

**COMPREHENSIVE MONTHLY REPORT**

**December 2010**

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

January 25, 2011

**PMOC Contract Number:** DTFT60-09-D-00016

**Task Order Number:** 002, **Project Number:** DC-27-5142, **Work Order No.** 01

**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:** 10.5 years

**Length of Time PMOC Lead Assigned to Project:** 3.0 years

## TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>EXECUTIVE SUMMARY</b> .....                                  | <b>1</b>  |
| E.    PROJECT DESCRIPTION .....                                 | 1         |
| F.    PROJECT STATUS SUMMARY .....                              | 1         |
| G.    PMOC’S ASSESSMENT OF PROJECT STATUS .....                 | 4         |
| <b>MAIN REPORT</b> .....  | <b>5</b>  |
| A.    GRANTEE’S CAPABILITIES AND APPROACH.....                  | 5         |
| a. <i>Technical Capacity and Capability</i> .....               | 5         |
| b. <i>Project Controls</i> .....                                | 5         |
| c. <i>Compliance</i> .....                                      | 6         |
| 2.    PROJECT SCOPE.....  | 6         |
| a. <i>Design Status</i> .....                                   | 6         |
| b. <i>Bidding and Construction Status</i> .....                 | 7         |
| c. <i>Third Party Coordination &amp; Agreement Status</i> ..... | 9         |
| d. <i>Real Estate</i> .....                                     | 9         |
| e. <i>Utility Coordination</i> .....                            | 10        |
| f. <i>Vehicle Procurement</i> .....                             | 10        |
| g. <i>Safety and Quality Status</i> .....                       | 11        |
| 3.    PROJECT MANAGEMENT PLAN AND SUB-PLANS .....               | 13        |
| 4.    PROJECT SCHEDULE .....                                    | 15        |
| a. <i>Critical Path Evaluation</i> .....                        | 17        |
| b. <i>Important Activities – 90-Day Look Ahead</i> .....        | 19        |
| E.    PROJECT COST .....  | 19        |
| a. <i>Explanation of Variances</i> .....                        | 20        |
| b. <i>Monthly Cost Report, November 2010</i> .....              | 21        |
| c. <i>Project Funding Sources: November 2010</i> .....          | 22        |
| 6.    PROJECT RISKS.....  | 22        |
| 7.    ACTION ITEMS.....   | 26        |
| <b>APPENDICES</b> .....   | <b>27</b> |
| APPENDIX A – <i>LIST OF ACRONYMS</i> .....                      | 28        |
| APPENDIX B – <i>PROJECT OVERVIEW AND MAP</i> .....              | 30        |
| APPENDIX C – <i>SAFETY AND SECURITY CHECKLIST</i> .....         | 34        |
| APPENDIX D – <i>PMOC TEAM PERFORMING THIS REVIEW</i> .....      | 38        |

## EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *January 6, 2011* to conduct a monthly progress meeting for work performed in *December 2010*. The full time on-site PMOC attended various project meetings and site tours throughout this reporting period. Future PMOC monthly progress meetings are planned to occur during the first week of each month.

### e. 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 Operations Date (ROD) is December 1, 2014. The Federal New Starts share is \$900 million for the Initial Operating Segment (extension to Wiehle Avenue). Through Federal fiscal year (FY) *2010*, Congress has appropriated \$364 million in Section 5309 New Starts funds and \$77.3 million in American Reinvestment and Recovery Act (ARRA) Capital Investment funds. (The FTA awarded \$21,281,890 in STP funds for VA-95-X056 on September 2, 2010 and \$85,000,000 in New Starts Funds for VA-03-113 on September 23, 2010. On December 27, 2010 the FTA announced that it was advancing \$19.799 million in New Starts funding for the Project.)

The Project Map is located in Appendix B.

### f. Project Status Summary

The PMOC met with MWAA on *January 6, 2010* to conduct a monthly progress review meeting. The status information is as of *December 25, 2010*, 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.
- **Rail car Procurement** moved forward with the July 27, 2010 contract award by WMATA to Kawasaki. The manufacturer's *original* 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). WMATA provided Notice-To-Proceed (NTP) on August 16, 2010. *The contractual requirements indicate that the 64<sup>th</sup> rail car will be accepted on January 15, 2015 as an early completion date, which does not comply with the FFGA date of December 1, 2014.* The 7000

Series Car procurement is now in the Conceptual Design Phase which is anticipated to be completed in January 2011, followed immediately by the Preliminary Design Phase of the procurement. WMATA committed by letter dated December 3, 2010 to provide necessary vehicles from the existing fleet to support the Project's Revenue Operations Date. *However, this does meet the requirements of the FFGA to have the 64<sup>th</sup> car by December 1, 2014.*

- **Design progress** continues to lag behind the baseline schedule but currently does not affect construction progress. Final Design of the stations was originally anticipated to be completed by the end of the third quarter of 2009. Final designs for all station structures have been completed and submitted for permitting by VDOT and DGS. Anticipated overall design completion of the five stations through "Issued for Construction" (IFC) drawings has now slipped to the first quarter of 2011. The associated pavilions and pedestrian bridge alignments are subject to coordination with adjacent developers who have requested design changes to accommodate their development plans. The PMOC anticipates that MWAA will execute agreements with the developers to reimburse the Project for these additional costs. Overall project design *remained* at 95% complete as of the end of *December 2010. However, design comment review resolution has progressed during this period.* The delay in project design does not appear to have adversely impacted the schedule's critical path at this point in time since *DTP* is submitting permit packages in the order dictated by construction sequencing.

On September 13, 2010, Mr. Nowakowski of the Airports Authority and Mr. Kubicek of WMATA met to discuss the status of WMATA's reviews of ATC design documents. During this meeting, WMATA agreed to re-engage in the ATC design review process provided that MWAA would direct DTP to hire an independent third party consultant to review Alstom's safety analysis of the Generation 4 track circuit modules proposed for use on the Dulles Extension. MWAA agreed and provided a scope for this independent review and analysis which WMATA has approved. Impact on the project schedule is not yet known. However, MWAA reported that DTP/Alstom had previously been directed to continue with the ATC design effort despite WMATA's failure to review and comment on the design submittals. Therefore, there should be no impact on the schedule as long as this independent analysis does not lead to a redesign effort. WMATA re-engaged in the ATC submittal review process in mid October 2010 *and the review catch-up process has continued through December and into January. MWAA received an acceptable proposal from the Battelle Memorial Institute on January 5, 2011. MWAA expects to issue NTP to Battelle during the week of January 10, 2011 to begin the "Safety Analysis Review and Assessment." Battelle has proposed a six (6) month period of performance.*

- **Construction progress** is broken into two components: utility relocation (UR), which is 99% complete and design-build (DB) construction, which is approximately 27% complete. *Significant accomplishments for December included the placement of the steel plate girders over west-bound I-66 for both IB and OB K-line track connections, significant O-1 Guideway deck installation progress, continued segmental box girder installation on the Tyson East Guideway, significant pier construction progress on the Tysons West Guideway and major foundation work on all five stations.*

The final Route 7 road shifts are expected to occur in *February* 2011 to permit complete station and guideway construction in the median.

The O-1 Guideway is approximately 84% complete. The Tysons East Guideway/Station is approximately 71%. The NATM Tunnel is approximately 56% complete with the contractor completing excavation of 1,670 feet for the Outbound (OB) track and 1,686 feet for the Inbound (IB) track. OB breakthrough occurred on October 21, 2010 and the IB breakthrough occurred on November 29, 2010. Tysons East Station is approximately 19% complete and Tysons Central 123 Station is approximately 17% complete. The Wiehle Avenue Station is approximately 21% complete. The pre-cast yard has cast 1,727 of 2,600 concrete box girder segments and station girders to date.

- **The Schedule** showed a *fourteen day loss* with the most current analyzed update schedule (data date of *November 25, 2010*) showing a total *-111* calendar days (*-97 in the October update*) variance from the approved baseline schedule. This results in a projected ROD of *March 25, 2014*. *DTP's December schedule update, which has not yet been analyzed, reflects an additional two day loss for a -113 calendar day delay.* The FFGA ROD is *December 1, 2014*. MWAA and DTP continued to meet regularly to review and discuss DTP's recovery schedule, which included an acceleration cost of \$23.7 million. MWAA continued to negotiate with the goal of reaching a mutually agreed recovery plan. *This effort resulted in the issuance of a "Directive Letter" to DTP to conduct a constructive acceleration effective December 15, 2010 on a time and material basis not to exceed seven million dollars. DTP has agreed to submit a zero loss recovery schedule and both have agreed to work toward a lump sum Change Order based upon the Recovery Schedule. MWAA has hired an independent consultant to perform an in-depth assessment of the new zero loss project schedule.*

*The PMOC considers the issuance of this directive letter to be a good first step toward recovery of the Contract Completion Date. However, the Project will need to maintain this forward momentum in order to recover the -113 day mainline construction loss and to overcome any unforeseen delays that may yet be faced in the months to come. The Project will need to agree on a zero loss schedule and critical path at an early date to avoid continued losses. Therefore, confidence that schedule recovery will occur during the first quarter of 2011 is tentative.*

The Project needs to increase its efforts to resolve disagreements relative to the West Falls Church Yard (WFCY) *schedule* in order to minimize the risk of irretrievable schedule creep leading to costly schedule compression or at least to minimize constructive acceleration costs. *This need becomes increasingly critical as the WFCY yard completion date continues to fall further behind to February 19, 2014 as reflected in DTP's December schedule update.*

- **Budget** status as of *November 25, 2010* indicates that *\$1,014,404,626 (32 %)* has been expended of the *\$3,142,471,634* budget total. MWAA reports *\$108,992,169* of the available contingency for the first *five* contingency milestones has been utilized with a remaining balance of *\$91,007,831* available through completion of the utility relocation work and the Aerial and Station Foundations which are expected to be completed by *February 2011* and *January 2011*, respectively.

The PMOC now agrees that the Phase 2 contingency milestone has been achieved. On November 19, 2010 MWAA resubmitted documentation on Phase 2 Contingency that is acceptable to the PMOC. The PMOC requested that MWAA finalize this document and submit it for the record. MWAA's estimate of the earned value for the Project through November 2010 is 43.47%.

**g. PMOC's Assessment of Project Status**

The Full Time Equivalent (FTE) *estimated* total for *December* is 1,729, which is a decrease from *the November actual* of 47 and appears to provide suitable support to the scheduled activities. The pre-casting facility continues to produce pre-cast concrete girder segments and long line station segments in advance of their erection schedule.

