

**COMPREHENSIVE MONTHLY REPORT**

**June 2013**

**Dulles Corridor Metrorail Project  
Phase 2  
(Wiehle Avenue Station to Route 772 Station)**

Metropolitan Washington Airports Authority  
Washington, DC

August 15, 2013

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

**Task Order Number:** 009, **Project Number:**DC-27-5242,**Work Order No.**01

**OPs Referenced:**01, 25

**Hill International, Inc.**

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**Length of Time PMOC Assigned to Project:**0.25years

**Length of Time PMOC Lead Assigned to Project:** .25 years

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## EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on July 10, 2013 to conduct the monthly progress meeting for work performed in June 2013 on Phase 2 of the Locally Preferred Alternative (LPA) for the Dulles Corridor Metrorail Project. This is the first Comprehensive Monthly Report for the Phase 2 project. The Phase 2 project extends from the Wiehle Avenue Station in Fairfax County through Dulles International Airport to Route 772 Station in Loudoun County. The PMOC plans to conduct future PMOC monthly progress meetings during the first week of each month.

### **1. Project Description**

MWAA, in cooperation with the Washington Metropolitan Area Transit Authority (WMATA), proposes to implement a 23.1-mile rapid transit system in the Dulles Corridor of Northern Virginia. The proposed corridor follows the alignment of the Dulles International Airport Access Highway (DIAAH), the Dulles Toll Road within Fairfax County, and the Dulles Greenway, a private toll road in Loudoun County. MWAA is implementing the LPA in 2 phases as described below.

Phase 1 of the Project (Initial Operating Segment) undertakes the construction of the initial 11.7-miles of the rail project from the existing Metrorail Orange Line just east of the West Falls Church (WFC) Station to a station to be constructed at Wiehle Avenue with a total project cost of \$3.142 billion. Included in the Project are five new stations (Tysons East, Tysons Central 123, Tysons Central 7, Tysons West and Wiehle Avenue), improvements to the existing yard at WFC, and tail tracks beyond the Wiehle Avenue station. The procurement of sixty-four new rail cars is also included for Phase 1.

Phase 2 of the Project will provide 11.4 miles of new track from the interim terminus at Wiehle Avenue Station through Washington Dulles International Airport ("Dulles Airport") to a terminus in eastern Loudoun County. Phase 2 includes six new stations (Reston Town Center, Herndon, Innovation Center, Dulles Airport, Route 606 and Route 772 Stations). Phase 2 also includes a maintenance and storage yard facility at Dulles Airport, five new parking facilities to provide a total of 8,900 parking spaces, wayside facilities (including traction power substations, tie-breaker stations, and storm water management ponds along the alignment), and sixty-four railcars. The Engineer's estimated year-of-expenditure capital cost of Phase 2 is \$3.153 billion, exclusive of finance costs. According to the current schedule, Phase 2 Revenue Service would begin in early 2019.

### **Project Status Summary**

The FTA and PMOC met with MWAA on July 10, 2013 to conduct the Phase 2 monthly progress review meeting. The information provided is as of June 30, 2013, unless otherwise noted.

- **National Environmental Policy Act (NEPA)/Environmental Assessment (EA)** – MWAA and FTA prepared an EA in April 2012 covering the preliminary engineering design refinements for Phase 2, which they released for public review on May 10, 2012. Subsequently, the FTA Regional Administrator issued a Finding of No Significant Impacts (FONSI) on December 17, 2012.
- **Procurement Status** – A Project Management Support Services (PMSS) consultant, Jacobs Engineering, supports the MWAA management team to ensure technical capacity and

capability. MWAA reported that its Board of Directors (Board) approved the contract for the PMSS, but it was pending signature as of June 30, 2013. Once MWAA executes the contract, they will issue the first task order to the PMSS to provide staffing support, and to review management plans and work plans. The PMSS has provided support for Phase 2 from preliminary engineering under a separate contract that expires on July 26, 2013.

Phase 2 is divided into several packages that will be procured separately: Package A includes the final design and construction of 11.4 miles of the rail line, stations and systems elements; The Advanced Earthwork Contract (Package S) is for the removal and relocation of the Phase 1 soils currently stockpiled at the Maintenance Facility site associated with Package B. Package B includes the final design and construction of the WMATA Maintenance Facility at the northwest corner of the Dulles Airport property; and Package C includes the design and construction of the five parking facilities at the stations in Fairfax and Loudoun counties. MWAA awarded the contract for Package A on May 14, 2013 and Notice-to-Proceed (NTP) on July 8, 2013. MWAA issued a solicitation for the Advanced Earthwork on June 27, 2013 and anticipates a contract award in August 2013 and a NTP in September 2013. MWAA will issue a solicitation for the Package B Contract in late 2013, with contract award by June 2014.

