

COMPREHENSIVE MONTHLY REPORT

April 2013

**Dulles Corridor Metrorail Project
Extension to Wiehle Avenue**
Metropolitan Washington Airports Authority
Washington, DC

May 31, 2013

PMOC Contract Number: DTFT60-09-D-00016

Task Order Number: 002, **Project Number:** DC-27-5142, **Work Order No.** 03

OPs Referenced: 01, 25

Hill International, Inc.

One Penn Square West

30 South 15th Street

Philadelphia, PA 19102

PMOC Lead: [REDACTED]

Length of Time PMOC Assigned to Project: 12.5 years

Length of Time PMOC Lead Assigned to Project: 5.5 years

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1. PROJECT DESCRIPTION	1
2. PROJECT STATUS SUMMARY.....	1
3. PMOC’S ASSESSMENT OF PROJECT STATUS.....	4
MAIN REPORT	7
1. GRANTEE’S CAPABILITIES AND APPROACH	7
a. <i>Technical Capacity and Capability</i>	7
b. <i>Project Controls</i>	7
c. <i>Compliance</i>	9
2. PROJECT SCOPE	9
a. <i>Design Status</i>	9
b. <i>Bidding and Construction Status</i>	9
c. <i>Real Estate</i>	13
d. <i>Utility Coordination</i>	14
e. <i>Vehicle Procurement</i>	14
f. <i>Safety and Quality Status</i>	17
3. PROJECT MANAGEMENT PLAN AND SUB-PLANS	20
4. PROJECT SCHEDULE.....	21
a. <i>Critical Path Evaluation</i>	23
b. <i>Important Activities – 90-Day Look Ahead</i>	24
5. PROJECT COST	25
a. <i>Explanation of Variances</i>	25
b. <i>Monthly Cost Report, March 2013 Federal Only</i>	27
c. <i>Project Funding Sources: March 2013</i>	28
6. PROJECT RISKS	29
7. ACTION ITEMS	32
APPENDICES.....	34
APPENDIX A – <i>LIST OF ACRONYMS</i>	35
APPENDIX B – <i>PROJECT OVERVIEW AND MAP</i>	37
APPENDIX C – <i>SAFETY AND SECURITY CHECKLIST</i>	41
APPENDIX D – <i>PMOC TEAM PERFORMING THIS REVIEW</i>	45

EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *May 7, 2013* to conduct a monthly progress meeting for work performed in *April 2013*. The full time on-site PMOC representative attended various project meetings and site tours throughout this reporting period. Additional information for this report was obtained from MWAA during the second week of *May 2013*. Future PMOC monthly progress meetings are planned to occur during the first week of each month.

1. Project Description

MWAA, in cooperation with the Washington Metropolitan Area Transit Authority (WMATA), proposes to implement a 23.1-mile rapid transit system in the Dulles Corridor of Northern Virginia. The proposed corridor follows the alignment of the Dulles International Airport Access Highway (DIAAH) and the Dulles Toll Road within Fairfax County, and the Dulles Greenway, a private toll road in Loudoun County. The Project (Initial Operating Segment) undertakes the construction of the initial 11.7-miles of the rail project from the existing Metrorail Orange Line just east of the West Falls Church (WFC) Station to a station to be constructed at Wiehle Avenue with a total project cost of \$3.142 billion. Included in the Project are five new stations (Tysons East, Tysons Central 123, Tysons Central 7, Tysons West and Wiehle Avenue), improvements to the existing yard at WFC, and tail tracks beyond the Wiehle Avenue station. The procurement of sixty-four new rail cars is also included the Project. Based on the Full Funding Grant Agreement (FFGA), the Revenue Service Date (RSD) is December 1, 2014. The Federal New Starts share is \$900 million, along with \$75 million in Surface Transportation Program (STP) funds, for the extension to Wiehle Avenue. Through Federal fiscal year (FY) 2013, Congress has appropriated \$701,844,869 in Section 5309 New Starts funds for the Project with the addition of the FY13 New Starts Appropriation of \$90,730,505. The FTA has awarded \$611,114,364 in Section 5309 New Starts and \$75,000,000 in STP funds to date for the Project.

2. Project Status Summary

The FTA and PMOC met with MWAA on *May 7, 2013* to conduct a monthly progress review meeting and supplemental information was obtained from MWAA during the following week. The status of information is as of *April 30, 2013*, unless otherwise noted.

- **Real estate acquisition** kept ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels. Of the 104 parcel packages required, 101 have been acquired. MWAA expects to complete the transfer of property to WMATA between SSCD and RSD.
- **Rail car Procurement** - Monthly Progress Review Meeting No. 32 between WMATA and Kawasaki on the 7000 Series railcars scheduled for *May 9, 2013* was cancelled. The WMATA/PMOC 7K Rail Car Update Meeting was held on *May 14, 2013* via teleconference. Design Qualification Testing (DQT) continues for components and subsystems, and car level DQTs have begun at the Kawasaki Heavy Industries (KHI) facility in Japan on the full prototype car. *Climate room testing has started in Japan on the prototype cars. WMATA's project team will be in Japan to witness the beginning of Maintainability Demonstrations*

from May 20 – 24, 2013. It is anticipated that the Maintainability Demonstrations will continue through May 31, 2013, and all demonstrations will be video recorded. KMM production of pilot cars continues. Four cars have passed the water test and wiring and rigging have begun. The delivery of the first four production cars is now forecast to be December 13, 2013, and the conditional acceptance of the first four production cars is forecast to be August 14, 2014. The four prototype rail cars were completed at KHI on April 8, 2013. Conditional acceptance for the 64th railcar is forecast for June 12, 2015.

- **Design progress** – MWAA reported that as of the end of February 2013, all required permit applications have been submitted and approved.
- **Construction progress** is broken into two components: utility relocation (UR), which is considered to be 100% complete, and design-build (DB) construction, which is approximately 91% complete. Significant accomplishments in April included continued installation work at stations of pedestrian bridges and pavilions finish work, elevators and escalators; completion of the testing of Traction Power Substations and track energizations; installation of Communications Systems; static testing of the Automatic Train Control system and continued train safe braking tests within 4 of 5 N-Line test blocks. The Project also continued to make good progress on the West Falls Church Yard upgrades to include track Sound Cover Box (SCB) and Service and Inspection (S&I) Shop construction.

SILVER LINE CONSTRUCTION PROGRESS THROUGH APRIL 2013			
ELEMENTS	% COMPLETE	STATIONS/YARD	% COMPLETE
O-3 (DCR) Trackway	100%	Tysons East	79%
Tysons East Guideway	100%	Tysons Central 123	70%
Tysons West Guideway	100%	Tysons Central 7	63%
O-9 (DIAAH) Trackway	100%	Tysons West	60%
Systems	60%	Wiehle Avenue	86%
Trackwork	99%		

WEST FALLS CHURCH YARD PROGRESS THROUGH APRIL 2013	
ELEMENTS	% COMPLETE
<i>Overall</i>	40%
<i>Sitework</i>	95%
<i>Sound Cover Box</i>	36%
<i>S&I Building</i>	31%
<i>Trackwork</i>	68%
<i>Systems</i>	42%
<i>Testing</i>	5%

- **The DTP Schedule Update** with a data date of March 25, 2013 “Mitigation Schedule” showed a -5 calendar day variance with a September 11, 2013 SSCD and a forecast RSD of January 15, 2014. MWAA completed its review of the Schedule Update with a data date of

March 25, 2013 on April 17, 2013, stating that the schedule was “Accepted as Noted.” See Section 4 for additional information.

- **With regard to the West Falls Church Yard (WFCY) completion date**, DTP’s schedule update of *March 25, 2013* reflected a *-10* calendar day variance to the targeted completion date of *December 20, 2013*, resulting in a forecast completion date of *December 30, 2013*.
- **Budget status as of March 25, 2013 indicates** that *\$2,365,027,112* has been expended of the *\$3,142,471,635* budget total. *In March, MWAA moved the \$40.38 million value of CNPAs expenditures to the available contingency. MWAA now reports \$318,307,380* of the available contingency for the first ten contingency milestones has been drawn down to date with a balance of *\$43,492,620* available through the tenth contingency phase. The current estimate of the contingency available at the end of construction is *\$51.26 million*. In the PMOC’s opinion, the contingency is adequate. As of *March 25, 2013*, the federal portion of the Allowance Items recommended for award and yet to be transferred to the Firm Fixed Price is estimated to be *\$10.97 million* over budget. With the completion of the award of all contracts for Allowance Items, *\$40.11 million* of the original FFGA amount of *\$77.47 million* budgeted for Indexed Commodity Escalation was transferred to the Firm Fixed Price.
- **MWAA’s estimate of the Earned Value** for the Project through *March* is *89.5%*.
- **Risk** - The FTA approved MWAA’s RCMP Rev. 3 on April 13, 2012. On September 30, 2012, MWAA issued a revised list of Top Ten Risks. FTA’s letter of November 29, 2012 approved the September 30 revised Top Ten Risks. These risks are now being reviewed on a quarterly basis. A revised list of Top Ten Risks dated December 2012 was submitted to the FTA via letter dated January 22, 2013. The PMOC submitted its comments on the proposed revised risks to MWAA on February 22, 2013 and the comments were discussed at the March 7, 2013 update meeting. MWAA revised the proposed top ten risks and resubmitted them on March 20, 2013 as their re-titled “Proposed Top Tier” list containing nine items along with a revised risk register. *The PMOC provided comments on April 3, 2013 and during the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list. The PMOC commented on April 29, 2013 relative to the resubmission dated April 17, 2013, agreeing to the risks but raising some questions relative to numbering. On May 1, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 to FTA for approval, which is under review.*
- **The Full Time Equivalent (FTE) estimated total for April is 1,110, which is a decrease of 19 from the March actual of 1,129.** A fluctuation is to be expected with *the completion of design and the winding down of civil construction and the ramping up of systems installation and testing.*

FFGA-MWAA Core Accountability Items			
Project Status:		Original at FFGA:	Current Estimate*:
Cost	Cost Estimate	\$3.142B	\$3.142B
Contingency	Unallocated Contingency		
	Total Contingency (Allocated plus Unallocated)	\$297.76M	\$51.26M
Schedule	Revenue Service Date	December 1, 2014	January 13, 2014**
Total Project Percent Complete		Based on Expenditures	75.3%
		Based on Earned Value	89.5%
Major Issue	Status	Comments/Action/Planned Action	
Concurrent Non-Project Activities (CNPA) -- Project Partners have added activities to the Project that may not be part of the FFGA-funded scope of work. Alstom Configuration Control – ATC field concerns arose with regard to testers working with unapproved test procedures.	The FTA identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA's letter of November 28, 2012 corrected the total to \$40.38M. <i>Desk top meetings and a re-review of seventeen test procedures have been completed.</i>	MWAA provided FTA, on <i>May 6th</i> , their draft budget modification for the CNPAs by both SCC and ALI codes which they are planning to submit as part of their FFY2013 grant amendment. <i>A new configuration control procedure is to be developed for review and approval. A Corrective Action Plan (CAP) needs to be developed by Alstom and DTP and approved by MWAA and WMATA.</i>	
Date of Next Quarterly Meeting:		May 22, 2013	

* Through March 2013

** Contingent upon WFCY not needing to be complete

3. PMOC's Assessment of Project Status

In its monthly report for June 2011, the PMOC concluded that MWAA needed to replenish the Project contingency, and to actively pursue items that may be additional scope (non-FFGA) and billed to the responsible parties in order to address potential budget overruns caused in part by scope of work issues. The FTA/PMOC and MWAA met on September 6, 2012 to discuss MWAA's August 10, 2012 re-tabulation of the list of potential Concurrent Non-Project Activities (CNPAs). The cost of items that are not part of the FFGA Project scope could provide a source of funds to replenish the Project Contingency. The FTA identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA provided a response on November 28, 2012 acknowledging the FTA letter and identifying an additional \$3.7 million to increase the value of the CNPAs to \$40.38 million. MWAA submitted an e-mail to the PMOC on April 24, 2013 outlining its CNPA expenditure accounting as well as MWAA's procedure for FTA grant drawdowns demonstrating how MWAA makes adjustments to previously drawn down grant funds when necessary. Adjustments were made to the contingency fund in March 2013 that effectively raised the remaining Phase 10 contingency by removing the identified CNPA expenditures. On

May 6, 2013, MWAA submitted to FTA the draft modification (by both SCC and ALI codes) for the CNPAs that they are planning to submit as part of their FFY2013 grant amendment.