Piers Re-Use Testing Reports and Program Status: The DTP Inspection and Test Program Final Report for the existing pile foundations in the K-Line Tie-in area has been completed by DTP and reviewed and accepted by the Project Team. The CTI report of the monitoring of the DTP inspection and test program has also been completed. In addition, MWAA/QA conducted an audit of the associated pier design and the test findings to verify incorporation of the existing pier inspection and test program results into the final pier designs. Both final reports and the accepted audit report were submitted to the FTA, PMOC and WMATA for review on October 19, 2010. The PMOC found the report to be full and comprehensive and that the test program accomplished its mission. The PMOC is in agreement with the report's conclusion that the existing piers are suitable for re-use. Follow-up continuity testing for piles and rebar for three pier foundations (along with their newly constructed piers 5-IB, 7-IB and 2-OB) that were expanded following the existing foundation test program revealed cabling flaws with the new construction on the existing foundations. Corrective action *was* on-going in *December* and early *January*. *A preliminary report covering the acceptable continuity testing on eight of eleven piers was provided via MWAA Letter dated December 17, 2010. A final report will be provided as soon as the remaining data become available.*

MWAA submitted its draft PMP, Version No. 7, to the PMOC on September 3, 2010. The PMOC's review report was submitted to the FTA on November 4, 2010, and the review resulted in six recommendations for revisions to the PMP. MWAA is currently incorporating the recommendations which it expects to complete in late *January* 2011.

*Through November 2010, \$231,739,965 of the \$437,278,511 Federal Allowance Items Budget had been awarded to subcontractors and suppliers. An \$11,869,686 overrun now exists for the 10 of 31 sub-contract packages awarded thus far for federally-funded allowance items. **The Airports Authority has forecast a major jump in the overrun costs due to Station finishes and mechanical, electrical and plumbing work in the next few months.***

## MAIN REPORT

### a. 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.

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 updated project schedule, with a data date of *November 25, 2010*, reflects a *-111* calendar day variance with the contractor's baseline schedule with a Revenue Operations Date (ROD) of December 4, 2013. The current variance would result in a ROD of March 25, 2014. MWAA has fully analyzed the *November 25* update and has reported that it continues to disagree with the critical path and the degree of delay. DTP's most recent schedule update submission with a data date of *December 25, 2010* (not yet analyzed) reflects a *-113* day delay. It is the PMOC's observation that MWAA continues to carefully scrutinize the schedule update submissions and meets with the contractor within two weeks of the schedule submission to discuss their observations and to discuss mitigation strategies with DTP. MWAA and DTP met weekly during the month of *December* to review DTP's recovery schedule, which included an acceleration cost of \$23.7M. The *Request for Change (RFC)* was rejected by MWAA in August. Discussions between MWAA and DTP continue at the executive level with regard to a recovery schedule. *This effort resulted in the issuance of a "Directive Letter" to DTP to conduct a constructive acceleration effective December 15, 2010 on a time and material basis not to exceed seven million dollars. DTP has agreed to submit a zero loss recovery schedule and both have agreed to work toward a lump sum Change Order based upon the Recovery Schedule.*

*MWAA has hired an independent consultant to perform an in-depth assessment of the new zero loss project schedule. The FFGA ROD is December 1, 2014.*

MWAA continues to monitor expenditures to date and update the estimate at completion. Through *November 25, 2010*, MWAA has utilized \$108,992,169 of the Phase 1 through 5 allotted contingency of \$200,000,000. *MWAA is in the process of updating the project Risk and Contingency Management Plan. A draft has been prepared by their consultant and is under review by MWAA.*

The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data. Through *December 2010*, of the cumulative total of 4,843,592 hours worked, there has been one lost time accident. Revision 4 of the SCIL was issued by DTP on November 24, 2010. *MWAA is currently reviewing the revision and expects to issue comments in early January 2011.*

DTP submitted revisions to the System Safety/Security Management Plan 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 on August 16, 2010. Comments have been received from WMATA and actions have been taken to address and resolve these comments by both the Airports Authority and DTP. A meeting with MWAA, DTP and WMATA was conducted on November 3, 2010 and necessary changes to the document were agreed upon. The revised plan and procedures were resubmitted on November 23, 2010. *MWAA accepted these documents on December 6, 2010.* MWAA continues to monitor the risk status and reports this information on a monthly basis.

### **c. Compliance**

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

MWAA submitted the required Record of Decision Mitigation Report to the FTA on November 2, 2010 for the third quarter of CY 2010.

FTA and the PMOC continue to review the May 19, 2010 submittal on proposed changes to Record of Decision mitigation measures at the Wiehle Avenue Station, primarily due to the joint development project proposed for that location. FTA submitted additional questions in September and is awaiting a response from MWAA and Fairfax County. MWAA expects to provide a consolidated response to the questions in early January.

## **2. Project Scope**

### **a. Design Status**

Work continues on the completion of station designs with *permit approvals*. *WMATA approval* of ATC submittals continues to lag. The problems with regard to stations permit approvals are due to a combination of poor quality control of the documents, submittal of incomplete packages,



and code interpretation by the designer which differs from that of the AHJ on several specific issues. MWAA continues to stress to DTP the need for better quality control of their permit submittals.

Efforts are also continuing by WMATA to improve their design review cycle times. Overall, design for all five stations is complete. However, preparation of the “Issued for Permit” (IFP) and subsequent “Issued for Construction” (IFC) drawings is proving to be a protracted process. Anticipated issuance dates for IFC design packages continue to change from month to month. As of *December 25, 2010*, the completion dates for all five station design packages with issuance of IFC drawings have been further delayed to *late January 2011*. The associated station pavilion and pedestrian bridge designs are anticipated in *late February 2011*. Issuance of completed IFC design packages has not impacted the project’s critical path, due in part to DGS continuing to assist with the permitting of partial packages. However, various design packages continue to accumulate negative float on the Project schedule.

## **b. Bidding and Construction Status**

Through *November 2010*, \$231,739,965 of the \$437,278,511 Federal Allowance Items Budget had been awarded to subcontractors and suppliers. An \$11,869,686 overrun now exists for the 10 of 31 sub-contract packages awarded thus far for federally-funded allowance items. *The Airports Authority has forecast a major jump in the overrun costs due to Station finishes and mechanical, electrical and plumbing work in the next few months.*

Utility relocation is 99% complete and DB construction is approximately 27% complete. All utility relocation efforts relating to the remaining Route 7 road shifts in the Tysons West Station area have been completed. However, DTP reported in its November schedule narrative that MCI cable and conduit conflicts are delaying caisson work for pier 5 on the Tysons West Guideway in the Route 7 median. *DTP reported in its December schedule update narrative that “In a collaborative effort with DTP to mitigate UR delays by MCI along Route 7 in the vicinity of Westpark Drive, MWAA issued Directive Letter 20, dated November 24, 2010, to have Brayman Construction Corporation mobilize and begin caisson construction at pier 6 while issues with MCI at pier 5 were sorted out.” The MCI ductbank issue was resolved on December 7, 2010.* The remaining utility companies are expected to complete their last bit of work in *January 2010*. Facchina is now preparing the new roadway for the remaining Route 7 road shifts scheduled to be completed in *February 2011*.

The following are the major accomplishments of the DB contractor during *December 2010*:

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1)** – *Continued with approach walls at abutment A-IB and B-IB. Set the last steel guideway girders at spans 3-OB, 4-OB and 6-IB for a total of fifteen completed to date. Continued forming and pouring track way decks. Poured track way decking at spans 8-IB, 9-IB, 10-IB, 11-IB, 12-IB, 13-IB and 20-IB for a total of twenty-two completed to date. Continued construction of storm drain and under drain installation east of Magarity Road. Continued constructing retaining walls west of Magarity Road. Continued invert slab installation at the first phase of the WFCY Cut and Cover Tunnel. Continued jack and*

bore crossings at TPSS #2. Continued final installation of communications manholes and ductbanks at the K-Line bypass.

- **Operations Area OP-4/5A (Tysons East Guideway/Station/I-495 Crossing)** – Poured pier columns at piers 40-IB, 41-IB, 42-OB, 42-IB, 43-OB, 62-IB and 62-OB for a total of eighty-eight completed to date. Poured pier cap at pier 62-IB for a total of fifty-eight completed to date. Completed mezzanine beam at pier 36-IB/OB for a total of seven completed to date. Completed platform cross beam at pier 31-IB/OB for a total of two completed to date. Continued segmental box girder guideway erection with Truss #1 completing spans 13-OB, 13-IB and 14-OB for a total of twenty-seven completed to date. Continued with span 14-IB. Completed construction of straddle bent 15. Continued segmental box girder erection with Truss #2 completing span 58-OB for a total of eight completed to date.
- **Operations Area OP-5 (Tysons Central 123 Station)** – Completed caissons at piers 67-OB and 70-OB for a total of nineteen completed to date. Completed pier columns at piers 71-IB and 73-IB for a total of nineteen completed to date. Completed pier caps at piers 64-OB and 64-IB for a total of seven completed to date. Continued pouring the structural foundation slab at Tysons Central 123 Station. Continued with abutment B construction.
- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure)** - Completed removal of temporary utilities in tunnel shafts. Continued shotcrete liner in the OB and IB tunnels in preparation for invert slab and waterproofing installation.
- **Operations Area OP-6 (West Cut and Cover Tunnel)** – Completed pouring invert slabs at Stage 1C. Started formwork for wall and roof sections. Continued excavation and SOE at Stage 2A and pouring mud slabs.
- **Operations Area OP-7 (Tysons Central 7 Station)** - Excavation and SOE continues for the station as does pile driving for the station foundation. Continued foundation slab rebar installation. Continued under-slab MEP installations. Continued pouring foundation base slabs for TPSS #5.
- **Operations Area OP-8 (Tysons West Station/Guideway)** – Storm drain installation and grading work continues between Westwood Center Drive and the Toll Road. Completed caissons at IB/OB piers 5, 6, 7 and 22 for a total of thirty-five completed to date. Completed pile caps at IB/OB piers 28, 29, 47, 42-IB, 50-IB and 50-OB for a total of fourteen completed to date. Completed columns at IB/OB piers 43, 51 and 50-OB for a total of eight completed to date.
- **Operations Area OP-9 (DIAAH)** – Completed waterproofing Hunter Mill Road Bridge. Completed pier walls at the intermediate piers at Difficult Run Bridge. Continued with retaining walls on the OB and IB sides between Hunter Mill Road and east of Difficult Run. Storm drain construction east of Difficult Run continues in the median. Placing of

track subgrade and track drainage continues between Wiehle Avenue and Hunter Mill Road. Grading work at Ponds 5 and 6 continues.

- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)** - Forming and pouring platform deck slabs continues. Pouring of station IB and OB outboard columns continues. Setting of mezzanine structural steel continues. Continue with footings for barrier walls between track way and the DIAAH.
- **Laydown Area #10 (Pre-cast Yard)** - Continued casting of segmental box girders; completed 1,727 of a total of 2600 segments to date.

### c. Third Party Coordination & Agreement Status

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

### d. Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *December 2010*, 67 of the 99 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *December 2010*.

**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 / Dulles Connector | 1         | 0                    | 0        | 0        | 1                    | 1         | 0          |
| Route 123                   | 23        | 1                    | 0        | (1)      | 21                   | 19        | (2)        |
| Route 7                     | 51        | 0                    | 2        | 2        | 42                   | 40        | (2)        |
| DIAAH                       | 24        | 0                    | 0        | 0        | 11                   | 7         | (4)        |
| <b>TOTAL</b>                | <b>99</b> | <b>1</b>             | <b>2</b> | <b>1</b> | <b>75</b>            | <b>67</b> | <b>(8)</b> |

- Notes: 1. Parcels secured through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 28 parcels for which Certificates of Take have been filed.  
2. Planned values are based on the March 31, 2010 Property Acquisition Status Update.

### Condemnation Status

A total of twenty-eight parcel packages have been obtained with the filing of twenty-four Certificates of Take. In *December*, the *appeal of the finding of the trial of the major case held in November for two parcels was not filed*. In addition, one new Agreement After Certificate (AAC) was in process for a case that was previously scheduled for trial in March 2011, thus there are four cases currently scheduled for trial. A Petition in Condemnation was filed for one case. A total of 18 Certificates of Take remain in process. The finalization timeframes are estimates as

the length of a condemnation process for different cases varies substantially and is difficult to predict with accuracy. Trials scheduled as of *December 31, 2010* are:

Parcel 32, CDC, LP (8500, Clemente) – April 4, 2011

Parcel 33, Office Depot – April 18, 2011

Parcel 21, Trulies/Marshalls – April 18, 2011

*Parcel 36, Container Store – May 16, 2011*

#### **e. Utility Coordination**

The various utility companies continue to relocate their facilities for the project. Utility coordination meetings are held with the various utilities to schedule and coordinate work. Specific utility relocation work completed in *December 2010* includes the following:

- **Along Route 7 (123 Overpass to Marshall's)** – All work completed.
- **Along Route 7 (Marshall's to Gosnell/Westpark)** – MCI *completed splicing and cutover of existing service.*
- **Along Route 7 (Gosnell/Westpark to Spring Hill Road)** – No remaining conflicts.
- **Along Route 7 (Spring Hill Road to Tyco/Westwood)** – MCI *completed* splicing and cutovers on the north side of Route 7. AboveNet continues splicing and cutover work on the north side of Route 7.
- **Along Route 7 (Tyco/Westwood to Route 267/Toll Road)** – AboveNet *continues* splicing on the north side of Route 7 at Koon's Toyota. MCI continues with splicing and cutover work. Verizon continues lowering the existing ductbank at the Sheraton due to storm drain conflict.
- **Along Route 123 (Route 7 to the Route 267 Connector Road)** – AboveNet continues relocation work at Route 123 and Scotts Crossing.
- **The DIAAH/Dulles Toll Road/Dulles Connector Road (Route 7 to Route 267 – DIAAH West)** – DTP/Lane continues the installation of the traction power ductbanks on the Dulles Connector Road median *west of Pimmit Run, east of Magarity Road and at the DCR/Chain Bridge Road. Continued installation of traction power ductbanks and manholes in the DIAAH median for the bridge crossing at the W&OD trail at Difficult Run. Washington Gas started relocation work at the TPSS #10 site. Continued with pipe liner installation in storm drain culverts.*

#### **f. Vehicle Procurement**

WMATA is procuring the additional 64 rail cars required for the project. WMATA is procuring 300 additional 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.

Rail car procurement moved forward with the July 27, 2010 contract award by WMATA to Kawasaki. 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). WMATA issued Notice-To-Proceed (NTP) on August 16, 2010. The contractual milestones for this procurement are:

|  | <u>Forecast Date</u> | <u>Actual Date</u> |
|--|----------------------|--------------------|
| Notice to Proceed                              |                      | August 16, 2010    |
| Delivery of 4 Pilot Cars                       | September 16, 2013   |                    |
| Conditional Acceptance of Pilot Cars           | March 16, 2014       |                    |
| Conditional Acceptance of 64 <sup>th</sup> Car | January 15, 2015     |                    |

A kick-off progress status meeting between WMATA, MWAA, and the PMOC was conducted on October 28, 2010 for the purpose of monitoring this procurement. The PMOC also attended the Monthly Progress Review meeting held between WMATA and the Car builder on December 9, 2010.

These progress status meetings are a concerted effort by the PMOC to ensure that either the new railcar procurement schedule is improved or that arrangements are made in advance to support the Project’s Operational Readiness Date with existing fleet cars. 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 went on to say that cars from the existing fleet will be made available for dynamic testing. If there is 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 PMOC will continue to monitor both the progress of the procurement and WMATA’s support of the project.

The procurement is currently in the Conceptual Design Review (CDR) phase, which is expected to continue through January 2011. This is slightly behind WMATA’s original schedule, however WMATA has noted that the submittals are more detailed than expected, being closer to what is expected for Preliminary Design Review (PDR). As a result, some level of PDR work has already taken place and the design development is proceeding at the expected rate.

**g. Safety and Quality Status**

The Airports Authority participated in *four* safety walk downs with DTP during the month of *December*. All were related to Design-Build work. As of *December 31, 2010*, DTP had logged a total of *4.84* million project man-hours with *152* first aid cases and one lost time case. There have been a total of *258* incident investigation reports, *80* utility hits and *15* vehicular accidents.

Revision 3 of the SCIL was issued by DTP on August 3, 2010. MWAA transmitted comments, including comments from WMATA, to DTP on August 26, 2010 and the SCIL, Revision 3, was “Accepted as Noted.” DTP addressed the remaining comments and Revision 4 to the SCIL was submitted on November 24, 2010. *Comments on Revision 4 will be transmitted to DTP in early January.*

DTP and the Airports Authority 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. A DCC was submitted for MWAA’s review on September 2, 2010 with seventy items signed off. Additional information was requested and received by MWAA. Its review was completed and comments were transmitted to DTP on November 5, 2010 with forty-nine items accepted. The acceptance of another eleven items was deferred pending issuance of “Issued for Construction” associated design drawings and ten items were not accepted. DTP submitted another DCC on December 2, 2010. *Forty-eight additional items were signed off and are currently under review. In addition, a Construction/Procurement/Installation Conformance Checklist (CCC) was received on October 4, 2010 with six items signed off. MWAA transmitted final comments on this checklist to DTP on January 3, 2011. WMATA is also currently conducting a 100% review of the submitted DCC and CCC items.*

Regular weekly visits to work sites by safety representatives from DTP, the Airports Authority and WMATA continue. The Tri-State Oversight (TOC) and the FTA’s on-site PMO representative continue to meet monthly with the Safety/Security Certification Working Group and continue ongoing involvement in the certification process.

DTP submitted revisions to the System Safety/Security Certification Management Plan 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, on August 16, 2010. Comments have been received from WMATA and actions have been taken to address and resolve these comments by both the Airports Authority and DTP. A meeting with MWAA, DTP and WMATA was conducted on November 3, 2010, and necessary changes to the document were agreed upon. The revised plan and procedures were resubmitted on November 23, 2010 *and accepted on December 6, 2010.*

MWAA’s QA group continues to monitor DTP’s quality program and maintains a schedule of audits and surveillances. In addition, MWAA continues to perform safety walk downs with DTP.

During *December* 2010 MWAA performed the following QA audits/surveillances:

- *DTP Status of Stray Current Protection Testing: Surveillance was conducted on the subject program on December 8, 2010. One issue was documented and a response is due in early January 2011.*

- *DTP Subcontractor Safety Program: Surveillance was conducted on the subject program on December 16, 2010. There were no issues requiring response.*

**The MWAA QA Audit and Surveillance Schedule through June 2011**

| <b>Tentative Date</b> | <b>Audit (A) Surveillance (S)</b> | <b>Organization/Activity</b>   | <b>Joint Audit/Surv.</b> | <b>Lead</b> |
|-----------------------|-----------------------------------|--|--------------------------|-------------|
| 1/5-6/11              | A                                 | DTP Environmental  | N                        | MWAA        |
| TBD                   | A                                 | ADCo, Rochester, NY (Alstom ATC Subcontractor –Relays)                               | Y                        | DTP         |
| 1/19-20/11            | A                                 | Flippo Construction (Wayside Facilities Subcontractor)                               | Y                        | DTP         |
| 2/2-3/11              | A                                 | Lane Construction (Early MEP)  | Y                        | DTP         |
| 2/15-16/11            | A                                 | DTP Acquisitions   | N                        | MWAA        |
| 2/23-24/11            | A                                 | Facchina Construction (Segments)   | Y                        | DTP         |
| 2/23-24/11            | A                                 | DTP Construction Safety Program  | N                        | MWAA        |
| 3/2/11                | S                                 | DTP Sub/Supplier Submittal Process: DTP/Subcontractor Nonconformance Control Systems | N                        | MWAA        |
| 3/9-10/11             | A                                 | DTP Construction and QA  | N                        | MWAA        |
| 4/6-7/11              | A                                 | CTI Consultants (Special Inspection)   | N                        | MWAA        |
| 4/13-14/11            | A                                 | Brayman Construction (Caissons)  | Y                        | DTP         |
| 4/27-28/11            | A                                 | DTP QA, Document Control, and Training   | N                        | MWAA        |
| 5/4-5/11              | A                                 | DTP System Safety and Security   | N                        | MWAA        |
| 5/11-12/11            | A                                 | Turner Construction (Shell Enclosure Trades)   | Y                        | DTP         |
| <i>5/24-25/11</i>     | <i>A</i>                          | <i>DTP Engineering</i>   | <i>N</i>                 | <i>MWAA</i> |
| <i>6/8-9/11</i>       | <i>A</i>                          | <i>Delta Railroad (Rail)</i>   | <i>Y</i>                 | <i>DTP</i>  |
| <i>6/15-16/11</i>     | <i>A</i>                          | <i>DTP Subcontractor Safety Program</i>  | <i>N</i>                 | <i>MWAA</i> |

**3. Project Management Plan and Sub-plans**

- MWAA’s Project Management Plan (PMP), Version 6.0 dated September 26, 2008 has been accepted by the FTA. The PMOC did a review of MWAA’s compliance with the PMP and issued a Spot Report on December 8, 2009. MWAA updated its PMP based on the PMOC’s observations and the recent MWAA reorganization to an integrated MWAA and PMSS organization. MWAA submitted its draft PMP update of Version 7.0 on September 3, 2010. This plan was reviewed by the PMOC and six recommendations were made for inclusion in the PMP. FTA forwarded the PMOC’s comments to MWAA for them to address in Version 7.0 Final. Dialogue continued between MWAA and the PMOC during November and *December* with regard to MWAA’s proposed revisions

relative to the six recommendations. The PMOC's various compliance reviews performed during 2009 have found MWAA to be in compliance with their various project plans and sub-plans.