- **DBE Goal** – MWAA developed a preliminary DBE Project Goal of 25% for Phase 2 that is under review by FTA. Package A has a contract goal of 14%, the PMSS Contract has a goal of 25%, the Package S Contract has a goal of 20%; the Package B goal is not yet determined. Fairfax and Loudoun Counties plan to procure the work in Package C without the use of Federal assistance; therefore, there would be no DBE requirement.
- **Third Party Agreements** – MWAA reported that there are six Intergovernmental Agreements required for Phase 2: WMATA, the Dulles Greenway, Loudoun County, Fairfax County, Virginia Department of Transportation (VDOT), and the City of Herndon. As of June 2013, the WMATA agreement, including the final budget, was pending execution. Execution is expected once the MWAA Board approves it, which is anticipated for July 17, 2013. The agreement with the Dulles Greenway is also pending execution. MWAA completed negotiating agreements with Loudoun County, the Town of Herndon, and VDOT and they expect to finalize them in July. MWAA and Fairfax County executed the amendment to their agreement.
- **Real Estate Acquisition** – As of this report, MWAA has not yet developed the Real Estate Acquisition Plan (RAMP) for Phase 2.
- **Design Progress** – MWAA reported that as of the end of June 2013, preliminary design for the Phase 2 Project is complete. The Package A contractor will complete its Final Design. MWAA has not yet decided on the procurement method for Package B. At present, Fairfax and Loudoun Counties would manage the final design of the parking facilities included in Package C. MWAA has set a deadline of September 1, 2014 for the counties to confirm that they can deliver the completed parking facilities as required. MWAA will perform oversight of the design and construction of the parking facilities.
- **Construction Progress** – MWAA issued a NTP for the Package A Contract on July 8, 2013. The substantial completion date is July 7, 2018.

- **Budget Status** - The Phase 2 Engineer's Estimate was \$3,153,264,289, which included \$157,750,000 in unallocated contingency. This figure is in year-of-expenditure (YOE) dollars and excludes the finance costs. The Phase 2 Project has been broken down into the following elements:

Package A – Design and Construction of the Guideway, Track, Stations and Systems

Package B – Design and Construction of the Maintenance Facility

Package S – Advanced Earthwork at Maintenance Facility

Package C – Design and Construction of Parking Facilities

Owner Costs – Preliminary Engineering, Real Estate, Rail Vehicles, WMATA Costs, Commodity Escalation, Professional Services, and Escalation

Package A firm-fixed price contract was awarded in June 2013 at \$1,177,777,000, which was below the engineer's estimate. As a result, the MWAA Board adjusted the total Project Capital Cost from \$3,153,264,289 to \$2,902,000,000.

Primary funding for Phase 2 comes from MWAA (7.75%), Fairfax County (21.74%), Loudoun County (14.89%), Commonwealth of Virginia (11.13%), and the Dulles Toll Road (44.49%). MWAA, Fairfax County, and Loudoun County anticipate receiving a total of \$1.9 billion in direct loans under the United States Department of Transportation (USDOT) Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance program to assist in financing their shares. MWAA submitted their draft Standard Cost Category (SCC) Budget Workbook to the PMOC on May 28, 2013. The PMOC evaluated the Phase 2 budget, including the proposed level of contingency, and conducted a cost review workshop with MWAA on June 20 and July 9, 2013. As a result of this review, it is the PMOC's opinion based on the FTA Beta Range Model, that additional contingency in the amount of \$146,211,294 is required, bringing the recommended project cost to \$3,126,450,757.

- **Risk** – MWAA submitted the Phase 2 Risk and Contingency Management Plan (RCMP) Revision 1 dated April 2013 to FTA for approval. Based on discussions held during the June 20 and July 9, 2013 meetings regarding the Phase 2 budget, the proposed level of contingency, and the draft risk register, MWAA issued a revised draft RCMP for PMOC review on July 31, 2013.
- **Rail Car Procurement** -On August 15, 2012, MWAA authorized WMATA to amend their contract with Kawasaki to exercise the option for an additional sixty-four 7000 Series railcars for Phase 2. WMATA's letter of August 30, 2012 to MWAA confirmed the amendment to the Kawasaki Contract for the Phase 2 railcars.
- **Personnel**–The April 2013 Draft Project Management Plan includes a staffing plan showing the gradual transfer of the Phase 1 staff to the Phase 2 project. Currently, Patrick Nowakowski, the MWAA Executive Project Director is dedicated 50 percent to Phase 2 through February 2014; Sam Carnaggio, MWAA Project Director is dedicated 10 percent to Phase 2 through February 2014; Karl Rohrer, MWAA Deputy Project Director is dedicated 100 percent to Phase 2.

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

As a result of the lessons learned and experience gained from the design and construction of the Phase 1 project, MWAA has developed a staffing plan necessary to effectively manage the Phase 2 project. The PMOC is reviewing the resumé summaries of Phase 2 key personnel submitted on June 21, 2013 in concurrence with the staffing transition plan. FTA needs to monitor closely the transition of staff from the Phase 1 project to Phase 2 to ensure that there are adequate levels of dedicated and experienced staff on both projects through the completion of Phase 1 and the procurement activities and the start of final engineering of the Phase 2. Additionally, the effective working relationship between MWAA and WMATA during Phase 1 needs to continue for Phase 2.

MWAA incorporated into the Phase 2 project the design changes to enhance the new system requested by WMATA during Phase 1. Hopefully, this will reduce the number of WMATA-requested design changes under Phase 2. Likewise, MWAA implemented lessons learned from the Phase 1 project to mitigate some of the potential risks in the Phase 2 project. However, as the Phase 2 project progresses into bidding and construction, MWAA needs to remain proactive in identifying and mitigating potential risks.

# MAIN REPORT

## 1. Grantee's Capabilities and Approach

### a. Technical Capacity and Capability

Based on lessons learned during the Phase One project, MWAA is implementing an integrated project management organization consisting of MWAA and PMSS staff. The Board approved the contract for the PMSS and it is awaiting signature. The first task order to the PMSS, Jacobs Engineering, to provide staffing support, and to review management plans and work plans is currently pending. The PMSS has provided support for Phase 2 from preliminary engineering under a separate contract that expires on July 26, 2013.