Through *March 2013*, MWAA has utilized \$318,307,380 resulting in a remaining balance of \$43.49 million through contingency Phase 10. With \$18,988,157 in obligated contingency, this leaves a balance of \$7.74 million for Phases 11 through 12 and a grand total balance, as of the end of *March 2013*, of \$51.26 million in contingency estimated to remain at project completion. The removal of the \$40.38 million in CNPAs from the federal portion of the Project *improved* the estimate of contingency remaining at the completion. In the opinion of the PMOC, the Project *now* has adequate contingency.

The Project continues working according to the “Mitigation Schedule” authorized by MWAA’s November 1, 2011 Directive Letter. The mitigation schedule with a data date of *March 25, 2013* reflected a -5 calendar variance to the contract schedule reflecting an SSCD of *September 11, 2013*.

DTP has incorporated the West Falls Church Yard construction into the mitigation schedule with a target completion date of December 20, 2013. DTP’s *March 25, 2013* schedule update reflected a -10 calendar day variance to the targeted completion date of December 20, 2013, resulting in a forecast completion date of *December 30, 2013*. It remains the PMOC’s opinion that the Project will be in revenue service within the FFGA specified date of December 1, 2014.

Kawasaki’s Mitigation Schedule based on the impacts of the March 2011 tsunami/earthquake forecasts a conditional acceptance date of the 64th DCMP rail cars on June 12, 2015. The Final Design Review (FDR) was closed February 28, 2013, a slippage of 343 calendar days. The completion of the Design Validation Review (DVR) also occurred on that date. Completion of Prototype rail cars #1, #2, #3, and #4 was achieved at KHI on April 8, 2013.

During April 2013, Automatic Train Control (ATC) field concerns arose with regard to testers working with unapproved marked up test procedures, and MWAA and WMATA field test observers not having the revised approved procedures available to them. This apparent lack of configuration control on Alstom’s part caused Project partners to lose confidence in the Alstom ATC test program. DTP reported that the first tabletop re-review of the seventeen test procedures requiring re-approval has been completed. A new Configuration Control Plan is being developed for submission and review. It was agreed that the first priority of the desk top review would be to determine a path forward for dealing with the unapproved software installed at K98. It is anticipated that the control lines affected by the unapproved software changes will require re-testing. WMATA, MWAA, DTP, and Alstom met on Wednesday April 24 for a status update on the ATC testing issues and to define a corrective action plan. DTP reported having spent several days in late April at Alstom’s Rochester, NY facility conducting a work shop. DTP reported that they discovered Alstom had installed 14 vital software changes on the N-Line (not yet operational) that Alstom had not submitted for review or approval. Alstom’s home office is only now beginning to learn the magnitude of the problem. There will be more meetings required and a clear path forward mapped out before confidence can be restored and the requisite procedure, software and drawing changes can be validated and approved. In the meantime, DTP has placed Alstom on a stand down with the exception of safe braking tests that are continuing. On May 7, 2013, Alstom and DTP senior management made a presentation to

MWAA and WMATA Executive Staff. DTP and Alstom were emphatic that they were going to turn the troubled test program around and outlined their plans to do so. They also emphasized they would fully cooperate with MWAA and WMATA to regain their confidence.

MAIN REPORT

1. Grantee's Capabilities and Approach

a. Technical Capacity and Capability

The PMOC prepared a Spot Report of Grantee Technical Capacity and Capability dated January 10, 2008 as part of the PMOC's effort to evaluate the Grantee's readiness to enter Final Design. The conclusion was that the MWAA project staff assigned to the Project was qualified. However, the MWAA direct staff was very thin with many project responsibilities assigned to MWAA's consultant team, Project Management Support Services (PMSS) team. The PMOC recommended that the Grantee add several staff positions and that reporting protocols be enhanced to ensure important project status information is shared in a timely manner with the Federal Transit Administration (FTA) and the PMOC. MWAA has adopted the recommendations and augmented their staff.

In September 2009, MWAA reorganized by implementing an integrated project management organization consisting of MWAA and PMSS staff. However, the personnel involved remained the same as was evaluated in the January 2008 Technical Capacity and Capability Report with a few replacements and additions. It remains the PMOC's opinion that the staffing levels and technical capabilities are still adequate. MWAA hired Mr. William Kerrigan as Manager of Project QA/QC and Safety, replacing Jon Christensen, who retired. PMSS also hired Mr. Leo Himmel to serve as the Project's Team Systems Testing Coordinator. In addition, MWAA has been reorganizing staff members into a new Testing and Start-up Group. MWAA has submitted a draft PMP, Version 8.0 to include the Testing and Commissioning stages of the project. The FTA transmitted comments to MWAA on July 11, 2012 requesting the final PMP by November 1, 2012. PMP Version 8.0 was transmitted to the FTA on November 8, 2012. The PMOC reviewed this submission and found it acceptable with the exception of the inclusion of draft organization charts, Figures 2-4 and 2-5. FTA's email of January 4, 2013 requested the updated organization charts, which MWAA submitted on January 23, 2013. The FTA's letter of January 25, 2013 approved PMP Version 8.0 Final.

Upon completion of the project, WMATA will become the operator of this extension to their system. WMATA personnel have been active participants in the project. The addition of WMATA personnel, particularly the Director of the Dulles Corridor Metrorail Project, has significantly improved the coordination between DTP, MWAA, and WMATA with regard to scheduling outages and work. Over the past year, WMATA's Dulles Project Director staffed a Quality Assurance and Inspection Staff to keep pace with Project progress as it enters the Testing and Start-up Phase. In addition, both MWAA and WMATA have hired Start-up Managers who are coordinating their efforts.

b. Project Controls

MWAA has procedures in place with regard to monitoring and controlling project scope, quality, schedule, cost, risk, and safety. It is the PMOC's observation that MWAA continues to monitor and control the project in accordance with their procedures.

- The Project Schedule was updated by DTP through *March* 2013. In this update, DTP reported a possible loss of *five* calendar days to the SSCD forecasted by DTP to occur on September 11, 2013. The WFCY schedule update reflected a *-10* calendar day variance to the target date of December 20, 2013. However, the WFCY activities and completion dates are only overlaid on the master mainline schedule but not connected to the mainline critical path or SSCD. MWAA completed its schedule review of the schedule update with a data date of *March 25, 2013* on *April 17, 2013* stating the schedule was “*Accepted as Noted.*” See Section 4.a for additional information.
- MWAA continues to monitor expenditures to date and to update the estimate at completion. In July 2012, MWAA allocated \$71.8 million in finance cost savings to contingency budget. In October 2012, MWAA identified \$19.0 million in forecast under-run commodity escalation that was transferred to the contingency budget. Through *March* 2013, MWAA has utilized \$318.30 million, of contingency, resulting in a remaining balance of \$43.49 million through contingency Phase 10. With \$18.99 million in obligated contingency, this leaves a balance of \$7.77 million for use in Phases 11 and 12, resulting in a grand total balance, as of the end of *March 2013*, of \$51.26 million in contingency estimated to remain at project completion. The removal of the \$40.38 million in CNPAs from the federal portion of the Project *improved* the estimate of contingency remaining at the completion of construction to \$51.26 million. In the opinion of the PMOC, the Project has adequate contingency.
- MWAA submitted the latest revision of the RCMP (Revision 3) to the FTA on March 28, 2012 and FTA letter of April 13, 2012 found it acceptable. For details, see section 3 “Project Management Plan and Sub-plans” below.
- The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data.

Through *April 2013*, there has been a cumulative total of *12,695,279* hours worked with six lost time cases.

DTP submitted the Safety and Security Certifiable Items List (SCIL) Revision 6 to include the WFCY on August 6, 2012. After MWAA review and comment, DTP subsequently resubmitted the SCIL Revision 6, which was approved “as noted” on February 5, 2013.

DTP submitted revisions to the System Safety/Security Management Plan (SSMP) and DTP Procedures PPQ 01.06.02, Development and Maintenance of the Safety/Security Certifiable Items List, and PPQ 01.06.03, Design Conformance Certification, which MWAA accepted on December 6, 2010. The FTA and PMOC met with MWAA, WMATA, and DTP on April 29, 2011 and again on January 27, 2012 to discuss development and status of a revised SSMP to integrate WMATA and MWAA systems testing, interface management and pre-revenue operations. SSMP Revision 9 was completed in March 2012; MWAA and WMATA approved the revised SSMP on March 20 and 22, 2012, respectively. The PMOC reviewed the completed revision and provided

comments to the FTA on April 5, 2012. The FTA accepted SSMP Rev. 9 dated March 2012 on April 13, 2012.

c. Compliance

It is the PMOC's observation that MWAA *continues* to follow the required statutes, regulations, and agreements.

MWAA submitted updates to the Amended Record of Decision Summary Mitigation Report to the FTA for the *first* quarter of 2013 on *April 29*, 2013.

2. Project Scope

a. Design Status

MWAA reported at the March 7, 2013 update meeting that all required permit applications have been submitted and approved as of the end of February 2013.

Regarding Automatic Train Control, MWAA issued a NTP on January 24, 2011 to an independent third-party consultant, Battelle, to review Alstom's safety analysis of their Generation 4 track circuit modules proposed for use on the Dulles Extension. MWAA received the Final Battelle Report on November 16, 2012. WMATA provided a letter dated November 19, 2012 stating, "the Alstom Generation 4 track circuit is accepted for service provided the system fulfills the requirements of Project specifications section 16919 – ATC System Reliability, Availability, Maintainability and Safety Program". MWAA wrote Letter No. 07687 dated November 30, 2012 to DTP stating, "As a condition of acceptance, WMATA has requested copies of the documents reviewed by Battelle. The list of documents is attached. DTP is requested to provide copies of these documents, in electronic format, to the Airports Authority." Battelle and DTP gathered and submitted the requested documents to MWAA and WMATA on January 14, 2013. MWAA wrote Letter No. 07877 dated January 23, 2013 to WMATA stating, "with the provision of the aforementioned documents to WMATA, the Airports Authority considers all of the tasks related to the Independent Review and Assessment of Alstom's Generation 4 Safety Analysis by Battelle to be complete."

b. Bidding and Construction Status

DTP has awarded all of the thirty-seven Allowance subcontract packages. Through *March 2013*, MWAA has transferred \$556,612,188 worth of the \$424,147,505 federally funded Allowance Items Budget with an overrun of \$132,464,683 to the firm fixed price contract. In addition, MWAA has Allowance Items recommended for Award, but not yet transferred to the firm fixed price contract, worth \$10.97 million, which is an additional \$8.97 million over budget. The \$8.97 million does not include Installation of Public Art (C7) and the remainder of Spare Parts (C11).

During April 2013, ATC field concerns arose with regard to testers working with unapproved marked up test procedures, and MWAA and WMATA field test observers not

having the revised approved procedures available to them. This apparent lack of configuration control on Alstom's part caused Project partners to lose confidence in the Alstom ATC test program. DTP reported that the first tabletop re-review of the seventeen test procedures requiring re-approval has been completed. A new Configuration Control Plan is being developed for submission and review. It was agreed that the first priority of the desk top review would be to determine a path forward for dealing with the unapproved software installed at K98. It is anticipated that the control lines affected by the unapproved software changes will require re-testing. WMATA, MWAA, DTP, and Alstom met on Wednesday April 24 for a status update on the ATC testing issues and to define a corrective action plan. DTP reported having spent several days in late April at Alstom's Rochester, NY facility conducting a work shop. DTP reported that they discovered Alstom had installed 14 vital software changes on the N-Line (not yet operational) that Alstom had not submitted for review or approval. Alstom's home office is only now beginning to learn the magnitude of the problem. There will be more meetings required and a clear path forward mapped out before confidence can be restored and the requisite procedure, software and drawing changes can be validated and approved. In the meantime, DTP has placed Alstom on a stand down with the exception of safe braking tests that are continuing. On May 7, 2013, Alstom and DTP senior management made a presentation to MWAA and WMATA Executive Staff. DTP and Alstom were emphatic that they were going to turn the troubled test program around and outlined their plans to do so. They also emphasized they would fully cooperate with MWAA and WMATA to regain their confidence. As part of the corrective actions due to this breach of configuration control, a new Alstom Project Manager (Kim Christy) has been assigned to the Project.

MWAA reported during the April 9, 2013 monthly update meeting that utility relocation was considered 100% complete, and DB construction is approximately 91% complete.

The following are the major accomplishments of the DB contractor during April 2013:

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1**

Continued rebar installation and concrete construction of the West Falls Church Yard (WFCY) Service and Inspection (S&I) Building foundation pile caps and the shop level west end floor slab; continued erecting S&I shop structural steel; continued rebar and concrete construction for the Sound Cover Box (SCB) foundation and walls along the outer loop track; continued equipment testing inside the TPSS facility at the WFCY; completed installation of the Yard Lead Track #3 tie-in to Loop Track #20; continued installation of surface troughs, rail lubricator ducts and manholes in the track area; began installation of the precast panel screen walls at the Fisher Street Train Control Room (TCR).