- MWAA's Quality Program Plan (QPP), Revision 6, dated June 25, 2008 was accepted by the FTA on September 19, 2008. MWAA submitted a revised QPP, Revision 7 to FTA on January 7, 2010. MWAA awaits FTA's comments on the revised plan or an indication that no comments will be forthcoming. MWAA reported that three Project Management Procedures were updated in the period from March through May 2010.
- 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) and has requested DTP to revise their Procedure PIQ-5.1.
- MWAA's Risk Management Plan (RMP) dated October 2008 has been reviewed and accepted by the FTA. The PMOC requested MWAA to begin the process to update the RMP by the end of the summer with a meeting to discuss the update to be scheduled after MWAA completes their risk plan update. A consultant submitted a draft revision in December 2010. MWAA is currently reviewing the draft. *It* expects to complete and submit *the* revision to the PMOC in late January *with* a meeting anticipated in *early February* to discuss the revised RMP.
- 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 provided comments to WMATA on March 15, 2010 based on the PMOC's Spot Report. The PMOC met with WMATA on April 6, 2010 to review the comments on the draft RFMP. The PMOC again met with WMATA on June 2, 2010, at WMATA's request, to further discuss the comments. WMATA submitted the revised draft RFMP on September 17, 2010 and a draft Spot Report summarizing the PMOC's review findings was issued to the FTA on November 8, 2010. The PMOC held a meeting with WMATA on November 15, 2010 to review the findings. A follow-up meeting will need to be scheduled in the near future *after WMATA submits the revised RFMP*.
- MWAA's Safety and Security Management Plan, Revision No. 6 dated January 2009 was accepted by the FTA on January 27, 2009. MWAA submitted the SSMP, Revision 7, to the FTA on September 23, 2009. The changes in Revision 7 were minor in nature and reflected changes in personnel assignments, integration of the Fire/Life Safety Working



Group with the Safety/Security Certification Working Group, and updates to schedules. Due to the minor nature of the changes, no response is expected from the FTA.

- FTA requested an update to the Appendices in the Permitting Plan on June 17, 2010. MWAA provided that information *on December 21, 2010*.

#### **4. Project Schedule**

The most recent MWAA analyzed project schedule update has a data date of *November 25, 2010*. The primary critical path identified by DTP reflects a *-111* calendar day variance in the achievement of the SSCD from that reflected in the approved Baseline Schedule. This variance *reflected a fourteen day loss from that* reflected in the critical path of the *October* schedule update and yields a March 25, 2014 ROD. The FFGA ROD is December 1, 2014.

On December 3, 2010, WMATA sent a letter to MWAA confirming WMATA will provide sufficient cars to support dynamic testing and initial revenue service for the Dulles Project. WMATA will use cars from the existing fleet for dynamic testing. If there is a gap between the delivery of the 7000 Series cars and revenue service date, WMATA will make sufficient cars available from within the existing WMATA fleet to support initial revenue service. *However, this contingency plan does not meet the FFGA requirement that the 64<sup>th</sup> car be accepted by December 1, 2014.*

During the month of *December 2010*, construction continued with the Tysons West guideway; the O-1 Guideway and Tysons East corridor aerial substructure; at Magarity, Pimmit, Hunter Mill, Difficult Run and W&OD bridges; Tysons East, Tysons Central 123, Tysons Central 7, *Tysons West* and Wiehle Avenue Stations; detention ponds at the DIAAH and West Cut-Cover Tunnel; MOT, retaining walls and storm drainage along the DCR and DIAAH; NATM tunnel work continues to progress on schedule for the inbound and outbound tunnels; the WFCY Lead Tunnel continues; Early Roadway work continues at various locations; segmental erection by launch truss #1 and launch truss #2 continues and *launch truss #3 will be commissioned in early January.*

The WFC Yard upgrade work schedule *continues to drop further behind with* a completion of the full facility in *February 2014*. DTP stated in its May schedule narrative that this date “incorporates a number of assumptions with regards to permitting and access to perform the work. DTP continues to finalize the WFCY schedule, which will be provided in a revised RFC-065 proposal.” The WFCY work is still disconnected from the schedule’s critical path. DTP’s reason was stated in response to MWAA’s review comment on the February schedule as follows: “DTP has previously advised MWAA that the WFCY schedule will be excluded from the Project SSCD due to the delay imposed on the WFCY work. Until design progression allows for a firm schedule for this work and resolution of the commercial issues surrounding the WFCY, DTP’s position remains unchanged. Therefore, the MWAA/PMSS suggestion that the WFCY is the primary critical path is not valid.” MWAA continues to state its disagreement with DTP’s completion date in light of the incomplete WFCY scope. DTP’s June Schedule narrative states that “DTP resubmitted RFC-065 for the West Falls Church Yard schedule showing a completion in February 2014. DTP anticipates that a new and separate contractual completion date for the WFCY will be established independent of the Project SSCD.” It is the PMOC’s opinion that the

‘independent contractual completion date’ must still support the Project Operational Readiness Date”. During the November monthly meeting, MWAA reported that the schedule and costs presented by DTP are still being reviewed and that they are confident that the schedule can be adjusted to support the Project’s Operational Readiness Date. *MWAA further reported during the December monthly meeting that it had issued a “Directive Letter” to DTP to continue the design and phase planning effort.*

DTP has made numerous presentations of its West Falls Church Yard K-Line Tie-In Phase Plan to MWAA and WMATA as it continues to refine the plan. The last presentation was on November 16, 2010. It was a very detailed and informative presentation that helped to involve more key WMATA personnel who will be needed to support the tie-in and integration process. The plan outlined the necessary track outage schedule for 2011 and detailed the activities for the special trackwork installation (#10 double crossover and the two #15 turnouts) along with the automatic train control installation. DTP provided a good overview of its plan and a tentative track outage schedule was officially submitted to MWAA in October. The plan begins with a three-day track outage in January 2011 to install four new loop track 3<sup>rd</sup> rail power disconnect switches in order to manage partial power outages needed to minimize the impacts to the daily operations of the yard during the sound box construction. *DTP awarded a subcontract to Lane Construction Company in December 2010 for early Civil Sitework. Work is expected to commence in mid January 2011.*

The WFCY Civil/Sitework final design was completed and issued for permit in October 2010. The S&I Building final design *has been submitted and is under review. The Sound Cover Box final design is progressing.* DTP has obtained the federal permit for the necessary stream restoration. DTP also submitted its 30% Tie-in Plan to MWAA in October 2010 to include its proposed track outage plan.

Bi-weekly meetings held between MWAA and DTP with regard to the schedule and schedule mitigation efforts continue to yield work-arounds and some increased work shifts, particularly with regard catch-up work related to the late UR work, VDOT MOT approvals and design package reviews. It remains the PMOC’s opinion that MWAA is maintaining control over the Project master schedule, with the exception of the WFCY schedule that continues to be of concern relative to meeting the scheduled Project Operational Readiness Date (ORD). In addition, the critical path, weather delays and schedule logic issues are yet to be resolved. Also, MWAA and DTP continue to voice concern with WMATA’s, VDOT’s and DGS’ abilities to provide timely design review comments and to issue timely permits. Improvement with VDOT’s turnaround time continues to be observed. WMATA continues to lag with its submittal reviews and DGS continues to lag with its reviews and building permit issuance. MWAA has repeatedly requested WMATA to improve its support to the Project and DTP has repeatedly requested MWAA and DGS to improve its support of the Project. Also, MWAA, WMATA and DGS continue to voice concern about the quality of the DTP design packages without substantial improvement by DTP. It is the PMOC’s opinion that *improvement is being made but more could and should be done by MWAA, DTP, WMATA and DGS to overcome these potentially costly delays.* In October 2010, WMATA dedicated an ATC Engineer and a Communications Engineer to the DCMP Phase 1 and an Assistant Project Manager to handle DCMP Phase 2 issues. The additional staff is beginning to be an asset to the Project. Improvement with the backlog of WMATA submittal reviews is expected to continue during the months to come.

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

- Potential conflict with Launcher #3 erecting segmental box girders over I-495 and the on-going Hot Lanes work in the area.
- Utility companies meeting the project schedule.
- Utility company redesign/relocation due to interferences.
- WFCY design, construction and commissioning.
- Weather Delays.
- Inability of DTP to achieve design finalizations.
- A potential systemwide upgrade program by WMATA could have numerous technical scope changes impacting Traction Power, Automatic Train Control and Communications.

#### **a. Critical Path Evaluation**

The PMOC agrees with MWAA's assessment regarding the critical path. The Project will need to continue its efforts to resolve disagreements relative to the WFC yard, critical path, logic and delay issues in order to minimize the risk of irretrievable schedule creep leading to costly schedule compression or constructive acceleration. DTP's early roadwork subcontractor, Facchina, Inc. continues to pursue the remaining Route 7 road shifts expected to be completed in *February 2011*. The schedule update with a data date of *November 25, 2010* was again not agreed to by MWAA. MWAA has not agreed to the critical path in any schedule update submitted by DTP for more than a year.

