

COMPREHENSIVE MONTHLY REPORT

December 2011

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

January 20, 2012

PMOC Contract Number: DTFT60-09-D-00016

Task Order Number: 002, **Project Number:** DC-27-5142, **Work Order No.** 02

OPs Referenced: 01, 25

Hill International, Inc.

One Penn Square West

30 South 15th Street

Philadelphia, PA 19102

PMOC Lead: [REDACTED]

Length of Time PMOC Assigned to Project: 11 years

Length of Time PMOC Lead Assigned to Project: 3.5 years

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EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *January 4, 2012* to conduct a monthly progress review meeting. The full time on-site PMOC representative attended various project meetings and site tours throughout this reporting period. Additional information for this report was obtained from MWAA during the *first and second week of January 2012*. Future PMOC monthly progress meetings are planned to occur on the first Tuesday of each month.

1. Project Description

MWAA, in cooperation with the Washington Metropolitan Area Transit Authority (WMATA), proposes to implement a 23.1-mile rapid transit system in the Dulles Corridor of Northern Virginia. The proposed corridor follows the alignment of the Dulles International Airport Access Highway (DIAAH) and the Dulles Toll Road within Fairfax County, and the Dulles Greenway, a private toll road in Loudoun County. The Project (Initial Operating Segment) undertakes the construction of the initial 11.7-miles of the rail project from the existing Metrorail Orange Line just east of the West Falls Church (WFC) Station to a station to be constructed at Wiehle Avenue with a total project cost of \$3.142 billion. Included in the Project are five new stations (Tysons East, Tysons Central 123, Tysons Central 7, Tysons West and Wiehle Avenue), improvements to the existing yard at WFC, and tail tracks beyond the Wiehle Avenue station. Sixty-four additional rail cars are required to provide service for the Project. Based on the Full Funding Grant Agreement (FFGA), the Revenue Service Date (RSD) is December 1, 2014. The Federal New Starts share is \$900 million, along with \$75 million in Surface Transportation Program (STP) funds, for the Initial Operating Segment (extension to Wiehle Avenue). Through Federal fiscal year (FY) 2011, Congress has appropriated \$524.5 million in Section 5309 New Starts funds for the Project. The FTA has awarded \$404,483,364 in Section New Starts and \$68,499,999 in STP funds to date for the Project.

2. Project Status Summary

The PMOC met with MWAA on *January 4, 2012* to conduct a monthly progress review meeting. The status information is as of *December 31, 2011*, 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** - The last of the initial PDRs was completed with the Truck PDR, which underwent review on November 30, 2011. *WMATA reported that all PDR engineering meetings have been completed and all remaining PDR contract deliverables are targeted to be approved by the end of January 2012, more than nine months past the baseline schedule date of March 30, 2011.*

On October 20, 2011, WMATA approved Kawasaki's Master Program Schedule (Baseline). WMATA subsequently approved Kawasaki's Mitigation Schedule on December 21, 2011 with a June 12, 2015 delivery date for the 64th railcar, which is more than six months beyond the FFGA completion date for the DCMP.

- **Design progress** - Overall project design is 99% complete as of the end of December 2011. Revised designs for the Tysons Central 123 and Tysons West Station pedestrian bridges and pavilions are near their final permitting stages, which are expected to be complete in February 2012.
- MWAA issued a NTP on January 24, 2011 to an independent third party consultant, Battelle, to review Alstom’s safety analysis of the Generation 4 track circuit modules proposed for use on the Dulles Extension. The Battelle “Safety Analysis Review and Assessment” remained behind schedule, with the review of proprietary data at Alstom’s facility in Rochester, NY, in December. MWAA reported during the January 4, 2012 monthly meeting that the review was winding down. However, during Battelle’s November interviews with Alstom, it was discovered that there was another ten documents they felt needed to be reviewed before completing their draft report. Those final documents are expected to be available for review on January 9 and Battelle’s plan to complete its draft report in January 2012 and the “Final Assessment Report” submission to the FTA remains unchanged from Battelle’s revised schedule.
- **Construction progress** is broken into two components: utility relocation (UR), which is 99% complete, and design-build (DB) construction, which is approximately 61% complete. Significant accomplishments for December included continued segmental box girder installation on the Tyson East Guideway with Launch Girder Truss LG1; completion of the remaining pier construction on the Tysons West Guideway along with significant segmental box girder installation with Launch Girder Truss LG2 along with completion of the ground based crane installation of the balanced cantilevered segments; major foundation, wall, track bed, platform, column and mezzanine work on all five stations; and precast cladding and architectural steel dome erection at the Wiehle Avenue Station; both ballasted and direct fixation trackwork installation on the O-1 Guideway, Tysons East Guideway, and along the DCR and DIAAH.

CONSTRUCTION PROGRESS THROUGH DECEMBER 2011			
GUIDEWAYS AND TRACKWAYS	% COMPLETE	STATIONS	% COMPLETE
O-1 Guideway	99%	Tysons East	41%
Tysons East Guideway	96%	Tysons Central 123	38%
Tysons Tunnel	97%	Tysons Central 7	22%
Tysons West Guideway	75%	Tysons West	28%
O-3 Trackway	86%	Wiehle Avenue	44%
O-9 Trackway	89%		

- **The DTP Schedule Update** with a data date of November 25, 2011 “Mitigation Schedule” showed a -12 calendar day loss compared to the -15 calendar day loss reflected in the October 25, 2011 update. This schedule update incorporated mitigation measures discussed and accepted in recent months. The costs for these mitigation efforts submitted as RFC’s 160 and 161. MWAA and DTP continue to negotiate the mitigation schedule related RFC’s and anticipate a lump sum settlement in late January 2012.

With regard to the WFC Yard completion date, matters finally appear to be close to resolution. MWAA reported during the January 4 monthly update meeting that they are nearing an agreement with DTP's request for change. DTP's schedule update of November 25, 2011 reflects a WFC Yard completion date of May 21, 2014. MWAA reported that Whiting-Turner, the WFCY contractor, recently presented a schedule showing the sound box completion in late 2013 and the S&I Shop completion in May 2014. MWAA also reported that they will be discussing the potential for running trains in the yard in advance of the S&I Shop completion in order to support the DCMP train testing program and subsequent RSD.

- **Budget** status as of November 25, 2011 indicates that \$1,623,897,587 (52%) has been expended of the \$3,142,471,634 budget total. MWAA reports \$213,849,905 (90%) of the available contingency for the first seven contingency milestones has been drawn down to date with a remaining contingency balance of \$22,650,095 (10%) available through the current phase of construction. **The federal portion of the Allowance Items recommended for award and yet to be awarded are estimated to be \$81.3 million over budget. This amount has not yet been drawn down. Therefore, the project is likely to be officially over budget in the near future.** MWAA acknowledges a \$71.8 million in potential source of an increase in contingency from a reduction in budgeted Finance Charges that they could use to make up a portion of this deficit. However, at the December 7, 2011 update meeting, MWAA indicated that the potential savings in finance costs will remain in that line item and not used for construction at this time. The PMOC is reviewing changes that could be betterments, and may recommend to FTA that MWAA label them as Concurrent Non-Project Activities or recover those costs from the requesting agencies.

MWAA's estimate of the earned value for the Project through November 2011 is 64.5%.

- **Risk --** The PMOC reviewed MWAA's updated Risk Assessment dated April 15, 2011. The PMOC and MWAA have met several times since then to review various revisions. MWAA submitted the Final Draft of RCMP – Rev. 2b on November 23, 2011. At the December 7 update meeting the PMOC expressed concern that the document did not address the PMOC's comments of November 18, 2011 relative to the Top Ten Risks and Risk Register which was submitted by MWAA on November 10, 2011. Another meeting was conducted on January 4, 2012 to address these remaining issues. It was agreed that the PMOC would recommend FTA approval once MWAA updated the top ten ratings and the risk register and separated risks R23 and R31.
- The Full Time Equivalents (FTE) estimated total for December is 1636, which is a decrease of 56 from the November actual of 1,692. A fluctuation of FTE's is to be expected as winter arrives and as certain civil work is completed and systems work begins. However, it remains to be seen if this fluctuation will be appropriately managed and will be adequate to support the newly agreed "Mitigation Schedule."
- **Core Accountability Items**
 - Cost:
 - Project Cost at FFGA Signing: \$3.142 B
 - Current Project Cost: \$3.142 B
 - Total Expenditures to Date: \$1.624 B

- Percent Complete in terms of expenditures to date: 50.2%
- Percent Complete in terms of earned value: 65.4%
- Schedule:
 - Forecasted Revenue Service Date: 12/31/13 (by DTP)
 - Percent Complete in terms of time expended to date: 49.1% (Total time from FFGA to RSD)
 - Percent Complete in terms of earned value: 65.4%
- Contingency
 - Total Project Contingency: \$297.76 M
 - Current (remaining) Contingency: \$ 49.79 M

3. PMOC's Assessment of Project Status

To address potential budget overruns, the PMOC concludes that MWAA needs to replenish the Project contingency and actively pursue items that may be betterments and billed to the responsible parties. It is the PMOC's opinion that the change orders for WMATA-requested ETS and TPSS Remote Monitoring systems are outside MWAA's Intergovernmental Agreement with WMATA, are betterments to the project, and should be funded outside the FTA project. The PMOC's current assessment of betterments amount is approximately \$94 M.