- **Systems Work**

- **Plainfield TCR and N91 Area of Control**

Continued dynamic train safe braking tests and conducting stray current monitoring at Piers 3-IB and 5-IB.

- **Baldwin TCR and N92 Area of Control**
Continued dynamic train safe braking tests.
- **Operations Area OP-4/5A (Tysons East Guideway and Tysons East Station)**
In the station – Continued installing control cables and equipment for station elevators; installing handrails in the mezzanine; installing cable, wire and light fixtures and communications systems equipment throughout the station, platform edges, pedestrian bridges and pavilions; installing elevator glass; bonding fire lines throughout the station; installing fireproofing caulk throughout the station; installing escalator cladding; installing the platform, mezzanine, pedestrian bridge and pavilion suspended ceiling, supports and panels; and installing rebar and forms for the pedestrian bridge and pavilion landing slab.

Systems Work

- **TBS #3 (Tysons East – N01)**
Continued dynamic train safe braking tests.
- **Operations Area OP-5 (Tysons Central 123 Station)**
Continued installing elevators and escalators; installing communications systems equipment, devices, raceways and wiring throughout the station and pavilion; installing sills on pavilion walls; installing platform pavers; rebar and form placement for pedestrian bridge and pavilion landing slabs; installing curtain wall glass; installing mezzanine level suspended ceiling and mesh screens; installing ductwork and vents in the platform elevator machine room; installing rebar for the pedestrian bridge deck slab; installing mezzanine canopy roof, gutters, ice and water shields, skylights and pavilion canopy; installing suspension framing under the platform decks; installing suspended ceiling at the platform and ceiling hangers for the pedestrian bridge and ground level; excavating for the station and pavilion retaining walls; and pouring mezzanine level topping slab.
- **Operations Area OP-6 (Laydown Area #6/NATM) Tunnel/East Cut & Cover and Ventilation Structure)**
Installing locks on all Automatic Train Control (ATC) and Heater Control (HC) trackside boxes; replacing WZ bond wiring; completed installing tunnel safety walk handrails; mounting portable fire extinguishers every 100 feet in the tunnels; and pressure washing the precast wall panels on the south face of the east vent structure.
- **Operations Area OP-6 (West Cut and Cover Tunnel)**
Welding grounding wires on the safety walk handrails; completed installing portable fire extinguishers along the tunnel walls; replaced a malfunctioning damper motor and preparing for additional fan field testing.
- **Operations Area OP-7 (Tysons Central 7 Station)**
Continue grading and retaining wall construction for the right lane of eastbound Route 7 between Gosnell and the DTR; installing raceways, cable, fixtures and devices for electrical and communications systems in the AC switchgear room, service rooms, under

platform, and in TPSS #5; continue installing station and pavilion escalators and elevators; installing portable fire extinguishers; installing metal roofing on the north pavilion; installing ceiling panels at the mezzanine level and pedestrian bridge; installing fire protection systems in both pavilions; installing fireproof sealant in various openings around conduit and in CMU wall gaps; installing waterproofing, expansion joints and sealant for the platform; and installing mezzanine curtain wall glass and woven screen mesh on the pedestrian bridges.

- **Operations Area OP-8 (Tysons West Station/Guideway)**

Grading and retention pond work within the median of Route 7 between the DTR and Spring Hill Road; conducted the eastbound Route 7 road shift and began new pavement installation east of Westwood Center Drive. In the station – installing steel access stairs in the AC switchgear room ; installing elevator glass; installing platform pavers; pulling communication systems wire under the platform; installing suspended ceiling supports; installing under floor ducts for power and control wiring; installing trim for platform level canopy skylights; installing lights in the emergency egress stairs; applying mezzanine and platform floor waterproofing and installing topping slabs; installing ceiling supports in the pedestrian bridges and pavilions; installing pavilion elevators and escalators; and installing communication and lighting conduits in the pedestrian bridges and pavilions.

Systems Work

- **TPSS #6 (Tysons West Station –N04)**

Testing trackside HC panels and grouting bases of ETS and HC frames.

- **OP-9 (DIAAH)**

Systems Work

- **TPSS #7 (Wolf Trap –N05)**

Energized the cable between the AC switchgear and the rectifier transformer; and testing trackside heater control panels; and grouting the bases of the ETS and HC frames.

- **TPSS #8 (Chatham’s Ford – N93)**

Installed and terminated power cables between the AC switchgear and the rectifier transformer; testing trackside heater control panels; and grouting bases of the ETS and HC frames.

- **TPSS #9 (Hunter Mill – N94)**

Testing trackside heater control panels; grouting bases of the ETS and HC frames; and installing conduit in the substation for the negative return cables.

- **Hunter Mill TCR and N94 Area of Control**

Continue dynamic train safe braking tests.

- **Sunset Hills TCR and N95 Area of Control**
Continue dynamic train safe braking tests.
- **Wiehle TCR/N06 Area of Control**
Continue dynamic train safe braking tests.
- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)**
Continued installing conduit and devices for communications systems in the plenum, west service rooms, kiosk and pedestrian bridges and pavilions; installing platform pavers; installing granite stair treads; installing ceiling grids for the station mezzanine and pedestrian bridges and pavilions; painting doors and walls throughout the station; and installing stainless steel handrails around the mezzanine.

c. Real Estate

Real Estate Acquisition continued to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *April 2013*, 101 of the 104 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *April 2013*. The three remaining parcels have been delayed due to protracted negotiations with the owners and Fairfax County regarding deed language and other modifications needed to finalize the deeds and agreements. *However, progress is being made and MWAA hopes to complete these final three acquisitions in late May.*

PARCELS ACQUIRED¹
(Number of parcel packages)

LOCATION	TOTAL	Period			To Date		
		Planned ²	Actual	Var	Planned ²	Actual	Var
I-66 / DCR	1	0	0	0	1	1	0
Route 123	23	0	0	0	23	22	(1)
Route 7	54	0	0	0	54	52	(2)
DIAAH	26	0	0	0	26	26	0
TOTAL	104	0	0	0	104	101	(3)

- Notes: 1. Parcels acquired through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 39 parcels for which Certificates of Take have been filed.
2. Planned *quantities* are based on the March 31, 2011 Property Acquisition Status Update. One additional acquisition was added in June 2012 was to be completed in September 2012 and another was added in October 2012 to be completed in February 2013.

Condemnation Status

Thirty-nine parcel packages have been obtained with the filing of thirty-three Certificates of Take. In *April 2013*, one case continued in finalization (Parcel 125, JBG 1831 Wiehle Avenue, LLC) and two cases moved into finalization (Parcel 109, Plaza America and Parcel 005/094/100, West Group Properties, LLC). A settlement is in process for the former case, which had previously been scheduled for trial. The landowner in the latter case agreed to a settlement at the Certificate amount in late April. The filing deadline for the case that is

anticipated to be appealed (Parcel 03 (West Group Properties, LLC) has not yet been reached and no appeal was filed by the end of April.

Property Turnover to WMATA

MWAA has been conducting meetings with VDOT, Fairfax County, and WMATA regarding the required transfer of property to WMATA that is expected to take place at some time between Substantial Completion and Revenue Service.

The following table summarizes the status of the conveyance of property interests and maintenance agreements.

Conveyance Documents	Total Required	General Format Accepted	Draft of Document Prepared	Plat/ Exhibit Complete	Submitted for Stakeholder Review	Document Accepted	Document Signed	Document Recorded
Fee/Easement Transfer	26	26	26	25	24	0	0	0
Easements on Public ROW	3	3	3	0	2	0	0	0
Maintenance Documents	4	4	2	2	2	0	0	0

d. Utility Coordination

MWAA reported during the April 9, 2013 monthly update meeting that Utility Relocation (UR) was 100% complete.

e. Vehicle Procurement

WMATA is procuring the 64 rail cars required for the project. WMATA is also procuring 300 replacement rail cars under the same contract. The WMATA and MWAA Boards agreed to share the development costs associated with the railcar procurement equally.

WMATA awarded a contract to Kawasaki on July 27, 2010. The manufacturer’s proposed schedule showed the 64th car would be delivered by September 12, 2014 based on a July 12, 2010 Notice-to-Proceed (NTP), but WMATA did not issue the NTP until August 16, 2010, resulting in the conditional acceptance of the 64th rail car on January 12, 2015, six weeks beyond the FFGA completion date of December 1, 2014.

On December 3, 2010, WMATA confirmed in a letter to MWAA that “sufficient resources including railcars will be available to support dynamic testing and initial revenue service in accordance with the Project’s current schedule.” WMATA confirmed that cars from the existing fleet would be made available for dynamic testing on the Dulles Extension. Since there would be a gap in the delivery of the 7000 Series rail car delivery and the revenue service date, WMATA outlined its strategies for being able to support initial revenue service using the existing WMATA fleet.

On March 16, 2011, Kawasaki formally notified WMATA of potential delays that they believe would be considered excusable under the terms of the contract due to the earthquake/tsunami in Japan on March 11, 2011. On December 21, 2011, WMATA approved Kawasaki's Mitigation Schedule with a June 12, 2015 delivery date for the 64th railcar, which is more than six months beyond the FFGA completion date for the DCMP. MWAA formally informed the FTA Regional Administrator in a letter dated January 31, 2012. In this letter, MWAA writes, "WMATA has stated that they would be able to provide sufficient rail cars from their existing fleet to begin service on the extension until the new Kawasaki rail cars are available. Therefore, we expect no impact to the FFGA, other than the late delivery of the rail cars." The PMOC continues to monitor WMATA's daily railcar availability statistics to determine if the existing fleet can support the start of revenue service. WMATA developed an interim operating plan for dealing with the delay. *WMATA proposed an operating plan that called for using only six-car trains in lieu of a mix of six- and eight-car trains in the prior plan.* This issue remains a concern of the FTA and PMOC. WMATA submitted this interim operating plan as part of the Rail Fleet Management Plan (RFMP). WMATA submitted RFMP Rev. 4F dated April 18, 2012 to the FTA on May 4, 2012. FTA and WMATA met to address this issue and WMATA prepared revisions to their RFMP and submitted RFMP Rev-4G to the FTA on August 3, 2012. FTA *conditionally* approved RFMP Rev-4G on October 11, 2012 with the proviso that that WMATA keep the FTA informed of the operating plan for the startup of the Dulles service. The details of a new Operating Plan for the Silver Line service, which incorporates changing the eastern terminus to Largo Station instead of Stadium-Armory Station, **has not yet been submitted to the FTA.** *After a month's delay, the revised Plan was presented to the WMATA Customer Service and Operations Committee on April 11, 2013, and approved by the full Board on April 25.* The material presented to the WMATA Board of Directors was general in nature and **FTA awaits the specifics of the operating plan, as well as a corresponding update to the RFMP.**

The Conceptual Design Review phase for the 7000 (7K) Series railcars was completed on January 31, 2011 and the Preliminary Design Review (PDR) phase *was* completed on March 16, 2012, more than eleven months past the original baseline schedule date of March 30, 2011.

Monthly Progress Review Meeting No. 32 between WMATA and Kawasaki on the 7000 Series railcars *was cancelled, although the meeting package of information was submitted,* and the WMATA/PMOC 7K Rail Car Update Meeting was held on *May 14, 2013 via teleconference.* Design qualification testing (DQT) continues for components and subsystems, and car level DQTs have begun at Kawasaki facility in Japan (KHI) on the full prototype car. KHI production of the first four prototype cars was completed on April 8, 2013. *Climate room testing has begun in Japan on the prototype cars. The project team will be in Japan on May 20-24, 2013 to witness the beginning of Maintainability Demonstrations, which are scheduled to continue through May 31, 2013. These demonstrations will be video recorded.* KMM production of four pilot cars continues. *Four cars have passed the water test, and wiring and rigging have started. The third rail and parts for the ATC system for the KMM test track have been delivered and the test track is now scheduled for completion on May 31, 2013.* WMATA has begun First Article Inspections (FAIs) on components and these will continue throughout the balance of 2013 and 2014.

