projected Resolution
SAS-A17-Aug08	2.4 Vehicles	<p>The PMOC requested additional information regarding certain statements in the draft Rail Fleet Management Plan:</p> <ul style="list-style-type: none">▪ NYCT should provide a test plan for increasing the period between inspections of the new technology fleet.▪ NYCT should explain why, in light of the ongoing state of good repair fleet replacement program, the cars financed under the SAS project are no longer needed.▪ MTACC should explain why they are considering removing the vehicles from the project scope without reducing the project funding.	2	7/30/10
SAS-A18-Aug08	ELPEP Updates	The change in the Contingency Drawdown Curve, particularly the latent contingency, needs to be clarified.	2	6/30/10

Number with Date Initiated	Section	Grantee Actions	Criticality	Projected Resolution
SAS-A19- Feb10	6.5 Cost and Schedule Contingency	<p>MTACC has developed a Risk Management Program through various workshops and mutual cooperation. The PMOC has documented the efforts of the Risk Assessment Team in various draft Spot Reports. The MTACC and FTA have identified and documented the risk mitigation initiatives in a scoping document for incorporation into the PMP.</p> <p>PMOC had expressed concern that the amount of available contingency may be insufficient to support the required contingency determined under the risk process.</p>	2	7/30/10

APPENDIX A -- LIST OF ACRONYMS

AFI	Allowance for Indeterminates
ARRA	American Recovery and Reinvestment Act
AWO	Additional Work Order
BCE	Baseline Cost Estimate
BFMP	Bus Fleet Management Plan
CCM	Consultant Construction Manager
CD	Calendar Day
CMAQ	Congestion Mitigation and Air Quality
CPM	Critical Path Method
CPRB	Capital Program Review Board
DHA	DMJM+Harris and ARUP
DOB	New York City Department of Buildings
EAC	Estimate at Completion
ELPEP	Enterprise Level Project Execution Plan
FD	Final Design
FEIS	Final Environmental Impact Statement
FPGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
HLRP	Housing of Last Resort Plan
IFP	Invitation for Proposal
IPS	Integrated Project Schedule
MEP	Mechanical, Electrical, Plumbing
MTACC	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
N/A	Not Applicable
NTP	Notice to Proceed
NYCDEP	New York City Department of Environmental Protection
NYCT	New York City Transit
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PQM	Project Quality Manual
RAMP	Real Estate Acquisition Management Plan
RFMP	Rail Fleet Management Plan
RFP	Request for Proposal
ROD	Record of Decision
ROD	Revenue Operations Date
RSD	Revenue Service Date
S3	Skanska, Schiavone and Shea
SAS	Second Avenue Subway
SCC	Standard Cost Categories
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 Plan
TIA	Time Impact Analyses