*In November 2010, the primary critical path identified by DTP reflects a -111 calendar-day variance in the achievement of the SSCD from that reflected in the approved Baseline Schedule. The critical path, as presented by DTP in November, shows its origin being the requirement to relocate an existing MCI conduit and cable which conflicts with the installation of caissons for pier 5-IB/OB for the Tysons West Guideway. According to DTP, this conflict was realized on or about November 8, 2010 and the forecasted relocation by MCI is December 7, 2010. This prohibits DTP from completing the caissons for pier 5 until December 15, 2010 which is one month later than identified in the October update. The Project team disagreed with DTP on designating this path as DTP has committed to install caissons at pier 6-IB/OB while awaiting MCI action and reflecting the same in next month's update. For this and other reasons such as inaccurate progress reporting, inappropriate ties and the need for supportable durations on a number of down-stream activities, the critical path(s) as presented by DTP are inaccurate resulting in the Project Team's disagreement with the schedule as submitted. Notwithstanding the above, DTP submitted its schedule with a data date of *December 25, 2010 (not yet analyzed)* with a similar critical path that now reflects a -113 day delay.*

MWAA and DTP continued to meet regularly to review and discuss DTP's recovery schedule, which was submitted to MWAA on July 26, 2010 with a Request for Change RFC-112 Rev. 0 entitled "Design-Build Acceleration for Delays through June 25, 2010." DTP submitted a recovery schedule on August 12, 2010 with an updated request for Change RFC-112 (Rev.1) entitled "Design-Build Acceleration for Delays through June 25, 2010." RFC-112 provided a recovery schedule that will mitigate ninety-one days of delay to the Project SSCD. The RFC

included an acceleration cost of \$23.7 million. The RFC was rejected by MWAA in August. However, MWAA *continued* to negotiate with the goal of reaching a mutually agreed recovery plan. *This effort resulted in the issuance of a “Directive Letter” to DTP to conduct a constructive acceleration effective December 15, 2010 on a time and material basis not to exceed seven million dollars. DTP has agreed to submit a zero loss recovery schedule and both have agreed to work toward a lump sum Change Order based upon the Recovery Schedule. MWAA has hired an independent consultant to perform an in-depth assessment of the new zero loss project schedule.*

*The PMOC considers the issuance of this directive letter to be a good first step toward recovery of the Contract Completion Date. However, the Project will need to maintain this forward momentum in order to recover the -113 day mainline construction loss and to overcome any unforeseen delays that may yet be faced in the months to come. The Project will need to agree on a zero loss schedule and critical path at an early date to avoid continued losses. Therefore, confidence that schedule recovery will occur during the first quarter of 2011 is tentative. In addition, the Project needs to increase its efforts to resolve disagreements relative to the West Falls Church Yard (WFCY) schedule in order to minimize the risk of irretrievable schedule creep leading to costly schedule compression or at least to minimize constructive acceleration costs. This need becomes increasingly critical as the WFCY yard completion date continues to fall further behind to February 19, 2014 as reflected in DTP’s December schedule update.*

In addition, the Project team does not agree with the schedule for the WFC yard contained in DTP’s November Update. *The Project team’s position has been that DTP’s completion date is incorrect in light of the inaccurate WFC Yard Scope. The Project team has reviewed the Final Design Submittal of the Service and Inspection Annex Building and developed a schedule which indicates completion of the WFC Yard much closer to the original SSCD of July 31, 2013 is feasible. It is also the Project team’s position that, because a large portion of the West Falls Church Yard construction will be accomplished as Allowance items, the opportunity exists to make the original scheduled completion a requirement for prospective bidders and as such any necessary acceleration cost would be competitively bid. The PMOC is in agreement with this assessment.*

*It continues to be the PMOC’s opinion that the design related permit issues will be resolved within the next few months. However, confidence that schedule recovery will occur during the first quarter of 2011 remains tentative until the recovery schedule for both the mainline and WFC Yard have been received and agreed upon.*

The following table compares the milestone dates relative to the approved baseline schedule. The PMOC concurs with MWAA’s assessment of the updated schedule and expects that discussions will continue with DTP to reach resolution on the schedule. However, the PMOC is not optimistic that DTP’s goal is to reach resolution with regard to the schedule disagreement. *MWAA continues to negotiate with DTP over schedule issues and is optimistic that resolution can soon be reached. They have hired an independent consultant to review the schedule.*

| MILESTONE                               | June 2008<br>Baseline<br>Schedule | September 25, 2010<br>Update Schedule | October 25, 2010<br>Update Schedule |
|---|-----------------------------------|---------------------------------------|-------------------------------------|
| Receipt of FFGA                         | 03/03/09 <sup>1</sup>             | 03/10/09 <sup>A</sup>                 | 03/10/09 <sup>A</sup>               |
| Station Design Complete                 | 10/21/09                          | 02/01/11                              | 02/10/11                            |
| Utility Relocation Complete             | 03/05/10                          | 07/15/11                              | 08/17/11                            |
| Aerial and Station Foundations Complete | 3/4/11                            | 07/05/11                              | 06/09/11                            |
| NATM Tunnels Mined                      | 01/29/11                          | 12/15/10                              | 12/03/10                            |
| K-Line Tie-In                           | 12/23/11                          | 05/23/12                              | 03/29/12                            |
| Guideway Complete                       | 2/12/12                           | 10/04/12                              | 10/15/12                            |
| Train Control Complete                  | 10/26/12                          | 01/23/13                              | 12/26/13                            |
| Substantial Completion                  | 07/31/13                          | 11/05/13                              | 11/19/13                            |
| Revenue Operations - Target             | 11/27/13                          | 03/19/14                              | 03/25/14                            |
| FFGA Revenue Operations                 | 12/01/14                          | 12/01/14                              | 12/01/14                            |

<sup>A</sup> Actual Date

<sup>1</sup> Date was not met. See narrative in section D.1.3.

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

The important milestones that are expected to be completed during the next 90 days include the following:

- Completion of stations design with issuance of IFC Drawings.
- Completion of utility relocation.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).

## e. Project Cost

The SCC Budget and Expenditures summary for the period ending *November 25, 2010* is as follows. Overall, approximately 33.08 % of the budget has been expended through *November 25, 2010*.

| FTA<br>SCC<br>CODE | DESCRIPTION                 | BASELINE<br>BUDGET | CURRENT<br>BUDGET <sup>1</sup> | EXPENDED TO<br>DATE | ESTIMATE AT<br>COMPLETION |
|--------------------|-----------------------------|--------------------|--------------------------------|---------------------|---------------------------|
| 10                 | Guideway and Track Elements | \$ 666,500,284     | \$ 649,438,815                 | \$ 227,004,436      | \$ 649,438,815            |

| FTA<br>SCC<br>CODE             | DESCRIPTION                    | BASELINE<br>BUDGET      | CURRENT<br>BUDGET <sup>1</sup> | EXPENDED TO<br>DATE     | ESTIMATE AT<br>COMPLETION |
|--------------------------------|--------------------------------|-------------------------|--------------------------------|-------------------------|---------------------------|
| 20                             | Stations                       | \$ 317,023,979          | \$ 314,530,699                 | \$ 35,716,153           | \$ 314,530,699            |
| 30                             | West Falls Church Yard         | \$ 51,789,539           | \$ 49,943,380                  | \$ 1,892,327            | \$ 50,305,150             |
| 40                             | Site Work & Utility Relocation | \$ 232,936,987          | \$ 231,369,434                 | \$ 133,235,773          | \$ 251,703,055            |
| 50                             | Systems                        | \$ 278,157,645          | \$ 281,616,298                 | \$ 35,385,424           | \$ 280,383,520            |
| 60                             | Right of Way Acquisition       | \$ 45,953,303           | \$ 67,631,026                  | \$ 50,541,437           | \$ 67,795,262             |
| 70                             | Vehicles                       | \$ 211,629,775          | \$ 211,629,775                 | \$ 20,825,600           | \$ 210,926,012            |
| 80                             | Professional Service           | \$ 698,471,472          | \$ 716,271,902                 | \$ 480,003,397          | \$ 725,490,602            |
| 90                             | Contingency Mgmt. Reserve      | \$ 130,000,075          | \$ 110,055,733                 | \$ -                    | \$ 81,913,949             |
| 100                            | Finance Charge                 | \$ 509,984,571          | \$ 509,984,571                 | \$ 29,800,079           | \$ 509,984,571            |
| <b>TOTAL (Federal portion)</b> |                                | <b>\$ 3,142,471,634</b> | <b>\$ 3,142,471,634</b>        | <b>\$ 1,014,404,626</b> | <b>\$ 3,142,471,634</b>   |

Current budget equals FFGA amount plus approved Change Orders CO-001-059, Directive Letters 001-020, and UR-CO-001-033. Estimate at Completion (EAC) includes changes and forecast.

### a. Explanation of Variances

The major variances in the project budget are associated in four categories as noted below:

1. SCC10 – Guideway and Track Elements has been reduced approximately \$31 million due to the decision by the DB contractor to self perform the NATM tunnel work. Of this major reduction, \$18 million was transferred to SCC 80.
2. SCC40 – Site work and Utility Relocation has been increased by approximately \$19 million as a result of executed utility relocation change orders.
3. SCC60 – Right of Way Acquisition experienced nearly \$24 million increase in the right-of-way (ROW) acquisition. This was due to a single property that had been anticipated as being a dedication having to be acquired by condemnation.
4. SCC80 – Professional Services increased approximately \$28 million due to the \$18 million for design, project management and construction management of the tunnel. \$1.3 million is associated with Final Design of the tunnel and \$17.5 million is associated with Project Management and Construction Management.

The balance is primarily due to utility relocation design overruns and the design for TPSS #9 and #11 in the amount of \$1.2 million which was transferred to the non-federal portion of the project. SCC80 was increased by approximately \$4.4 million for 33 change orders and \$2.4 million for other budget transfers, as well as \$3.5 million increase for VDOT.

