

**COMPREHENSIVE MONTHLY REPORT**

**July 2012**

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

August 31, 2012

**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 15<sup>th</sup> Street

Philadelphia, PA 19102

**PMOC Lead:** [REDACTED]

**Length of Time PMOC Assigned to Project:** 11.5 years

**Length of Time PMOC Lead Assigned to Project:** 4.0 years

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
1. PROJECT DESCRIPTION .....	1
2. PROJECT STATUS SUMMARY.....	1
3. PMOC’S ASSESSMENT OF PROJECT STATUS.....	5
<b>MAIN REPORT .....</b>	<b>8</b>
1. GRANTEE’S CAPABILITIES AND APPROACH .....	8
a. Technical Capacity and Capability .....	8
b. Project Controls .....	8
c. Compliance.....	9
2. PROJECT SCOPE .....	10
a. Design Status .....	10
b. Bidding and Construction Status .....	10
c. Real Estate.....	12
d. Utility Coordination.....	13
e. Vehicle Procurement .....	14
f. Safety and Quality Status .....	16
3. PROJECT MANAGEMENT PLAN AND SUB-PLANS .....	19
4. PROJECT SCHEDULE.....	20
a. Critical Path Evaluation.....	21
b. Important Activities – 90-Day Look Ahead .....	22
5. PROJECT COST .....	22
a. Explanation of Variances.....	23
c. Project Funding Sources: October 2011 .....	25
6. PROJECT RISKS .....	26
7. ACTION ITEMS .....	29
<b>APPENDICES.....</b>	<b>30</b>
APPENDIX A – LIST OF ACRONYMS .....	31
APPENDIX B – PROJECT OVERVIEW AND MAP .....	33
APPENDIX C – SAFETY AND SECURITY CHECKLIST .....	37
APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW .....	41

## EXECUTIVE SUMMARY

*The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on August 22, 2012 to conduct a monthly progress meeting (in conjunction with the FTA Quarterly Progress Meeting for the period April 2012 through June 2012) for work performed in July 2012. The full time on-site PMOC attended various project meetings and site tours throughout this reporting period and participated with MWAA and FTA representatives in a complete field tour of the Project on the morning of August 22, 2012. Additional information for this report was obtained from MWAA during the second and third weeks of August 2012. 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. Sixty-four additional rail cars are required to provide service for 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 Initial Operating Segment (extension to Wiehle Avenue). Through Federal fiscal year (FY) 2012, Congress has appropriated \$611,124,364 in Section 5309 New Starts funds for the Project. The FTA has awarded \$520,282,364 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 *August 22, 2012* to conduct a monthly progress review meeting and supplemental information was obtained from MWAA during the *preceding weeks*. The status of information is as of *July 31, 2012*, unless otherwise noted.

- **Real estate acquisition** continues to keep ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels. Of the 102 parcel packages required, 99 have been acquired.
- **Rail car Procurement** - The 7K Monthly Progress Review Meeting No. 23 between WMATA and Kawasaki was held on August 9, 2012 and the WMATA/PMOC Update Meeting was held on August 14, 2012. The Preliminary Design Review (PDR) phase was completed on March 16, 2012 compared to the mitigation schedule completion date of January 18,

2012. The current Final Design Review (FDR) completion date is August 28, 2012 compared to the mitigation schedule completion date of March 22, 2012, a slippage of 158 calendar days. FDR meetings have been completed with the exception of train wayside equipment. On June 27, 2012, Kawasaki introduced a new supplier for this system to WMATA. The new supplier is Ansaldo, which is also the supplier of ATC; therefore, WMATA does not foresee any major problems. *This change in supplier will result in the final FDR meeting being held in early September with the FDR completion now being September 21, 2012. The approved FDR CDRs are at 39.1% completed and 52.1% in progress.* The submission and acceptance of final design documentation remains. *WMATA reported that they have filled the Senior Program Manager Position and Mr. Satchit Kakkar, currently with the Southeastern Pennsylvania Transportation Authority, will start on August 27, 2012.*

On October 20, 2011, WMATA approved Kawasaki's Master Program Schedule (Baseline). WMATA subsequently approved Kawasaki's Mitigation Schedule, due to the March 2011 tsunami/earthquake, on December 21, 2011 with a June 12, 2015 conditional acceptance date for the 64<sup>th</sup> railcar, which was more than six months beyond the FFGA completion date for the DCMP. MWAA informed the FTA's Regional Administrator for Region III by letter on January 31, 2012 of the delay.

- **Design progress** - Overall project design remains at 99% complete as of the end of July 2012. The Tysons West Kiss & Ride Lot 100% design is not expected until September 27, 2012. DTP's design submission for a code modification package for the Wiehle Avenue pedestrian bridge and pavilion to add an emergency call station has been accepted. Related architectural matters remain to be resolved, and then the design will be submitted for permitting.
- MWAA issued a NTP on January 24, 2011 to an independent third-party consultant, Battelle, to review Alstom's safety analysis of the Generation 4 track circuit modules proposed for use on the Dulles Extension. MWAA reported during the July 10, 2012 monthly progress meeting that Battelle submitted its draft "Safety Analysis Review and Assessment" report to MWAA for review on June 29, 2012. *DTP/Alstom and Battelle provided a presentation of the report to all partners on July 19, 2012. A question and answer session followed the presentation. Most attendees felt that it was a weak "Conclusion" with too many open items of potential concern. Battelle and Alstom were pressed hard by MWAA, WMATA and the PMOC to expedite the closing of open items. Alstom committed to expedite the submission of an "Operating and Support Hazard Analysis" OSHA (referenced in AREMA) which they would provide in mid-September. Battelle said they would review the OSHA and address the other open items by mid-October with a Draft Final Report and a Final Report in November. The group pressed them both to improve that schedule. WMATA wrote letter No. 173 dated July 20, 2012 stating that "The presentation and draft report by Battelle do not satisfy WMATA's expectations, leaving some unresolved issues...until we have received an affirmative report from Battelle...WMATA will not approve the interlocking into our system and the K-Line cutover cannot proceed." The Project had been planning a September 15, 2012 cutover, but this will be delayed until at least mid-October.*

- **Construction progress** is broken into two components: utility relocation (UR), which *remains at 99% complete*, and design-build (DB) construction, which is approximately 77% complete. Significant accomplishments for *July* included *completion of the* segmental box girder installation on the Tysons West Guideway with Launch Girder Truss LG2; wall, track-bed, platform, column, mezzanine and precast panel work on all five stations; both ballasted and direct fixation trackwork installation on the Tysons East *and Tysons West Guideways*, and along the DCR and DIAAH and Wiehle Avenue tail tracks; and significant progress with the construction of Traction Power Substations, Communications and Automatic Train Control Equipment Rooms and delivery and installation of equipment. *The Project also made significant progress on the K-Line tie-in ATC static testing and dynamic train safe braking tests.*

CONSTRUCTION PROGRESS THROUGH JUNE 2012			
GUIDEWAYS AND TRACKWAYS	% COMPLETE	STATIONS	% COMPLETE
Tysons East Guideway	100%	Tysons East	56%
Tysons West Guideway	98%	Tysons Central 123	49%
O-3 Trackway	99%	Tysons Central 7	37%
O-9 Trackway	97%	Tysons West	40%
Systems	19%	Wiehle Avenue	61%
Trackwork	68%		

- **The DTP Schedule Update** with a data date of *June 25, 2012* “Mitigation Schedule” showed a -5 calendar day *decrease* as compared to the +2 calendar day *increase* reflected in the *May 25, 2012* update.
- **With regard to the West Falls Church Yard (WFCY) completion date**, DTP’s schedule update of *June 25, 2012* reflected a targeted WFCY completion date of *January 3, 2014* which represents a -14 calendar day variance to the planned December 20, 2013 completion date. *At the August 22, 2012 Quarterly Progress Review Meeting, MWAA reported that the DTP schedule update with a data date of July 25, 2012 indicated a further slippage with a completion date of January 30, 2014 or 41 days behind schedule. The July schedule was under review by MWAA.*
- **Budget** status as of *June 25, 2012* indicates that \$1,990,573,466 (71%, excluding the remaining contingency and finance charges) has been expended of the \$3,142,471,634 budget total. MWAA reports \$224,716,538 of the available contingency for the first eight contingency milestones have been drawn down to date with a remaining contingency balance of \$26,283,462 available through the eighth contingency phase. The current estimate of the contingency available at the end of construction is \$34.11M. **The federal portion of the Allowance Items recommended for award and yet to be awarded is estimated to be \$45.66 million over budget. During the June monthly meeting, MWAA agreed to adjust the table to incorporate the budget overrun. This amount has been added to the Contingency Obligation Table.** MWAA acknowledges a \$71.8 million in available Finance Charges that could be added to the contingency to resolve this potential deficit. However, at the July 10<sup>th</sup> update meeting, MWAA stated that this would not be transferred until the end of

the current year as part of the new annual budget. However, MWAA has updated their Project Cost Report to reflect the Finance Cost Savings. In addition, the PMOC has been reviewing changes to the project scope since Preliminary Engineering that could be considered betterments (Non-FFGA) or Concurrent Non-Project Activities (CNPAs). MWAA and the FTA/PMOC met in April, May and June to discuss and refine MWAA's tabulations. MWAA submitted *a revised* tabulation of the CNPAs/non-FFGA items on July 6, 2012 and FTA provided comments and additional justification information on July 30, 2012. MWAA re-submitted their CNPA tabulation on August 10, 2012, which is under review. Following review and approval, the Airports Authority will transfer the cost for the Non-FFGA Scope items from the FFGA Budget and Estimate at Completion (EAC), and replenish the contingency accounts (Federal and Non Federal) establishing a separate account with an "Additional Funding Source" to capture the specific Non-FFGA scope. FTA and the PMOC will review this latest submission internally before discussing it with MWAA during the PMOC's September monthly site visit.