MWAA has submitted a draft PMP for Phase 2, Version 1.1, which includes project organization and staffing chart. Because most of the Phase 1 staff will be transitioning to Phase 2, labor distribution charts for each position were also provided to determine levels of staffing by month. The PMP, including the current Phase 2 staffing levels, are currently under review.

MWAA negotiated and signed the lease for the Phase 2 project office on June 22, 2013. Renovations are ongoing and MWAA would occupy the Phase 2 project office beginning in September 2013. Project staff will move in three phases: September 2013, November 2013, and February 2014. The Package ADB Contractor, Capital Rail Constructors, and WMATA staff will be co-located with the MWAA project staff. The design team for the Capital Rail Constructors will be located in an adjacent building. Capital Rail Constructors has begun moving into their offices.

MWAA stated that the reason for the one-month delay in moving into the Phase 2 project office is due to the review required to ensure that all procurements meet federal requirements, including the lease for the project office. The address for the Phase 2 project office is 198 Van Buren Street, Herndon, Virginia.

Upon completion of the project, WMATA will become the operator of this extension to their system. WMATA personnel have been active participants in the Phase 1 project, and will have a larger staff involved on the Phase 2 project.

### b. Project Controls

MWAA is developing procedures with regard to monitoring and controlling project scope, quality, schedule, cost, contingency management, and safety. MWAA has implemented lessons learned from the Phase 1 project for the Phase 2 contracts. Most significant of the lessons learned and implemented in Phase 2 was the elimination of Allowance Items, institution of a cost loaded schedule requirement and requiring the DB Contractor to be responsible for utility relocations. These were elements that led to significant cost overruns in Phase 1. It is the PMOC's observation that MWAA continues to monitor and control the project in accordance with their draft procedures.

### c. Compliance

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

- **DBE Goal** – MWAA has developed a DBE Project Goal of 25% for Phase 2, which is currently under review by the Region 3 Civil Rights Officer. Package A has a contract goal of 14%, the PMSS Contract has a goal of 25%, the Package S Contract has a goal of 20%; the Package B goal is not yet determined. Fairfax and Loudoun Counties plan to procure the work in Package C without the use of Federal assistance; therefore, there is no DBE requirement.
- **Civil Rights** – FTA stated that should Fairfax and Loudoun Counties use federal funds for the five parking garages (Package C) an approved Title VI Plan would be required. Loudoun County confirmed that they have not submitted a Title VI Plan to FTA for review. Fairfax County stated that a Title VI Plan was previously submitted but rejected by FTA and questioned whether that plan just needed to be revised and resubmitted. FTA stated that Fairfax County needs to address the comments and resubmit the plan for review. Both counties have contacted the Region 3 Civil Rights Officer for guidance.

## 2. Project Scope

Phase 2 of the Project will provide 11.4 route miles of new track from the interim terminus at Wiehle Avenue Station through Dulles Airport to a terminus in eastern Loudoun County. Phase 2 includes six new stations (Reston Town Center, Herndon, Innovation Center, Dulles Airport, Route 606 and Route 772 Stations). Phase 2 also includes a Maintenance Facility (maintenance and storage yard facility) at Dulles Airport, five new parking facilities at three stations to provide 8,900 parking spaces, wayside facilities, including traction power substations, tie-breaker stations, and storm water management ponds, along the alignment.

### a. National Environmental Policy Act (NEPA)/Environmental Assessment (EA)

MWAA prepared an Environmental Assessment covering the preliminary engineering design refinements for Phase 2, which was issued for public review on May 10, 2012. The FTA Regional Administrator issued a Finding of No significant Impact (FONSI) on December 17, 2012. It stated that there were “no significant environmental or socioeconomic impacts associated with the design refinements for Phase 2 of the Dulles Corridor Metrorail Project.” FTA cautioned that should there be any changes in the location of the parking garages by the counties, or if they need any additional property for the construction of the parking garages, MWAA must notify FTA immediately to determine if the environmental documents would need revisions.

### b. Third Party Agreements

MWAA reported that there are six Intergovernmental Agreements required for Phase 2: WMATA, the Dulles Greenway, Loudoun County, Fairfax County, Virginia Department of Transportation (VDOT), and the City of Herndon. MWAA provided a summary of the status of finalizing the six Intergovernmental Agreements below.

AGREEMENT	STATUS	NOTES
WMATA – New Agreement	Negotiations Completed – Terms Agreed	Requires MWAA Board Approval (Expected 7/17/13)
VDOT – Amendment of Phase 1 Agreement	Negotiations Completed – Terms Agreed	Awaiting signature by both parties
Fairfax County – Amendment of Phase 1 Agreement	Executed	Fully Complete
Loudoun County	Negotiations Completed – Terms Agreed	Approved by Loudoun Board on 7/3/2013; Awaiting MWAA signature
Town of Herndon	Partially Executed– Terms Agreed	Executed by MWAA; Awaiting Herndon signature
TRIP II (Dulles Greenway)	Negotiations Completed – Terms Provisionally Agreed	Under Final Review by both parties

**c. Design Status**

Preliminary Engineering is complete for Phase 2. Final design and construction will be performed under the DB contract for Package A. Preliminary Engineering is complete for Package B, for which design and construction will also be performed as a DB contract. Fairfax and Loudoun Counties will manage the final design of the parking garages included in Package C. MWAA has set a deadline of December 31, 2014 for the counties to confirm that they can deliver the completed parking facilities as required. MWAA will perform oversight of the design and construction of the parking facilities.