The key milestones for this railcar procurement are:

Item #	Description	<i>December 2011 Approved Baseline MPS Dates</i>	<i>October 2012 Approved MPS Dates</i>	Actual and Current Forecast Dates
1	Soft Mock up	12/17/10	-	4/28/11A
2	CDR Completion	12/14/10	-	6/30/11A
3	PDR Completion	3/30/11	-	3/16/12A
4	Hard Mock up	10/4/11	-	4/24/12A
5	Completion of HVAC Unit DVR	NA	NA	8/10/12A
6	<i>Completion of Propulsion DVR</i>	NA	NA	9/21/12A
7	<i>Completion of ATC DVR</i>	NA	NA	10/10/12A
8	<i>Completion of Communications DVR</i>	NA	NA	10/19/12A
9	<i>Completion of Network DVR</i>	NA	NA	10/19/12A
10	<i>Begin Production of Pilot Cars #1, 2, 3 and 4 at KMM</i>	9/10/13	-	12/17/12A
11	FDR Completion	10/24/11	11/8/12	2/28/13A
12	Begin Car Level Qualification Testing in Japan	10/30/12	2/13/13	3/10/13A
13	Completion of Prototype Cars #1, 2, 3, and 4 at KHI	10/29/12	2/12/13	4/8/13A
14	Completion of KMM Test Track	NA	NA	5/31/13
15	Approval Climate Room Testing	2/15/13	5/31/13	5/9/13
16	Completion and Approval of Pilot Car Production Activities	9/30/13	5/31/13	5/9/13
17	Begin Pilot Car Testing at KMM	10/1/13	7/8/13	6/28/13
18	First Manual submission (DRAFT)	8/30/13	7/26/13	6/29/13
19	Completion of Pilot Car Testing at KMM	10/17/13	10/2/13	8/12/13
20	Completion of Prototype Car Review (Prior to Ship out from Japan)	5/14/13	7/31/13	9/30/13
21	Completion of Pilot Car FAI	10/21/13	10/3/13	10/4/13
22	Ship out of Prototype cars from Japan to USA	6/15/13	8/31/13	10/2013
23	Completion and Approval of FAI Activities	12/11/13	12/12/13	11/30/13
24	Delivery of first 4 Pilot Cars to WMATA	2/20/14	2/20/14	12/16/13
25	Delivery of first 4 production Cars to WMATA	2/11/14	2/20/14	2/20/14
26	Final Manual submission (DRAFT)	5/12/14	4/4/14	4/17/14
27	Conditional Acceptance of first 4 pilot Cars	8/14/14	8/14/14	8/14/14
28	Conditional Acceptance of first 4 Production Cars	8/14/14	8/14/14	8/14/14
29	Completion of On-site Test (After Burn-In)	2/19/15	2/19/15	2/14/15
30	Conditional Acceptance of 64th Production Car	6/12/15	6/12/15	6/12/15

Note: **Bold Activities/Dates** are contractual and contain a penalty for non-performance.

f. Safety and Quality Status

MWAA participated in *seven* safety walk downs with DTP during the month of *April*. All were related to Design-Build work. As of *April 30, 2013*, DTP had logged *12.695* million project man-hours with *488* first aid cases and *6* lost time cases. There have been a total of *1,069* incident investigation reports, *92* utility hits, and *44* vehicular accidents.

DTP submitted Safety and Security Certifiable Items List (SCIL) Revision 6 to include the WFCY on August 6, 2012. WMATA *submitted comments* on September 21, 2012; MWAA completed its review and issued Letter No. 07547 dated October 24, 2012 identifying three issues needing to be addressed. DTP responded by letter on November 30, and MWAA and DTP met on December 18 to discuss the issues further. DTP subsequently resubmitted the SCIL Revision 6, which was approved “as noted” on February 5, 2013.

DTP and MWAA now meet every week to review the status of issued for construction designs (including subcontractor designs) and to determine the status of sign-offs of the Design Conformance Checklist (DCC) and Construction/Procurement/Installation Conformance Checklist (CCC) items related to all issued for construction designs. The status of the conformance checklists is reflected in the status table below.

Safety and Security Conformance Checklists (excluding n/a)

<i>Total # of Items</i>	<i>Verified in Design</i>		<i>Verified in Construction</i>		<i>Verified in Startup and Testing</i>	
<i>6,172</i>	<i>5,008</i>		<i>4,743</i>		<i>1,563</i>	
<i>DTP Signed</i>	<i>4,983</i>	<i>99.5%</i>	<i>1,979</i>	<i>42%</i>	<i>169</i>	<i>11%</i>
<i>MWAA Accepted</i>	<i>4,955</i>	<i>99%</i>	<i>784</i>	<i>17%</i>	<i>0</i>	<i>0%</i>
<i>WMATA Audited</i>	<i>4,430</i>	<i>88%</i>	<i>0</i>	<i>0%</i>	<i>0</i>	<i>0%</i>

- 1) *Checklists are exclusive of WFCY (K99)*
- 2) *DTP Design, Construction, and Testing Verifications are through 5/2/2013*
- 3) *MWAA accepted Design Verifications projected through DCC #11*
- 4) *WMATA has audited through DCC #10*
- 5) *MWAA has accepted Construction Verifications through CCC #5*
- 6) *WMATA is auditing CCC #5*
- 7) *DTP re-submitted the first sign-offs of Startup and Testing Verification on 5/2/2013*

Regular weekly visits to work sites by safety representatives from DTP, MWAA, and WMATA continue. The Tri-State Oversight (TOC) and the FTA’s on-site PMOC representative continue to meet monthly with the Safety/Security Certification Working Group (SCWG) and continue ongoing involvement in the certification process. In addition, the TOC has begun attending the Monthly and Quarterly DCMP progress update meetings. The SCWG held its regular monthly meeting on *April 16, 2013*. The next SCWG Meeting is scheduled for *May 21, 2013*.

MWAA submitted its Safety and Security Management Plan, Revision 8, to the FTA on February 17, 2011. MWAA and WMATA agreed to jointly develop a revised SSMP that would cover the roles and responsibilities of both MWAA and WMATA. MWAA submitted

Draft SSMP Rev. 9 to the FTA, PMOC, WMATA, and TOC on September 30, 2011. WMATA completed its revision of its SSCPP in March 2012. The SSCPP was subsequently incorporated as Appendix E into SSMP Revision 9 and MWAA and WMATA approved the revised SSMP on March 20 and 22, 2012 respectively. The PMOC reviewed the completed revision and provided comments to the FTA on April 5, 2012. The FTA accepted the SSMP on April 13, 2012.

During April 2013, MWAA and DTP performed the following QA audit/surveillances:

- *Facchina Construction Co. (Pedestrian Bridge and Pavilion Finishes): MWAA/DTP conducted this audit on April 10, 2013. Three observations and one recommendation were made. A response is anticipated in mid-May.*
- *DTP System Safety/Security Program: MWAA conducted this audit on April 17, 2013. Four observations and two recommendations were made. A response is anticipated in mid-May.*
- *Facchina Construction Co. (Late C6 Work): MWAA/DTP conducted this audit on April 25, 2013. There was one CAR issued for a signal pole foundation installation accomplished without approved drawings and there were eight observations and one recommendation provided. A response is anticipated in mid-May.*

MWAA QA Audit and Surveillance Schedule for May and June 2013

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv.	Lead
TBD	S	Permanent Equipment Facilities	Y	MWAA
5/01-02/13	A	DTP Startup and Testing	N	MWAA
6/12-13/13	A	<i>DTP/Alstom's Corrective Actions</i>	N	MWAA
TBD	A	<i>WMATA's Quality Management System</i>	N	MWAA

At the May 7, 2013 update meeting, it was suggested that MWAA consider conducting audits of WMATA and Alstom, which are reflected above.

Use of Existing Foundations

As a result of the USDOT Office of Inspector General's audit report of the Dulles Project dated July 26, 2012, testing of the foundations installed in the 1970's by VDOT for the future extension of the Silver Line, MWAA will conduct tests to determine the effects, if any, of stray current on the service life of the steel piles that made up those foundations. To assure that the existing steel piles to be re-used for the Dulles Extension provide a minimum of a fifty year service life, MWAA is undertaking stray current tests to calculate the piles' corrosion rate and estimate their remaining service life. The following table contains a summary of the actions to be taken to estimate the remaining service life of the re-used steel piles. Russell Corrosion Consultants, Inc. was employed by MWAA to develop a Corrosion Test Plan and to oversee implementation of that plan. Russell developed a Draft Corrosion Testing Plan, and numerous comment resolution meetings were conducted during August with all partners. A Final Plan was submitted to MWAA on September 14, 2012 for review

and acceptance. MWAA accepted the plan and submitted it to the FTA for review and approval via MWAA Letter No. 07403 dated September 24, 2012. WMATA reviewed and accepted the plan on October 5, 2012 via an email. The FTA reviewed the plan and provided an acceptance letter dated November 1, 2012. A Site Specific Work Plan submitted to WMATA on October 10, 2012 was approved on November 9, 2012. A productive planning meeting with all partners was held on November 20, 2012. Coordination of the night access and necessary escorts was discussed. UTRS, under the oversight of Russell Corrosion Consultants and CTI Special Inspection and MWAA/QA, began work on December 11, 2012. As of January 8, 2013, the contractor has completed the Vertical Test Facility (VTF) installation at both piers 3-IB and 5-IB. The test plan called for the VTFs to be left to settle for 30 days, after which the specified testing will commence.

On March 25, 2013, MWAA submitted Revision No. 1 of the Stray Current and Corrosion Rate Test Plan to the FTA, which is under review by the FTA consultant. WMATA provided Letter No. 239 dated May 6, 2013 providing its concurrence with the revised plan.

UTRS has been conducting track-to-earth resistance testing. UTRS experienced numerous delays caused by weather and track access issues. However, this prerequisite (track-to-earth) testing to the pier foundations stray current testing was finally completed on April 11, 2013 with the exception of some retesting scheduled for May 11, 2013. UTRS and RCC began the stray current testing on April 22, 2013. Long term data loggers are currently running at both piers. The data gathering is expected to be completed on May 13, 2013 and forwarded to RCC for analysis. Issuance of a preliminary report is scheduled for May 20, 2013.

OIG Report Follow-up Action Items

	Action Item	Due Date	Comments
1	Provide a copy to the OIG of the final stray current test plan MWAA will implement, including a plan for accounting for untested locations and for collecting baseline track-to-earth resistance measurements	As soon as the plan become available	Test Plan Rev.1 submitted to FTA on March 25, and is under review by FTA consultant. <i>WMATA provided Letter No. 239 dated May 6, 2013 providing its concurrence with the revised plan.</i>
2	Provide documentation to OIG on actions taken on the stray current testing	10 days after action is completed	
3	Provide documentation to OIG on actions taken on corrosion protection measures installation plan	10 days after action is completed	
4	Provide documentation to OIG on actions taken pertaining to the rail car delivery schedule	10 days after action is completed	

3. Project Management Plan and Sub-plans

- The FTA accepted MWAA's **Project Management Plan (PMP)** Version 7.0 Final on February 14, 2011. FTA requested MWAA update its PMP to include the start-up and testing phase. MWAA submitted its Version 8.0 Draft to the FTA on May 1, 2012. The PMOC provided its draft review and comments to the FTA on June 11, 2012. On July 9, the FTA sent comments to MWAA and requested a PMP Version 8.0 Final or a PMP Version 9.0 be submitted by November 1, 2012. PMP Version 8 Final was submitted to the FTA on November 8, 2012. The PMOC reviewed this submission and found it acceptable with the exception of the inclusion of draft organization charts, Figures 2-4 and 2-5. FTA's email of January 4, 2013 requested the updated organization charts, which MWAA submitted on January 23, 2013. The FTA approved PMP Version 8.0 Final on January 25, 2013.
- MWAA submitted a revised **Quality Program Plan (QPP)**, Revision 7 to FTA on January 7, 2010. MWAA reported that three Project Management Procedures were updated in the period from April through June 2011. No new QPP procedure updates were made during the period from July through January 2012.
- MWAA's **Real Estate Acquisition Management Plan (RAMP)**, Revision 2, dated September 15, 2009, has been reviewed by the PMOC with a recommendation that the FTA concur, with comments, with the revised RAMP. On January 21, 2010, the FTA provided comments to MWAA, and MWAA staff has revised Procedure PM-3.01 (Monitoring the Design-Build Contractor Property Acquisition Services). DTP revised their Procedure PIQ-5.1 (Property Acquisition Coordination) on November 1, 2010.
- The FTA requested MWAA to update its **Risk and Contingency Management Plan (RCMP)**, formerly called a Risk Management Plan (RMP), along with their Project Management Procedures to address Directive Letters and Contingency Drawdown Procedures. MWAA submitted the revised RCMP Rev. 3 on March 28, 2012, and the PMOC recommended FTA acceptance. The FTA accepted RCMP Rev. 3 as well as revised Project Management Procedure PM 5.07, Rev. 4, on April 13, 2012. MWAA updated the Risk Register Assessment on June 30, 2012 and submitted it to the FTA and PMOC on August 27. A discussion was held during the PMOC's September 6 monthly meeting. The PMOC provided review comments and a modified Top Ten Risk List that was reviewed by MWAA. MWAA provided a submittal dated October 3, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. The FTA approved the revised Top Ten Risks by letter dated November 29, 2012. It was agreed that the top ten risks would be reviewed and revised as needed on a quarterly basis. A revised list of Top Ten Risks dated December 2012 was submitted to the FTA via letter dated January 22, 2013. The PMOC submitted its comments on the proposed revised risks to MWAA on February 22, 2013 and the comments were discussed at the March 7, 2013 update meeting. MWAA revised the proposed top ten risks and resubmit them on March 20, 2013 as their re-titled "Proposed Top Tier" list containing nine items along with a revised risk register. *The PMOC provided comments on April 3, 2013 and during the April 9, 2013 monthly meeting the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list. The PMOC commented on April 29, 2013 relative to the resubmission dated April 17, 2013, agreeing to*

the risks but raising some questions relative to numbering. On May 1, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 to FTA for approval.

