U.S. Department
of Transportation
**Federal Transit
Administration**

Administrator

1200 New Jersey Ave., S.E.
Washington, DC 20590

MEMORANDUM

To: Dulles Metrorail Phase 2 Project Stakeholders

From: Peter M. Rogoff
Administrator
PMR

Re: White Paper Regarding Secretary LaHood's Proposed Scope Reductions

Date: July 3, 2011

- Pursuant to the direction of the Secretary as articulated during our stakeholder meeting of June 30, I have prepared the attached White Paper discussing the details of his final proposal for scope reductions to the Metrorail Phase 2 project. The paper also discusses some associated financing issues as well as the process that gave rise to his proposal.

- Please note that the table of scope reductions included in the White Paper differs from the one discussed at our June 30 meeting in only one respect. I believe it was widely agreed upon at the meeting that the potential opportunity for reducing the number of railcars necessary for the Silver Line service should remain an option to be considered upon WMATA completing its railcar fleet plan. As such, I added this option at the end of the table. The FTA expects to receive WMATA's draft plan later this month.

- Please do not hesitate to contact me or the Secretary's Chief Financial Officer, Chris Bertram, if we can provide additional information.

- I hope you and your families all have a very safe and enjoyable Independence Day holiday.

Dulles Rail Phase 2 Cost Reduction Efforts

Convening of Stakeholders

On June 1, 2011, U.S. Transportation Secretary Ray LaHood convened the first of five meetings of the principal stakeholders and funding partners of the Dulles Metrorail Phase 2 project, including the Metropolitan Washington Airports Authority (MWAA), Fairfax County, Loudoun County, the Washington Metropolitan Transportation Authority (WMATA), and the Commonwealth of Virginia.

Secretary LaHood convened these stakeholders for the purpose of establishing a common agreed-upon design and finance plan for the Phase 2 project so that it could get back on a path to successful implementation without further delay.

At the inaugural meeting, Secretary LaHood articulated his desire to complete an agreement in principle within 30 days – one that will ensure the deployment of a viable and beneficial regional transit link but at a significantly reduced cost so as to lessen the financial burden on the funding partners, local taxpayers, and the users of the Dulles Toll Road.

Criteria for Scope Reductions

The Secretary hosted five separate meetings over the 30-day period during which all participants were invited to propose project scope reductions. The Federal Transit Administration (FTA) contracted with its own Project Management Oversight Contractor (PMOC) to independently evaluate the cost and operational impact of each cost mitigation proposal for the benefit of all participants.

Over the ensuing 30 days, stakeholders discussed and debated the merits of each proposal with the technical assistance of FTA's PMOC. The Secretary sought to focus attention on scope reductions that:

- Offered significant cost savings;
- Maintained a cost effective approach to project construction;
- Maintained project performance goals;
- Sustained expected ridership; and
- Minimized significant delays associated with wholesale redesigns or substantial new environmental review requirements.

Secretary's LaHood's Proposal

At the June 30 meeting, Secretary LaHood presented a final proposal that, in the view of the USDOT, best achieves these objectives. Importantly, given the depth of feelings on the part of many stakeholders, the Secretary's proposal also sought to ensure "shared sacrifice" on the part of the major funding partners. Concessions needed to be made by all.

Taken together, the Secretary's final proposal reduces the estimated cost of the Phase 2 by $1.058 billion below that of the original locally preferred alternative (LPA). This new cost estimate of $2.767 billion could be reduced by as much as another $200 million depending on the outcome of analysis of some additional potential scope reductions during July and August. The Secretary's proposed scope reductions are outlined below. A more detailed description of each adjustment is included as an appendix.

