



## Board Report

File #: 2015-1228, File Type: Contract

Agenda Number: 64.

**REVISED**  
**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE**  
**SEPTEMBER 17, 2015**

**SUBJECT: NEW FLYER BUSES**

**ACTION: APPROVE RETROFIT OF OPERATOR BARRIERS AND LIVE VIDEO MONITORS ON REMAINING NEW FLYER BUSES AND OPTION 1 PRICE ESCALATION**

**RECOMMENDATION**

AUTHORIZING the Chief Executive Officer to:

- A. Increase the Life of Project (LOP) budget for the **900 bus buy project to include funding for Option 1 price escalation; retrofit of operator safety barriers; and Live Video Monitoring System (LVMS)** in the amount of \$3,617,152 from \$503,442,500 to \$507,059,652; and
- B. Approve Contract Modifications 9 and 10 for Contract OP33202869 to New Flyer of America, in the amount of \$6,043,492, for Option 1 price escalation and for retrofit of operator safety barriers and LVMS, increasing the total Contract value from \$498,652,341 to \$504,695,833.

**ISSUE**

Contract OP33202869 is a firm fixed price contract for the purchase of up to 900 forty-foot CNG transit buses. The Base Order Contract for 550 buses was executed on February 1, 2013. In February 2015, Metro's Board approved Contract Option 1 for 350 additional buses for a total of 900 buses. Base order buses purchased under this contract went into service in December 2013. Option 1 buses are currently being delivered to Metro at a rate of 5 buses per week with a delivery completion date of October 2016.

In response to increased operator assaults, Metro's CEO directed staff to retrofit all of Metro's bus fleet with protective operator barriers in order to provide additional protection to operators.

**DISCUSSION**

Operator Barriers & Live Video Monitoring System

In September 2014, New Flyer was directed to begin installation of LVMS during production on 618 buses. In February 2015, Metro directed New Flyer to begin installation of protective operator barriers on 473 buses during production.

The first phase of Metro CEO's directed fleet retrofit plan will include installation of operator barriers and LVMS on the base order New Flyer buses purchased under Contract OP33202869 that did not have this equipment installed during production. Currently, there are 427 New Flyer buses that do not have operator safety barriers installed, and there are 282 New Flyer buses that do not have the LVMS installed.

In the last couple years, several major U.S. transit operators are installing operator barriers to help reduce the number of bus operator assaults (Attachment D). The barriers are being installed as part of new bus procurements and continue to be in use. Metro will continue to monitor advancements in operator barriers and protective systems internally and within the transit industry. The information gathered from manufacturers and transit agencies only indicates who is using protective operator barriers, there is no current information available on their effectiveness against operator assaults.

Between April and August 2015 Metro conducted surveys and sent bus operators several pieces of communications to inform them and solicit their feedback regarding protective operator barriers and LVMS. The results of this survey found:

- 62% of operators surveyed expressed that they would use the barriers in the future
- 58% of operators surveyed felt that the barriers made their job easier or did not affect their job in a negative way
- 59% of operators surveyed reported that they felt safe or somewhat safe when operating a bus with a barrier
- 63% of operators surveyed felt safe or somewhat safe when operating a bus with the on-board video monitor

The total retrofit cost of the operator safety barriers is \$2,512,726 and LVMS is \$1,104,426. Once this project begins, it is estimated that barrier installations will be completed in 25 weeks, and video monitor installations will be completed in 15 weeks.

#### Escalation for 350 Bus Option

Option buses purchased under the Contract are subject to escalation based on the Producer Price Index (PPI) for bus and truck bodies. The Total Contract Value approved by the Board in February was based on projected escalation using the latest PPI figure (Dec '14) available at the time of board approval. Between January and March 2015, the PPI increased 1.33% or \$2,426,340, increasing the Total Contract value for the 350 Option buses from \$498,652,341 to \$501,078,681, inclusive of sales tax. Staff recommends an increase to the Total Contract Value for Option 1 buses in the amount of \$2,426,340 to cover the cost of escalation accrued between January and March 2015 for the 350 vehicle Option approved by the Board in February 2015.