- Since WMATA, rather than MWAA, will be the operator of the completed project, the **WMATA Rail Fleet Management Plan (RFMP)** is the applicable document. The FTA accepted a WMATA RFMP on September 25, 2007. However, WMATA updated the RFMP to reflect the 7000 Series Rail Car procurement and submitted a draft copy dated February 26, 2010 to the FTA for review and comment. The PMOC issued its Spot Report on its review of the draft RFMP on March 11, 2010, finding the plan to be deficient in many areas. The FTA, PMOC, and WMATA continued the review and comment reconciliation process of various draft revisions. FTA and the PMOC provided some additional comments and WMATA's RFMP Rev. 4E dated March 14, 2012 was submitted to the FTA on April 10, 2012. FTA's comments on that revision were submitted to WMATA on April 12 with the request that the comments are incorporated and the final document then be formally submitted to the FTA Regional Administrator. WMATA submitted RFMP Rev. 4F dated April 18, 2012 to the FTA on May 4, 2012. FTA and WMATA met on July 3, 2012 to address the issue of the Dulles Interim Operations Plan. WMATA has revised their RFMP and RFMP Rev 4_G was submitted to the FTA on August 3, 2012. FTA letter dated October 11, 2012 conditionally approved the RFMP with the proviso that WMATA keep the FTA informed of the operating plan for the startup of the Dulles service. *The WMATA Board approved the proposed change in the eastern turn back moving from Stadium-Armory Station to Largo Town Center Station at its Board meeting on April 25.* FTA awaits WMATA's submission of the detailed updated Operating Plan and an updated RFMP.
- **Safety and Security Management Plan (SSMP)** see Section 2f.

4. Project Schedule

Mainline - The project "Mitigation Schedule" update with a data date of *March 25, 2013* reflected a -5 calendar day variance with a *September 6, 2013* SSCD. DTP's schedule shows the Revenue Service Date to be *January 10, 2014*. MWAA completed its schedule review of the schedule update with a data date of *March 25, 2013* on *April 17, 2013* and found it to be "Accepted as Noted." *MWAA Letter No. 08207 once again indicated that DTP continues to ignore specifications by adding activities, deleting activities, changing relationships, using constraints, and changing durations contrary to contract requirements.*

The mitigation schedule supersedes the previously approved recovery schedule with a data date of December 25, 2010 that was finally settled in mid-September 2011 but does not relieve DTP from their obligations to the earlier recovery schedule.

MWAA and DTP continue the ongoing deliberation process of determining weather related excusable delay days as reflected in the table below. *MWAA's letter No. 8238 dated April 26, 2013 granted an additional weather day.* As a result, the SSCD has been adjusted to *September 9, 2013 as of April 26, 2013.* *This results in a revised planned Revenue Service Date of January 13, 2014.*

MWAA's Report of Excusable Work Days of Delay through March 25, 2013

ACTION	WORK DAYS
Total Excusable Days of Delay on Project Critical Path requested by DTP	75
Contractually Identified	28
Retracted by DTP	20
Denied by MWAA/Disputed by DTP	0
Under evaluation by MWAA	1
Granted by MWAA	26

The schedule-related issues regarding the delivery of rail cars are discussed in section 2.f. Vehicle Procurement above.

West Falls Church Yard - The WFCY Civil/Site work final design was completed and issued for permit in October 2010. The S&I Building Issued for Permit (IFP) drawings were submitted to DGS on May 3, 2011 and they issued a permit on September 15, 2011. The Sound Cover Box IFP drawings were submitted to DGS on May 18, 2011 and DGS issued a permit on September 7, 2011.

MWAA and DTP agreed to a target completion date of December 20, 2013. DTP's schedule update of *March 25, 2013* reflected a -10 calendar day variance yielding a forecasted completion date of *December 30, 2013*.

It should be noted that WFCY activities and completion dates are only overlaid on the master mainline schedule and not connected to the mainline critical path or SSCD and does not include systems integration into the mainline system. MWAA and WMATA continue considering parts of the WFCY expansion that may not be needed to support the RSD should the Project be unable to achieve the target date. WMATA has noted that the storage tracks and the sound cover box are most critical to WMATA's needs to support start-up and operation. The PMOC remains confident that the project can be completed before the FFGA RSD of December 1, 2014. It is the PMOC's opinion that SSCD can be achieved by September 30, 2013. RSD is dependent upon the completion of WMATA's schedule associated with the Rail Activation Plan (RAP).

Other problem areas with potential delays identified by MWAA include the following:

- *ATC test procedures and software configuration issues. Action Taken: Executive staffs from DTP, Alstom, MWAA, and WMATA are continuing meet to develop and implement a Corrective Action Plan.*
- Kone's work related to elevators and escalators in stations and pavilions falling behind schedule. Action Taken: In response, Kone has added crews and MWAA continues to carefully scrutinize Kone's progress. *In addition, Kone attends weekly progress meetings.*
- WMATA required points of testing for acceptance are now up to 700 points per location, necessitating an increased number of resources in order to avoid any adverse impact if something in the field is not wired correctly or if there is an abnormality in the software program. Action Taken: DTP is attempting to accelerate the submission of the remaining

Point Assignment Charts (PAC) and DTP and WMATA are now conducting SCADA testing in multiple locations in order to meet the schedule requirements.

- DGS availability for walk-downs and inspections. Action Taken: DGS and MWAA continue to discuss permit closures and to define the path forward for DGS final acceptance.
- Obtaining required weekend outages from WMATA for K-Line systems testing. Action Taken: DTP, MWAA, and WMATA meet on a weekly basis to refine and adjust outages to meet DTP's level of readiness and WMATA's changing operational needs and requirements.
- WMATA systems upgrade programs could have other technical scope changes *affecting* Automatic Train Control, and Communications systems. Action Taken: MWAA has requested that any other preferential scope changes be implemented by WMATA following SSCD.
- Availability of spare parts for the K & N cutover. Action Taken: DTP is endeavoring to obtain two each of the necessary ATC spares to support the Memorial Day Weekend cutover. WMATA will allow the cutover to proceed with two of each spare, if DTP can guarantee that the remaining K-Line spares are delivered by June 19, 2013.
- *Availability of operational testing vehicles. Action Taken: WMATA is endeavoring to provide additional train sets and trains that are more reliable, and the new N-Line WFCY lead track has been made available for quicker transport of trains requiring repair to the existing S&I Shop.*

a. Critical Path Evaluation

Since November 1, 2011, the Project is managed utilizing the work plan set forth in MWAA's November 1, 2011 Directive Letter to implement a Mitigation Schedule with a data date of October 25, 2011.

In DTP's March 2013 Schedule Update, the Critical Path No.1 has negative five days of float that starts with erecting the structural steel framing for the Tysons Central 123 Station South Pavilion; continues with the standing seam roof and lighting for the pavilion, stairway, and entrance; then moves to the punch list and walk down for Tysons Central 123 Station; and ends with the system performance demonstration. MWAA does not accept this path as the primary critical path because this additional scope is not benefiting from the appropriate resource level required to finish. DTP is using the crews that could be doing this work in other locations on the project. Furthermore, this work is not critical to the operation of the trains. Therefore, this path should not be considered the primary path of the project at this point.

Instead, MWAA considers that the Automatic Train Control issues to be the most critical work on the project; then, the critical path that starts with the rail polishing for Segment N06 (Wiehle Avenue), moves to safe braking and dynamic train testing from N06 to N93 (Chathams Ford Road), and ends with the Level F testing. The train testing path is critical to the operation of the trains. The lack of operational and test-ready trains could further delay this path. DTP identifies this sequence as Critical Path No. 5, having one day of positive float.

The PMOC is *again* in agreement with MWAA's assessment regarding the critical path. MWAA continues to carefully analyze the schedule and continues to hold DTP accountable

for changes made to the agreed schedule, which *still* appears to be yielding the desired results.

The following table compares the milestone dates relative to the approved baseline schedule. The PMOC concurs with MWAAs assessment of the updated schedule.

MILESTONE	June 2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	February 2013	March 2013
Receipt of FFGA	03/03/09	03/10/09 ^A	03/10/09 ^A	03/10/09 ^A
Station Design Complete	10/21/09	02/18/11	10/28/11 ^A	10/28/11 ^A
Utility Relocation Complete	03/05/10	09/13/11	01/31/12 ^A	01/31/12 ^A
Aerial and Station Foundations Complete	3/4/11	09/01/11	07/23/11 ^A	07/23/11 ^A
NATM Tunnels Mined	01/29/11	12/03/10 ^A	12/03/10 ^A	12/03/10 ^A
K-Line Track Tie-In	12/23/11	03/28/12	10/14/11 ^A	10/14/11 ^A
Guideway Complete	2/12/12	09/13/12	11/26/12 ^A	11/26/12 ^A
Train Control Installation Complete	10/26/12	10/29/12	02/03/13 ^A	02/03/13 ^A
Systems Testing Complete - Tysons East Station	07/24/12	02/21/13	05/08/13	05/17/13
Systems Testing Complete - Wiehle Ave Station	08/13/12	01/16/13	06/13/13	05/23/13
Systems Testing Complete - Central 7 Station	01/23/13	04/12/13	07/02/13	07/02/13
Systems Testing Complete - Tysons West Station	02/21/13	05/14/13	07/08/13	07/24/13
Systems Testing Complete - Tysons 123 Station	12/20/12	03/28/13	06/14/13	07/09/13
Substantial Completion Date (SSCD)	07/31/13	07/31/13	09/11/13	09/11/13
Completion – WFCY	NA	N/A *	01/17/14	12/30/13
Revenue Service Date (RSD) – Target	11/27/13	01/02/14	01/15/14	01/15/14
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

^A Actual Date. See narrative in section D.1.3. *Agreed Target Date is 12/20/13.

b. Important Activities – 90-Day Look Ahead

- K98 ATC circuits cutover.
- Obtain all level one Dynamic Testing Readiness Certifications.
- Obtain all Alstom ATO and level two Dynamic Testing Readiness Certifications.
- Complete train safe braking tests and progress level two ATC dynamic train testing.
- Complete SCADA Testing.
- Complete the stray current testing of existing piers 3-IB and 5-IB.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- Complete the three remaining property acquisitions along Route 7 and Route 123.

5. Project Cost

The SCC Budget and Expenditures summary for the period ending *March 25, 2013* is shown below. Overall, approximately 75.2% of the budget has been expended.

Project Cost Summary by SCC Code, *March 2013*

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION	CONTINGENCY TO DATE
10	Guideway and Track Elements	\$ 621,223,936	\$ 602,617,813	\$ 614,499,731	\$ 41,681,049
20	Stations	\$ 342,642,263	\$ 284,218,668	\$ 349,366,468	\$ 26,706,007
30	West Falls Church Yard	\$ 71,202,263	\$ 27,549,871	\$ 71,012,232	\$ 7,803,084
40	Site Work & Utility Relocation	\$ 238,644,314	\$ 211,163,661	\$ 260,110,796	\$ 7,944,677
50	Systems	\$ 306,868,476	\$ 279,444,784	\$ 303,718,592	\$ 23,949,088
60	Right of Way Acquisition	\$ 67,631,026	\$ 57,010,413	\$ 62,310,611	\$ 809,164
70	Vehicles	\$ 195,352,701	\$ 57,343,261	\$ 194,648,939	\$ 16,491,446
80	Professional Service – FD	\$ 730,425,739	\$ 742,547,207	\$ 797,352,653	\$ 69,865,001
90	Contingency Mgmt. Reserve ²	\$ 130,296,345	\$ -	\$ 51,267,043	\$ 127,382,041
100	Finance Charge ³	\$ 438,184,571	\$ 103,131,435	\$ 438,184,571	\$ -
Subtotal		\$ 3,142,471,635	\$ 2,365,027,112	\$ 3,142,471,635	\$ 322,631,556

1. Current budget equals FFGA amount plus change orders CO#001-117, 119-134, 136-137, Directive Letters 001-050, UR-CO-001-039. CO#118 is for betterment.