The projected overruns in the estimated costs of the remaining Allowance Items (\$81.3M) indicate that there is an immediate need to replenish the project contingency. **Given the forecasted magnitude of the Allowance Items cost overrun, the Project is, in the PMOC's opinion, on track to exceed the FFGA budget, if the betterments are not removed from the federal project.** The PMOC *continues to* review both the use of contingency and the changes that can be considered betterments to determine the shortfall in contingency.

Following many months of schedule critical path disagreement, the Project is now working according to an agreed "Mitigation Schedule". The mitigation schedule with a data date of November 25, 2011 with a -12 calendar variance to the contract schedule reflects an SSCD of August 27, 2013. MWAA issued Directive Letter #35 on November 1, 2011 to authorize implementation of the Mitigation Schedule. Associated cost negotiations are currently underway with an anticipated lump sum settlement expected in late January 2012. Therefore, it remains the PMOC's opinion that the Project will be in revenue service within the FFGA specified date of December 1, 2014.

However, Kawasaki's ongoing struggle to address the impacts of the March 2011 earthquake and tsunami continues to be a concern to the PMOC. *On December 21, 2011, WMATA approved a mitigation contract schedule that forecasts a delivery date of the 64th DCMP rail cars on June 12, 2015. This schedule does not meet the FFGA Revenue Service Date (RSD) date of December 1, 2014. In addition, the PMOC's questions WMATA's ability to provide interim rail cars for testing and revenue service suggests that full revenue service by the FFGA RSD is still in jeopardy. The inability of WMATA to meet current daily car requirements makes questionable their ability to provide the additional cars required for the Dulles Phase 1 testing and revenue service.*

MAIN REPORT

1. Grantee's Capabilities and Approach

a. Technical Capacity and Capability

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

In September 2009, MWAA reorganized by implementing an integrated project management organization consisting of MWAA and PMSS staff. However, the personnel involved remained the same as was evaluated in the January 2008 Technical Capacity and Capability Report. It is the PMOC's opinion that the staffing levels and technical capabilities are still adequate.

Upon completion of the project, WMATA will become the operator of this extension to their system. WMATA personnel have been active participants in the project.

b. Project Controls

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

- *The Project Schedule was updated by DTP through November 2011. In this update DTP reported a possible delay of -12 calendar days to the SSCD which is forecasted by DTP to occur on August 27, 2013. DTP's Critical Path No. 1 in their November 2011 Schedule Update originates with the LG #1 precast segmental erection of Aerial Guideway outbound of Tysons East Station. MWAA completed its schedule review and wrote letter 06016 dated December 22, 2011 providing agreement with the schedule with some schedule logic exceptions.*
- MWAA continues to monitor expenditures to date and to update the estimate at completion. Through November 25, 2011, MWAA has drawn down \$213,849,905 of the Phase 1 through 7 allotted contingency of \$236,500,000. The contingency utilization reflects expended costs. There is an additional \$34.1 million in obligated contingency in Phases 8 through 10.

- MWAA submitted an updated draft of the project Risk and Contingency Management Plan to the FTA on August 5, 2011. For details, see section 3 “Project Management Plan and Sub-plans” below.
- The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data.

Through *December 2011*, of the cumulative total of 8,077,077 hours worked there have been three lost time accidents.

Revision 5 of the *Safety and Security Certifiable Items List (SCIL)* has been reviewed and all comments have been resolved. *DTP’s final resubmission on November 18, 2011 was subsequently accepted as noted by MWAA. The SCIL for K99 (West Falls Church Yard) was received by MWAA on December 21, 2011 separately from the entire SCIL for review and comment. Comments for the K99 SCIL will be returned by January 27, 2012. Once the K99 review is completed, DTP will submit Revision 6 of the SCIL in it’s entirety with K99 included.*

DTP submitted revisions to the System Safety/Security Management Plan (SSMP) and DTP Procedures PPQ 01.06.02, Development and Maintenance of the Safety/Security Certifiable Items List and PPQ 01.06.03, Design Conformance Certification that MWAA accepted on December 6, 2010. The FTA and PMOC met with MWAA, WMATA, and DTP on April 29, 2011 to discuss development of a revised SSMP to integrate WMATA and MWAA systems testing, interface management and pre-revenue operations. WMATA has created a “Start-up Steering Committee” and has hired the Delcan Corporation to assist with that effort. MWAA published its draft SSMP Revision 9 on September 30, 2011. The draft provides a placeholder as Appendix E for WMATA’s input yet to be completed. A follow-up joint meeting *was rescheduled for January 27, 2012* to review the progress made thus far.

c. Compliance

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

MWAA submitted updates to the Amended Record of Decision Summary Mitigation Report to the FTA for the third quarter of 2011 on November 7, 2011.

2. Project Scope

a. Design Status

Except for the associated pedestrian bridges and pavilions, DTP has completed design work with the receipt of permit approvals on the station designs. Issued for Construction (IFC) drawings for all five stations have also been completed. WMATA review and approval of ATC submittals continues to meet the needs of the project.

Revised designs for the Tysons Central 123 and Tysons West Station pedestrian bridges and pavilions are near their final permitting stages and are expected to be complete in February 2012. The late issuance of IFP and IFC design packages has had no apparent adverse impact on the project's critical path, due in part to DGS permitting of partial packages. However, the remaining design packages continue to accumulate negative float on the Project schedule.

b. Bidding and Construction Status

Through *November 2011*, DTP has awarded \$333,087,173 of the \$437,278,511 *federally funded* Allowance Items Budget to subcontractors and suppliers, a \$46,767,866 overrun for 31 of 38 sub-contract packages awarded thus far. In addition, MWAA has Allowance Items recommended for Award, but not yet awarded, worth \$215.2 million, which is \$81.3 million over budget. The \$81.3 million does not include the \$23.5 million for allowance items anticipated to be awarded in the first quarter of 2012, *including* Pavilion and Pedestrian Finishes, Stonework and Tile, Pedestrian Bridge Installation, Installation of Public Art, Spare Parts and Traction Power Supply – WP.10C Instrument and Fiber Optic Cable.

Utility relocation is 99% complete, and DB construction is approximately 62% complete. Remaining utility relocation involves installation of traction power ductbank and manholes for bridge crossings along the DIAAH from Route 7 to Route 267 and along the DCR between Route 123 and the WMATA K-Line.

The following are the major accomplishments of the DB contractor during *December 2011*:

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1)** – *Continued installation of acoustical barriers on the O-1 guideway segments. Continued installation of ATC cabling and equipment during non-revenue hours at the K-line. Continued installation of cable troughs adjacent to new ballasted track at the K-line area. Continued modifications to the existing TPSS at Fisher Avenue. Delivered and set the Train Control facility at Fisher Avenue and continued with cable and terminations inside. Continued installation of the special track work and ballasted track west of the WFCY lead tunnel in the DCR median. Continued placing ballast, ties and rail between Idyllwood Road and the Tysons East Guideway abutment. Continued track and plinth construction on the O-1 guideway. Commenced construction of Stage 2B of the WFCY Cut and Cover Tunnel in the right lane of the EB DCR. Continued installation of piping and conduits at the jack and bore into the WFCY. Delivered and set the Train Control Room facility at the TPSS #1 site. Continued ductbank construction at TPSS #2. Began post and panel wall erection at TBS #2. Surfaced and aligned K and N-Line tracks during the single track outage in mid-December.*

Operations Area OP-4/5A (Tysons East Guideway/Station/I-495 Crossing) – *Continued segmental box girder guideway erection with Truss LG1 completing spans 43-OB, 44-IB and 44-OB for a total of seventy-six spans completed to date. Completed post-tensioning and grouting of the I-495 segmental girders. Continued direct fixation track installation on the guideway west of the double crossover. Continued installation of acoustical precast panels on segmental girders on the guideway over I-495. Continued placing concrete walls at the ground level entrance and service rooms, MEP installations and erection of architectural precast panels at the Tysons East Station. Delivered and set*

in place the TBS #3 facility. Mobilizing for pile driving at the Tysons East pedestrian bridge foundation at Colshire Drive.