- MWAA's estimate of the **Earned Value** for the Project through *June* is 77.2%.
- **Risk** -- The PMOC reviewed MWAA's updated Risk Assessment dated April 15, 2011. A series of meetings during the following eleven months led to submission of RCMP Revision 2c on March 5, 2012. The FTA and PMOC provided comments on March 16, 2012 and MWAA submitted RCMP Rev. 3 to the FTA for approval by letter dated March 28, 2012. The FTA approved the RCMP on April 13, 2012. *MWAA has developed a new revised Risk Register; this document and a recommendation to update the Top Ten Risks will be forwarded to FTA and the PMOC for review, with a discussion planned during the PMOC's September monthly site visit.*
- The **Full Time Equivalent** (FTE) estimated total for *July* is 1,475 which is a *decrease of thirty-three* from the *June* actual of 1,508. A fluctuation is to be expected with the winding down of design and civil construction and the ramping up of systems installation and testing. The PMOC will continue to monitor this fluctuation to ensure that the project is appropriately managed to support the current "Mitigation Schedule."

- **Core Accountability Items**

<b>FFGA-MWAA Core Accountability Items</b>			
<b>Project Status:</b>		<b>Original at FFGA:</b>	<b>Current Estimate*:</b>
<b>Cost</b>	Cost Estimate	\$3.142B	\$3.142B
<b>Contingency</b>	Unallocated Contingency		
	Total Contingency (Allocated plus Unallocated)	\$297.76M	\$34.11M
<b>Schedule</b>	Revenue Service Date	December 1, 2014	January 7, 2014
<b>Total Project Percent Complete</b>		Based on Expenditures**	71%
		Based on Earned Value	77.2%
<b>Major Issue</b>	<b>Status</b>	<b>Comments/Action/Planned Action</b>	
<b>Contingency/CNPAs (Additional Scope non-FFGA)</b>	Project Partners have added additional activities to the project that will increase the project cost and are not part of the FFGA-funded scope of work.	The FTA, PMOC and MWAA met in April, May and June, 2012 to review their respective lists of CNPAs (additional scope-non-FFGA); MWAA submitted its latest tabulation via Letter No. 07222 dated August 10, 2012, which is currently under review.	
<b>Date of Next Quarterly Meeting:</b>		November 14, 2012	

Note: \* Through June 2012

\*\* Excluding remaining contingency and finance charges

### **3. PMOC's Assessment of Project Status**

To address potential budget overruns, the PMOC concludes that MWAA needs to replenish the Project contingency and actively pursue items that may be additional scope (non-FFGA) and billed to the responsible parties. It is the PMOC's opinion that the change orders for WMATA-requested ETS and TPSS Remote Monitoring systems are outside MWAA's Intergovernmental Agreement with WMATA, are additional scope CNPAs (non-FFGA) to the project, and should be funded outside the FTA project. The PMOC's current assessment of CNPAs (non-FFGA additional scope) *remains at* approximately \$63.9 million down from \$94 million, *pending review of the August 10 re-submission*. Efforts continue to arrive at an agreement as to what

changes since PE constitute FFGA versus non-FFGA expenditures. MWAA acknowledges that the FTA and VDOT funding is fixed and that the local funding partners each bear a percentage of the non-FFGA scope costs.

The estimated cost overruns of the Allowance Items (\$98.4M which has been funded by contingency plus \$45.6M has been obligated) had indicated that there was a need to replenish the project contingency. Given the forecasted magnitude of the Allowance Items costs, the federal portion of the Project was, in the PMOC's opinion, on track to exceed the FFGA budget, if additional contingency was not provided and /or the Concurrent Non-Project Activities (CNPAs) are not addressed. **The transfer of the \$71.8M in savings from the Finance Charges to Contingency has been used to address this shortfall, regardless of the final disposition of the CNPAs.** The PMOC continues to review both the use of contingency and the changes that can be considered CNPAs to determine the possible shortfall in contingency. PMOC met with MWAA in April, May and June 2012 to review its findings with regard to CNPAs. Based on those discussions, MWAA submitted their current tabulation of CNPAs through February 2012 to the FTA, which was updated with additional information on August 10, 2012 and is under review. *FTA requested MWAA to review the balance of Commodity Escalation funds that could be used for Contingency, if needed.*

The Project continues working according to an agreed "Mitigation Schedule", authorized by MWAA's November 1, 2011 Directive Letter. The mitigation schedule with a data date of *June 25, 2012* shows a -5 calendar variance to the contract schedule and now reflects an SSCD of *September 3, 2013*. Associated cost negotiations and settlement language associated with RFCs 160 and 161 (remote monitoring) were completed on June 15, 2012.

DTP has incorporated the West Falls Church Yard construction into the mitigation schedule with a completion date of December 20, 2013. The *June 25, 2012* schedule update reflects a -14 day variance to this completion date. *The schedule update with a data date of July 25, 2012, and currently under review, reflects a WFCY completion date of January 30, 2014 or 41 days behind schedule.* 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 ongoing struggle to address the impacts of the March 2011 earthquake and tsunami in Japan continues to be a concern to the PMOC. On December 21, 2011, WMATA approved a mitigation contract schedule that forecasts a conditional acceptance date of the 64<sup>th</sup> DCMP rail cars on June 12, 2015. This schedule does not meet the FFGA Revenue Service Date (RSD) date of December 1, 2014. MWAA informed the FTA Regional Administrator of the delay 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 see if WMATA is improving railcar availability. WMATA has developed an interim operating plan for dealing with the delay. However, the plan calls for using six-car trains in lieu of a mix of six- and eight-car trains. 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 have met to address this issue and WMATA *prepared* revisions to their RFMP *and submitted RFMP Rev-4G to the FTA on August 3, 2012.*

# 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. It is the PMOC's opinion that the staffing levels and technical capabilities are still adequate. MWAA has hired Mr. William Kerrigan as Manager of Project QA/QC and Safety, replacing the retired Jon Christensen.

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.

### 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 *June* 2012. In this update DTP reported a possible *loss* of -5 calendar days to the SSCD forecasted by DTP to occur on *September 3, 2013*. DTP's Critical Path in their *June 2012* Schedule Update *involves the DVP Tie-in from the WFCY (K99) through DVP termination cables at the Tysons Central 7 Station*. MWAA completed its schedule review *of the schedule update with a data date of June 25, 2012 on July 24, 2012 and "Accepted as Noted" the schedule update*.
- MWAA continues to monitor expenditures to date and to update the estimate at completion. Through *June, 2012*, MWAA has *utilized \$250,954,805* of the Phases 1 through 8 contingency budget of \$251,000,000. *MWAA has allocated \$26.24 million of the \$71.8 million in finance costs savings to the current phase bringing the remaining balance to \$26,283,462*. The contingency utilization reflects expended *and obligated* costs. There is an additional \$84.50 million in obligated contingency of a total of \$92.32 million *available* in Phases 9 through 12 consisting of a budget of \$45.56 million and a

contribution of \$45.56 million from the finance charges under-run . This leaves a balance, as of the end of *June*, of \$34.11 million in remaining 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 *July 2012*, there has been a cumulative total of *10,760,614* hours worked with six lost time accidents.