**b. Monthly Cost Report, November 2010**

| DESCRIPTION   | FFGA AMOUNT<br>(Original) | EXPENDITURE TO<br>DATE <sup>1</sup> | ESTIMATE TO<br>COMPLETE | ESTIMATE AT<br>COMPLETION |
|---|---------------------------|-------------------------------------|-------------------------|---------------------------|
| <b>FEDERAL (FFGA SCOPE)</b>                                 |                           |                                     |                         |                           |
| <b>Design-Build</b>   |                           |                                     |                         |                           |
| Firm Fixed Price  | \$ 1,112,052,172          | \$ 552,451,053                      | \$ 845,096,214          | \$ 1,397,547,267          |
| Firm Fixed Price Insurance and Bonds                        | \$ 65,109,408             | \$ 64,600,962                       | \$ 4,654,179            | \$ 69,255,141             |
| Firm Fixed Price Subtotal                                   | \$ 1,177,161,580          | \$ 617,052,015                      | \$ 849,750,393          | \$ 1,466,802,408          |
| Subcontract Allowance                                       | \$ 430,199,817            |                                     | \$ 230,549,846          | \$ 230,549,846            |
| Design-Build Contract Prices                                | \$ 1,607,361,397          | \$ 617,052,015                      | \$ 1,080,300,239        | \$ 1,697,352,254          |
| Indexed Commodity Escalation                                | \$ 77,469,926             | \$ -                                | \$ 57,907,009           | \$ 57,907,009             |
| <b>Design-Build Contract Total</b>                          | \$ <b>1,684,831,324</b>   | \$ <b>617,052,015</b>               | \$ <b>1,138,207,248</b> | \$ <b>1,755,259,263</b>   |
| <b>Utility Relocation</b>                                   |                           |                                     |                         |                           |
| Utility Work  | \$ 84,312,807             | \$ 79,979,392                       | \$ 22,257,574           | \$ 102,236,966            |
| Terf Tax  |                           | \$ -                                | \$ 0                    | \$ 0                      |
| Project Management and Final Design                         | \$ 8,423,426              | \$ 15,812,993                       | \$ 164,330              | \$ 15,977,323             |
| <b>Utility Relocation Total</b>                             | \$ <b>92,736,233</b>      | \$ <b>95,792,385</b>                | \$ <b>22,421,904</b>    | \$ <b>118,214,289</b>     |
| <b>Right of Way</b>   |                           |                                     |                         |                           |
| <b>Right Of Way Total</b>                                   | \$ <b>42,443,132</b>      | \$ <b>50,541,437</b>                | \$ <b>17,253,825</b>    | \$ <b>67,795,262</b>      |
| <b>WMATA Agreement</b>                                      |                           |                                     |                         |                           |
| Vehicles  | \$ 195,138,329            | \$ 20,825,600                       | \$ 173,608,966          | \$ 194,434,567            |
| Construction and Procurement                                | \$ 31,484,799             | \$ 1,794,832                        | \$ 28,772,192           | \$ 30,567,024             |
| WMATA Force Account Startup                                 | \$ 13,777,100             | \$ 1,265,653                        | \$ 12,139,368           | \$ 13,405,021             |
| Project Management and Final Design                         | \$ 31,235,400             | \$ 12,779,930                       | \$ 20,449,087           | \$ 33,229,017             |
| <b>WMATA Agreement Total</b>                                | \$ <b>271,635,628</b>     | \$ <b>36,666,016</b>                | \$ <b>234,969,613</b>   | \$ <b>271,635,628</b>     |
| <b>Preliminary Engineering<sup>2,3</sup></b>                |                           |                                     |                         |                           |
| <b>Preliminary Engineering Total</b>                        | \$ <b>100,968,646</b>     | \$ <b>100,730,999</b>               | \$ <b>-</b>             | \$ <b>100,730,999</b>     |
| <b>Airports Authority Services</b>                          |                           |                                     |                         |                           |
| General Conditions <sup>4</sup>                             | \$ 28,879,153             | \$ 4,891,540                        | \$ 22,016,020           | \$ 26,907,559             |
| Airports Authority Project Management and Wiehle Ave Garage | \$ 23,225,717             | \$ 16,558,217                       | \$ 7,365,100            | \$ 23,923,317             |
| Project Management Support                                  | \$ 90,004,649             | \$ 62,371,938                       | \$ 31,993,646           | \$ 94,365,583             |
| <b>Airports Authority Services Total</b>                    | \$ <b>142,109,519</b>     | \$ <b>83,821,694</b>                | \$ <b>61,374,765</b>    | \$ <b>145,196,459</b>     |
| <b>Contingency</b>  |                           |                                     |                         |                           |
| <b>Contingency Total</b>                                    | \$ <b>297,762,579</b>     | \$ <b>-</b>                         | \$ <b>173,655,161</b>   | \$ <b>173,655,161</b>     |
| <b>Finance Costs</b>  |                           |                                     |                         |                           |
| <b>Finance Costs Total</b>                                  | \$ <b>509,984,571</b>     | \$ <b>29,800,079</b>                | \$ <b>480,184,492</b>   | \$ <b>509,984,571</b>     |
| <b>Total Federal (FFGA Scope)</b>                           | \$ <b>3,142,471,634</b>   | \$ <b>1,014,404,626</b>             | \$ <b>2,128,067,008</b> | \$ <b>3,142,471,634</b>   |
| <b>INTERRELATED HIGHWAY IMPROVEMENTS</b>                    |                           |                                     |                         |                           |
| <b>Design-Build</b>   |                           |                                     |                         |                           |
| Firm Fixed Price - Engineering                              | \$ 5,929,082              | \$ 3,978,337                        | \$ 23,527,367           | \$ 27,505,704             |
| Firm Fixed Price Insurance and Bonds                        | \$ 2,889,450              | \$ 936,675                          | \$ 153,406              | \$ 1,090,082              |
| Firm Fixed Price Subtotal                                   | \$ 8,818,532              | \$ 4,915,012                        | \$ 23,680,773           | \$ 28,595,785             |
| Subcontract Allowance                                       | \$ 18,854,682             | \$ -                                | \$ 18,854,682           | \$ 18,854,682             |
| <b>Design-Build Contract Total</b>                          | \$ <b>27,673,214</b>      | \$ <b>4,915,012</b>                 | \$ <b>42,535,455</b>    | \$ <b>47,450,467</b>      |
| <b>Utility Relocation</b>                                   |                           |                                     |                         |                           |
| Utility Work  | \$ 31,552,369             | \$ 37,411,384                       | \$ 3,462,094            | \$ 40,873,478             |
| Terf Tax  |                           | \$ -                                |                         |                           |
| Project Management and Final Design                         | \$ 4,727,549              | \$ 7,147,257                        | \$ 227,246              | \$ 7,374,502              |
| <b>Utility Relocation Total</b>                             | \$ <b>36,279,918</b>      | \$ <b>44,558,641</b>                | \$ <b>3,689,339</b>     | \$ <b>48,247,980</b>      |
| <b>Right of Way</b>   |                           |                                     |                         |                           |
| <b>Right Of Way Total</b>                                   | \$ <b>44,772,663</b>      | \$ <b>15,231,988</b>                | \$ <b>4,667,891</b>     | \$ <b>19,899,879</b>      |
| <b>Airports Authority Services</b>                          |                           |                                     |                         |                           |
| General Conditions <sup>4</sup>                             |                           | \$ 1,306,585                        | \$ 108,672              | \$ 1,415,256              |
| <b>Airports Authority Services Total</b>                    | \$ <b>-</b>               | \$ <b>1,306,585</b>                 | \$ <b>108,672</b>       | \$ <b>1,415,256</b>       |
| <b>Contingency</b>  |                           |                                     |                         |                           |
| <b>Contingency Total</b>                                    | \$ <b>14,482,435</b>      | \$ <b>-</b>                         | \$ <b>6,194,647</b>     | \$ <b>6,194,647</b>       |
| <b>Total Interrelated Highway Improvements</b>              | \$ <b>123,208,229</b>     | \$ <b>66,012,226</b>                | \$ <b>57,196,003</b>    | \$ <b>123,208,229</b>     |
| <b>TOTAL PROJECT COST</b>                                   | \$ <b>3,265,679,863</b>   | \$ <b>1,080,416,852</b>             | \$ <b>2,185,263,011</b> | \$ <b>3,265,679,864</b>   |

1 Reflects Paid costs through November 25, 2010

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.

### c. Project Funding Sources: November 2010

| 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                 |                                      | \$ -                    |
| Final Design Grant                             | VA-03-0113-00 |                     | \$ 159,001,838          | \$ 159,001,838                |                                      | \$ -                    |
| ARRA Construction Grant                        | VA-36-0001-00 |                     | \$ 77,260,000           | \$ 77,260,000                 |                                      | \$ -                    |
| FFGA Construction Grant                        | VA-03-0113-02 |                     | \$ 28,809,000           | \$ 28,809,000                 |                                      | \$ -                    |
| FFGA Construction Grant                        | VA-03-0113-03 |                     | \$ 85,000,000           | \$ 3,702,915                  |                                      | \$ 81,297,085           |
| FFGA Balance                                   | Planned       |                     | \$ 495,516,636          | \$ -                          |                                      | \$ 495,516,636          |
| <b>Subtotal - New Starts</b>                   |               | <b>28.64%</b>       | <b>\$ 900,000,000</b>   | <b>\$ 323,186,279</b>         | <b>35.91%</b>                        | <b>\$ 576,813,721</b>   |
| <b>Other Federal Funds</b>                     |               |                     |                         |                               |                                      |                         |
| Sec 5307 Surface Transportation Program        |               |                     |                         |                               |                                      |                         |
| Construction Grant                             | VA-95-X056-01 |                     | \$ 47,218,109           | \$ 47,218,109                 |                                      | \$ -                    |
| Construction Grant                             | VA-95-X056-02 |                     | \$ 21,281,890           | \$ -                          |                                      | \$ 21,281,890           |
| STP Balance                                    | Planned       |                     | \$ 6,500,001            | \$ -                          |                                      | \$ 6,500,001            |
| <b>STP/Sec. 5307</b>                           |               | <b>2.39%</b>        | <b>\$ 75,000,000</b>    | <b>\$ 47,218,109</b>          | <b>63%</b>                           | <b>\$ 27,781,891</b>    |
| <b>Local Funds</b>                             |               |                     |                         |                               |                                      |                         |
| VTA 2000                                       |               |                     | \$ 51,700,000           | \$ 51,700,000                 |                                      | \$ -                    |
| Commonwealth Transportation Bonds <sup>2</sup> |               |                     | \$ 125,000,000          | \$ 113,100,629                |                                      | \$ 11,899,371           |
| Fairfax County Funds <sup>3</sup>              |               |                     | \$ 523,750,000          | \$ 47,000,000                 |                                      | \$ 476,750,000          |
| Dulles Toll Road Revenues <sup>2,4</sup>       |               |                     | \$ 1,467,021,634        | \$ 432,199,609                |                                      | \$ 1,034,822,025        |
| <b>Subtotal - Local Funds</b>                  |               | <b>68.97%</b>       | <b>\$ 2,167,471,634</b> | <b>\$ 644,000,238</b>         | <b>29.71%</b>                        | <b>\$ 1,523,471,396</b> |
| <b>Total Project Budget</b>                    |               | <b>100%</b>         | <b>\$ 3,142,471,634</b> | <b>\$ 1,014,404,626</b>       |                                      | <b>\$ 2,128,067,008</b> |
| <b>Interrelated Highway Activities</b>         |               |                     |                         |                               |                                      |                         |
| DTR Revenues/Commonwealth Funds <sup>3</sup>   |               |                     | \$ 123,208,229          | \$ 66,012,226                 |                                      | \$ 57,196,003           |
| <b>Total</b>                                   |               |                     | <b>\$ 3,265,679,863</b> | <b>\$ 1,080,416,852</b>       | <b>53.58%</b>                        | <b>\$ 2,185,263,011</b> |

<sup>1</sup> Reflects costs through November 2010

<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

## 6. Project Risks

The PMOC commenced the risk assessment process with the first workshop held April 4-7, 2006. Risk Assessment Workshops were held on June 12-14, 2007 and July 10-12, 2007 at the Project offices.