- **Operations Area OP-5 (Tysons Central 123 Station)** – *Continued pouring interior columns. Continued installation of ductbank for traction power, ATC, and communications between Tysons 123 Station and the East Ventilation Structure. Completed pouring of the track invert slab. Continued setting precast platform beams. Continued setting precast architectural panels. Formed and poured the pedestrian bridge column adjacent to the Tysons 123 Station. Mobilized the flash butt rail welding plant between Tysons 123 and the tunnel and started welding rail strings for the Tyson 123 Station and Tysons East Guideway.*
- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure)** – *Continued forming, rebar installation and pouring the fan room walls. Completed pouring roof section for the east cut and cover tunnel and continued backfilling operations.*
- **Operations Area OP-6 (West Cut and Cover Tunnel)** – *Continued with the wall and roof construction on the IB and OB tunnel sections. Continued with the column and elevated slab construction at the West Ventilation Structure.*
- **Operations Area OP-7 (Tysons Central 7 Station)** – *Continued installing steel roof framing and decking for TPSS #5. Continued forming, rebar installation, and pouring barrier walls adjacent to Route 7. Continued to form and pour station columns. Continued the CMU installation in the station mechanical room.*
- **Operations Area OP-8 (Tysons West Station/Guideway)** – *Continued guideway segmental girder erection with Truss LG2, completing spans 20-OB, 20-IB, 21-IB, 21-OB and 22-OB for a total of thirty-seven completed to date. Completed erection of the balanced cantilever segments at spans 5, 6 and 7 over Gosnell Road with a ground based crane. Completed Tysons West Guideway/Station pier cap at pier 33, all guideway pier caps are now complete. Continued rebar installation and pouring of the mezzanine slab. Completed form removal at straddle bent 42 over eastbound Route 7. Continued approach wall construction at abutment B.*
- **Operations Area OP-9 (DIAAH)** – *Continued pouring approach walls at the Difficult Run Bridge. Continued construction of retaining walls on both OB and IB sides between Hunter Mill Road and the Tysons West abutment B. Continued jack and bore work, ductbank installation and installation of the ground grid for TPSS #7. Continued drilling steel posts for post and panel walls at TPSS #11 and started the ground grid installation. Continued ductbank tie-ins at TPSS #10. Delivered transformers at TPSS #9. Continued installation of ballast and track between the W&OD Trail and Wiehle Avenue. Continued finish grading at Storm Water Pond No. 11.*
- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)** – *Continue MEP installations at the west platform service rooms. Continued installation of precast architectural panels. Continued installation of station escalators. Completed installation*

of the steel roof vault framing. Continued installation of steel H-piles for the land bridges at the Williams Transco pipelines west of the Wiehle Avenue Station.

- **Laydown Area 10 (Pre-cast Yard)** – Continued staging and load out of precast segments for Tysons East and Tysons West Guideways.

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

c. Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *December 2011*, 93 of the 102 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *December 2011*.

PARCELS ACQUIRED¹
(Number of parcel packages)

LOCATIONS	TOTAL	Period			To Date		
		Planned ²	Actual	Var	Planned ²	Actual	Var
Route 66 / DCR	1	0	0	0	1	1	0
Route 123	23	0	0	0	23	21	(2)
Route 7	51	0	0	0	51	49	(2)
DIAAH	27	0	3	3	27	22	(5)
TOTAL	102	0	3	3	102	93	(9)

- Notes: 1. Parcels acquired through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 38 parcels for which Certificates of Take have been filed.
 2. Planned values are based on the March 31, 2011 Property Acquisition Status Update.

Condemnation Status

Thirty-eight parcel packages have been obtained with the filing of thirty-two Certificates of Take. *In December 2011, two new cases entered discussions with the property owners (Parcel 81, Commerce Executive Park and Parcel 186, Maximus Properties), two cases are in the early stages for an Agreement after Certificate (Parcel 76, Oakcrest School and Parcel 109, AG/ARC Plaza America), and four other cases continued to move toward having the Final Order entered for Agreements After Certificate (Parcel 35, Embassy Suites; Parcel 28, Stohlman; Parcel 29, Westpark Corporation Center, LLC and Parcel 56, HBL Mercedes/George C. Andreas, TR, et al.) One case had the Final Order entered (Parcel 80, American College of Radiology). In addition, a settlement for the case formerly under appeal (Parcel 23, Pike 7) was agreed to, so that case entered finalization in December.*

d. Utility Coordination

Utility relocation work continued through December 2011 and is considered to be 99% complete. DTP’s utility relocation design team continues to address conflicts or field

conditions when required and to coordinate all modifications with the A&R D-B contract requirements. Installation of facilities for each third party utility has been completed in Tysons Corner and all utility companies have completed the local tie-in conduits and cables required to modify their circuits in compliance with the overall Project utility design.

Specific utility relocation work completed and continuing through *December 2011* includes the following:

- **Dulles Connector Road (DCR) East – (K-Line to Route 123)** – *Continued installing conduits at and tie-ins for Pimmit Run and Magarity Road bridge crossings.*
- **Route 123 (DCR to Route 7)** – *Lane construction continued to complete the electrical duct bank section adjacent to the Tysons East Station and resumed installation of the bypass manhole and ductbanks at the two remaining locations in Laydown Area 6.*
- **DIAAH West -- (Route 7 to Wiehle Avenue)** – *Continued installation of the traction power ductbank and manholes for bridge crossings. Continued installation of the traction power conduit hangers on the Hunter Mill Road, Difficult Run and W&OB Bridges. Washington Gas continues relocation work at the TPSS #10 site.*

e. Vehicle Procurement

WMATA is procuring the 64 rail cars required for the project. WMATA is also procuring 300 replacement rail cars under the same contract. The WMATA Board approved the award of a contract and a sharing of development costs with MWAA at its May 27, 2010 meeting. The MWAA Board agreed at its June 2, 2010 meeting to share the development costs associated with the railcar procurement equally with WMATA.

WMATA awarded a contract to Kawasaki on July 27, 2010. The manufacturer's proposed schedule showed the 64th car would be delivered by September 12, 2014 based on a July 12, 2010 notice to proceed (NTP), but WMATA did not issue the Notice-To-Proceed (NTP) until August 16, 2010. Thus, the contract indicated that the 64th rail car would be conditionally accepted on January 15, 2015 as an early completion date, which did not comply with the FFGA date of December 1, 2014.

On December 3, 2010, WMATA confirmed in a letter to MWAA "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 on the Dulles Extension. Since there is a gap in the delivery of the 7000 Series Rail Car delivery and revenue service date, WMATA outlined its strategies for being able to support initial revenue service using the existing WMATA fleet.

The Conceptual Design Review phase was completed on January 31, 2011 and the program moved into the Preliminary Design Review (PDR) phase. The last of the initial PDRs was completed with the Truck PDR, which underwent review on November 29-30, 2011. *WMATA reported that all PDR engineering meetings have been completed and all remaining PDR contract deliverables are targeted to be approved by the end of January 2012, more than nine months past the baseline schedule date of March 30, 2011.*

- On March 16, 2011, Kawasaki formally notified WMATA of potential delays that they believe would be considered excusable under the terms of the contract due to the earthquake/tsunami of March 11, 2011.

WMATA and Kawasaki have been working to minimize the delays. However, mitigation must occur with the car assembly activities since Kawasaki suppliers have been unable to mitigate the earthquake delays in the production phase. WMATA met with Kawasaki during November 2011 to work out the remaining technical schedule issues.

On October 20, 2011, WMATA approved Kawasaki’s Master Program Schedule (Baseline). *On December 21, 2011, WMATA approved Kawasaki’s Mitigation Schedule with a June 12, 2015 delivery date for the 64th railcar, which is more than six months beyond the FFGA completion date for the DCMP.*

The *current* contractual milestones for this procurement are:

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

The PMOC will continue to monitor both the progress of the procurement and WMATA’s management.

f. Safety and Quality Status

MWAA participated in *four* safety walk downs with DTP during the month of *December*. All were related to Design-Build work. As of *December 31, 2011*, DTP had logged 8.077 million project man-hours with 326 first aid cases and three lost time cases. There have been a total of 577 incident investigation reports, 82 utility hits and 15 vehicular accidents.