Revision 5 of the Safety and Security Certifiable Items List (SCIL) has been reviewed and all comments have been resolved. DTP’s final resubmission on November 18, 2011 was subsequently accepted by MWAA. The SCIL for K99 (West Falls Church Yard) was received by MWAA on December 21, 2011 separately from the entire SCIL for review and comment. Informal comments for the K99 SCIL were provided to DTP on February 14, 2012 and a meeting to discuss the comments was conducted on March 26, 2012. Follow-up comments were officially sent to DTP on May 11, 2012 and the comment resolution process continued. DTP and MWAA met again in June to refine the K99 SCIL. DTP submitted the SCIL Revision 6 to include the WFCY on *August 6, 2012 and it is currently under review.*

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 that 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 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 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 *second* quarter of 2012 on *July 31, 2012.*

## 2. Project Scope

### a. Design Status

Except for the Tysons West Station Kiss and Ride Lot, DTP has completed design work with the receipt of permit approvals on all station designs and Issued for Construction (IFC) drawings for all five stations have also been completed. The Tysons Kiss and Ride Lot Issued for Permit (IFP) drawings are expected to be ready to issue for permit on *September 19 and be permitted by September 27, 2012*. The late issuance of IFP and IFC design packages has had no apparent adverse impact on the project's critical path, due in part to DGS permitting of partial packages.

### b. Bidding and Construction Status

Through *June 2012*, DTP has awarded \$422,941,992 worth of the \$437,278,511 federally funded Allowance Items Budget to subcontractors and suppliers with an \$88,296,368 overrun for 34 of 38 sub-contract packages awarded thus far. In addition, MWA has Allowance Items recommended for Award, but not yet awarded, worth \$144.5 million, which is an additional \$45.6 million over budget. The \$45.6 million does not include the remaining allowance items yet to be awarded, including Pavilion and Pedestrian Finishes (C3), Specialties (including signage) (C3), Installation of Public Art (C7), Spare Parts (C11). MWA has recently obligated these funds (\$45.6 million) from Contingency.

Utility relocation is 99% complete, and DB construction is approximately 77% complete. Remaining utility relocation involves the remaining punch list work on traction power ductbanks and manholes and Dominion Virginia Power's (DVP) installation of power cables to the Traction Power Substation.

The following are the major accomplishments of the DB contractor during *July 2012*:

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1)** – *Continued splicing fiber optic cables and installing equipment into the Fisher Avenue Communications Room. Continued installing conduits and pulling cable from the Fisher Avenue TCR Room into the Communications Room. Continued racking traction power feeders from the trackway into the cable vault at TPSS #1. Continued installation of trackside ATC cable and making terminations in the median of the DCR. Installed ETS and heater control supports at TPSS #1. Performed ATC track circuit testing during the K-Line track outages in July. Performed safe braking distance train testing on the K-Line during non-revenue and track outages in July. Continued terminations of ATC cabling inside the N91 TCR. Completed splicing the primary fiber optic cable and started splicing redundant fiber optic cable in the Communications Room at TPSS #1 and TPS #2. Continued installing racks in electrical manholes at TPSS #2. Continued traction power testing at TPSS #2. Pulled 34.5 Kv cables from DVP vista switch into TPSS #2. Continued installing post and panel walls at TPSS #1. Continued repairs on acoustical panels on the O-1 guideway.*

- *Continued acoustical barrier panel installation at the Magarity and Pimmit Run Bridges. Completed installation of the grounding grid for TPSS at the WFCY. Continued installing tiebacks for SOE piles at the S&I Building foundation at the WFCY. Continued installing SOE piles for the Sound Cover Box foundation at the WFCY.*
- **Operations Area OP-4/5A (Tysons East Guideway/Station/I-495 Crossing)** – *Continued emergency guardrail installation on the aerial guideway between Tysons East and Tysons Central 123 Stations. Continued installation of ATC track equipment and WZ bonds and pulling ETS cable on the guideway. Started platform roof canopy steel erection at the Tysons East Station. Continued installation of electrical equipment and raceways under the platform, at the mezzanine level, in the TCR and AC Switchgear Rooms. Continued installation of elevator and escalator equipment and controls. Continued installation of raceways and equipment in TPSS #3. Continued installing fiber optic and FIA cables from TBS #3 to the TCR at the platform level. Continued rebar and concrete construction of walls and stairs for the pedestrian bridge and pavilion. Continued terminating traction power cables on the Tysons East Guideway. Continued installing aerial raceway covers, racking traction power cables in the vault and meggering cables at N01. Continued installing aerial guideway traction power cable troughs between Westpark Drive and the Tysons 123 Station.*
- **Operations Area OP-5 (Tysons Central 123 Station)** – *Continued rebar and concrete construction for the pedestrian bridge and pavilion. Implemented a traffic shift on northbound Route 123 for the pedestrian bridge pier in the median of Route 123. Continued installing the roof membrane at the TPSS #4 roof and west service rooms. Continued raceway and electrical equipment installation at TPSS #4, the AC switchgear room, battery room, and for communications at the lower level and platform level service rooms. Continued installing HVAC ductwork. Continued installation of precast wall panels. Continued installation of the double crossover track between Tysons 123 Station and tunnel.*
- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure)** – *Continued electrical cabinet and light fixture installation at the East Vent Structure. Continued installing fan dampers at the East Vent Structure. Continued installing light fixtures in the NATM tunnel. Continued installing contact rails in the tunnel. Continued installing ATC and Communication cables in the tunnel emergency walkway duct bank.*
- **Operations Area OP-6 (West Cut and Cover Tunnel)** – *Continued interior room electrical panel and conduit installation at the West Vent Structure. Continued assembly of dampers and vent transitions at the West Vent Structure.*
- **Operations Area OP-7 (Tysons Central 7 Station)** – *Continued raceway, fixtures and device installations for AC and Communications systems in the service rooms, under platform, at elevators and in TPSS #5. Continued rebar and concrete construction for the north and south pedestrian bridge pavilion walls. Continued backfilling at the barrier walls. Continued track plinth and rail installation through the Station and west*

*on the Tysons West Guideway. Continued installing steel for the barrel roofing on the mezzanine level. Continued installing the UPS in the AC Switchgear Room.*

- **Operations Area OP-8 (Tysons West Station/Guideway)** – *Completed segmental girder erection with Truss LG2 completing spans 54-IB, 54-OB, 55-IB and 55-OB for a total of eighty-six completed to date. Completed installation of steel framing for the mezzanine level curtain wall and pedestrian bridge entrance at the Tysons West Station. Continued installation of HVAC ductwork in the mezzanine level and the electrical raceway and bus duct in the AC Switchgear Room. Continued installation of systems cable trays on aerial guideway and piers. Continued installation of Station precast panels. Continued installation of CMU walls at the mezzanine level. Continued rebar and concrete construction of foundation and walls at the north and south pedestrian bridge pavilions. Continued traction power testing at TPSS #6. Continued pouring cable trough walls and direct fixation track plinths on the aerial guideway east of Spring Hill Road.*
- **OP-9 (DIAAH)** – *Continued closing remaining openings in the retaining walls of the outbound side between Hunter Mill Road and Difficult Run. Continued traction power and ATC testing at TPSS #7, TPSS #8 and TPSS #10. Continued installation of ballast and track between Beulah Road and just west of the Tysons West abutment B. Continued with cable trough installation from the Tysons West abutment to Difficult Run. Continued installation of contact rail and coverboard between the W&OD Trail and Difficult Run. Continued pulling traction power cables between the trackway and TPSS #10. Continued installing IDW boxes and cable on the fence in the median of the DIAAH.*
- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)** – *Continued installing wiring, panels, transformers, and equipment cabinets in the AC Switchgear Room and throughout the Station. Continued ATC testing. Continued terminating traction power cables at the trackway west of the Station. Completed pedestrian bridge piers 01 and 1 near the west-bound toll road ramp. Continued traction power and ATC cable installations west of the station. Continued installation of the station communications conduits and wiring. Continued elevator assembly. Continued standing seam roofing on the vaulted roof. Continued installation of fire alarm devices in service rooms. Continued installation of dry fire sprinkler piping throughout the station. Continued installation of FIA conduits and boxes at TPS #11.*
- **Laydown Area 10 (Pre-cast Yard)** – *Completed staging and load out of precast segments for the Tysons West Guideway.*

All Intergovernmental Agreements and Agreements with utility companies were executed prior to the FFGA.

### **c. Real Estate**

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through July 2012, 99 of the 102 parcels required

for the Project have been acquired. The table below summarizes acquisition activities for the Project through *July 2012*.