In August 2008, the PMOC was directed by the FTA 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 MWAA 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 MWAA's cost, schedule and secondary mitigation procedures. The PMOC issued the Final PG-40EFG spot report on October 6, 2008.

Through November 25, 2010, MWAA reports that it has utilized \$108,992,169 of the available authorized federal contingency of \$200,000,000 for Contingency Phases 1 through 5. Phases 1 and 2 were to carry the Project through the completion of stations design which was anticipated



to have been completed by the end of the third quarter of 2009. The completion of stations design is now anticipated during the first quarter of 2011. Phase 3 would complete the Utility Relocation Program now anticipated to be fully complete in the third quarter of 2011. MWAA now reports that it has \$15,115,250 obligated from Phase 6 through 10 monies. Of the total project contingency of \$297,762,579, the project has \$173,655,160 available. The PMOC also requested that MWAA update the Risk Management Plan. The Project Team has engaged the Risk Consultant used to prepare the original Risk Analysis to prepare the update to the Risk and Contingency Management Plan. During the quarter there were two two-day sessions held for the purpose of updating the data inputs to the revised analysis. It is expected that the results will be reported in the next quarterly report.

With regard to Schedule Contingency, the Project has utilized 111 calendar days of the total of 510 calendar days. The balance in schedule contingency is 399 calendar days.

MWAA has been following their Risk Management Plan dated October 2008. *It is now reviewing the draft revision submitted by its consultant. It plans to complete its review and be prepared to submit the revised plan in late January 2011 and meet with the PMOC for discussions in early February 2011.* The following are the Project’s current top 10 cost and schedule risks, along with their current status.

### Top 10 Project Risks

| Risk No. | Risk Description   | SCC Reference      | Risk Category |       | Status<br>(Change from Previous Month)  |
|----------|--|--------------------|---------------|-------|---|
|          |  |                    | Cost          | Sched |   |
| M-21     | Allowance items- a substantial part of the contract price is tied to “Allowance Subcontracts.” There is potential risk for increased project cost and schedule if the actual subcontracts exceed the allocated cost and schedule components in the contract. | 10, 20, 30, 40, 50 | X             | X     | Unchanged. Thirteen of thirty-one sub-contract packages have been awarded to date. The variance of the awarded cost versus allowance budget is \$11.87 million. <i>However, a sharp increase is expected in the coming quarter.</i> |
| C-8      | NATM tunnel—there are a limited number of qualified tunneling contractors, unforeseen conditions, tunnel collapse, production rate slower than anticipated, and possible critical path delay.  | 10.07              | X             | X     | <i>To be Retired.</i> The contractor self-performed this work. Mining construction was completed with 1,670-feet of excavation complete on the outbound tunnel and 1,686-feet of excavation complete on the inbound tunnel.         |

| Risk No. | Risk Description  | SCC Reference  | Risk Category<br>Cost Sched |   | Status<br>(Change from Previous Month)   |
|----------|---|----------------|-----------------------------|---|--|
| C-29     | Soils Management – risk that costs for disposal of soil (clean and contaminated) may exceed budget.   | 40.1           | X                           | X | Unchanged. Agreements with MWAA allow “clean” soils, which represent about 90% of all project soils to be transferred to Laydown Area #11, and management of contaminated soils is being mitigated as schedule progresses.   |
| D-29     | WFCY maintenance annex – Design constraints and WMATA requirements may erode the cost reductions anticipated.   | 30             | X                           |   | Unchanged.   |
| C-34     | Utility companies performing utility relocation are not performing in accordance with the durations incorporated in the project schedule.   | 40.02          | X                           | X | Unchanged. (Replaced risk C-14.) Utility contractors have completed all critical relocation work in October 2010. However, the cost and schedule impacts are not yet known and forecast completion dates remain behind schedule as the road work contractor works toward regaining schedule losses.  |
| M-16     | Cost risk for vehicle procurement – size and timing of base order and options could change the car manufacturer’s interest in project and proposal pricing; vehicles may not be available in time for revenue operations. | 20.01<br>20.02 | X                           | X | <i>To be Retired.</i> Bids were received on June 19, 2009. The WMATA Board approved an award recommendation to Kawasaki on May 27, 2010. However, the delivery of the last car, as contained in the bid, is not scheduled to occur until September 12, 2014 which does not support Project needs. The WMATA Board awarded the contract to Kawasaki on July 27, 2010. NTP was issued on August 16, 2010. A revised delivery date schedule has not been submitted. <i>PMOC requested MWAA to include a schedule risk since the schedule does not currently meet the FFGA date.</i> |
| M-12     | Unpredictability of ROW settlement costs.   | 10.04          | X                           |   | Unchanged. Use of condemnation has increased the ROW costs.  |

| Risk No. | Risk Description  | SCC Reference           | Risk Category |       | Status<br>(Change from Previous Month)   |
|----------|---|-------------------------|---------------|-------|--|
|          |   |                         | Cost          | Sched |  |
| C-20     | WMATA scope of work, including site access support, technical support and WMATA construction elements may exceed the budget and schedule. In addition, there is the risk that WMATA will have difficulty supporting the DB contractor's requirements.   | 10.00<br>20.00<br>50.00 | X             | X     | Unchanged. Technical support for design has been generally provided in a timely manner, although the backlog of design reviews continues to increase. SSWPs required to access WMATA property are lengthy. There is potential risk with WMATA directing systems design upgrades for ATC, Traction Power and Communications systems.  |
| D-19     | Cost of Dominion Virginia Power (DVP) 34.5 kV distribution – Level of design is not typical of 100% PE design.  | 50.04                   | X             |       | Unchanged. Design of ductbank that will contain 34.5 kV power the length of project has been completed and the ductbank construction continues. Design by DVP to bring power to project has not been completed.  |
| D-27     | Permit Approvals – Potential delays due to the Virginia Department of Transportation (VDOT) requiring their review/approval of final design plans prior to Issued for Proposal (IFP) submittals. Potential delays due to the Department of General Services (DGS) making design-related comments rather than strictly permit/code comments. | 10.00<br>20.00<br>40.00 | X             | X     | Unchanged. The issuance of construction permits is taking longer than anticipated and the contractor is claiming that its costs are increasing. The Six Sigma process improved turn-around time with VDOT. The VDOT requirement for final design plans prior to IFP submittals may increase the risk. In addition, DGS is making design-related comments rather than strictly code/permit evaluations. |

## 7. Action Items

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

| PR | ITEM  | IDENTIFICATION  | NATURE of PROBLEM   | D | A | I | COMMENTS  | STATUS |
|----|-------|---|---|---|---|---|---|--------|
| 1  | 2A.01 | PMP Update<br>(Nov. 2009)   | MWAA's PMP needs to be updated to reflect the new integrated organization.  | Y | N | N | The integrated organizational structure has been formally implemented, and the PMP is now being updated to reflect this. MWAA received the PMOC's comments from the PMP Compliance Review held on October 14, 2009. MWAA submitted a draft PMP Version 7.0 to the PMOC on September 3, 2010. PMOC review comments were submitted to the FTA on November 4, 2010. MWAA is currently addressing the comments.   | R      |
| 1  | 2B.01 | Final Testing Plan for Re-used Piers<br>(Feb. 2010)               | MWAA approved the final testing plan (Rev 0) proposed by DTP for the Re-used Piers on March 30, 2010.                         | Y | Y | N | DTP and CTI Final Reports and MWAA's audit of the findings and pier designs were submitted to the FTA, PMOC and WMATA on October 19, 2010 for review. The PMOC recommended that continuity testing data be submitted for all eleven newly constructed piers on existing pier foundations. <i>MWAA Letter dated December 17, 2010 transmitted acceptance data on eight of eleven piers. Data on three piers remains outstanding as does a final Pier Continuity Test Report.</i> | R      |
| 3  | 2A.02 | Update Permitting Plan Appendices (June 2010)                     | Appendices need to reflect actual permitting agencies roles and responsibilities  | D | N | N | MWAA was requested to update the Permitting Plan Appendices at the June 2010 meeting. <i>MWAA submitted the updated permitting appendices on December 21, 2010.</i>   | R      |
| 4  | 2A.03 | Update Risk and Contingency Management Plan (RCMP)<br>(Oct. 2010) | The original Risk Management Plan was prepared in October 2008 and needs to be updated to reflect the current Project Status. | N | N | N | MWAA has engaged their Risk Management Consultant and is preparing a draft RCMP that is expected to be ready in <i>February</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    | <i>Agreement After Certificate</i>                                 |
| ARRA   | American Reinvestment and Recovery Act                             |
| ASSHTO | American Association of State Highway and Transportation Officials |
| BFMP   | Bus Fleet Management Plan  |
| CCC    | <i>Construction/Procurement/Installation Conformance Checklist</i> |
| CD     | Calendar Days  |
| CPM    | Critical Path Method   |
| CTI    | CTI Consultants, Inc.  |
| CY     | <i>Calendar Year</i>   |
| DB     | Design-Build   |
| DCC    | <i>Design Conformance Checklist</i>                                |
| DGS    | (Virginia) Department of General Services                          |
| DIAAH  | Dulles International Airport Access Highway                        |
| 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  |
| 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  |
| 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   | <i>Risk and Contingency Management Plan</i>                        |
| RFMP   | Rail Fleet Management Plan   |
| RMP    | Risk Management Plan   |
| ROD    | Revenue Operations Date  |

|             |   |
|-------------|---|
| ROE         | Right-of-Entry                                    |
| ROW         | Right-of-Way                                      |
| 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                                 |
| <i>WFCY</i> | <i>West Falls Church Yard</i>                     |
| WMATA       | Washington Metropolitan Area Transit Authority    |
| XO          | Executive Officer                                 |