Revision 5 of the SCIL has been reviewed and all comments have been resolved. *DTP's final resubmission on November 18, 2011 was subsequently accepted as noted by MWAA. MWAA received the SCIL for K99 (West Falls Church Yard on December 21, 2011, separately from the entire SCIL for review and comment. MWAA will provide comments back to DTP on K99 SCIL by January 27, 2012. Once the K99 review is completed, DTP will submit Revision 6 of the SCIL in its entirety with K99 included.*

DTP and MWAA continue to meet every two weeks to review the status of issued for construction designs (including subcontractor designs) and to determine the status of sign-offs of the Design Conformance Checklist (DCC) and Construction/Procurement/Installation Conformance Checklist (CCC) items related to all issued for construction designs. The FTA and PMOC have been expressing concern with the lack of progress on both the DCC and CCC submissions. In *recent* months, all partners have exchanged correspondence on these concerns and have been working together to address those concerns. However, *it is apparent that the problems persist since MWAA reports that its review of DCC No. 7 "found excessive serious discrepancies" and rejected the submittal. MWAA also noted that a Corrective Action Report has been issued to DTP Engineering due to the procedural deficiencies noted during the review and that a response is expected by mid-January 2012. DTP's submission of DCC No. 8 has been delayed pending resolution of the issues with DCC No. 7. During the January 4, 2012 Monthly Update Meeting, MWAA reported that the matter has again been elevated to MWAA and DTP executive management.*

It *still* appears to the PMOC that two DTP staff (one full time and one part time) who have been tasked with managing the SCIL and sign-offs is insufficient, that they need the authority to make meaningful and timely progress, ***and that DTP management has done little to remedy the matter over the past year.***

DTP submitted Construction/Procurement/Installation Conformance Checklist (CCC) submittal No. 3 on July 11, 2011 with only three sign-off items. MWAA rejected CCC No. 3 and returned it to DTP due to insufficient information. MWAA and DTP report that not many items have been signed off since many of the sign-off activities include large segments of work that need to be completely finished prior to sign-off; the majority of the CCC items are systems-related and most of the work thus far has been civil-related. The next CCC will be submitted in early 2012. *A preliminary walk down of K98 (K-Line Tie-in) was conducted by MWAA, WMATA, DTP and the PMO on December 14, 2011 in an effort to refine the CCC process and expectations of each partner prior to the CCC No. 4 submission. It was a good effort and helped identify what documentation support MWAA and WMATA would need from DTP to validate sign-off acceptance.*

Regular weekly visits to work sites by safety representatives from DTP, MWAA and WMATA continue. The Tri-State Oversight (TOC) and the FTA's on-site PMOC representative continue to meet monthly with the Safety/Security Certification Working Group (SCWG) and continue ongoing involvement in the certification process. The SCWG did not hold its regular monthly meeting in *December 2011 due to the holidays.*

MWAA transmitted Revision 5 of the DTP System Safety/Security Certification Management Plan to the FTA on December 8, 2010. MWAA submitted its Safety and

Security Management Plan, Revision 8, to the FTA on February 17, 2011. An FTA/PMOC Safety/Security Program Review Meeting was conducted with all stakeholders on April 29, 2011. FTA explained the requirement for a complete SSMP for the Dulles Corridor project -- not just for the MWAA portion. MWAA and WMATA agreed to develop a revised SSMP that will cover the roles and responsibilities of both MWAA and WMATA for this project -- including the vehicles, the approach for integrated testing and interface management, joint safety and security certification activities and hand-offs, and pre-revenue operations. WMATA will also determine how it will manage its role in the safety and security certification process and identify and develop the required plans or procedures. MWAA and WMATA plan to hold bi-weekly meetings to address these issues. MWAA reported that WMATA has hired Delcan Transportation, Inc. to review all of the quality work done on the project and to develop a WMATA Project Acceptance Plan and Procedure. MWAA/QA met with Delcan on June 21, 2011 to discuss the effort. MWAA submitted Draft SSMP Rev. 9 to the FTA, PMOC, WMATA and TOC on September 30, 2011. This draft still requires WMATA's input. An all partners meeting has been *re-scheduled* for January 27, 2012 to discuss the progress made thus far and what is needed to complete the task.

During *December* 2011, MWAA performed the following QA audits/surveillances:

- *Delta Railroad (Trackwork): DTP conducted an audit on December 5, 2011. There were two issues with one requiring a response and DTP will issue a report in mid-January.*
- *QA, Document Control and Training: DTP conducted an audit on December 7, 2011. There were no issues.*
- *Contractor/Subcontractor Submittal Process: DTP conducted an audit on December 14, 2011. There were three issues and DTP will issue a report in mid-January.*

The MWAA QA Audit and Surveillance Schedule through June 2012

Tentative Date	Audit (A) Surv. (S)	<u>Organization/Activity</u>	<u>Joint Audit/Surv.?</u>	<u>Lead</u>
1/04/12	S	DTP Engineering - Processing FCDs and DCNs	Y	MWAA
1/11-12/12	A	Flippo Construction (Wayside Facilities)	Y	DTP
1/18-19/12	A	DTP Construction and QC	N	MWAA
1/25-26/12	A	M.C. Dean (Late MEP)	Y	DTP
**1/30-2/02/12	A	Quality Record Audit (DTP Records-Civil)	N (MWAA/Delcan)	MWAA

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv.?	Lead
2/08-09/12	A	DTP Environmental	N	MWAA
2/15-16/12	A	Powell Electric (Traction Power)	Y	DTP
2/22-23/12	A	F.H. Paschen (Station Finishes)	Y	MWAA
**2/29-30/11	A	Contractor and Subcontractor Safety Programs	N	MWAA
3/07-08/12	A	Truland Walker-Seal (Communications)	Y	DTP
3/14-15/12	A	Lane Construction (West Falls Church Yard)	Y	MWAA
3/21-22/12	A	Internal Audit by STV	N	STV
3/28-29/12	A	Alstom Signaling (Automatic Train Control)	Y	DTP
**4/02-05/11	A	Quality Records Audit (DTP records – Systems)	N (MWAA/Delcan)	MWAA
4/11/12	S	DTP Subcontractor/Supplier Submittal Process: DTP/Subcontractors Nonconformance Control Systems	N	MWAA
4/18-19/12	A	Turner Construction (Shell Enclosure Trades)	Y	DTP
4/25-26/12	A	Special Inspector CTI QA Program	N	MWAA
5/02-03/12	A	KONE (Elevators and Escalators)	Y	DTP
5/09-10/12	A	DTP Startup and Test Program	Y	MWAA
5/16-17/12	A	A & A Industrial (Tunnel Ventilation)	Y	DTP
5/30-31/12	A	Delta Construction Company (Trackwork)	Y	DTP
6/06-07/12	A	DTP System Safety and Security Program	N	MWAA
6/013-14/12	A	Facchina Construction (Late C6)	Y	MWAA

3. Project Management Plan and Sub-plans

The FTA accepted MWAA's **Project Management Plan (PMP)** Version 7.0 Final on February 14, 2011.

- MWAA submitted a revised **Quality Program Plan (QPP)**, Revision 7 to FTA on January 7, 2010. MWAA reported that three Project Management Procedures were updated in the period from April through June 2011. No new QPP procedure updates were made during the period from July through *December* 2011.
- MWAA's **Real Estate Acquisition Management Plan (RAMP)**, Revision 2, dated September 15, 2009, has been reviewed by the PMOC with a recommendation that the FTA concur, with comments, with the revised RAMP. On January 21, 2010, the FTA provided comments to MWAA, and MWAA staff has revised Procedure PM-3.01 (Monitoring the Design-Build Contractor Property Acquisition Services). DTP revised their Procedure PIQ-5.1 (Property Acquisition Coordination) on November 1, 2010.
- MWAA's **Risk Management Plan (RMP)** dated October 2008 was reviewed and accepted by the FTA. The PMOC requested MWAA to begin the process to update the RMP by the end of the summer 2010 with a meeting to discuss the update to be scheduled after MWAA completes their risk plan update. A consultant submitted a draft of the Risk Analysis, a primary component of the RMP, to MWAA in December 2010. MWAA and the PMOC discussed the draft on January 26, 2011 and determined that some refinements were needed. *Numerous refinements and meetings to discuss those refinements occurred throughout 2011.* MWAA submitted the Final Draft of RCMP – Rev. 2b on November 23, 2011. At the December 7 update meeting the PMOC expressed concern that the document did not address the PMOC's comments of November 18, 2011 relative to the Top Ten Risks and Risk Register that was submitted by MWAA on November 10, 2011. *Another meeting was conducted on January 4, 2012 to address these remaining issues. It was agreed that the PMOC would recommend FTA approval once MWAA updated the top ten risks, updated the risk register and separated risks R23 and R31.*
- 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. The PMOC reviewed the RFMP dated January 31, 2011 and recommended that the FTA not accept the document. On March 1, 2011, the

FTA Regional Administrator requested that WMATA revise and resubmit the RFMP. WMATA hired a consultant to prepare the revised RFMP. WMATA submitted the revised RFMP (Rev. 3D) dated July 27, 2011 to the FTA on July 29, 2011; the FTA and PMOC reviewed this version and FTA forwarded comments to WMATA on August 24, 2011. The PMOC met with WMATA to discuss the development of the RFMP and the PMOC's comments on September 29, 2011. WMATA Submitted RFMP Rev4B to the FTA on October 21, 2011. The PMOC reviewed the document and submitted comments to WMATA on November 7, 2011. *FTA requested an update of the status of the RFMP from WMATA on December 15, 2011 and a response has not yet been received. FTA will meet with WMATA staff to discuss any remaining items on January 20.*

- MWAA submitted **Safety and Security Management Plan (SSMP) Revision 8** to the PMOC for review on February 28, 2011. On April 29, 2011, the PMOC, MWAA, WMATA, DTP and TOC met to review the SSMP, Safety Certification Program and other issues. MWAA and WMATA agreed to develop a revised SSMP that will cover the roles and responsibilities of both MWAA and WMATA for this project -- including the vehicles, the approach for integrated testing and interface management, joint safety and security certification activities and hand-offs, and pre-revenue operations. WMATA will also determine how it will manage its role in the safety and security certification and identify and develop whatever plans or procedures are required. MWAA and WMATA plan on bi-weekly meetings to address these issues. MWAA published Draft SSMP Revision 9 on September 30, 2011 for review by all partners. WMATA is currently developing its input to the draft. The PMOC will review the revised SSMP upon the incorporation of WMATA's input. A follow-up joint meeting has been *re-scheduled* for January 27, 2012 to review progress made thus far.