**PARCELS ACQUIRED<sup>1</sup>**  
(Number of parcel packages)

LOCATIONS	TOTAL	Period			To Date		
		Planned <sup>2</sup>	Actual	Var	Planned <sup>2</sup>	Actual	Var
Route 66 / DCR	1	0	0	0	1	1	0
Route 123	23	0	0	0	23	21	(2)
Route 7	53	0	0	0	52	51	(1)
DIAAH	26	0	0	0	26	26	0
<b>TOTAL</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>99</b>	<b>(3)</b>

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 values are based on the March 31, 2011 Property Acquisition Status Update. *One additional acquisition was added in June 2012 to be completed in September 2012.*

Condemnation Status

Thirty-nine parcel packages have been obtained with the filing of thirty-three Certificates of Take. In *July 2012*, four cases continues to work towards an Agreement after Certificate (Parcel 109, AG/ARC Plaza America; Parcel 125/JGB 1831 Wiehle Avenue, LLC; Parcel 86 Maximums Properties, LLC; and Parcel 90 Kaiser Foundation Health Plan).

**d. Utility Coordination**

Utility relocation work continued through *July 2012* and is considered to be 99% complete. DTP's utility relocation design team continues to address conflicts or field conditions when required and to coordinate all modifications with the A&R D-B contract requirements. Installation of facilities for each third party utility has been completed in Tysons Corner and all utility companies have completed the local tie-in conduits and cables required to modify their circuits in compliance with the overall Project utility design. All UR work along Route 7 is complete. Traction Power duct bank and DVP power installations continue.

Specific utility relocation work completed and continuing through *July 2012* includes the following:

- **Dulles Connector Road (DCR) East – (K-Line to Route 123) – DVP continued splicing 34.5 kV traction power cables in the DCR median between TPSS #2 and Chain Bridge Road. DVP energized their new power substation at Redfield and DVP switch at TPSS #1.**
- **Route 123 (DCR to Route 7) – All work completed.**

- **Route 7 (Spring Hill Road to Tyco/Westwood)** – Lane continues punch list work on traction power conduits into manholes in front of the Ernst & Young wall.
- **Route 7 (Tyco/Westwood to Dulles Toll Road)** – DVP continued installing and splicing cables in manholes into TPSS #6. DVP energized the switch at the Tysons West Substation.
- **DIAAH West - (Route 7 to Wiehle Avenue)** – DVP continued installation of 34.5 kV traction power cables in ductbanks and splicing cables in manholes along the westbound DIAAH between TPSS #7 and TPSS #8.

#### 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 Board approved the award of a contract and a sharing of development costs with MWAA at its May 27, 2010 meeting. The MWAA Board agreed at its June 2, 2010 meeting to share the development costs associated with the railcar procurement equally with WMATA.

WMATA awarded a contract to Kawasaki on July 27, 2010. The manufacturer's proposed schedule showed the 64<sup>th</sup> 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. Thus, the contract indicated that the 64<sup>th</sup> rail car would be conditionally accepted on January 15, 2015 as an early completion date, which did not comply with the FFGA 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.

The Conceptual Design Review phase was completed on January 31, 2011 and the program moved into the Preliminary Design Review (PDR) phase. All PDRs were completed on March 16, 2012, more than eleven months past the original baseline schedule date of March 30, 2011. At the 7K Monthly Progress Review meeting held on *August 14, 2012*, Kawasaki reported that it now anticipates that the Final Design Review (FDR) phase will be completed on *September 21, 2012* compared to the mitigation schedule completion date of March 22, 2012, which represents a 182 calendar day delay. On June 27, 2012, Kawasaki introduced a new supplier for the train wayside control equipment to WMATA. The new supplier is Ansaldo who is also the supplier of ATC; therefore, WMATA does not foresee any major problems. In order to mitigate this loss, Kawasaki has been performing work at risk pending completion of the FDRs.

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 64<sup>th</sup> 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. As noted in the schedule table below, the actual completion date of the A-Car mock-up was April 24, 2012, forty-six calendar days beyond the mitigation schedule completion date. Master Test Plan, Revision B was submitted for review on May 29, 2012 and *the Test Master Plan was approved on July 19, 2012*. As noted above, the completion of Final Design Reviews is now anticipated to be on *September 21, 2012*, 158 calendar days beyond the mitigation schedule. The Carbody/Truck First Article Inspection Approval is now anticipated to be completed in November 2012, which is 92 calendar days behind schedule.

The contractual milestones for this railcar procurement are:

Activity	Original Baseline Schedule Date	Mitigation Schedule Date	Actual Date
Notice to Proceed	July 12, 2010	---	August 16, 2010
Preliminary Design Review Submission	March 31, 2011	March 31, 2011	March 31, 2011
Preliminary Design Review Complete	May 1, 2011	January 18, 2012	March 16, 2012
Approval of Master Test Plan	August 23, 2011	February 7, 2012	<i>July 19, 2012</i>
Approval of A-Car Mock-up	October 24, 2011	March 8, 2012	April 24, 2012
Final Design Review Submission	October 31, 2011	February 1, 2012	February 1, 2012
Final Design Review Complete	December 1, 2012	March 22, 2012	
Carbody/Truck First Article Inspection Approval	March 30, 2012	August 1, 2012	
Final Assembly Prototype Car #1		November 20, 2012	
Delivery of 4 pilot cars	September 16, 2013	February 20, 2014	
Conditional acceptance of 4 pilot cars	March 16, 2014	August 14, 2014	
Conditional Acceptance of first 4 Production Cars	March 16, 2014	August 14, 2014	
Conditional acceptance of 64 <sup>th</sup> car	January 15, 2015	June 12, 2015	

WMATA has developed an interim operations plan for dealing with the delay. However, the plan calls for no eight-car trains and all six-car trains. This issue remains a concern of the FTA and PMOC. The PMOC continues to monitor both the progress of the procurement and WMATA's management. At the May 9 WMATA Quarterly meeting, WMATA pledged to

meet with FTA to review alternative operating plans. FTA met with WMATA on *July 3, 2012* to discuss the Interim Operating Plan. WMATA *reviewed* the current plan and *resubmitted RFMP Rev-4G on August 3, 2012* for FTA's review.

#### **f. Safety and Quality Status**

MWAA participated in *four* safety walk downs with DTP during the month of *July*. All were related to Design-Build work. As of *July 31, 2012*, DTP had logged *10.761* million project man-hours with *361* first aid cases and six lost time cases. There have been a total of *788* incident investigation reports, *86* utility hits and *22* vehicular accidents.

Revision 5 of the Safety Critical Items List (SCIL) was reviewed and all comments resolved. MWAA received the SCIL for K99 (West Falls Church Yard) on December 21, 2011, separately from the entire SCIL for review and comment. MWAA provided comments back to DTP on the K99 SCIL on February 14, 2012 and a meeting to discuss the SCIL was conducted on March 26, 2012. Follow-up comments were officially sent to DTP on May 11, 2012 and the comment resolution process continued. DTP and MWAA met again in June to refine the K99 SCIL. *DTP submitted SCIL Revision 6 to include the WFCY on August 6, 2012 and it is currently under review.*

DTP and MWAA continue to meet every two weeks 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 FTA and PMOC continue to express concern with the lack of progress on both the DCC and CCC submissions. Submission No. 8 of the DCC was received on June 15 and MWAA *completed its review on August 3, 2012 and comments are being prepared.* Submission of DCC No. 9 is scheduled for September 15, 2012.

A preliminary walk-down of K98 (K-Line Tie-in) was conducted by MWAA, WMATA, DTP and the PMOC on December 14, 2011 in an effort to refine the CCC process and expectations of each partner prior to the CCC No. 4 submission. It was a good effort and helped identify what documentation support MWAA and WMATA would need from DTP to validate sign-off acceptance. CCC No. 4 covering the K98 interface was submitted on March 19, 2012 with backup records and was reviewed and returned to DTP with comments on May 14, 2012. This CCC is intended to be the model for the remaining construction submissions and remains a work in progress. *DTP submitted CCC No. 4 (Revision 5) on July 25, 2012 and it is currently under review by MWAA and WMATA.*

It has been the observation of the PMOC that two DTP staff (one full time and one part time) tasked with managing the SCIL and sign-offs has been insufficient to adequately manage this important process. MWAA reported *in July* that DTP has recently hired a third person to assist with the SCIL sign-off management process.

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. The SCWG held its regular monthly meeting on *July 17, 2012*. The next SCWG Meeting is scheduled for *August 21, 2012*.