**d. Bidding and Construction Status**

- **New Mass Transit Line (Package A)**

In August 2012, MWAA issued a Request for Qualifications solicitation for the DB contract for Package A of the Phase 2 Dulles Corridor Metrorail Project. Five DB teams were shortlisted and a final Request for Proposals issued on February 6, 2013. At the opening of proposals on April 19, 2013, Capital Rail Constructors, a joint venture consisting of Clark Construction Group, LLC and Kiewit Infrastructure South, Company, had the lowest responsible and responsive bid of \$1,177,777,000. On May 14, 2013, MWAA formally awarded the Package A Contract to Capital Rail Constructors and contract awarded was issued on May 14, 2013. NTP was issued on July 8, 2013 with a contractual duration for Package A of 1825 calendar days from NTP. Thus, the Substantial Completion Date for Package A is July 7, 2018.

The contractor, Capital Rail Constructors, is currently mobilizing and staff and working on the required management plans. Preliminary work, to include geotechnical investigation and location of existing utilities, is expected to begin in late July/early August 2013.

- **Dulles Maintenance Facility (Package B)**

Package B will include the final design of the Maintenance and Storage Yard. On June 6, 2013, MWAA submitted a cost validation study in response to a request from FTA. This study included updated plans and cost estimates for the redesign of the Dulles Maintenance Facility based on program reductions proposed by WMATA in late

2011. Some of the changes include: reduction in the yard storage track capacity from 250 railcars to an initial storage of 168, with the ability to expand to 228; reduction in the size of the Maintenance of Way and Warehouse buildings; and elimination of the Heavy Damage Building and inspection tracks and associated inspection pits in the Service and Inspection Maintenance Building. MWAA's evaluation shows that the reduced scope saves \$10 million. The PMOC is reviewing this document.

MWAA explained that they are in the process of preparing the contract documents for Package B based on the reduced scope using some of the original plan details and layouts. MWAA anticipates issuing an RFQI for the Package B Contract in November 2013; however, the method of procurement has not been finalized. MWAA anticipates issuing solicitation for the Package B Contract in late 2013, with final contractor selection in May 2014, and contract award in June 2014. Substantial completion is currently scheduled for June 29, 2018.

- **Advanced Earthwork (Package S)**

The Phase 1 contractor used the site of the proposed Dulles Maintenance Facility to stockpile excavated material. To construct the new facility, it will be necessary to move the stockpiled material and re-grade the site. MWAA intends to issue an Advanced Earthwork contract to move the stockpile to another site on Dulles Airport property. The Advanced Earthwork contract will have a separate contractor, scope, DBE goal, and milestones from the Package B contract. MWAA issued the Advanced Earthwork contract (Package S) solicitation on June 27, 2013 and held the pre-proposal conference on July 12, 2013. Bids are due on August 7, 2014 and MWAA anticipates an award by the end of August, with NTP by September 2013.

- **Parking Garages (Package C)**

At present, Fairfax County and Loudoun County plan to procure the five required parking garages.

Fairfax County is currently responsible for two parking garages; one at the Route 28 Station and one at the Herndon-Monroe Station. Fairfax County reported that it is holding a public hearing on July 30, 2013 to allow the County to enter into discussions with the adjacent landowner at the site of the Route 28 Station, one of its two parking facilities. Fairfax County anticipates issuing a Design-Bid-Build solicitation through the Public Works and Environmental Services Department for the construction of both of their parking garages.

Loudoun County is currently responsible for three parking garages; one at the Route 606 Station and two at the Route 772 Station. On November 16, 2012, Loudoun County issued a Solicitation for Conceptual Proposals through the Public-Private Transportation Act of 1995 for Loudoun County Parking Facilities. The solicitation requested the submittal of conceptual proposals from qualified private entities for the finance, design, development, construction, and operation of the Route 606 and 772 Stations, three parking facilities. Following a detailed review of the proposals by Loudoun County staff, an action item was put before the Loudoun County Board of Supervisors requesting their approval to proceed with a Best and Final Offer for the three garages. At its meeting on July 17, 2013, the Board voted to reject the three

initial proposals which were received through a Request for Information process. The Board also voted to solicit new proposals through the RFP process. Loudoun County is considering using a Design-Build-Operate-Maintain procurement method.

MWAA established a substantial completion date for all of the parking garages of December 14, 2017.

**e. Real Estate**

MWAA is in the process of developing their Real Estate Acquisition Management Plan (RAMP) for Phase 2. Details of the required properties will be developed during the design phase of the Package A Contract.

**f. Utility Coordination**

MWAA will develop their permitting plan during the design phase of the Package A Contract. The contract with Capital Rail Constructors states that all utility relocations are the contractor's responsibility.

**g. Vehicle Procurement**

On August 15, 2012, MWAA authorized WMATA to amend their contract with Kawasaki to exercise the option for an additional sixty-four 7000 Series railcars for Phase 2. WMATA's letter of August 30, 2012 confirmed the executed amendment to the Kawasaki Contract.

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

MWAA has submitted the PMP and required sub-plans. Below is the status of each plan received by FTA through June 30, 2013.