4. Project Schedule

- **Mainline** - The most recent MWAA analyzed project "Mitigation Schedule" update has a data date of *November 25, 2011*. The primary critical path identified by DTP showed a *-12* day loss as compared to the *-15* calendar loss reflected in the *October 25, 2011*. *DTP's schedule shows the Revenue Service Date to be December 31, 2013. The FFGA RSD is December 1, 2014. MWAA completed its schedule review and wrote letter 06016 dated December 22, 2011 providing agreement but with some schedule logic and omissions exceptions taken.*

This mitigation schedule supersedes the previously approved recovery schedule with a data date of December 25, 2010 that was finally settled at \$7.2M in mid-September 2011 but does not relieve DTP from their obligations to the earlier recovery schedule. MWAA and DTP continue to negotiate the mitigation schedule related RFC's and anticipate a lump sum settlement in late *January 2012*.

MWAA and DTP continue the ongoing and ever changing deliberation process of determining weather related excusable delay days as reflected in the table below.

Excusable Days of Delay through December 25, 2011

ACTION	WORK DAYS
Total Excusable Days of Delay on Project Critical Path requested by DTP	50
Contractually Identified	16
Retracted by DTP	3
Denied by MWAA	14
Under evaluation by MWAA	2
Granted by MWAA	15

1. The 15 work day delays granted equal 21 calendar days.

2. Please note that days evaluated in any period get incorporated in the next period.

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

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

The WFC Yard completion date matter finally appears to be close to resolution. MWAA reported during the January 4 monthly update meeting that they are nearing an agreement with DTP's request for change. However, MWAA also reported that DTP is yet to submit a detailed schedule for the final systems interconnection, testing and commissioning of the yard improvements in order to finalize the agreement regarding integration of the WFC Yard and Shop. MWAA is awaiting DTP's finalization and incorporation of these revisions and DTP continues to cite the WFC Yard schedule as having significant constraints and unresolved stakeholder issues. DTP's schedule update of November 25, 2011 reflects a WFC Yard completion date of May 21, 2014.

MWAA reported that Whiting-Turner, the WFCY contractor, recently presented a schedule showing the sound box completion in late 2013 and the S&I Shop completion in May 2014. MWAA also reported that they will be discussing the potential for running trains in the yard in advance of the S&I Shop completion in order to support the DCMP train testing and subsequent RSD.

It is the PMOC's opinion that MWAA is pursuing control over the Project master schedule, but with a questionable and unclear strategy with regard to the WFC Yard and with limited cooperation from DTP. MWAA previously reported progress with the WFCY schedule disagreements in that they were nearing a cost settlement with DTP, which would yield a WFCY completion date that supports the Project RSD. That cost and schedule settlement is proving to be a long and protracted process.

It appears to the PMOC that the mainline schedule losses are currently under control and are being recovered. However, the WFC Yard delays and their impact on the yard completion and mainline start-up activities and RSD remain a concern. However, the PMOC feels that the project can be completed before the FFGA RSD of December 1, 2014.

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

- DTP's non-performance in meeting recovery schedule dates in Stations and Aerial Guideways causing delays to Delta's access for track installation.
- DTP's non-performance in heavy civil construction operations project-wide causing delays to Delta's access.
- Obtaining required weekend outages from WMATA for the K-Line Tie-in work.
- Potential systems upgrade programs requested by WMATA could have numerous technical scope changes affecting Traction Power, Automatic Train Control, and Communications.
- Downtimes and lack of performance associated with LG #1 and LG #2 and DTP's lack of resources to address these efficiently.
- WFCY construction and commissioning (currently separate from the Project SSCD).
- Required re-casting of damaged or otherwise unacceptable segments.
- Delay to delivery of the 64 Rail Cars for Phase 1.

a. Critical Path Evaluation

- *Since November 1, 2011, the Project is managed utilizing the work plan set forth in MWAA's November 1, 2011 Directive Letter to implement a Mitigation Schedule with a data date of October 25, 2011). In DTP's November 2011 Schedule Update, Critical Path No. 1 is LG#1 precast segmental erection operations at Tysons East Station and the aerial portion of the Tysons East Guideway. It reflects a -12 calendar day float achieving SSCD on August 27, 2013. MWAA completed its schedule review and wrote letter 06016 dated December 22, 2011 providing agreement but with some schedule logic and omission exceptions as follows:*
 1. *The November 2011 Schedule Update did not reflect DTP's field plans for segmental erection of Spans 42 through 46 of the Tysons East Guideway. The schedule does not reflect or categorically quantify the delays due to discovery of cracking on Pier 37, which held up the segmental erection activities on Span 38. DTP was requested to provide these details last month.*
 2. *MWAA's analysis of trackwork activities in the critical path, following completion of the Tysons West Guideway, shows that some of the ongoing and future activities are not tied in a manner consistent with the sequence in which these similar activities have been completed.*
 3. *The production rates for the ongoing and future segmental erection activities have not been adjusted to be consistent with the production rates achieved thus far for LG#1 segmental erection operations. If the trending is accurately adjusted, the schedule update would reflect 30 calendar days delay to this path.*
 4. *MWAA's review of logic ties between trackwork activities and wayside systems installations show that minor work-arounds could be implemented to gain float on this path. The presented logic extends the remaining duration of the Project and the SSCD*

and there does not seem to be any attempt to spread resources or implement work-arounds to avoid downtime.

The PMOC agrees with MWAA’s assessment regarding the critical path. *The above noted review is a good demonstration that MWAA continues to analyze the schedule carefully and to hold DTP accountable for self-serving liberties continually taken with the schedule updates. This also emphasizes the need for MWAA to expedite its efforts to resolve the remaining logic issues with the mainline and the need to expedite its agreement(s) relative to the WFCY in order to minimize the risk of irretrievable schedule creep leading to additional schedule compression and a costlier constructive acceleration.* Although MWAA and DTP have agreed to implement a new Mitigation Schedule as of November 1, 2011, the PMOC anticipates that new disagreements will arise for claimed weather delays and change order impacts to the schedule. The project has now reached *its 58%* point in the schedule and, therefore, these ongoing and new issues have increased in criticality.

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

MILESTONE	June 2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	October 2011	November 2011
Receipt of FFGA	03/03/09 ¹	03/10/09 A	03/10/09 A	03/10/09 A
Station Design Complete	10/21/09	02/18/11	10/27/11	10/28/11 A
Utility Relocation Complete	03/05/10	09/13/11	12/02/11	01/10/12
Aerial and Station Foundations Complete	3/4/11	09/01/11	07/23/11 A	07/23/11 A
NATM Tunnels Mined	01/29/11	12/03/10 A	12/03/10 A	12/03/10 A
K-Line Tie-In	12/23/11	03/28/12	09/02/12	10/14/11 A
Guideway Complete	2/12/12	09/13/12	09/17/12	09/18/12
Train Control Complete	10/26/12	10/29/12	01/04/13	01/04/13
Substantial Completion	07/31/13	07/31/13	08/27/13	08/27/13
Revenue Operations - Target	11/27/13	01/20/14	12/31/13	12/24/13
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	10/01/14

^A Actual Date ¹ Date was not met.

b. Important Activities – 90-Day Look Ahead

The important milestones scheduled for the next 90 days include:

- *WFC Yard Schedule Agreement.*
- Completion of station pedestrian bridges and pavilions designs.
- Completion of utility relocation.
- Settlement of RFC 160 and 161 and the Recovery Schedule.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- TPSS #9, #10 and #11 civil work. *(Site work needs to be completed to allow Powell to proceed.)*
- Property acquisition for Operations Area 9 and 10.

5. Project Cost

The SCC Budget and Expenditures summary for the period ending *November 25, 2011* is as follows. Overall, approximately 52% of the budget has been expended.

FTA SCC CODE	DESCRIPTION	BASELINE BUDGET	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements	\$ 666,500,284	\$ 655,054,990	\$ 473,195,684	\$ 655,054,990
20	Stations	\$ 317,023,979	\$ 300,485,997	\$ 109,713,391	\$ 300,485,997
30	West Falls Church Yard	\$ 51,789,539	\$ 41,549,390	\$ 5,446,262	\$ 41,359,359
40	Site Work & Utility Relocation	\$ 232,936,987	\$ 240,989,101	\$ 193,635,786	\$ 270,245,621
50	Systems	\$ 278,157,645	\$ 313,802,427	\$ 94,302,532	\$ 310,652,543
60	Right of Way Acquisition	\$ 45,953,303	\$ 67,631,026	\$ 55,699,057	\$ 65,011,618
70	Vehicles	\$ 211,629,775	\$ 211,629,775	\$ 21,614,412	\$ 210,926,012
80	Professional Service	\$ 698,471,472	\$ 717,033,953	\$ 604,491,155	\$ 772,420,173
90	Contingency Mgmt. Reserve	\$ 130,000,075	\$ 84,310,403	\$ -	\$ 6,330,749
100	Finance Charge	\$ 509,984,571	\$ 509,984,571	\$ 65,799,308	\$ 509,984,571
TOTAL (Federal portion)		\$ 3,142,471,635	\$ 3,142,471,635	\$ 1,623,897,588	\$ 3,142,471,635

1) Current budget equals FFGA amount plus approved Change Orders CO-001-081, 083-088, 099-101 & 103-105, Directive Letters 001-033 & 36-37, UR-CO-001-039.