2. Estimate at Completion for Contingency reflects the remaining amount.

3. The transfer of Finance Costs under-run of \$71.8 million to the contingency was approved in December 2012.

General Comments:

1. During March 2013, \$40.3M was transferred from Fed to Non-Fed as a result CNPA adjustments making a contribution to Federal contingency and drawdown from Non Federal contingency. This decreased the federal expenditure.

a. Explanation of Variances

During March 2013, \$40.3 million was transferred from Federal to Non-Federal as a result of CNPA adjustments making a contribution to Federal contingency. The major variances in the FFGA project budget are associated in seven categories as noted below:

1. SCC10 – Guideway and Track Elements has been reduced approximately \$52.00 million due to the decision by the DB contractor to self-perform the NATM tunnel work. In so doing, \$29.2 million was transferred out of the direct account to other accounts including predominantly SCC80 for the professional services portion of the subcontract budget. This was offset by scope additions and other budget transfers, the most notable being the adjustment for the revised federal/non-federal split and the addition of sales tax to permanent materials.
2. SCC20 – Stations has been increased by approximately \$32.34 million. The decision by the Airports Authority to remove the Wiehle Avenue Parking Garage – Allowance Item C-2, due to the Fairfax County Joint Development project, allowed the transfer of \$29.1 million out of the direct account into the unallocated contingency account. This was offset by a combination of add and subtract change orders, the allowance item for stations finishes and MEP increased over budget.
3. SCC30 – WFC Yard has increased by approximately \$19.22 million due to delay in progressing the design and additional requirements requested by WMATA.

4. SCC40 – Site work and Utility Relocation has been increased by approximately \$27.15 million as a result of a combination of change events (change orders, directive letters and scope transfers) and cost overruns.
5. SCC50 -- Systems has increased by \$25.56 million due to additional WMATA requirements for Emergency Trip Station/Amber Light Warning System and requirements for Communications.
6. SCC60 – Right of Way Acquisition experienced nearly \$16.36 million increases primarily due to adjustment of project cost for the revised federal/non-federal split along Route 7.
7. SCC70 – Vehicles has been reduced by \$16.98 million due to actual bid prices.
8. SCC80 – Professional Services increased approximately \$98.88 million. The change events are numerous with the most significant being the transfer from the tunnel subcontract and the addition of design for and WFCY. The forecast adjustment is predominantly attributed to higher project management costs for MWAA, PMSS, WMATA and VDOT.
9. SCC90 – Contingency Management Reserve estimate at completion of \$51.27 million is *the result of* the transfer of the Finance Costs under-run of \$71.8 million, which was authorized by the MWAA Board in December 2012, and the \$19 million under-run in commodity escalation. *The PMOC is of the opinion that the remaining \$51.27 million contingency reserve that includes* the \$40.3 million in CNPAs is adequate.

MWAA indicates that there are 24 Design-Build Change Orders totaling an *estimated \$19.55 million* and 3 Utility Relocation Change Orders totaling an *estimated \$5.93 million* under evaluation. In addition, there remain 104 Design-Build Potential Change Orders and 5 Utility Relocation Subcontractor Changes under review.

b. Monthly Cost Report, March 2013 Federal Only

DESCRIPTION	FFGA AMOUNT (Original)	EXPENDITURE TO DATE ¹	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION	PERCENT OF EAC EXPENDED TO DATE
FEDERAL (FFGA SCOPE)					
Design-Build					
Firm Fixed Price	\$ 1,112,052,173	\$ 1,640,960,234	\$ 122,492,334	\$ 1,763,452,568	
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 74,103,635	\$ 1,089,124	\$ 75,192,759	
Firm Fixed Price Subtotal	\$ 1,177,161,581	\$ 1,715,063,869	\$ 123,581,459	\$ 1,838,645,327	
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 16,393,308	\$ 16,393,308	
Design-Build Contract Prices	\$ 1,607,361,398	\$ 1,715,063,869	\$ 139,974,766	\$ 1,855,038,635	
Indexed Commodity Escalation ⁵	\$ 77,469,926	\$ -	\$ 18,351,961	\$ 18,351,961	
Design-Build Contract Total	\$ 1,684,831,325	\$ 1,715,063,869	\$ 158,326,728	\$ 1,873,390,596	92%
Utility Relocation					
Utility Work	\$ 84,312,807	\$ 95,064,552	\$ 6,776,783	\$ 101,841,335	
Terf Tax	\$ -	\$ -	\$ 0	\$ 0	
Project Management and Final Design	\$ 8,423,426	\$ 25,518,179	\$ 223,037	\$ 25,741,216	
Utility Relocation Total	\$ 92,736,233	\$ 120,582,731	\$ 6,999,820	\$ 127,582,551	95%
Right of Way					
Right Of Way Total	\$ 42,443,132	\$ 57,343,308	\$ 5,592,302	\$ 62,935,611	91%
WMATA Agreement					
Vehicles	\$ 195,138,329	\$ 57,343,261	\$ 137,305,677	\$ 194,648,939	
Construction and Procurement	\$ 31,484,799	\$ 9,777,481	\$ 18,320,636	\$ 28,098,117	
WMATA Force Account Startup	\$ 13,777,100	\$ 6,643,797	\$ 6,761,224	\$ 13,405,021	
Project Management and Final Design	\$ 31,235,400	\$ 25,292,374	\$ 10,191,178	\$ 35,483,552	
WMATA Agreement Total	\$ 271,635,628	\$ 99,056,913	\$ 172,578,715	\$ 271,635,628	36%
Preliminary Engineering^{2,3}					
Preliminary Engineering Total	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999	100%
Airports Authority Services					
General Conditions ⁴	\$ 28,879,153	\$ 11,284,019	\$ 18,766,759	\$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 33,653,233	\$ 10,075,649	\$ 43,728,882	
Project Management Support	\$ 90,004,649	\$ 124,180,606	\$ 18,784,369	\$ 142,964,975	
Airports Authority Services Total	\$ 142,109,519	\$ 169,117,857	\$ 47,626,777	\$ 216,744,634	78%
Contingency⁵					
Contingency Total	\$ 297,762,579	\$ -	\$ 51,267,043	\$ 51,267,043	
Finance Costs⁶					
Finance Costs Total	\$ 509,984,571	\$ 103,131,435	\$ 335,053,136	\$ 438,184,571	
Total Federal (FFGA Scope)	\$ 3,142,471,635	\$ 2,365,027,112	\$ 777,444,522	\$ 3,142,471,635	85%

1 Reflects Paid costs through March 31 2013.

2 Preliminary Engineering Period (PE) - Prior to August 1, 2007.

3 Preliminary Engineering actuals have been agreed to be \$100,730,999. This is \$237,646 under the original budget of \$100,968,646. The under run is transferred to unallocated contingency.

4 The line item marked General Conditions includes Temporary Facilities Development, Hazardous Material Remediation, Miscellaneous Access Roads and Wiehle Ave Garage.

5 Estimate at Completion for Contingency and Indexed Commodity Escalation represent the remaining amounts.

6 The transfer of Finance Costs under-run of \$71.8 million to the contingency was approved in December 2012.

General Comments:

1. During March 2013, \$40.3M was transferred from Fed to Non-Fed as a result CNPA adjustments making a contribution to Federal contingency and drawdown from Non Federal contingency. This decreased the federal expenditure.

c. Project Funding Sources: March 2013

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE ¹	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
Sec 5309 New Starts Federal Funds						
Preliminary Engineering Grants			\$ 54,412,526	\$ 54,412,526	100%	\$ -
Final Design Grant	VA-03-0113-00		\$ 159,001,838	\$ 159,001,838	100%	\$ -
ARRA Construction Grant	VA-36-0001-00		\$ 77,260,000	\$ 77,260,000	100%	\$ -
FFGA Construction Grant	VA-03-0113-02		\$ 28,809,000	\$ 28,809,000	100%	\$ -
FFGA Construction Grant	VA-03-0113-03		\$ 85,000,000	\$ 85,000,000	100%	\$ -
FFGA Construction Grant	VA-03-0113-04		\$ 115,799,000	\$ 115,799,000	100%	\$ -
FFGA Construction Grant ⁵	VA-03-0113-05		\$ 90,832,000	\$ 90,832,000	100%	\$ -
FFGA Balance	Planned		\$ 288,885,636	\$ -	0%	\$ 288,885,636
Subtotal - New Starts		33.29%	\$ 900,000,000	\$ 611,114,364	67.90%	\$ 288,885,636
Other Federal Funds						
Sec 5307 Surface Transportation Program						
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 47,218,109	100%	\$ -
Construction Grant	VA-95-X056-02		\$ 21,281,890	\$ 21,281,890	100%	\$ -
Construction Grant	VA-95-X056-03		\$ 6,500,001	\$ 6,500,001	100%	\$ -
STP/Sec. 5307		2.77%	\$ 75,000,000	\$ 75,000,000	100%	\$ -
Local Funds						
VTA 2000			\$ 51,700,000	\$ 51,700,000	100%	\$ -
Commonwealth Transportation Bonds ^{2,5}			\$ 125,000,000	\$ 125,000,000	100%	\$ -
Fairfax County Funds ³			\$ 400,000,000	\$ 387,986,529	97%	\$ 12,013,471
Dulles Toll Road Revenues ^{2,4,5}			\$ 1,151,953,922	\$ 1,114,226,219	97%	\$ 37,727,703
Subtotal - Local Funds		63.94%	\$ 1,728,653,922	\$ 1,678,912,748	97.12%	\$ 49,741,174
Total Project Budget		100%	\$ 2,703,653,922	\$ 2,365,027,112	87.48%	\$ 338,626,810
Interrelated Highway Activities						
DTR Revenues/Commonwealth Funds ³			\$ 201,408,229	\$ 147,958,539	73.46%	\$ 53,449,690
Total⁶			\$ 2,905,062,151	\$ 2,512,985,651	86.50%	\$ 392,076,500

¹ Reflects costs through *March 31, 2013*

² In January 2010, \$23.6 million previously identified as pay-go Dulles Toll Road (DTR) Revenues were reclassified as Commonwealth Transportation Board (CTB) funds, reducing the contribution from DTR revenues and increasing the contribution from CTB funds.

³ Includes Tax District Revenues (\$400 million)

⁴ Includes pay-as-you-go revenues and bond proceeds

⁵ Expenditures include accruals.

⁶ Totals do not include financing charges, as those are not funding sources.

6. Project Risks

In June 2012, MWAA updated the Risk Register. This document and a recommendation to update the Top Ten Risks were forwarded to the FTA and the PMOC for review on August 27, 2012. FTA, the PMOC, and MWAA discussed this issue during the PMOC's September monthly site visit. The PMOC provided review comments and a modified Top Ten List that will be reviewed by MWAA. MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. FTA approved the revised Top Ten Risks by letter dated November 29, 2012. MWAA submitted a list of revised Top Ten Risks dated December 2012 on January 22, 2013. The PMOC submitted its comments on the proposed revised risks to MWAA on February 22, 2013 and the comments were discussed at the March 7, 2013 update meeting. MWAA revised the proposed top ten risks and resubmit them on March 20, 2013 as their re-titled "Proposed Top Tier" list containing nine items along with a revised risk register. *The PMOC provided comments on April 3, 2013 and during the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list. The PMOC commented on April 29, 2013 relative to the resubmission dated April 17, 2013, agreeing to the risks but raising some questions relative to numbering. On May 1, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 to FTA for approval.*

- **Budget Risks:** MWAA has allocated \$71.8 million in finance cost savings and \$19 million of Commodity Escalation under-run to Contingency. This brings the total Contingency to \$388,562,579. Through *March 25, 2013*, MWAA reports that it has utilized \$318,307,380 of the \$361,800,000 available contingency for the first ten contingency milestones leaving a balance of \$43,492,620. For phases 11 through 12 MWAA reports obligating \$18,988,157 of the available \$26,762,579 leaving an available balance of \$7,774,424. Therefore, as of *March 25, 2013*, the project has an estimated balance at project completion of \$51,267,043. MWAA's transfer of \$90.80 million to *contingency* and the *removal of CNPA expenditures* have improved the Project Contingency situation. However, the project must *continue to be diligent* in its efforts to identify additional contingency monies and to control the project costs. As noted elsewhere in this report, there is a *significant number of Design-Build (24) and Utility Relocation (3) Change Orders* under evaluation, and a large number of Potential Change Orders (104) and Utility Relocation Subcontractor Changes (5) still under review.