- MWAA submitted that latest version of the draft Phase 2 **Project Management Plan** (PMP), Version 1.1 to FTA on May 16, 2013 for FTA review and approval. Version 1.1 included modifications based on the comments received from FTA to Version 1.0, dated November 2012 submitted to FTA on December 7, 2012. The résumé summaries of key personnel were received on June 21, 2013. The PMP is under review by the PMOC.
- MWAA submitted the latest revision of the Phase 2 **Quality Program Plan** (QPP), Revision 1, to the FTA on March 26, 2013 for FTA review and approval. The QPP incorporates the changes to address the PMOC comments to QPP Revision 0, dated October 24, 2012 submitted to FTA on December 12, 2012. The comments were discussed after the March 7, 2013 FTA/PMOC monthly meeting, and were addressed and closed. The PMOC recommended acceptance of the QPP to FTA on May 31, 2013.
- MWAA submitted the Phase 2 **Safety and Security Management Plan** (SSMP), Revision Draft dated February 28, 2013, to the FTA on March 27, 2013 for review and approval. On May 17, 2013, the PMOC recommended that the FTA accept the SSMP contingent upon the signature by WMATA's Chief Safety Officer. MWAA stated that they plan to address three recommendations included in the PMOC review and resubmit the SSMP the week of July 29, 2013. MWAA added that they would like to get the draft Readiness for Revenue Operations Report before submitting the final SSMP in order to incorporate any findings identified by the Office of Safety and Security during the review process. FTA confirmed

that the draft Readiness for Revenue Operations Report will not be ready by the end of July 2013.

- MWAA submitted the latest revision of the Phase 2 **Risk and Contingency Management Plan (RCMP)**, Revision 1, to the FTA on April 24, 2013 for review and approval. Revision 1 included modifications based on the comments received from FTA to Revision 0, Draft 2, dated December 2012. MWAA submitted their draft SCC Budget Workbook to the PMOC on May 28, 2013. MWAA, FTA and the PMOC met on June 20 and July 9, 2013 to review MWAA's development of project costs. Based on the discussions during the review meetings, MWAA will issue a revised RCMP Revision 1A for PMOC review by the end of July 2013.
- Since WMATA, rather than MWAA, will be the operator of the completed project, the WMATA **Rail Fleet Management Plan (RFMP)** is the applicable document. WMATA submitted RFMP Rev 4G to the FTA on August 3, 2012. FTA's letter dated October 11, 2012 conditionally approved the RFMP with the proviso that WMATA keep the FTA informed of the operating plan for the startup of the Dulles service. WMATA's submitted their RFMP, Revision I to the FTA on July 5, 2013. WMATA submitted RFMO, Revision J, on August 2013 and it was accepted by FTA on August 8, 2013.

#### 4. Project Schedule

Phase 2 is currently in the procurement phase. Construction is expected to begin in July 2013 with revenue service in September 2018. The table below shows the Phase 2 milestones, as provided by MWAA in the latest schedule dated July 2013 and updated during the July 10, 2013 meeting.

<b>DULLES CORRIDOR PHASE 2 MILESTONES</b>	
<b>MILESTONE</b>	<b>DATE</b>
Package A Design-Build Contract Award	05/14/2013(A)
Package S Advanced Earthwork Contract IFB	06/27/2013 (A)
Package A Contract NTP	07/08/2013(A)
Package S Advanced Earthwork Contract Award	08/30/2013
Package S Advanced Earthwork Contract NTP	09/16/2013
Package B Contract RFQ	10/15/2013
Package B Contract RFP	01/15/2014
Package B Contract Award	05/28/2014
Package B Contract NTP	07/01/2014
Deadline for Fairfax and Loudoun Counties' decision to construct the Parking Facilities	09/01/2014
Package S Advanced Earthwork Contract Substantial Completion	10/01/2014
Construction of Parking Facilities Complete	12/14/2017
Package B Contract Substantial Completion	06/29/2018
Package A Contract Substantial Completion	07/07/2018
Begin Operations Readiness Testing	07/07/2018
Complete Operations Readiness Testing	09/04/2018
Project Final Acceptance	09/04/2018
Begin Revenue Operations Acceptance Testing	09/05/2018
Complete Revenue Operations Acceptance Testing	01/02/2019
Revenue Service Date	Spring 2019

**a. Important Activities – 90-Day Look Ahead**

- MWAA to execute Phase 2 PMSS contract with Jacobs Engineering.
- Receive bids and issue NTP for Advanced Earthwork Contract (Package S).
- Execute third-party agreement for WMATA, VDOT, Loudoun County, the Dulles Greenway and the Town of Herndon.
- MWAA to submit RCMP Revision 1A for PMOC review.
- MWAA to resubmit the SSMP addressing the recommendation issued by the FTA/PMOC.
- Fairfax County public hearing to allow the County to enter into discussions with an adjacent landowner to the Route 28 Station.

**5. Project Cost**

MWAA’s current Phase 2 budget is \$2,902,000,000, including the cost of the parking garages to be funded by Fairfax and Loudoun Counties. This figure is in year-of-expenditure dollars and excludes the finance costs. Below is the breakdown of that budget:

<b>ESTIMATED CAPITAL COSTS (\$ Millions)</b>	
<b>SCOPE AND FTA COST CATEGORIES</b>	<b>PHASE 2</b>
Guideway and Track Elements	\$ 409
Stations and Parking	\$ 262
Support Facilities: Yards and Shops	\$ 295
Sitework and Utilities	\$ 424
Train Systems	\$ 227
Right-of-Way and Property Acquisition	\$ 62
Rail Cars and Support Vehicles	\$ 282
Design and Engineering Services	\$ 546
Unallocated Contingency	\$ 79
<b>Baseline Project Cost Estimate</b>	<b>\$ 2,587</b>
Phase 2 County-Funded Elements	\$ 315
<b>TOTAL PROJECT CAPITAL COST</b>	<b>\$ 2,902</b>

Primary funding for Phase 2 comes from MWAA (7.75%), Fairfax County (21.74%), Loudoun County (14.89%), Commonwealth of Virginia (11.13%), and the Dulles Toll Road (44.49%). MWAA, Fairfax County, and Loudoun County anticipate receiving a total of \$1.9 billion in direct loans under the United States Department of Transportation (USDOT) Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance program to assist in financing their shares.