MWAA transmitted Revision 5 of the DTP System Safety/Security Certification Management Plan to the FTA on December 8, 2010. MWAA submitted its Safety and Security Management Plan, Revision 8, to the FTA on February 17, 2011. An FTA/PMOC Safety/Security Program Review Meeting was conducted with all stakeholders on April 29, 2011. FTA explained the requirement for a complete SSMP for the Dulles Corridor project that would carry through start-up, pre-revenue operations and to the Revenue Service Date. MWAA and WMATA agreed to jointly develop a revised SSMP that will 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. A follow-up meeting was conducted with all parties on January 27, 2012 to review the progress made thus far. 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 *July 2012*, MWAA and DTP performed the following QA audits/surveillances:

- *DTP System Safety/Security Program: MWAA conducted an audit on July 11, 2012. There were no issues.*
- *DTP Construction and QC: MWAA conducted an audit on June 25, 2012. There was one observation requiring a response.*

**The MWAA QA Audit and Surveillance Schedule for August through December 2012:**

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv.?	Lead
8/08-09/12	A	A & A Industrial (Tunnel Ventilation)	Y	DTP
8/15-16/12	A	Contractor and Subcontractor Safety Programs	N	MWAA
8/22-23/12	A	Truland Walker-Seal (Communications)	Y	DTP
8/29-30/12	A	Whiting-Turner (West Falls Church Yard)	Y	MWAA
9/05-06/12	A	M.C. Dean (Late MEP)	Y	DTP
9/12-13/12	A	DTP Environmental	N	MWAA
9/19-20/12	A	Internal Audit by STV	N	STV

9/26-27/12	A	Lane Construction (Pedestrian Bridge Erection)	Y	MWAA
10/10-11/12	A	Reliance (Fire Suppression)	Y	DTP
10/17-18/12	A	Turner Construction (Shell Enclosure Trades)	Y	MWAA
10/24-25/12	A	Whiting-Turner (Stonework, Tile & Pavers)	Y	DTP
12/05-06/12	A	Subcontract to be Awarded (Ped. Bridges & Pavilion Finishes)	Y	DTP
12/12-13/12	A	DTP Startup and Test Program	N	MWAA

*As a result of the USDOT Office of Inspector General's audit of the Dulles Project, it was determined that the testing of the foundations installed in the 1970's by VDOT for the future extension of the Silver Line did not adequately address the effects 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.*

#### **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	
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, 2012 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.*

- 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<sup>th</sup> for discussion at the September 6, 2012 PMOC Update Meeting.*

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 the 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 this issue. *WMATA has revised their RFMP and RFMP Rev 4\_G was submitted to the FTA on August 3, 2012.*

**Safety and Security Management Plan (SSMP)** see Section 2f.

## 4. Project Schedule

**Mainline** - The project “Mitigation Schedule” update with a data date of *June 25, 2012* reflects a *-5 day decrease* as compared to a *+2 increase* reflected in the *May 25, 2012* DTP’s schedule shows the Revenue Service Date to be *January 7, 2014*. MWAA completed its schedule review on *July 24, 2012 and accepted it with a few exceptions, to include disagreement on the critical path*. The PMOC remains confident that the project can be completed before the FFGA RSD of December 1, 2014.

This mitigation schedule supersedes the previously approved recovery schedule with a data date of December 25, 2010 that was finally settled at \$7.2M in mid-September 2011 but does not relieve DTP from their obligations to the earlier recovery schedule. MWAA reported during the July 10, 2012 Monthly Update Meeting that RFC160 and RFC161 related to the mitigation schedule has been settled along with the language on June 15, 2012. The final package for signature is being prepared.

MWAA and DTP continue the ongoing and ever changing deliberation process of determining weather related excusable delay days as reflected in the table below. As a result, the SSCD has been adjusted to August 27, 2013.

**Excusable Days of Delay through *June 25, 2012***

ACTION	WORK DAYS
<b>Total Excusable Days of Delay on Project Critical Path requested by DTP</b>	<b>69</b>
Contractually Identified	25
Retracted by DTP	16
Denied by MWAA/Disputed by DTP	7
Under evaluation by MWAA	0
Granted by MWAA	21

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.

The WFCY completion date continues to improve as MWAA and DTP continue to evaluate and refine the schedule. DTP’s schedule update of *June 25, 2012* shows a planned WFCY completion date of December 20, 2013 and also reflects a *-14 calendar day variance* which yields a forecast completion date of *January 3, 2014*. However, the schedule update with a data date of *July 25, 2012 and still under review shows a -41 day variance*.

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

- *Construction of the station structural and precast installation to support timely systems installations.*
- *Fabrication of precast panels and pedestrian bridges to support timely completion of the Stations, local and integrated testing, Certification of Occupancy impacting WMATA's equipment installations.*
- *Design changes impacting civil/structural construction leading to systems installation.*
- *Construction of trackwork and wayside installations leading to readiness for dynamic testing.*
- *Installations of DVP's ductbanks, manholes, switch pads at TPSS wayside, cable pulls, splicing and terminations etc. for systems' permanent power.*
- *Construction of trackwork to support timely installation of cable troughs for systems cable pulling.*
- *Obtaining required weekend outages from WMATA for K-Line systems testing.*
- *WMATA systems upgrade programs could have other technical scope changes impacting Traction Power, Automatic Train Control, and Communications.*

**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 June 2012 Schedule Update, Critical Path No. 1, *DVP's cable installations from the Redfield substation through Tysons Central 7 Station TPSS #5 along the DCR, has a -5 calendar day float for achieving SSCD on September 3, 2013. This path originates with DVP's tying in ducts, installing pads and switches at the WFCY to enable terminating cable pulls from DVP's Redfield substation to the WFCY. This is followed by DVP's sequentially pulling cable, splicing and making terminations through the Tysons Central 7 station leading to energization for TPSS #5. This is followed by local and integrated tests of the tunnel ventilation system leading to readiness for dynamic testing, full system performance demonstration and SSCD.*

MWAA disagreed with DTP's Critical Path in the June 2012 Schedule Update as presented for the following reasons:

1. *This path inaccurately shows the need of permanent power for local electrical and functional testing of the Redfield substation through the Tysons Ventilation system when temporary power will be available a month earlier.*
2. *DTP shows an excessive 6 week period for the local testing of the Tunnel West Ventilation System followed by 3 weeks of integrated testing.*

3. DTP has revised the sequence of Series 24 (Level B & C) ATC testing, which does not have any physical constraints as it progresses from interlocking to interlocking, from concurrent to finish-to-start. This adds approximately 23 calendar days to this path. DTP has not explained the rationale behind this revision.

The PMOC agrees with MWAA’s assessment regarding the critical path. This latest schedule and review again demonstrates that MWAA continues to analyze the schedule carefully and to hold DTP accountable for changes made to the agreed schedule. The PMOC anticipates that new disagreements will continue to arise for claimed weather delays and change order impacts to the schedule as demonstrated by DTP’s June 2012 schedule update.

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

MILESTONE	June 2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	May 2012	June 2012
Receipt of FFGA	03/03/09 <sup>1</sup>	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	1/31/12 A	1/31/12 A
Aerial and Station Foundations	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 Tie-In	12/23/11	03/28/12	10/14/11 A	10/14/11 A
Complete Running Rail – Tysons Tunnel	2/24/12	03/08/12	03/15/12 A	03/15/12 A
Stations Electrical Energization – Tysons West	04/17/12	09/19/12	11/30/12	07/26/12 A
Ready for Interlocking Testing – Tysons 123	06/06/12	01/25/13	01/22/13	11/15/12
Substantial Completion	07/31/13	07/31/13	08/27/13	09/13/13
Revenue Service Date - Target	11/27/13	01/20/14	12/31/13	01/07/14
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

<sup>A</sup> Actual Date <sup>1</sup> Date was not met.

## b. Important Activities – 90-Day Look Ahead

The important milestones scheduled for the next 90 days include:

- Completion of Tysons West Kiss and Ride Lot designs/permitting.
- Execution of the Change Order formalizing the Settlement of RFC 160 and 161 and the Recovery Schedule reached in June 2012.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- Property acquisition for Operations Area 9 and 10.

## 5. Project Cost

The SCC Budget and Expenditures summary for the period ending June 25, 2012 is shown below. Overall, approximately 71% of the budget (excluding contingency and finance charges) has been expended.