MWAA submitted a tabulation of possible Concurrent Non-Project Activities (CNPAs) on July 6, 2012 *that had* a total value of approximately \$63.9 million. This tabulation was reviewed by the FTA and PMOC and additional information was requested from MWAA on July 30, 2012. The revised tabulation of CNPAs was submitted on August 10, 2012. MWAA and the FTA/PMOC discussed this tabulation following the September 7 monthly meeting. The FTA/PMOC indicated that there was a potential \$23,861,089 that could be considered CNPAs. FTA indicated that \$19,511,703 in additional costs would be taken up with the FTA Administrator for possible inclusion in the CNPAs. The FTA subsequently identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA's letter of November 28, 2012 corrected the total for CNPAs to \$40.38 million. MWAA is currently developing the documentation to confirm the refund of any

federal funds previously drawn down to pay for these ineligible costs. *MWAA submitted an e-mail to the PMOC on April 24, 2013 outlining its CNPA expenditure accounting as well as MWAA's procedure for FTA grant drawdowns demonstrating how MWAA makes adjustments to previously drawn down grant funds when necessary. Adjustments were made to the contingency fund in March 2013 that effectively raised the remaining Phase 10 contingency by removing the identified CNPA expenditures. FTA requested additional documentation to identify the CNPA charges by SCC code.*

- **Schedule Risks:** With regard to Schedule Contingency, MWAA and DTP previously agreed to a zero loss recovery schedule with a data date of December 25, 2010. This recovery schedule had a mitigation period of fourteen months, extending from January 2011 through February 2012 to recover 113 calendar days of the available 510 calendar days. MWAA and DTP are now working off a new Mitigation Schedule with a data date of October 25, 2011 that was accepted "as noted" on November 23, 2011. Through *March 2013*, MWAA has granted DTP time extensions of 40 calendar days reducing the available contingency from 510 to 275 calendar days. *The currently approved SSCD is September 9, 2013.* There are additional weather delay days currently in contention for the WFCY, however they are not likely to trigger a DTP self-imposed constructive acceleration since the S&I Shop is not needed to support ORD and RSD.
- **Top Ten Risks:** MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the Top Ten Risks for review and approval. FTA approved the revised Top Ten Risks by letter dated November 29, 2012. *Below is the MWAA proposed Top Ten Risks submitted to FTA on May 1, 2013.*

Summary Status of the Top Ten Project Risks, April 2013

RISK NUMBER	RISK DESCRIPTION	RISK STATUS			
		SINCE INCLUSION ON TOP TEN LIST		Since March 2013 Update	
		COST	SCHEDULE	COST	SCHEDULE
70.R.27	Delay in <i>new RC-7000</i> vehicle (railcar) delivery.	Unchanged	Unchanged	Unchanged	Unchanged
10.C.21	Availability of track access for DTP to complete the K-Line connection work. <i>This has transitioned into the delivery of all prerequisites (spare parts) for WMATA acceptance.</i>	Unchanged	Unchanged	Unchanged	Unchanged
80.C.20	WMATA deliverables scope of work – including technical support may exceed the schedule <i>and therefore the budget.</i>	Unchanged	Unchanged	Unchanged	Unchanged
30.C.39	Construction issues (WFC Yard delayed construction which affects opening of the system). <i>West Falls Church Yard Construction issues delaying construction completion.</i>	Decreased	Decreased	Unchanged	Unchanged
50.S.2	<i>WMATA required points of testing for acceptance. (Supervisory Control and Data Acquisition (SCADA) Testing Required Points)</i>	Decreased	Decreased	<i>Decreased</i>	<i>Decreased</i>
20.C.40	Delay in Station Finishes (Platform Granite Edge, Platform & Mezzanine Paving Tile, Ceilings and Ceiling Lighting)	Unchanged	Unchanged	Unchanged	Unchanged
50.S.34	<i>Design changes by DTP during construction: 1. This is causing a massive backlog of design Review by DTP Engineering". In some instances DTP is proceeding with construction of changes to the Authority Having Jurisdiction (AHJ) approved design documents without the necessary approvals. 2. This is also causing a backlog of design reviews which are required by WMATA. (Reviewing/approving DTP Construction/Test documents.)</i>	Unchanged	Unchanged	Unchanged	Unchanged
70.S.1	<i>Insufficient number of Rail Cars for Safe Braking Dynamic Testing</i>	Unchanged	Unchanged	Unchanged	Unchanged
50.C.41	Completion of the installation of the upgrade for the new (Proposed) communication center at WMATA's Carmen Turner Building.	Unchanged	Unchanged	<i>Decreased</i>	<i>Decreased</i>
20.C.45	<i>Construction not in accordance with permitted design documents.</i>	<i>New</i>	<i>New</i>	<i>New</i>	<i>New</i>

7. Action Items

MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
3	2A.05	Submit Updated Risk Register developed in June 2012	FTA and PMOC need to review the updated document.	Y	Y	Y	MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. FTA issued an approval letter on November 29, 2012. MWAA submitted a list of revised Top Ten Risks dated December 2012 on January 22, 2013. MWAA revised the proposed top ten risks and resubmit them on March 20, 2013 as their re-titled “Proposed Top Tier” list containing nine items along with a revised risk register. <i>The PMOC provided comments on April 3, 2013 and during the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list. The PMOC commented on April 29, 2013 relative to the resubmission dated April 17, 2013, agreeing to the risks but raising some questions relative to numbering. On May 1, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 to FTA for approval.</i>	R
2	2B.01	Submit dates and responsible individuals for the Readiness for Revenue Operations Roadmap provided on February 12, 2013.	FTA and PMOC need to schedule necessary readiness reviews.	N	N	N	Information for roadmap was requested by February 28, 2013. MWAA is still working on populating the roadmap and anticipates submission in mid-May 2013.	R

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
2	2B.02	Transfer the value of CNPAs out of the federal portion and add to contingency.	FTA agreed to the CNPAs on November 6, 2012 and MWAA corrected the value of the CNPAs on November 28, 2012.	Y	N	N	The details of the accounting of the CNPAs were requested in FTA's November 6 letter. MWAA submitted an e-mail to the PMOC on April 24, 2013 outlining its CNPA expenditure accounting as well as MWAA's procedure for FTA grant drawdowns demonstrating how MWAA makes adjustments to previously drawn down grant funds when necessary. Adjustments were made to the contingency fund in March 2013 that effectively raised the remaining Phase 10 contingency by removing the identified CNPA expenditures. FTA requested additional documentation to reflect the CNPA costs by SCC code.	R

KEY ITEM

Subtask 2A CLIN 0002A – PMP Review
Subtask 2B CLIN 0002 – On-Site Monitoring

Note – Items marked with a ‘C’ in the ‘PMO Contractor Status’ column will be dropped from future reports.

LEGEND

PRIORITY (PR)

1- Most Critical
2- Critical
3- Least Critical

GRANTEE ACTION

D – Remedial Action Developed
A – Remedial Action Approved
I – Action Implemented

PMO CONTRACTOR STATUS

R – Review On-going
C – Completed – No further review required

APPENDICES

APPENDIX A – LIST OF ACRONYMS

AAC	Agreement After Certificate
AMEP	Architectural/Mechanical/Electrical/Plumbing
ARRA	American Reinvestment and Recovery Act
ASSHTO	American Association of State Highway and Transportation Officials
ATC	Automatic Train Control
CAR	Corrective Action Request
CCC	Construction/Procurement/Installation Conformance Checklist
CD	Calendar Days
CDRL	Contract Deliverables Requirements List
CMU	Concrete Masonry Units
CNPA	Concurrent Non-Project Activities
CPM	Critical Path Method
CR	Communications Room
CTI	CTI Consultants, Inc.
CY	Calendar Year
DB	Design-Build
DCC	Design Conformance Checklist
DCN	Design Change Notice
DCR	Dulles Connector Road
DF	Direct Fixation
DGS	(Virginia) Department of General Services
DIAAH	Dulles International Airport Access Highway
DQT	Design Qualification Testing
DR	Deficiency Report
DTP	Dulles Transit Partners, LLC
DTR	Dulles Toll Road
DVP	Dominion Virginia Power
ETS	Emergency Trip Station
FFGA	Full Funding Grant Agreement
FIA	Fire and Intrusion Alarm
FTA	Federal Transit Administration
FTE	Full Time Equivalent
FY	Fiscal Year
HC	Heater Cable
HOT	High Occupancy Toll
IDW	Intrusion Detection Warning System
IFC	Issued For Construction
IFP	Issued for Proposal
IRR	Issue Requiring Resolution
KHI	Kawasaki Heavy Industries, Ltd. (Plant in Japan)
KMM	Kawasaki Motor Manufacturing, Corp. (Plant in Lincoln, NE)
KSA	KSA, INC – Producer of Concrete Crossties
MH	Manhole
MCI	A communication company now owned by Verizon
MEP	Mechanical, Electrical and Plumbing

MPS	Master Program Schedule (7K Railcars)
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
ORD	Operational Readiness Date
PAC	<i>Point Assignment Charts</i>
PDA	Pile Driving Analysis
PDR	Preliminary Design Review (7K Railcars)
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor
PMSS	Project Management Support Services
PMP	Project Management Plan
QA	Quality Assurance
QC	Quality Control
QPP	Quality Program Plan
RAMP	Real Estate Acquisition Management Plan
RAP	Rail Activation Plan
RCMP	Risk and Contingency Management Plan
RFC	Request for Change
RFMP	Rail Fleet Management Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROE	Right-of-Entry
ROW	Right-of-Way
RSD	Revenue Service Date (synonymous with Revenue Operations Date)
SCADA	Supervisory Control and Data Acquisition
SCB	Sound Cover Box
SCC	Standard Cost Category
SCIL	Safety and Security Certifiable Items List
S&I	Service and Inspection
SOE	Support of Excavation
SSCD	Scheduled Substantial Completion Date
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan
STP	Surface Transportation Program
SWGR	Switch Gear
TBD	To Be Determined
TBS	Tie Breaker Station
TOC	Tri-state Oversight Committee
TPSS	Traction Power Substation
UR	Utility Relocation
VDOT	Virginia Department of Transportation
VTF	Vertical Test Facility (Corrosion Testing)
W&OD	Washington and Old Dominion
WFC	West Falls Church
WFCY	West Falls Church Yard
WMATA	Washington Metropolitan Area Transit Authority

APPENDIX B -- PROJECT OVERVIEW AND MAP

Project Overview

Date: *May 31, 2013* (reporting current through *April 2013* - Financials through *March 2013*)

Project Name: Dulles Corridor Metrorail Project – Extension to Wiehle Avenue

Grantee: Metropolitan Washington Airports Authority (MWAA)

FTA Regional Contact: Brian Glenn, P.E.

FTA Headquarters Contact: Dale Wegner, P.E.

Scope

- **Description:** MWAA The Project is the initial 11.7-miles of the LPA, which will run from the current Metrorail Orange Line near the West Falls Church (WFC) station to Wiehle Avenue in Reston, providing direct service to the commercial and office center of Tysons Corner. The Project will be constructed in or parallel to the Dulles Connector Road, Routes 123 and 7 through Tysons Corner, and the Dulles International Airport Access Highway (DIAAH). It will include five new passenger stations, one 2,300-car parking facility (provided through a joint development agreement at Wiehle Avenue Station), improvements to the existing WFC Service and Inspection Yard, tail tracks outbound of the interim terminus station at Wiehle Avenue, and the procurement of 64 rail cars.
- **Guideway:** Phase 1 is approximately 11.7 miles in length consisting of two tracks.
- **Stations:** There are five stations in Phase 1. Each station will include a kiss-n-ride area; bus drop-off facilities; station platforms with benches, canopies, ticket vending machines; and other amenities.
- **Support Facilities:** There will be a modification to the West Falls Church Yard and service building. A tail track will be constructed beyond the Wiehle Avenue Station.
- **Vehicles:** The Project will include the purchase of sixty-four vehicles for Phase 1 that will be procured by WMATA.

Ridership

The Project is estimated to carry 69,700 average weekday riders during opening year.