SOURCES OF CAPITAL FUNDING (\$ Millions)				
	Multi-funded Elements	County-funded Elements	Phase 2 Total	% of Total
Commonwealth of Virginia	\$ 323		\$ 323	11.13%
Fairfax County	\$ 484	\$ 147	\$ 631	21.74%
Loudoun County	\$ 264	\$ 168	\$ 432	14.89%
MWAA (Aviation Funds)	\$ 225		\$ 225	7.75%
MWAA (Dulles Toll Road)	\$ 1,291		\$ 1,291	44.49%
<b>Total Sources of Funding</b>	<b>\$ 2,587</b>	<b>\$ 315</b>	<b>\$ 2,902</b>	<b>100.00%</b>

On April 11, 2013, MWAA provided the financial feasibility study to the TIFIA Joint Program Office. On May 9, 2013, MWAA submitted its initial plan of finance and financial model, and indicative rating to the TIFIA Joint Program Office and based ongoing conversations and meetings with TIFIA funding partners, anticipates submitting additional information requested on June 7, 2013.

The County of Fairfax submitted its initial plan of finance and financial model, indicative rating, and feasibility study to the TIFIA Joint Program Office on June 5, 2013. The initial submittal from Loudoun County is pending receipt of its indicative rating from Standard & Poor's which is expected in mid-June 2013. Once the rating is received, Loudoun County will forward its initial plan of finance and financial model, indicative rating, and feasibility study to the TIFIA Joint Program Office. MWAA, and Fairfax and Loudoun Counties presented the financial plans for the project to the USDOT TIFIA staff and consultants on June 21, 2013.

The SCC Project Cost Summary by SCC Code as provided in the July 2013 RCMP:

Contract Package	SCC Code	SCC Category	Construction Cost		Owner Cost		Total Program Cost	
			YOE Estimate including Contingency	YOE Estimate total without Contingency	YOE Estimate including Contingency	YOE Estimate total without Contingency	YOE Estimate including Contingency	YOE Estimate total without Contingency
A	10	Guideway	\$ 340,953	\$ 340,953	\$ 67,552	\$ 3,993	\$ 408,505	\$ 344,946
	20	Stations, Stops, Terminals, Intermodals	\$ 224,433	\$ 224,433	\$ 32,331	\$ 3,992	\$ 256,763	\$ 228,424
	30	Support Facilities: Yards, Shops and Admin Bldgs	\$ 377	\$ 377	\$ -	\$ -	\$ 377	\$ 377
	40	Sitework and Special Conditions	\$ 352,760	\$ 352,760	\$ 51,143	\$ 12,651	\$ 403,902	\$ 365,411
	50	Systems	\$ 172,044	\$ 172,044	\$ 38,009	\$ 21,750	\$ 210,053	\$ 193,794
	60	ROW, Land and existing improvements	\$ -	\$ -	\$ 63,646	\$ 58,523	\$ 63,646	\$ 58,523
	70	Vehicles	\$ -	\$ -	\$ 213,383	\$ 212,765	\$ 213,383	\$ 212,765
	80	Professional services and Agency costs	\$ 87,210	\$ 87,210	\$ 356,465	\$ 323,841	\$ 443,675	\$ 411,051
	90	Unallocated Contingency			\$ 59,484	\$ -	\$ 59,484	\$ -
		<b>Package A Total</b>	<b>\$ 1,177,777</b>	<b>\$ 1,177,777</b>	<b>\$ 882,013</b>	<b>\$ 637,515</b>	<b>\$ 2,059,790</b>	<b>\$ 1,815,292</b>
B	10	Guideway	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	20	Stations, Stops, Terminals, Intermodals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	30	Support Facilities: Yards, Shops and Admin Bldgs	\$ 247,207	\$ 222,194	\$ 36,996	\$ 7,286	\$ 284,203	\$ 229,480
	40	Sitework and Special Conditions	\$ 29,513	\$ 26,300	\$ 3,871	\$ 1,511	\$ 33,383	\$ 27,811
	50	Systems	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	60	ROW, Land and existing improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	70	Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	80	Professional services and Agency costs	\$ 23,280	\$ 20,786	\$ 72,436	\$ 64,650	\$ 95,717	\$ 85,436
	90	Unallocated Contingency			\$ 15,965	\$ -	\$ 15,965	\$ -
		<b>Package B Total</b>	<b>\$ 300,000</b>	<b>\$ 269,281</b>	<b>\$ 129,268</b>	<b>\$ 73,447</b>	<b>\$ 429,268</b>	<b>\$ 342,727</b>
C	10	Guideway	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	20	Stations, Stops, Terminals, Intermodals	\$ 227,737	\$ 198,564	\$ 3,968	\$ -	\$ 231,705	\$ 198,564
	30	Support Facilities: Yards, Shops and Admin Bldgs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	40	Sitework and Special Conditions	\$ 3,957	\$ 3,445	\$ 968	\$ -	\$ 4,925	\$ 3,445
	50	Systems	\$ 6,823	\$ 5,952	\$ -	\$ -	\$ 6,823	\$ 5,952
	60	ROW, Land and existing improvements	\$ 10,825	\$ 9,832	\$ -	\$ -	\$ 10,825	\$ 9,832
	70	Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	80	Professional services and Agency costs	\$ 65,794	\$ 58,518	\$ 76,091	\$ 67,912	\$ 141,885	\$ 126,430
	90	Unallocated Contingency			\$ 16,771	\$ -	\$ 16,771	\$ -
		<b>Package C Total</b>	<b>\$ 315,136</b>	<b>\$ 276,312</b>	<b>\$ 97,797</b>	<b>\$ 67,912</b>	<b>\$ 412,933</b>	<b>\$ 344,224</b>
	<b>Project Total</b>	<b>\$ 1,792,913</b>	<b>\$ 1,723,370</b>	<b>\$ 1,109,079</b>	<b>\$ 778,874</b>	<b>\$ 2,901,992</b>	<b>\$ 2,502,243</b>	