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET <sup>1</sup>	EXPENDED TO DATE	ESTIMATE AT COMPLETION	CONTINGENCY TO DATE
10	Guideway and Track Elements	\$ 640,105,887	\$ 568,399,032	\$ 640,400,967	\$ 40,096,774
20	Stations	\$ 312,242,435	\$ 181,699,307	\$ 348,365,949	\$ 25,992,703
30	West Falls Church Yard	\$ 66,008,239	\$ 11,243,722	\$ 65,818,208	\$ 4,597,945
40	Site Work & Utility Relocation	\$ 229,210,478	\$ 211,866,364	\$ 267,838,453	\$ 16,350,511
50	Systems	\$ 322,197,304	\$ 173,627,190	\$ 318,805,104	\$ 22,194,251
60	Right of Way Acquisition	\$ 67,631,026	\$ 59,082,697	\$ 65,011,618	\$ 3,510,171
70	Vehicles	\$ 195,352,701	\$ 35,294,152	\$ 194,648,939	\$ 16,491,446
80	Professional Service – FD	\$ 713,888,276	\$ 665,562,079	\$ 769,288,495	\$ 38,528,702
90	Contingency Mgmt. Reserve <sup>2</sup>	\$ 85,850,718	\$ -	\$ 34,109,332	\$ 141,452,480
100	Finance Charge <sup>3</sup>	\$ 509,984,571	\$ 83,798,922	\$ 438,184,571	
<b>Total</b>		<b>\$ 3,142,471,635</b>	<b>\$ 1,990,573,466</b>	<b>\$ 3,142,471,635</b>	<b>\$ 309,214,984</b>

1. Current budget equals FFGA amount plus change orders CO-001-081, 083-115, Directive Letters 001-38, UR-CO-001-039

2. Estimate at Completion for Contingency reflects the amount approved for utilization per PM-5 07 Rev. 4.

3. The Estimate at Completion for Finance Charge has been adjusted for an underrun of \$71.8M. This underrun is expected to be authorized by the end of 2012.

General Comments:

1. Per FTA's direction during the quarterly progress review meeting held on 5/9/2012, the overruns on the Allowance subcontracts awarded and yet to be transferred to Firm Fixed Price are obligated.

### a. Explanation of Variances

The major variances in the project budget are associated in seven categories as noted below and remain unchanged from last month:

1. SCC10 – Guideway and Track Elements has been reduced approximately \$26.4 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, the addition of the directive letter for crossing the Beltway during construction of the HOT Lanes Project by VDOT and the addition of sales tax to permanent materials.
2. SCC20 – Stations has been increased by approximately \$31.4 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 most notable addition being the transfer from the tunnel subcontract. In addition, the allowance item for stations finishes and MEP increased over budget.
3. SCC30 – WFC Yard has increased by approximately \$14.0 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 \$34.9 million as a result of a combination of change events (change orders, directive letters and scope transfers) and cost overruns. The forecast adjustments are predominantly due to cost overruns in utility relocations.

5. SCC50 -- Systems has increased by \$40.89 million due to additional WMATA requirements for Traction Power Remote Monitoring, Emergency Trip Station/Amber Light Warning System and requirements for Communications.
6. SCC60 – Right of Way Acquisition experienced nearly \$19.0 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 \$70.8 million due to a combination of change events (\$17.8 million) and forecast adjustments (\$53.2 million). The change events are numerous with the most significant being the transfer from the tunnel subcontract and the addition of design for the HOT Lanes and WFCY. The forecast adjustment is predominantly attributed to higher project management costs for MWAA, PMSS and VDOT. In addition, WMATA budget transfers are treated as forecast adjustments.
9. SCC90 – Contingency Management Reserve estimate at completion of \$34.11M is available for future use with the transfer of the Finance Costs under run of \$71.8M to be authorized by year's end. The PMOC is of the opinion that the contingency reserve still needs to be increased based on the current status of the contract and potential overruns for Allowance Items.

**b. Monthly Cost Report: June 2012**

DESCRIPTION	FFGA AMOUNT (Original)	EXPENDITURE TO DATE <sup>1</sup>	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION	PERCENT OF EAC EXPENDED TO DATE <sup>7</sup>
<b>FEDERAL (FFGA SCOPE)</b>					
<b>Design-Build</b>					
Firm Fixed Price	\$ 1,112,052,173	\$ 1,340,017,132	\$ 313,459,350	\$ 1,653,476,482	
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 69,267,675	\$ 3,491,587	\$ 72,759,262	
Firm Fixed Price Subtotal	\$ 1,177,161,581	\$ 1,409,284,807	\$ 316,950,937	\$ 1,726,235,744	
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 130,105,577	\$ 130,105,577	
Design-Build Contract Prices	\$ 1,607,361,398	\$ 1,409,284,807	\$ 447,056,513	\$ 1,856,341,321	
Indexed Commodity Escalation	\$ 77,469,926	\$ -	\$ 45,148,158	\$ 45,148,158	
<b>Design-Build Contract Total</b>	\$ 1,684,831,325	\$ 1,409,284,807	\$ 492,204,672	\$ 1,901,489,479	74%
<b>Utility Relocation</b>					
Utility Work	\$ 84,312,807	\$ 101,705,695	\$ 8,544,820	\$ 110,250,515	
Terf Tax	\$ -	\$ -	\$ 0	\$ 0	
Project Management and Final Design	\$ 8,423,426	\$ 20,337,803	\$ (39,163)	\$ 20,298,640	
<b>Utility Relocation Total</b>	\$ 92,736,233	\$ 122,043,498	\$ 8,505,657	\$ 130,549,155	93%
<b>Right of Way</b>					
<b>Right Of Way Total</b>	\$ 42,443,132	\$ 59,389,913	\$ 6,246,705	\$ 65,636,618	90%
<b>WMATA Agreement</b>					
Vehicles	\$ 195,138,329	\$ 35,294,152	\$ 159,354,786	\$ 194,648,939	
Construction and Procurement	\$ 31,484,799	\$ 5,114,280	\$ 22,983,836	\$ 28,098,117	
WMATA Force Account Startup	\$ 13,777,100	\$ 5,037,237	\$ 8,367,784	\$ 13,405,021	
Project Management and Final Design	\$ 31,235,400	\$ 23,173,995	\$ 12,309,557	\$ 35,483,552	
<b>WMATA Agreement Total</b>	\$ 271,635,628	\$ 68,619,664	\$ 203,015,964	\$ 271,635,628	25%
<b>Preliminary Engineering <sup>2,3</sup></b>					
<b>Preliminary Engineering Total</b>	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999	100%
<b>Airports Authority Services</b>					
General Conditions <sup>4</sup>	\$ 28,879,153	\$ 7,319,909	\$ 22,730,868	\$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 29,463,535	\$ 16,927,321	\$ 46,390,856	
Project Management Support	\$ 90,004,649	\$ 109,922,218	\$ 13,772,000	\$ 123,694,218	
<b>Airports Authority Services Total</b>	\$ 142,109,519	\$ 146,705,662	\$ 53,430,190	\$ 200,135,852	73%
<b>Contingency <sup>5</sup></b>					
<b>Contingency Total</b>	\$ 297,762,579	\$ -	\$ 34,109,332	\$ 34,109,332	
<b>Finance Costs</b>					
<b>Finance Costs Total</b>	\$ 509,984,571	\$ 83,798,922	\$ 354,385,649	\$ 438,184,571	
<b>Total Federal (FFGA Scope)</b>	\$ 3,142,471,635	\$ 1,990,573,466	\$ 1,151,898,169	\$ 3,142,471,635	71%

1 Reflects Paid costs through June 30, 2012

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

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 reflects the amount approved for utilization per PM-5 07 Rev 4

6 The Estimate at Completion for Finance Charge has been adjusted for an underrun of \$71.8M This underrun is expected to be authorized by the end of 2012

7 Percent complete excludes contingency and finance charges

### c. Project Funding Sources: June 2012

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE <sup>1</sup>	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
<b>Sec 5309 New Starts Federal Funds</b>						
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 <sup>5</sup>	VA-03-0113-04		\$ 115,799,000	\$ 115,799,000	100%	\$ -
FFGA Construction Grant (amendment for FTA review)	VA-03-0113-05		\$ 90,832,000	\$ -	0%	\$ 90,832,000
FFGA Balance	Planned		\$ 288,885,636	\$ -	0%	\$ 288,885,636
<b>Subtotal - New Starts</b>		<b>28.64%</b>	<b>\$ 900,000,000</b>	<b>\$ 520,282,364</b>	<b>57.81%</b>	<b>\$ 379,717,636</b>
<b>Other Federal Funds</b>						
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%	\$ -
<b>STP/Sec. 5307</b>		<b>2.39%</b>	<b>\$ 75,000,000</b>	<b>\$ 75,000,000</b>	<b>100%</b>	<b>\$ -</b>
<b>Local Funds</b>						
VTA 2000			\$ 51,700,000	\$ 51,700,000	100%	\$ -
Commonwealth Transportation Bonds <sup>2,5</sup>			\$ 125,000,000	\$ 113,600,000	91%	\$ 11,400,000
Fairfax County Funds <sup>3</sup>			\$ 523,750,000	\$ 299,780,481	57%	\$ 223,969,519
Dulles Toll Road Revenues <sup>2,4,5</sup>			\$ 1,467,021,634	\$ 930,210,621	63%	\$ 536,811,013
<b>Subtotal - Local Funds</b>		<b>68.97%</b>	<b>\$ 2,167,471,634</b>	<b>\$ 1,395,291,102</b>	<b>64.37%</b>	<b>\$ 772,180,532</b>
<b>Total Project Budget</b>		<b>100%</b>	<b>\$ 3,142,471,634</b>	<b>\$ 1,990,573,466</b>	<b>63.34%</b>	<b>\$ 1,151,898,168</b>
<b>Interrelated Highway Activities</b>						
DTR Revenues/Commonwealth Funds <sup>3</sup>			\$ 123,208,229	\$ 79,846,962	64.81%	\$ 43,361,267
			\$ 123,208,229	\$ 79,846,962	64.81%	\$ 43,361,267
<b>Total</b>			<b>\$ 3,265,679,863</b>	<b>\$ 2,070,420,428</b>	<b>63.40%</b>	<b>\$ 1,195,259,435</b>

<sup>1</sup> Reflects costs through June 30, 2012.