2) Estimate at Completion (EAC) for Contingency reflects the amount approved for utilization per PM-5.07.

3) The Estimate at Completion of Finance Costs includes \$71.8 million in allocated contingency.

a. Explanation of Variances

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

1. SCC10 – Guideway and Track Elements has been reduced approximately \$17 million due to the decision by the DB contractor to self-perform the NATM tunnel work. In so doing, \$29.2 million was transferred out of the direct account to other accounts including predominantly SCC80 for the professional services portion of the subcontract budget. This was offset by scope additions and other budget transfers, the most notable being the adjustment for the revised federal/non-federal split, the addition of the directive letter for crossing the Beltway during construction of the HOT Lanes Project by VDOT and the addition of sales tax to permanent materials.
2. SCC20 – Stations has been reduced by approximately \$17 million. The decision by the Airports Authority to remove the Wiehle Avenue Parking Garage – Allowance Item C-2, due to the Fairfax County Joint Development project, allowed the transfer of \$29.1 million out of the direct account into the unallocated contingency account. This was offset by a combination of add and subtract change orders, the most notable addition being the transfer from the tunnel subcontract.

3. SCC40 – Site work and Utility Relocation has been increased by approximately \$24.6 million as a result of a combination of change events (change orders, directive letters and scope transfers) and cost overruns. The forecast adjustments are predominantly due to cost overruns in utility relocations.
4. SCC50 -- Systems has increased by \$16.6 million due to additional WMATA requirements for Traction Power Remote Monitoring, Emergency Trip Station/Amber Light Warning System and requirements for Communications.
5. SCC60 – Right of Way Acquisition experienced nearly \$20.3 million increases primarily due to adjustment of project cost for the revised federal/non-federal split along Route 7.
6. SCC80 – Professional Services increased approximately \$71.0 million due to a combination of change events (\$17.8 million) and forecast adjustments (\$53.2 million). The change events are numerous with the most significant being the transfer from the tunnel subcontract and the addition of design for the HOT Lanes and WFCY. The forecast adjustment is predominantly attributed to higher project management costs for MWAA, PMSS and VDOT. In addition, WMATA budget transfers are treated as forecast adjustments.
7. SCC90 – Contingency Management Reserve estimate at completion of \$6,330,749 is available for future use. The PMOC is of the opinion that the contingency reserve needs to be increased based on the current status of the contract and potential overruns for Allowance Items. The PMOC is in the process of reviewing contingency use on the Project

b. Monthly Cost Report, November 2011

DESCRIPTION	FFGA AMOUNT (Original)	EXPENDITURE TO DAT ¹	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION	PERCENT OF EAC EXPENDED TO DAT ⁷
FEDERAL (FFGA SCOPE)					
Design-Build					
Firm Fixed Price	\$ 1,112,052,172	\$ 1,050,151,229	\$ 507,347,766	\$ 1,557,498,995	
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 66,911,460	\$ 2,466,581	\$ 69,378,041	
Firm Fixed Price Subtotal	\$ 1,177,161,580	\$ 1,117,062,689	\$ 509,814,347	\$ 1,626,877,036	
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 139,909,454	\$ 139,909,454	
Design-Build Contract Prices	\$ 1,607,361,397	\$ 1,117,062,689	\$ 649,723,801	\$ 1,766,786,490	
Indexed Commodity Escalation	\$ 77,469,926	\$ -	\$ 48,110,456	\$ 48,110,456	
Design-Build Contract Total	\$ 1,684,831,324	\$ 1,117,062,689	\$ 697,834,257	\$ 1,814,896,946	62%
Utility Relocation					
Utility Work	\$ 84,312,807	\$ 99,160,924	\$ 11,026,592	\$ 110,187,515	
Terf Tax		\$ -	\$ 0	\$ 0	
Project Management and Final Design	\$ 8,423,426	\$ 19,259,750	\$ 243,400	\$ 19,503,150	
Utility Relocation Total	\$ 92,736,233	\$ 118,420,674	\$ 11,269,992	\$ 129,690,665	91%
Right of Way					
Right Of Way Total	\$ 42,443,132	\$ 55,985,893	\$ 9,650,725	\$ 65,636,618	85%
WMATA Agreement					
Vehicles	\$ 195,138,329	\$ 21,614,412	\$ 172,820,154	\$ 194,434,567	
Construction and Procurement	\$ 31,484,799	\$ 1,290,547	\$ 26,807,569	\$ 28,098,116	
WMATA Force Account Startup	\$ 13,777,100	\$ 2,488,525	\$ 10,916,496	\$ 13,405,021	
Project Management and Final Design	\$ 31,235,400	\$ 14,984,372	\$ 20,713,553	\$ 35,697,924	
WMATA Agreement Total	\$ 271,635,628	\$ 40,377,856	\$ 231,257,772	\$ 271,635,628	15
Preliminary Engineering ²					
Preliminary Engineering Total	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999	100
Airports Authority Services					
General Conditions	\$ 28,879,153	\$ 7,106,549	\$ 22,923,963	\$ 30,030,512	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 25,365,392	\$ 21,014,430	\$ 46,379,822	
Project Management Support	\$ 90,004,649	\$ 93,048,227	\$ 30,645,991	\$ 123,694,218	
Airports Authority Services Total	\$ 142,109,519	\$ 125,520,168	\$ 74,584,384	\$ 200,104,552	63
Contingency ⁵					
Contingency Total	\$ 297,762,579		\$ 49,791,655	\$ 49,791,655	
Finance Costs					
Finance Costs Total	\$ 509,984,571	\$ 65,799,308	\$ 444,185,263	\$ 509,984,571	
Total Federal (FFGA Scope)	\$ 3,142,471,634	\$ 1,623,897,587	\$ 1,518,574,048	\$ 3,142,471,635	60%

1 Reflects Paid costs through November 30, 2011

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

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

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

5 Estimate at Completion for Contingency reflects the amount approved for utilization per PM-5 07

6 The Estimate at Completion for Finance Costs includes \$71 8 million in allocated contingency

7 Percent complete excludes *remaining* contingency and finance charges

c. Project Funding Sources: October 2011

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE ¹	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
Sec 5309 New Starts Federal Funds						
Preliminary Engineering Grants			\$ 54,412,526	\$ 54,412,526	100%	\$ -
Final Design Grant	VA-03-0113-00		\$ 159,001,838	\$ 159,001,838	100%	\$ -
ARRA Construction Grant	VA-36-0001-00		\$ 77,260,000	\$ 77,260,000	100%	\$ -
FPGA Construction Grant	VA-03-0113-02		\$ 28,809,000	\$ 28,809,000	100%	\$ -
FPGA Construction Grant	VA-03-0113-03		\$ 85,000,000	\$ 85,000,000	100%	\$ -
FPGA Construction Grant (<i>amendment for FTA approval</i>) ⁵	VA-03-0113-04		\$ 115,799,000	\$ 95,054,264	82%	\$ 20,744,736
FPGA Balance	Planned		\$ 379,717,636	\$ -	0%	\$ 379,717,636
Subtotal - New Starts		28.64%	\$ 900,000,000	\$ 499,537,628	55.50%	\$ 400,462,372
Other Federal Funds						
Sec 5307 Surface Transportation Program						
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 47,218,109	100%	\$ -
Construction Grant	VA-95-X056-02		\$ 21,281,890	\$ 8,562,331	40%	\$ 12,719,559
Construction Grant (<i>amendment for FTA review</i>)	VA-95-X056-03		\$ 6,500,001	\$ -	0%	\$ 6,500,001
STP/Sec. 5307		2.39%	\$ 75,000,000	\$ 55,780,440	74.37%	\$ 19,219,560
Local Funds						
VTA 2000			\$ 51,700,000	\$ 51,700,000	100%	\$ -
Commonwealth Transportation Bonds ⁵			\$ 125,000,000	\$ 113,433,213	91%	\$ 11,566,787
Fairfax County Funds ³			\$ 523,750,000	\$ 241,266,120	46%	\$ 282,483,880
Dulles Toll Road Revenues ^{2,4}			\$1,467,021,634	\$ 662,180,186	45%	\$ 804,841,448
Subtotal - Local Funds		68.97%	\$2,167,471,634	\$ 1,068,579,519	49.30%	\$ 1,098,892,115
Total Project Budget		100.00%	\$3,142,471,634	\$ 1,623,897,587	51.68%	\$ 1,518,574,047
Interrelated Highway Activities						
DTR Revenues/Commonwealth Funds ³			\$ 123,208,229	\$ 78,015,238	63.32%	\$ 45,192,991
TOTAL			\$3,265,679,863	\$ 1,701,912,825	52.12%	\$ 1,563,767,038

¹ Reflects costs through November 30, 2011.