	Cost Estimate of Original LPA	**$3.825B**
	Initial Project Cost Savings	**Identified Cost Savings**
1	Construct an Aerial Dulles Airport station near North Garage	-$562M
2	Provide additional station amenities (windscreens, weatherization) for aerial station	+$10M
3	Reduce Yard and Shop facilities to Dulles Phase 2 level	-$81M
4	Transfer Responsibility for Route 28 Station to Fairfax County	-$136M
5	Transfer Responsibility for 5 parking facilities to Fairfax and Loudoun Counties	-$235M
6	Reduce canopy design to Phase 1 requirements	-$15M
7	Utilize steel structures in lieu of concrete	-$35M
8	Modify Station Finishes	-$4M
	Initial New Cost Estimate	**$2.767B**
	Later Cost Savings Opportunities (July-August)	
9	Value Engineering by MWAA	Up to -$75M
10	Donation of Property to Project in lieu of ROW Purchase	Up to -$53M
11	Reduce the number of Traction Power Substations (TPSS) by two (awaits WMATA simulation)	-$34M
12	Estimating error in SCC50 (TPSS)	-$15M
13	Reduce number of railcars (awaits WMATA Rail Fleet Plan)	Up to -$24M

Further Governmental Assistance

The USDOT's Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides credit assistance for surface transportation projects including highway, transit, railroad, intermodal freight, and port access projects. Eligible applicants include state and local governments, transit agencies, railroad companies, special authorities, special districts, and private entities. The TIFIA program is designed to fill market gaps and leverage substantial private co-investment. The program has been highly successful in bringing private sector capital into traditionally public sector investments.

In allocating TIFIA assistance, the USDOT must work within a very limited amount of credit subsidy made available annually by Congress. While the amount of credit subsidy required for each loan depends in part on the size of the loan, an even larger determinant is the overall creditworthiness of the project. In recent years, the popularity of the TIFIA program has grown exponentially.

In March of 2010, MWAA submitted a letter of interest for a TIFIA loan totaling $1.73 billion for the Dulles Rail project. The MWAA request was one of almost 40 such requests which together sought loan assistance in excess of $12.5 billion. The MWAA request was by far the largest of any request received for 2010, totaling well more than five times the average request for that year. Moreover, the estimated credit subsidy requirement for MWAA's loan would have absorbed all of the credit subsidy available for that year for all potential TIFIA projects across the nation.

In determining how USDOT's very limited TIFIA resources might assist in the Phase 2 project, Secretary LaHood has focused on using TIFIA to assist Loudoun and Fairfax counties in enticing public-private investment and helping defray the costs associated with the assumption of the Phase 2 parking facilities and Route 28 station. Given the difference in creditworthiness between the counties and MWAA, the limited amount of TIFIA subsidy available can go a great deal farther in lowering Phase 2 costs if directed to these project elements. Nothing in the decision would preclude MWAA from applying for Phase 2 assistance at some future time from the TIFIA program.

In the course of the recent stakeholder meetings, both Virginia Transportation Secretary Sean Connaughton and VDRPT Director Thelma Drake have discussed the possibility of the Commonwealth providing further assistance to the Phase 2 project. Such assistance could include extending the terms of the toll road lease to MWAA and providing direct credit assistance through the Commonwealth's recently-enacted State Infrastructure Bank. Both of these mechanisms hold the potential for easing the financing requirements of the project and the burden on toll road users.

Appendix:

Detailed Description of Cost Adjustments

1. Construct an aerial Dulles Airport station near the North Garage. The North Garage Aerial option would result in an aerial alignment with a station located adjacent to the existing North parking garage. In addition to a lower cost, this option reduces the construction duration. It will require further Federal environmental and historic preservation reviews. Access from the North parking garage to the airport terminal is currently provided by an underground pedestrian passageway and a regular bus shuttle service. FTA's PMOC estimates that this option would reduce the project cost by approximately $562 million.

2. Provide additional station amenities for aerial Airport station. Windscreens could be installed on the platform, while the stairs and escalators can be built to provide for enhanced protection from the weather. Climate controlled enclosures on the platform will be available for waiting passengers. FTA's PMOC estimates that this change would reduce the savings estimated above by approximately $10 million.

3. Reduce Yard and Shop facilities to Dulles Phase 2 level. The vehicle yard and repair shops were designed for 250 rail cars. The Dulles Phase 2 project only requires facilities to service 184 rail cars. FTA's PMOC consulted with WMATA to determine the type and size of the facilities and equipment required for this project and determined that the scope of the yard could be reduced. FTA's PMOC estimates that reductions to the size of the maintenance yard would achieve cost savings of approximately $81 million.