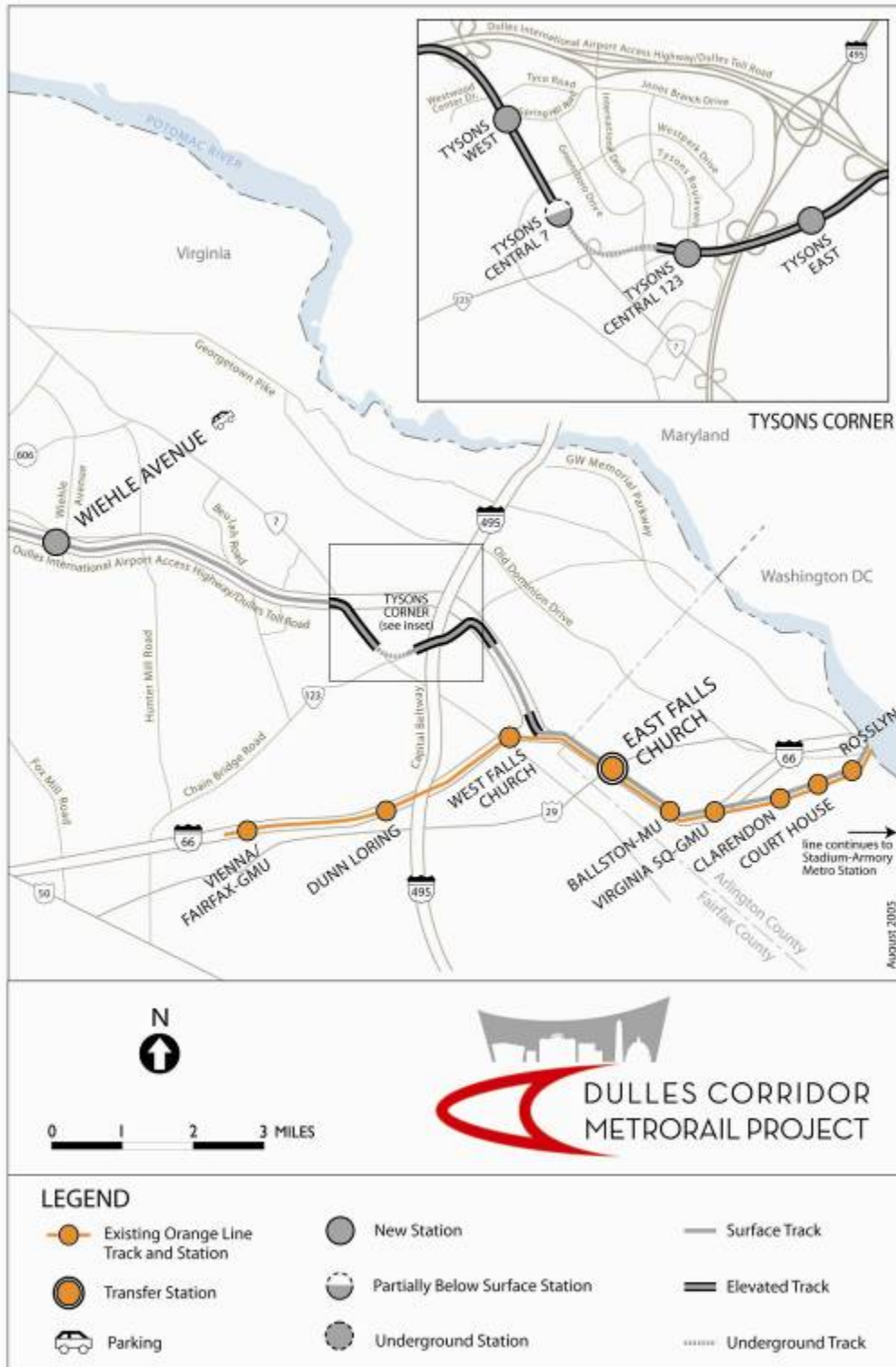
Schedule

06/10/04	Approval to Enter PE	2011	Estimated Rev Ops at Entry to PE
05/12/08	Approval to Enter FD	12/04/13	Estimated Rev Ops at Entry to FD
03/10/09	FFGA signed	12/01/14	Estimated Rev Ops at FFGA
01/13/14	Revenue Service Date (RSD) <i>as of March 25, 2013</i>		
91.0%	Percent Complete Construction <i>as of April 30, 2013.</i>		
72.0%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
89.5%	MWAA's Estimate of Project Earned Value through <i>March 2013</i>		

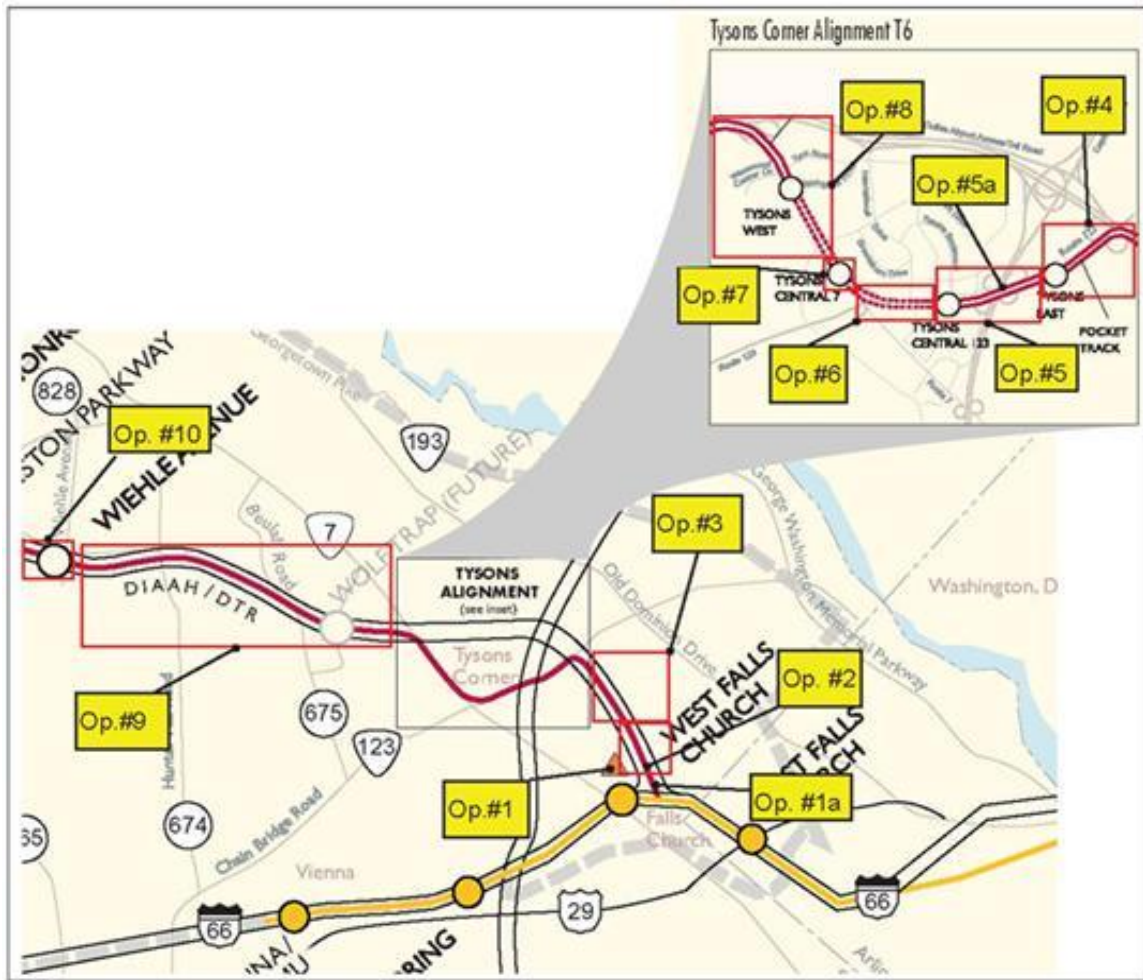
Cost

\$1.490 billion	Total Project Cost (\$YOE) at Approval to Enter PE
\$2.961 billion	Total Project Cost (\$YOE) at Approval to Enter Final Design
\$3.142 billion	Total Project Cost at date of report including \$510 million in Finance Costs
\$2.365 billion	Expenditures through <i>March 2013</i> from total project budget of \$3.142B
75.3%	Percent complete based on federal expenditures.
\$51.27 million	Total project contingency remaining (allocated and unallocated) through <i>March 2013</i> .

Project Map



Construction Operational Areas



APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST

Project Overview	Dulles Corridor Metrorail Project		
Project Mode (Rail, Bus, BRT, multimode)	Rail		
Project Phase (Preliminary Engineering, Design, Construction, or Start-up)	Design and Construction		
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGG, etc)	Design/Build		
Project Plans	Version	Review By FTA	Status
Safety and Security Management Plan	3/20/12	4/20/12	Accepted. MWAA's SSMP Rev.9 dated March 2012 was submitted for review in March 2012 and accepted by the FTA on April 13, 2012.
Safety and Security Certification Plan			WMATA's SSCPP March 2012 Revision is included as Appendix E to MWAA's SSMP Revision 9, which was accepted by the FTA on April 13, 2012.
System Safety Program Plan	1/20/2011		In response to FTA's Safety and Security Oversight Audit of TOC/WMATA and TOC Triennial Review findings, WMATA submitted an updated SSPP dated January 20, 2011, which was approved by TOC on February 22, 2011 with minor comments to be addressed in the next revision.
System Security Plan or Security and Emergency Preparedness Plan (SEPP)			WMATA submitted a revised SEPP to TOC in March 2010. TOC approved the SEPP on August 2, 2010.
Construction Safety and Security Plan			Addressed in PMP Version 8 was submitted on May 1, 2012 and is under revision.

Safety and Security Authority	Y/N	Notes/Status
Is the grantee subject to 49 CFR Part 659 State Safety Oversight requirements?	Y	Tri-State Oversight Committee (TOC)
Has the State designated an oversight agency as per Part 659.9?	Y	Tri-State Oversight Committee (TOC)
Has the oversight agency reviewed and approved the grantee's SSPP as per 659.17?	N	An updated WMATA SSPP dated January 20, 2011 was approved by TOC on February 22, 2011.
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	Y	Approved on August 2, 2010
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	TOC had a representative at the November 9, 2011 QPRM.
Has the grantee submitted its safety certification plan to the oversight agency?	N	Plan in progress. TOC participates in monthly meetings.
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	WMATA will be operator.

SSMP Monitoring	Y/N	Notes/Status
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	Y	
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y	
Does the grantee implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	N	WMATA will be operator.
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	N	WMATA will be operator.
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	N	WMATA will be operator.
Does the grantee update the safety and security responsibility matrix/organizational chart as necessary?	N	WMATA will be operator.
Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	N	WMATA will be operator.
Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y	

Does the grantee implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities?	Y	
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	Design and Construction only. WMATA participates
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	N	MWAA's letter of September 7, 2011 to WMATA indicated that they believed that such an evaluation is not required but that they would support WMATA if it chooses to conduct such an analysis.
Has the grantee ensured the development of safety design criteria?	Y	
Has the grantee ensured the development of security design criteria?	Y	
Has the grantee ensured conformance with safety and security requirements in design?	Y	
Has the grantee verified conformance with safety and security requirements in equipment and materials procurement?	Y	
Has the grantee verified construction specification conformance?	Y	
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	Y	In progress.
Has the grantee verified conformance with safety and security requirements during testing, inspection and start-up phases?	N	After SSCD
Does the grantee evaluated change orders, design waivers, or test variances for potential hazards and /or vulnerabilities?	Y	
Has the grantee ensured the performance of safety and security analyses for proposed work-arounds?	Y	
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following: • Activation Plan and Procedures • Integrated Test Plan and Procedures • Operations and Maintenance Plan • Emergency Operations Plan	N	In progress with WMATA.
Has the grantee issued final safety and security certification?	N	
Has the grantee issued the final safety and security verification report?	N	

Construction Safety	Y/N	Notes/Status
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	DTP's Construction Safety, Health and Security Plan accepted on January 6, 2009.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	
Provide the grantee's OSHA statistics compared to the national average for the same type of work. If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	Y	DTP has recorded 488 first aid cases and six lost time cases in 12.695 million project man-hours, which is below the national average.
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	

Federal Railroad Administration	Y/N	Notes/Status
If shared track: has grantee submitted its waiver request application to FRA? (Please identify specific regulations for which waivers are being requested)	N/A	Heavy Rail Transit Project. No FRA involvement.
If shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	N/A	
Is the Collision Hazard Analysis underway?	N/A	
Other FRA required Hazard Analysis – Fencing, etc.?	N/A	
Does the project have Quiet Zones?	N/A	
Does FRA attend the Quarterly Review Meetings?	N/A	

APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]