## APPENDIX B -- PROJECT OVERVIEW AND MAP

### Project Overview

**Date:** January 25, 2011 (*reporting current through December 2010*)

**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

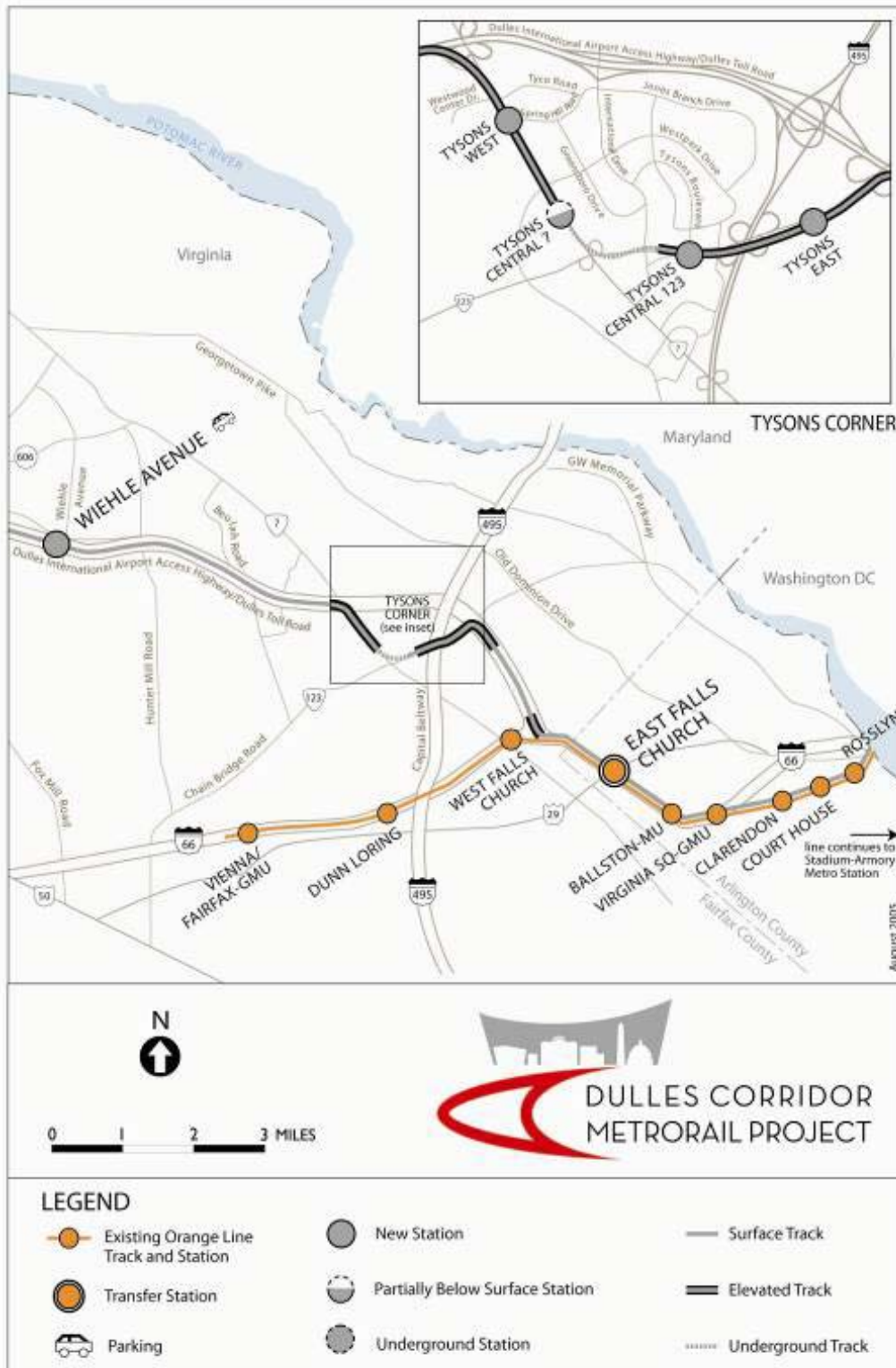
|          |  |          |                                  |
|----------|--|----------|----------------------------------|
| 06/10/04 | Approval to Enter PE   | 2011     | Estimated Rev Ops at Entry to PE |
| 05/12/08 | Approval to Enter FD   | 12/04/13 | Estimated Rev Ops at Entry to FD |
| 03/10/09 | FFGA signed  | 12/01/14 | Estimated Rev Ops at FFGA        |
| 03/25/14 | Revenue Operations Date (ROD) <i>as of November 25, 2010</i>           |          |                                  |
| 27.0%    | Percent Complete Construction <i>as of December 31, 2010.</i>          |          |                                  |
| 31.86%   | Percent Complete Time based on ROD of December 1, 2014 (based on FFGA) |          |                                  |
| 43.47%   | MWAA's Estimate of Project Earned Value through <i>November 2010</i>   |          |                                  |



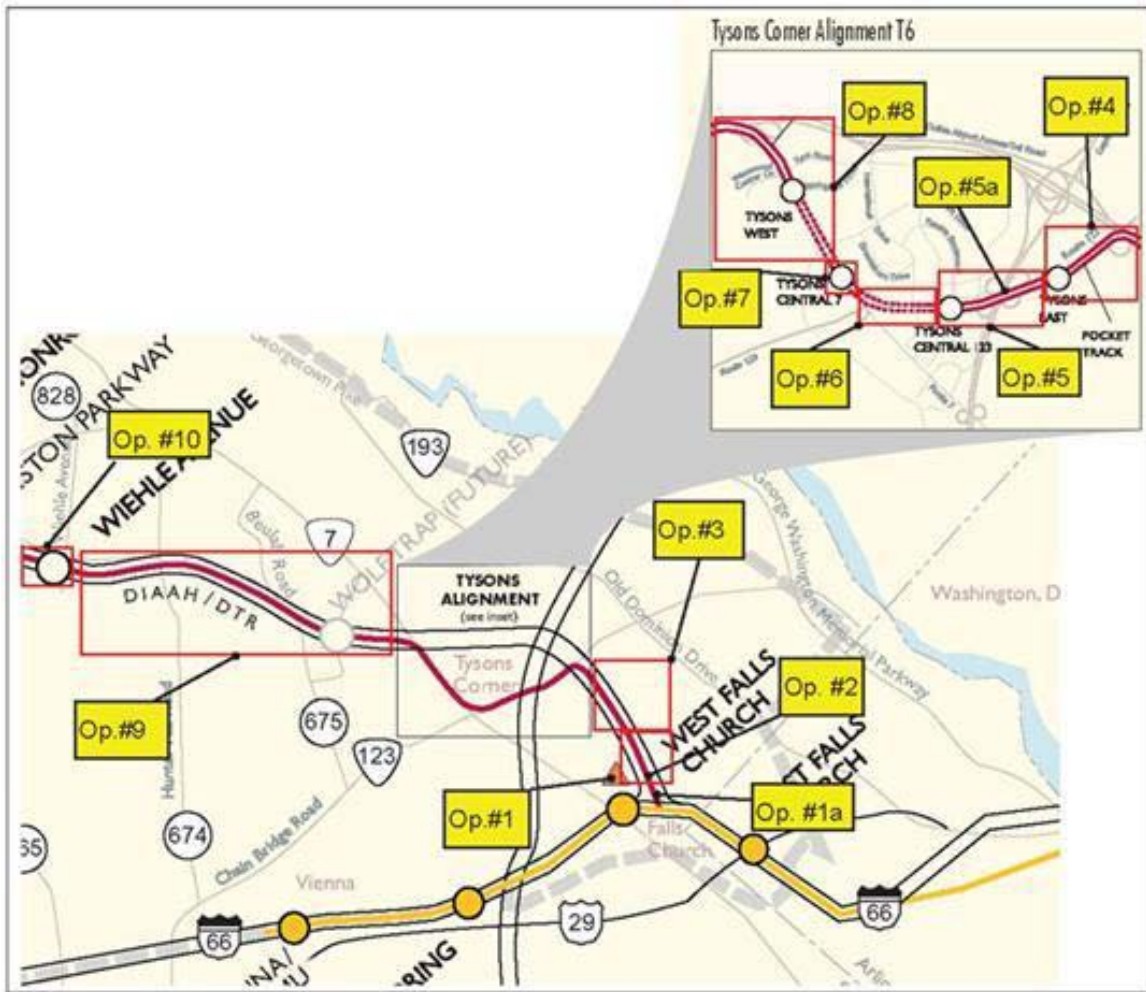
**Cost**

|                        |  |
|------------------------|--|
| \$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                  |
| <i>\$1.014 billion</i> | Expenditures through <i>November 2010</i> from total project budget of \$3.142 billion         |
| 32%                    | Percent complete based on <i>federal</i> expenditures through <i>November 2010</i> .           |
| \$173.655 million      | Total project contingency remaining (allocated and unallocated) through <i>November 2010</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>   | <i>Version</i>                           | <i>Review By FTA</i> | <b>Status</b>   |
| Safety and Security Management Plan  | 9/2009                                   |                      | Accepted  |
| Safety and Security Certification Plan   |  |                      | Under development; 98% complete   |
| System Safety Program Plan   |  |                      | WMATA's SSPP will be used. In response to FTA's Safety and Security Oversight Audit of TOC/WMATA and TOC Triennial Review findings, WMATA is updating its SSPP which is to be approved by TOC and submitted to FTA in January 2011. |
| 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, which 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 | WMATA's SSPP will be used. Revised SSPP is to be submitted in January 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 two representatives at the October 27, 2010 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>  |   |   |
| 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   |
| Does the grantee maintain a regularly scheduled report on the status of safety and security activities?   | N | WMATA   |
| Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?   | N | WMATA   |
| Does the grantee update the safety and security responsibility matrix/organizational chart as necessary?  | N | WMATA   |
| Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?  | N | WMATA   |
| 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.  |   |  |
| 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, 98% complete.                       |
| Has the grantee verified conformance with safety and security requirements during testing, inspection and start-up phases?  | N | After SSCD                                       |
| Does the grantee evaluate 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 | Y |  |
| 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>  |   |  |
| 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?  | N   |  |
| If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?  |     |  |
| Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?   | Y   |  |
| <b>Federal Railroad Administration</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]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



[Redacted text block]

[Redacted text block]

[Redacted text block]