On May 14, 2013, MWAA awarded the Package A Contract for final design and construction of the line and stations in the amount of \$1,177,777,000. This was \$307.6 million below the engineer's estimate; however, MWAA is issuing an Owner Controlled Insurance Program (OCIP), the cost of which was initially intended to be included in the DB contract cost. The cost of the OCIP, which was estimated at \$50 million, will be transferred from Package A to the Owner Cost. Thus, the net savings realized was approximately \$250 million.

## **6. Project Risks**

MWAA submitted the latest revision of the Phase 2 Risk and Contingency Management Plan (RCMP), Revision 1, to the FTA on April 24, 2013, including MWAA's proposed Top Ten Risks to FTA for review and approval. MWAA has identified four primary mitigation strategies; however, MWAA and the PMOC agree that the primary and secondary mitigation measures should be developed in more detail following the award of the DB contracts.

- **Budget Risks:** MWAA has allocated \$464 million in contingency for the overall project. Contingency is further broken down by Package as follows: \$400 million for Package A, \$54 million for Package B, and \$10 million for Package C. A contingency management plan has been established for the release of contingency based on contract milestones. This plan is under review by the PMOC.
- **Schedule Risks:** With regard to Schedule Contingency, MWAA believes that the anticipated construction schedule durations are reasonable and contain some level of inherent schedule contingency. This plan is under review by the PMOC.
- **Top Ten Risks:** In its April 2013 RCMP, Revision 1, MWAA provided a summary of the Top Ten Risks for review and approval. Below is the MWAA proposed Top Ten Risks submitted to FTA in the RCMP, which the PMOC is reviewing.

## Summary Status of the Top Ten Project Risks, July 2013RCMP

RCMP Revision 1a - July 2013			
Risk ID	Event Description	(Proposed Primary) Risk Mitigation	Risk Rating
80.R.1	Project Team and various Agencies add new design requirements not currently included in the PE documents.	Project Team earliest possible exploration and identification of politically based/influenced issues from any and all sources and the timely implementation of a solution that minimizes cost and schedule impact to the Project.	32
40.C.98	Utility Companies involved in the utility relocation delay the DB.	DB to establish agreements with utility companies to start relocations work in advance of construction and complete by earliest need date in DB schedule for timely Project Completion.	27
20.C.103	PE Design for the Dulles Airport Station mezzanine construction on either or both sides of North Garage Walk-back Tunnel proves challenging due to extent of as-built conditions and construction alterations required to the existing tunnel.	DB to undertake early exploration and verification of existing conditions and provide, as required, alternative solutions. Project Team to allow maximum flexibility in design parameters for Dulles Airport Station to encourage DB to achieve optimum final design-construction solutions to lower cost & simplify construction and accommodate patron interface.	27
80.D.70	Loudoun and Fairfax Counties interfering with the design process of the parking garages and do not complete design documents in a timely manner.	Project Team to coordinate with Loudoun and Fairfax Counties to ensure timely issuance of DB packages for Garages and completion of designs.	27
20.R.124	Fairfax and Loudoun Counties, when assigned responsibility, do not complete procurement and construction of parking facilities in timely manner.	Project Team to develop a plan as to how it would build parking facilities in the event of failure by either Fairfax or Loudoun County, and identify and allocate funding sources, enforce deadlines for timely decisions and actions by Fairfax and Loudoun Counties.	27
80.D.39	Fairfax and Loudoun Counties, VDOT, Reston and Town of Herndon require local roadway improvements & traffic signal integration not currently planned or represented in the PE design.	DB to undertake early coordination with the Project Team, Loudoun and Fairfax Counties, Reston and Town of Herndon, VDOT and the owners/developers of congruous and adjacent real property..	24
80.D.43	Initial PE design addressing issues of real property acquisition is incomplete, vague or ambiguous.	Project Team to perform advance supplemental analysis of PE design and real estate requirements; Project Team include pessimistic availability dates in DB Contract Documents.	24
40.R.96	VDOT, Loudoun County, Fairfax County, Reston, and/or Town of Herndon do not provide new roadways or alteration connecting existing roadways to Project station and parking facility access points.	The Project Team is to coordinate and clarify the responsibilities and obligations of Loudoun and Fairfax Counties, the Town of Herndon, Reston, and VDOT, in the IGA and engage the above named counties and local authorities to solidify buy-in from owners and developers of contiguous and adjacent properties for completing access roadways availability to meet the DB schedule for Project Completion.	21
80.C.193	DB does not issue complete and coordinated documents for use in design, construction and the permitting process.	The Project Team is to coordinate the clear articulation in the DB RFP documents the expectations for DB early establishment of submissions procedures and compliance therewith during design and construction, to include establishment of interim milestones during the design phase that are enforceable. Furthermore, the Project Team has to ensure that the DB Contract Documents clearly articulate the DB responsibilities and obligations to provide full and complete submissions to include the work scope of all disciplines required to complete construction and that submittals are staggered to prevent overloading of the review systems.	18
60.R.22	Project Team or DB does not make timely acquisition of right-of-way permanent and temporary easements.	The Project Team shall coordinate the early acquisition of right-of-way and easements so as to not impact the DB design and construction process and progress.	18