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

³ Includes Tax District Revenues (\$400 million) plus debt service costs allocated to Project budget.

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

⁵ Expenditures includes accruals. The funds will be drawn down upon approval and award of the grant.

6. Project Risks

In August 2008, FTA directed the PMOC to resume the risk process and to prepare a report that combines the requirements of PG-40: Subtasks PG-40E, PG-40F, and PG-40G. These subtasks are to identify the framework for primary and secondary mitigation of project cost and schedule. A draft PG-40EFG report was prepared and the Risk Register was updated. The documents were shared with 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.

Budget Risks. Through November 25, 2011, MWAA reports that it has utilized \$213,849,905 (90%) of the \$236,000,000 available contingency for the first seven contingency milestones leaving a contingency balance of \$22,650,095 (10%) available through the current phase of construction. The contingency utilization reflects expended costs. Phases 1 and 2 carry the Project through the completion of station design, which was supposed to be completed by the end of the third quarter of 2009. The completion of station designs is now anticipated during the second quarter of 2012. DGS has issued permits for all stations. MWAA estimates that Phase 3, Utility Relocation Program, will be fully completed in the first quarter of 2012. MWAA reports

that it has already obligated \$34,121,021 of the \$61,262,579 available for Phases 8 through 12. As of November 25, 2011, of the \$297,762,579 total project contingency, the project has a total of \$49,791,653 available. However, MWAA estimates that the cost of the Allowance Items recommended for award, but not yet charged to the project is estimated to be \$81.3 million over budget. **Thus, the project may be officially over budget in the near future.**

To address potential budget overruns, the PMOC concludes that MWAA needs to replenish the Project contingency and actively pursue items that may be betterments and billed to the responsible parties. It is the PMOC's opinion that the change orders for WMATA-requested ETS and TPSS Remote Monitoring systems are outside MWAA's Intergovernmental Agreement with WMATA, are betterments to the project, and should be funded outside the FTA project. The PMOC's current assessment of betterments amount is approximately \$94 M.

The projected overruns in the estimated costs of the remaining Allowance Items (\$81.3M) indicate that there is an immediate need to replenish the project contingency. Given the forecasted magnitude of the Allowance Items cost overrun, the Project is, in the PMOC's opinion, on track to exceed the FFGA budget, if the betterments are not removed from the federal project. The PMOC continues to review both the use of contingency and the changes that can be considered betterments to determine the shortfall in contingency.

MWAA acknowledges a \$71.8 million in potential source of an increase in contingency from a reduction in budgeted Finance Charges that they could use to make up a portion of this deficit. However, at the December 7, 2011 update meeting, MWAA indicated that the potential savings in finance costs will remain in that line item and not used for construction at this time. The PMOC is reviewing changes that could be betterments, and may recommend to FTA that MWAA label them as Concurrent Non-Project Activities or recover those costs from the requesting agencies.

MWAA's estimate of the earned value for the Project through November 2011 is 64.5%.

Schedule Risks. With regard to Schedule Contingency, MWAA and DTP agreed to a zero loss recovery schedule on Month, day, year, with a data date of December 25, 2010. This recovery schedule had a mitigation period of fourteen months, extending from January 2011 through February 2012 to recover 113 calendar days of the total of 510 calendar days. MWAA and DTP are now working off a new Mitigation Schedule with a data date of October 25, 2011 that was accepted "as noted" on November 23, 2011. Through November 2011, MWAA has granted DTP time extensions of 21 (15 work days) calendar days reducing the available contingency from 510 to 489 calendar days.

- MWAA included proposed new Top Ten Risks as identified from the draft Risk Assessment in the handouts for August 10 QPRM. Once FTA and the PMOC agree, the new Top Ten Risks would replace those previously reported. MWAA continues to monitor the risk status and reports this information on a monthly basis. The PMOC provided comments relative to the RCMP Rev 2b and MWAA's subsequent submittal of September 16 on October 2, 2011 and a comment resolution meeting was conducted with MWAA on October 4, 2011. The revised Top Ten Risks and revised Contingency Management Procedure (PM-5.07) were to be submitted by MWAA on October 24. The PMOC then expected MWAA to submit the final draft RCMP by November 11, 2011. MWAA submitted the Final Draft of RCMP –

Rev. 2b on November 23, 2011. The PMOC shared its comments on this submission at the December 7, 2011 Update Meeting expressing concern that the PMOC’s comments on the Top Ten Risks, Risk Register and PM 5.07 transmitted on November 18, 2011 had not been included. *Another meeting was conducted on January 4, 2012 to address these remaining issues. It was agreed that the PMOC would recommend FTA approval once MWAA updated the top ten ratings and the risk register and separated risks R23 and R31.*

The following are the Project’s current Top 10 Cost and Schedule Risks from the RMP dated October 2008, along with their status. *This table will be updated next month to reflect MWAA’s anticipated RCMP plan update.*

Top 10 Project Risks

Risk No.	Risk Description	SCC Reference	Risk Category		Status (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. Thirty-one of thirty-eight sub-contract packages have been awarded to date. The variance of the awarded cost versus allowance budget is \$46.76 million. A sharp increase is expected in the coming quarter of approximately another \$81.36 million.
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	Closed.
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		Increased. Bids were received on July 7, 2011. Following discussions with WMATA in an attempt to delete the S&I Shop, MWAA authorized DTP to award the subcontract that was finally awarded on November 8, 2011.

Risk No.	Risk Description	SCC Reference	Risk Category		Status (Change from Previous Month)
			Cost	Sched	
C-34	Utility companies performing utility relocation are not performing in accordance with the durations incorporated in the project schedule.	40.02	X	X	Schedule risk closed. Cost risk remains. (Replaced risk C-14.) Utility contractors have completed all critical relocation work in October 2010. As of <i>December 25, 2011</i> , <i>eight</i> UR change orders remain under review <i>and one rejected</i> .
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 20.02	X	X	Cost risk closed. Schedule risk remains. Bids were received on June 19, 2009. The WMATA Board awarded the contract to Kawasaki on July 27, 2010. NTP was issued on August 16, 2010. However, the conditional acceptance of the 64 th car for the Project, as contained in the bid, is not scheduled until <i>June 12, 2015 in the agreed mitigation schedule</i> , which does not support Project needs. In addition, the earthquake/tsunami may delay the procurement further. PMOC requested MWAA to include a schedule risk since the schedule does not currently meet the FFGA date.
M-12	Unpredictability of ROW settlement costs.	10.04	X		Unchanged. Use of condemnation has increased the ROW costs.
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 20.00 50.00	X	X	Unchanged. Technical support for design has been generally provided in a timely manner. 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.

Risk No.	Risk Description	SCC Reference	Risk Category Cost Sched		Status (Change from Previous Month)
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 20.00 40.00	X	X	Unchanged. The issuance of construction permits has taken longer than anticipated. However, all stations civil permits have been received and pedestrian bridges and pavilions are nearing completion.

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.03	Update Risk and Contingency Management Plan (RCMP) (October 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 who has prepared a draft revised Risk Assessment (Analysis). The analysis was submitted to the FTA and PMOC on January 31, 2011. It is anticipated that once agreed upon, the Top Ten Risks as identified from the Risk Analysis will replace those previously reported MWAA submitted a draft "Risk Management Plan" on June 3, 2011. The PMOC provided comments to MWAA on July 5, 2011. MWAA edited the Plan and resubmitted it to the FTA on August 5, 2011. MWAA and the PMOC met again on September 7, 2011 and discussed the relevancy of the "Proposed Top Ten Risks" and relevancy of the milestones listed on Table 3-1. Some changes were discussed and subsequently e-mail the following week for further review and comment. A joint meeting was again conducted to address the adjustments on October 4, 2011. Upon incorporation of PMOC review comments, the RCMP will be completed by MWAA and was submitted on November 23, 2011. <i>The PMOC reviewed the submission and provided comments. Another meeting was conducted on January 4, 2012 to address these remaining issues. It was agreed that the PMOC would recommend FTA approval once MWAA updated the top ten risks, updated the risk register and separated risks R23 and R31.</i>	R