<sup>2</sup> In January 2010, \$23.6M 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.

<sup>3</sup> Includes Tax District Revenues (\$400M) plus debt service costs allocated to Project Budget.

<sup>4</sup> Includes pay-as-you-go revenues and bond proceeds.

<sup>5</sup> Expenditures includes accruals.

## 6. Project Risks

In August 2008, FTA directed the PMOC to resume the risk process and to prepare a report that combines the requirements of PG-40: Subtasks PG-40E, PG-40F, and PG-40G. These subtasks are to identify the framework for primary and secondary mitigation of project cost and schedule. A draft PG-40EFG report was prepared and the Risk Register was updated. The documents were shared with MWA and a workshop was held on August 26-27, 2008 to review the Risk Register, reach a consensus on the top ten costs and schedule risks and to identify MWA's cost, schedule and secondary mitigation procedures. The PMOC issued the Final PG-40EFG spot report on October 6, 2008.

**Budget Risks:** Through June 25, 2012, MWA reports that it has utilized \$224,716,538 of the \$251,000,000 available contingency for the first eight contingency milestones leaving a contingency balance of \$26,283,462 available through the eighth contingency phase. The contingency utilization reflects expended costs. MWA estimates that the third contingency phase, Utility Relocation Program, will be fully completed in the third quarter of 2012. MWA reports that it has already obligated \$84,498,446 of the \$92,324,312 (\$46,762,579 original

+\$45,561,733 contribution from finance savings) available for Phases 9 through 12 which leaves a balance of \$7.825 million. As of June 25, 2012, of the \$297,762,579 total project contingency, the project has a total of \$34,109,326 available. To address potential budget overruns, the PMOC had concluded that MWAA needed to replenish the Project contingency and actively pursue items that may be additional scope (non-FFGA) and billed to the responsible parties. MWAA's transfer of the \$71.8M reduction in the finance cost savings to Contingency has improved the Project Contingency situation. At the July 10<sup>th</sup> update meeting, MWAA indicated that this transfer will not occur until year's end with the new MWAA budget.

MWAA submitted a tabulation of possible CNPAs that could further improve the Contingency on July 6, 2012 with 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 and is under review by the FTA and PMOC. The CNPAs will be discussed with MWAA at the September 6, 2012 PMOC Update Meeting.*

MWAA acknowledged that the FTA and VDOT budgets are fixed, that the other funding partners bear a percentage of the non-FFGA budget overruns; all principles understand their financial responsibility and all budget overruns will be managed according to the agreed funding plan.

MWAA's estimate of the **Earned Value** for the Project through June 2012 is 77.2%.

**Schedule Risks.** With regard to Schedule Contingency, MWAA and DTP 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 total of 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 June 2012, MWAA has granted DTP time extensions of 21 work days reducing the available contingency from 510 to 481 calendar days.

The following are the Project's current Top 10 Cost and Schedule Risks from the RCMP dated December 2011 and transmitted on March 5, 2012 and updated for the month of June 2012, along with their status. *As noted earlier in this report, MWAA updated the Risk Register Assessment on June 30, 2012 and submitted it to the FTA and PMOC on August 27<sup>th</sup> for discussion at the September 6, 2012 PMOC Update Meeting.*

## Top 10 Project Risks

### Summary Status of the Top Ten Project Risks

RISK NUMBER	RISK DESCRIPTION	RATING	RISK STATUS			
			SINCE INCLUSION ON TOP TEN LIST		OVER PAST 30 DAYS	
			COST	SCHEDULE	COST	SCHEDULE
R21	Additional Remote Monitoring and Control (RMC) of TPSS.	15	Increased	Increased	Unchanged	Unchanged
C39	Construction issues (WFCY delayed construction which effects opening of the system).	12	Decreased	Decreased	Unchanged	Unchanged
R23	Automatic Train Control (ATC) System Requirements per NTSB concerns and Other Systems Issues resulting from the Red line accident and NTSB safety report.	12	Unchanged	Unchanged	Unchanged	Unchanged
M27	Delay in Vehicle (Rail Car) Delivery beyond the specified FFGA ROD date of December 1, 2014.	12	Unchanged	Unchanged	Unchanged	Unchanged
C28	Completion of the installation of upgrade for the new (proposed) communication center at the Carmen Turner Building by WMATA to support integration testing to meet the Project ROD.	12	Unchanged	Unchanged	Unchanged	Unchanged
C27	WMATA resource constraints delay system acceptance or operational testing resulting in additional costs.	10	Decreased	Decreased	<i>Decreased</i>	<i>Decreased</i>
C20	WMATA deliverables scope of work – including technical support and WMATA construction elements may exceed the budget and schedule.	10	Unchanged	Unchanged	Unchanged	Unchanged
D35	Incorporation of the Tysons - 123 Pavilion (Macerich) into the D/B Contract scope.	9	Unchanged	Unchanged	Unchanged	Unchanged
D34	WMATA Delay in reviewing/approving DTP design documents.	9	Unchanged	Unchanged	Unchanged	Unchanged
C21	Availability of track access for the Contractor to complete the K-Line connection work.	8	Unchanged	Unchanged	Unchanged	Unchanged

## 7. Action Items

### MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
2	2A.04	Update Procedures PM5.01 (Processing DB Changes) and PM5.07(Management of Project Contingency)	Procedures need to include Directive Letters and Contingency Drawdowns.	Y	Y	N	These Procedures in support of RCMP need to be updated to include Directive Letters, Contingency Drawdown and top management control of contingency. PM-5.07, Rev. 4 was submitted with RCMP Rev.3 and accepted by the FTA. <b>Revision to PM-5.01 remains outstanding.</b>	R
2	2A.05	Submit Updated Risk Register developed in June 2012	<i>FTA and PMOC need to review the updated document.</i>	Y	N	N	<i>The updated Risk Register Assessment was sent to the FTYA and PMOC on August 27<sup>th</sup> for discussion at the September 6<sup>th</sup> Update Meeting.</i>	R

#### KEY ITEM

Subtask 2A  
Subtask 2B

CLIN 0002A – PMP Review  
CLIN 0002 – On-Site Monitoring

#### 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

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

# 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
BFMP	Bus Fleet Management Plan
CAR	Corrective Action Request
CCC	Construction/Procurement/Installation Conformance Checklist
CD	Calendar Days
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
DR	Deficiency Report
DTP	Dulles Transit Partners, LLC
DTR	Dulles Toll Road
DVP	Dominion Virginia Power
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FTE	Full Time Equivalent
FY	Fiscal Year
HOT	High Occupancy Toll
IFC	Issued For Construction
IFP	Issued for Proposal
IRR	Issue Requiring Resolution
KSA	KSA, INC – Producer of Concrete Crossties
MH	Manhole
MCI	A communication company now owned by Verizon
MEP	Mechanical, Electrical and Plumbing
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
ORD	Operational Readiness Date
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
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)
SAIC	Scientific Applications International Corporation
SCC	Standard Cost Category
SCIL	Safety and Security Certifiable Items List
SOE	Support of Excavation
SSCD	Scheduled Substantial Completion Date
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan
STP	Surface Transportation Program
TBD	To Be Determined
TOC	Tri-state Oversight Committee
TPSS	Traction Power Substation
UR	Utility Relocation
VDOT	Virginia Department of Transportation
W&OD	Washington and Old Dominion
WFC	West Falls Church
WFCY	West Falls Church Yard
WMATA	Washington Metropolitan Area Transit Authority
XO	Executive Officer