## 7. Action Items

### MWAA – DULLES CORRIDOR METRORAIL PROJECT PHASE 2- Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
1	2A	MWAA needs to submit an updated RCMP	The RCMP must take into account the PMOC recommended contingency levels for each contract package	Y				R

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

Subtask 2A CLIN 0002A – PMP Review  
 Subtask 2B 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

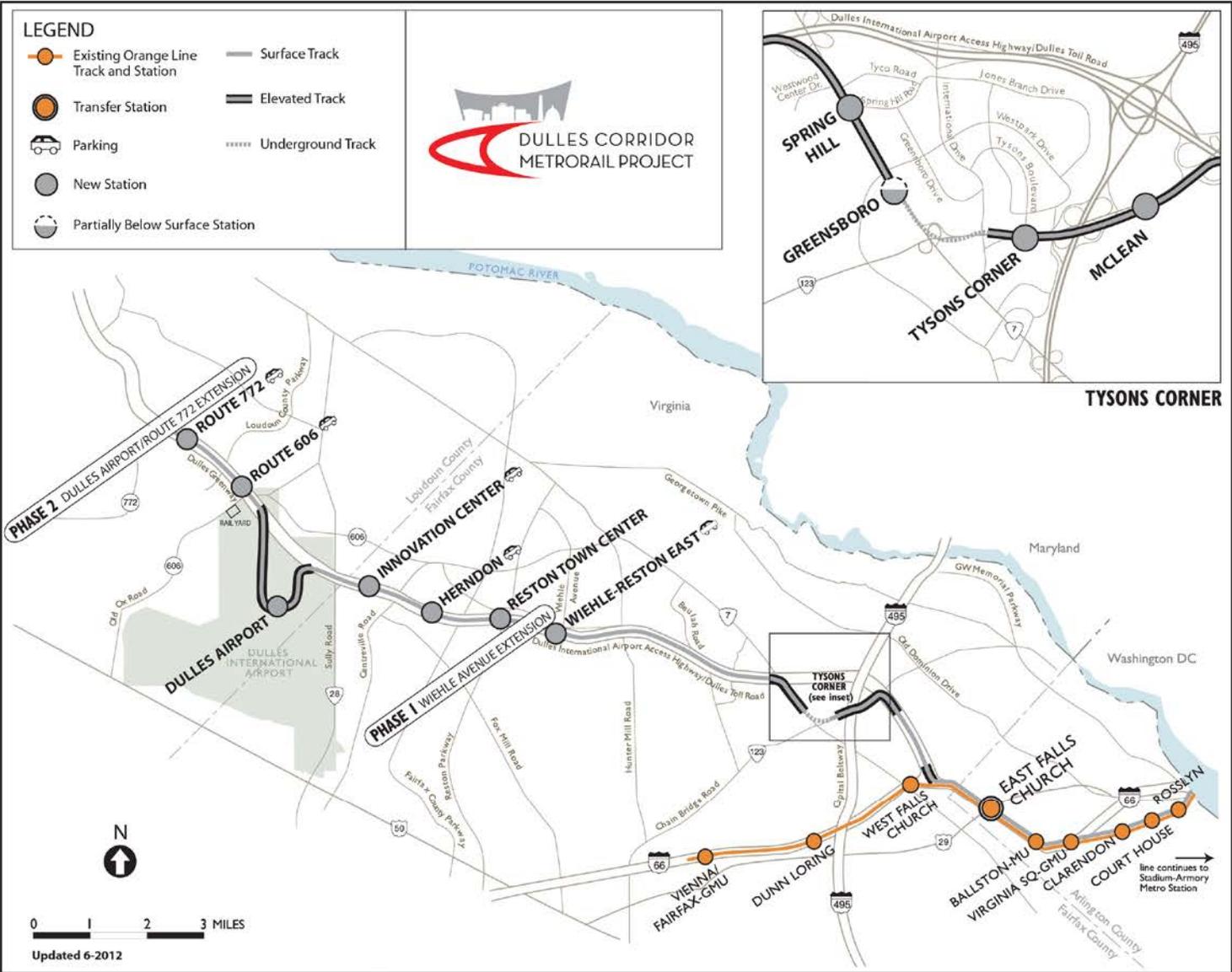
R – Review On-going  
 C – Completed – No further review required

# APPENDICES

## APPENDIX A – LIST OF ACRONYMS

Board	MWAA Board of Directors
DB	Design-Build
DIAAH	Dulles International Airport Access Highway
EA	Environmental Assessment
FTA	Federal Transit Administration
LPA	Locally Preferred Alternative
MWAA	Metropolitan Washington Airports Authority
NEPA	National Environmental Policy Act
NTP	Notice to Proceed
OCIP	Owner Controlled Insurance Program
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
RFMP	Rail Fleet Management Plan
SCC	Standard Cost Category
SSMP	Safety and Security Management Plan
TBD	To Be Determined
TIFIA	Transportation Infrastructure Finance and Innovation Act
USDOT	United States Department of Transportation
VDOT	Virginia Department of Transportation
WFC	West Falls Church
WMATA	Washington Metropolitan Area Transit Authority

# APPENDIX B – PROJECT MAP





[Redacted]

[Redacted]