KEY ITEM

Subtask 2A
Subtask 2B

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

LEGEND

PRIORITY (PR)
1- Most Critical
2- Critical
3- Least Critical

GRANTEE ACTION

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

PMO CONTRACTOR STATUS

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

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

APPENDICES

APPENDIX A – LIST OF ACRONYMS

AAC	Agreement After Certificate
AMEP	Architectural/Mechanical/Electrical/Plumbing
ARRA	American Reinvestment and Recovery Act
ASSHTO	American Association of State Highway and Transportation Officials
BFMP	Bus Fleet Management Plan
CAR	Corrective Action Request
CCC	Construction/Procurement/Installation Conformance Checklist
CD	Calendar Days
CPM	Critical Path Method
CR	<i>Communications Room</i>
CTI	CTI Consultants, Inc.
CY	Calendar Year
DB	Design-Build
DCC	Design Conformance Checklist
DCN	Design Change Notice
DF	<i>Direct Fixation</i>
DGS	(Virginia) Department of General Services
DIAAH	Dulles International Airport Access Highway
DR	Deficiency Report
DTP	Dulles Transit Partners, LLC
DTR	Dulles Toll Road
DVP	Dominion Virginia Power
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FTE	Full Time Equivalent
FY	Fiscal Year
HOT	High Occupancy Toll
IFC	Issued For Construction
IFP	Issued for Proposal
IRR	Issue Requiring Resolution
KSA	KSA, INC – Producer of Concrete Crossties
MH	Manhole
MCI	A communication company now owned by Verizon
MEP	Mechanical, Electrical and Plumbing
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
ORD	Operational Readiness Date
PDA	Pile Driving Analysis
PDR	Preliminary Design Review (7K Railcars)
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor
PMSS	Project Management Support Services
PMP	Project Management Plan

QA	Quality Assurance
QC	Quality Control
QPP	Quality Program Plan
RAMP	Real Estate Acquisition Management Plan
RCMP	Risk and Contingency Management Plan
RFC	Request for Change
RFMP	Rail Fleet Management Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROE	Right-of-Entry
ROW	Right-of-Way
RSD	Revenue Service Date (synonymous with Revenue Operations Date)
SAIC	Scientific Applications International Corporation
SCC	Standard Cost Category
SCIL	Safety and Security Certifiable Items List
SOE	Support of Excavation
SSCD	Scheduled Substantial Completion Date
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan
STP	Surface Transportation Program
TBD	To Be Determined
TOC	Tri-state Oversight Committee
TPSS	Traction Power Substation
UR	Utility Relocation
VDOT	Virginia Department of Transportation
W&OD	Washington and Old Dominion
WFC	West Falls Church
WFCY	West Falls Church Yard
WMATA	Washington Metropolitan Area Transit Authority
XO	Executive Officer

APPENDIX B -- PROJECT OVERVIEW AND MAP

Project Overview

Date: *January 20, 2012* (reporting current through *December 2011*- Financials through *November 2011*)

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

Grantee: Metropolitan Washington Airports Authority (MWAA)

FTA Regional Contact: Brian Glenn, P.E.

FTA Headquarters Contact: Dale Wegner, P.E.

Scope

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

Ridership

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

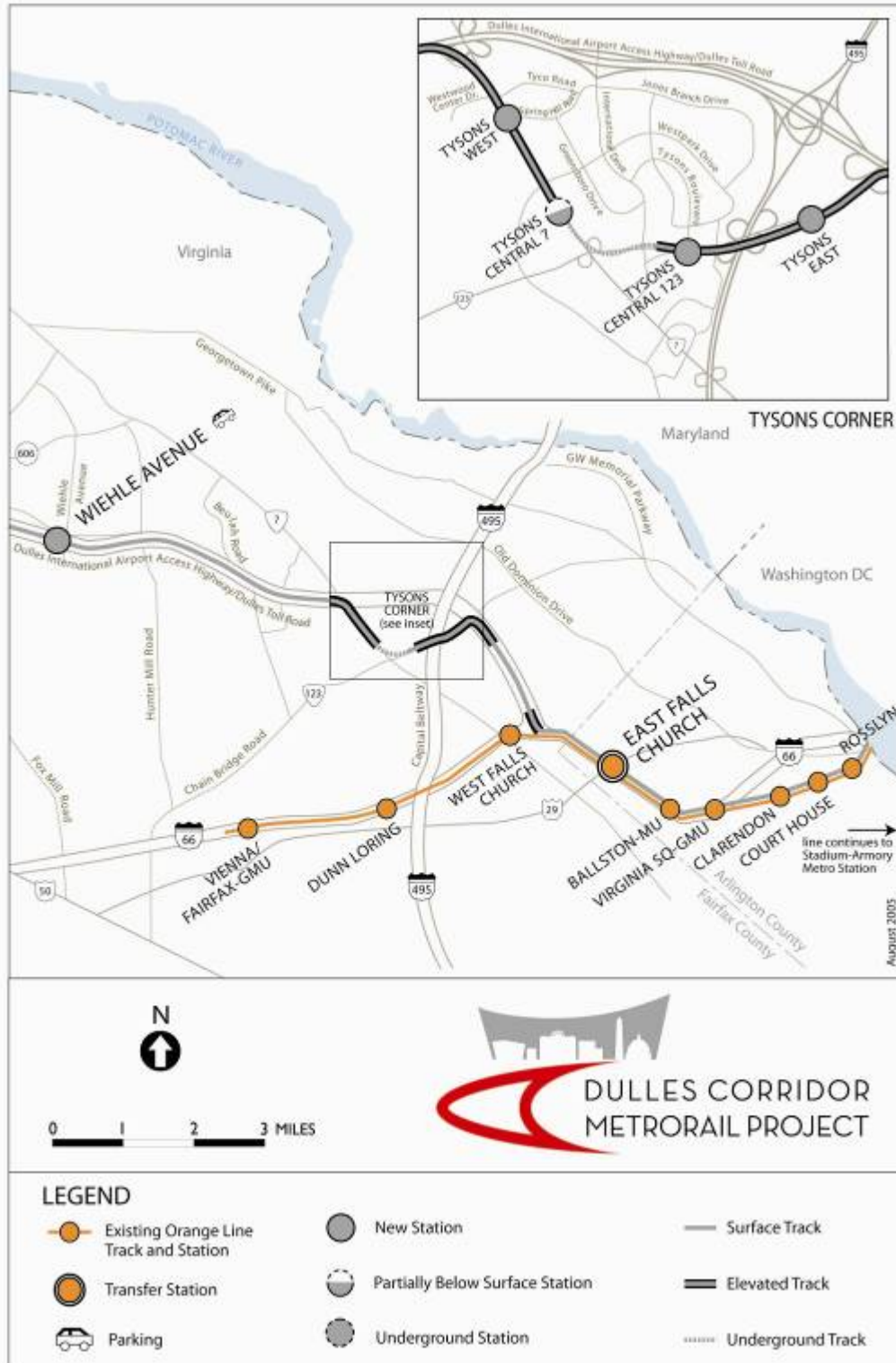
Schedule

06/10/04	Approval to Enter PE	2011	Estimated Rev Ops at Entry to PE
05/12/08	Approval to Enter FD	12/04/13	Estimated Rev Ops at Entry to FD
03/10/09	FFGA signed	12/01/14	Estimated Rev Ops at FFGA
12/31/13	Revenue Service Date (RSD) <i>as of November 25, 2011</i>		
62.0%	Percent Complete Construction <i>as of December 31, 2011.</i>		
49.1%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
65.4%	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
\$1.623 billion	Expenditures through <i>November 2011</i> from total project budget of \$3.142 billion
51.67%	Percent complete based on federal expenditures through <i>November 2011</i> .
\$49.79 million	Total project contingency remaining (allocated and unallocated) through <i>November 2011</i> .

Project Map



Construction Operational Areas



APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST

Project Overview	Dulles Corridor Metrorail Project		
Project Mode (Rail, Bus, BRT, multimode)	Rail		
Project Phase (Preliminary Engineering, Design, Construction, or Start-up)	Design and Construction		
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGG, etc)	Design/Build		
Project Plans	<i>Version</i>	<i>Review By FTA</i>	Status
Safety and Security Management Plan	9/2009		Accepted. MWAA's SSMP Rev.8 was submitted for review in February. At the April 29, 2011 meeting it was agreed that a SSMP and SSCPP would be developed to include the responsibilities of both MWAA and WMATA. A progress update meeting is to be held on January 27, 2012.
Safety and Security Certification Plan			Under development; 98% complete
System Safety Program Plan	1/20/2011		In response to FTA's Safety and Security Oversight Audit of TOC/WMATA and TOC Triennial Review findings, WMATA submitted an updated SSPP dated January 20, 2011, which was approved by TOC on February 22, 2011 with minor comments to be addressed in the next revision.
System Security Plan or Security and Emergency Preparedness Plan (SEPP)			WMATA submitted a revised SEPP to TOC in March 2010. TOC approved the SEPP on August 2, 2010.
Construction Safety and Security Plan			Addressed in PMP, which is under revision.

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

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

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

Construction Safety	Y/N	Notes/Status
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	DTP's Construction Safety, Health and Security Plan accepted on January 6, 2009.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	
Provide the grantee's OSHA statistics compared to the national average for the same type of work. If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	Y	DTP has recorded 316 first aid cases and three lost time cases in 7.776 million project man hours which is below the national average.
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	

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

APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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