## APPENDIX B -- PROJECT OVERVIEW AND MAP

### Project Overview

**Date:** August 31, 2012 (reporting current through July 2012- Financials through June 2012)

**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.

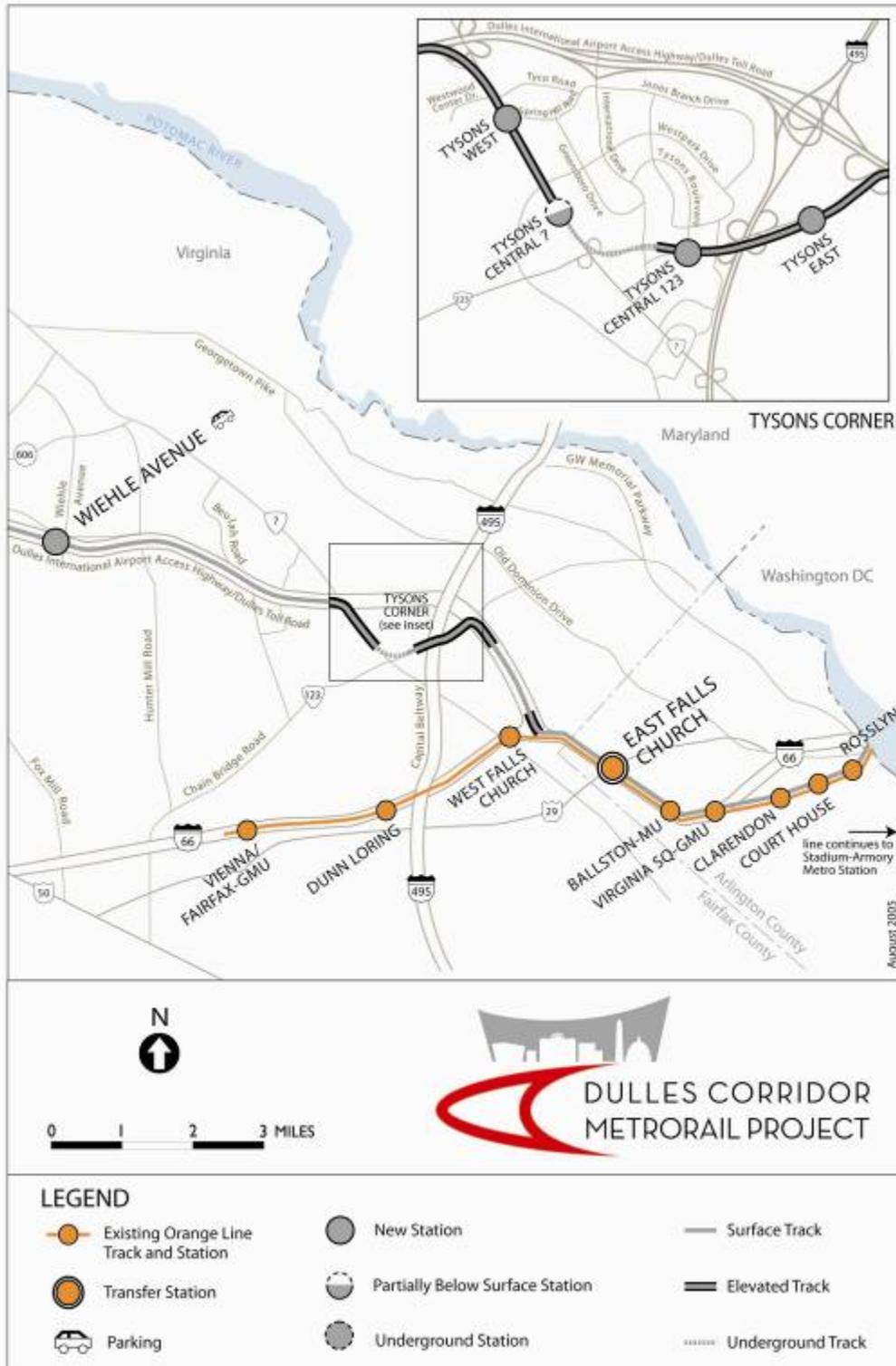
### Schedule

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
12/31/13	Revenue Service Date (RSD) as of June 25, 2012		
77.0%	Percent Complete Construction as of June 30, 2012.		
59.2%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
77.2%	MWAA's Estimate of Project Earned Value through June 2012		

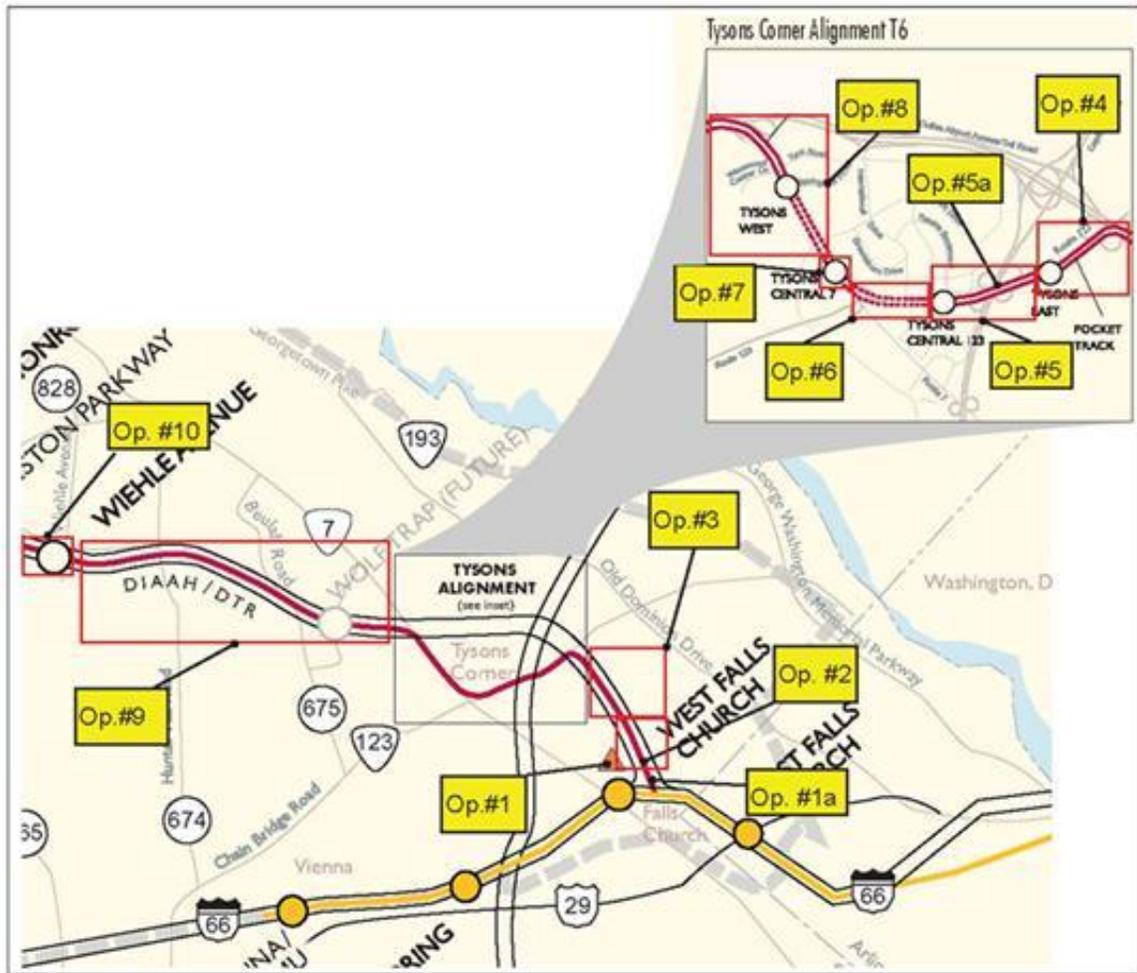
**Cost**

\$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
\$1.950 billion	Expenditures through <i>June 2012</i> from total project budget of \$3.142B
71%	Percent complete based on federal expenditures excluding contingency and finance charges through <i>June 2012</i> .
\$34.11 million	Total project contingency remaining (allocated and unallocated) through <i>June 2012</i> .

# Project Map



# Construction Operational Areas



## APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST

<b>Project Overview</b>	<b>Dulles Corridor Metrorail Project</b>		
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		
<b>Project Plans</b>	<b>Version</b>	<b>Review By FTA</b>	<b>Status</b>
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.

<b>Safety and Security Authority</b>	<b>Y/N</b>	<b>Notes/Status</b>
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.

<b>SSMP Monitoring</b>	<b>Y/N</b>	<b>Notes/Status</b>
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	

<b>Construction Safety</b>	<b>Y/N</b>	<b>Notes/Status</b>
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 <i>361</i> first aid cases and <i>six</i> lost time cases in <i>10.760</i> 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	

<b>Federal Railroad Administration</b>	<b>Y/N</b>	<b>Notes/Status</b>
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]