4. Transfer responsibility for the Route 28 Station to Fairfax County. While constructed along with the Phase 2 project, Fairfax County would be responsible for paying the cost of constructing the Route 28 Station. FTA's PMOC estimates the cost of the station to be approximately $136 million.

5. Transfer responsibility for five parking facilities to Fairfax and Loudoun Counties. There are five new parking garages planned for the Phase 2 project. Under this option, Fairfax and Loudoun Counties would assume the responsibility to acquire property, design, build, construct and operate these parking facilities. This could be accomplished through a Public-Private Partnership or other type of joint development. Parking revenue would accrue to the counties or their project partner – not to WMATA. FTA's PMOC estimates the cost of each parking garage as shown:

Garage Location	# Spaces	Estimated Cost
Herndon-Monroe Station	1949	$51.4 M
Route 28 Station	2027	$53.5 M
Route 606 Station	1965	$51.9 M
Route 772 Station (North)	1434	$37.8 M
Route 772 Station (South)	1540	$40.6 M
Total Savings	8915	$235.3 M

6. Reduce station canopy design to be consistent with Phase 1 requirements. The current design of the Phase 2 station platform canopies is 600 feet long to cover the entire platform. This proposed change would reduce the canopy length to a minimum of 300 feet and simplify the design to match the canopies being constructed for Phase 1. FTA's PMOC estimates the cost savings for this change to be approximately $15 million.

7. Utilize steel structures in lieu of concrete. The current project design incorporates pre-cast segmental concrete girders similar to Phase 1 to support the aerial guideway in Phase 2. There are some locations where less expensive steel girders could be used while still maintaining the structural integrity of the guideway. FTA's PMOC estimates the cost savings of this change to be approximately $35 million.

8. Modify station finishes. This change calls for less costly roofing, flooring ceiling, interior and exterior wall surfaces and handrails on platforms, mezzanines, pedestrian bridges, and pavilions. FTA's PMOC estimates the savings of this change to be approximately $4 million.

9. Value Engineering by MWAA. MWAA will undertake a value engineering exercise through a third-party consultant. FTA's PMOC estimates potential cost savings opportunities through this effort could be as much as $75 million.

10. Donation of Property to Project in lieu of right-of-way purchase. Most of the property required for the project may already be owned by MWAA, Fairfax County, or Loudoun County. In addition, the Dulles Toll Road and the Dulles Greenway median is reserved for the Phase 2 project. Thus, the cost of much of the project right-of-way could be removed from the budget if the counties and MWAA donate the property to the project. MWAA will have to complete an analysis of the ownership and value of the associated parcels in the project budget to fully estimate potential cost savings. This savings could be as high as $53 million.

11. Reduce the number of Traction Power Substations (TPSS). WMATA's new design standard calls for the Traction Power Substations, which provide electricity to run its trains, to accommodate a 120-second service frequency. However, WMATA has agreed that the Phase 2 project may use the same 135-second frequency as being built for Phase 1. FTA's PMOC believes that this is too stringent a requirement given the 7-minute service frequency called for in WMATA's operating plan for the "Silver Line". The PMOC recommends a 180-second standard, which would allow the deletion of two substations. WMATA disagrees with this proposed option unless a simulation study shows otherwise. FTA's PMOC estimates the savings of this change to be approximately $34 million.

12. Estimating error in TPSS cost. In its review, FTA's PMOC discovered a discrepancy between the 95% preliminary engineering cost estimate and the design drawings regarding the number of traction power substations for the Dulles Phase 2 Line and the rail yard and shops. FTA's PMOC estimates the correction of this error would reduce the project cost by approximately $15 million.

13. <u>Reduce number of railcars</u>. The current Dulles Phase 2 project budget calls for the purchase of 64 rail cars. The required number of railcars is based on a 2004 WMATA Operating Plan for 2025 and a 2007 WMATA Rail Fleet Management Plan (RFMP). WMATA is currently updating the RFMP to reflect their current and future system-wide fleet requirements and expects to deliver the draft Plan for review by FTA in July. The 7000 Series rail cars will be manufactured in sets of 4 cars, which are estimated to cost approximately $12 million each. If two sets of vehicles can be eliminated from the project budget, the resulting savings is estimated by FTA's PMOC to be approximately $24 million.