#### **DETERMINATION OF SAFETY IMPACT**

Operator safety is at the forefront of Metro's priorities. The installation of protective barriers and

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video monitors on the new fleet is expected to help reduce the rate of Operator assaults.

## **FINANCIAL IMPACT**

Funding for this recommendation will be included in the FY16 capital program by an LOP increase to project 201056 550 40' Foot Bus Buy. Budget will be allocated to cost center 3320 in account 53105 - Vehicle Technology for \$3,617,152 in the FY16 budget. The balance of the project shall be funded in accordance with the cashflow plan found in Attachment C. Should additional funds be identified or become available throughout the life of this action, project management will coordinate with funding staff to accelerate the bus delivery. Since this is a multi-year action, the cost center manager and project manager will be responsible for budgeting in future fiscal years.

### Impact to Budget

The recommended action will be funded with Federal 5307, Federal 5339 and Local TDA-4 funds which are eligible for Bus and Rail Operations.

## **ALTERNATIVES CONSIDERED**

### Operator Barriers & LVMS

Staff considered conducting a new procurement for barriers and monitors for all Metro buses fleet-wide. This option is not recommended for the New Flyer buses because it would delay the installation and will compromise fleet uniformity for the New Flyer fleet and create additional inventory and training costs. If outside vendors (other than New Flyer) were to do this work it may void the warranty coverage on these buses.

### Escalation for Option 1

Staff considered purchasing slightly fewer than the full 350 buses to stay within previously approved contracting authority limits. This action is not recommended because funding is already programmed that covers the cost of this increase, and all of these New Flyer buses are needed to replace older CNG buses that are scheduled to be retired.

## **NEXT STEPS**

If this action is approved, staff will issue Contract Modification No. 9, and Contract Modification No. 10 to direct New Flyer to immediately begin a retrofit program for all 5600 series buses that do not already have protective operator safety barriers and/or video monitors. New Flyer will begin retrofitting buses within 30 days of the Notice-to-Proceed. The estimated completion timeline is 25 weeks for operator safety barriers and 15 weeks for LVMS.

While the operator barriers meet all Federal Motor Vehicle Safety Standards, Operations understands that the barriers are new to our environment. As concerns are raised, staff will review and work with the equipment suppliers to rectify any operational and safety concerns.

Staff also plans to issue a new competitive solicitation for the installation of operator safety barriers on approximately 1,500 other buses in Metro's fleet that do not already have this equipment.

Staff will continue to evaluate the effectiveness of the operator barriers. Operations will provide the Board with the information gained internally through Metro's usage of the barriers, and through partnerships with our peer agencies that utilize operator barriers.

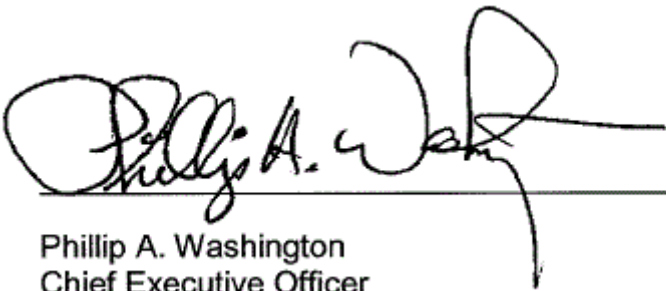
## **ATTACHMENTS**

Attachment A - Procurement Summary  
Attachment B - Contract Modification / Change Order Log  
Attachment C - Funding / Expenditure Plan  
Attachment D - Transit Agencies Using Operator Barriers

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Reviewed by: Ivan Page, Interim Executive Director, Vendor/Contract Management  
James T. Gallagher, Chief Operations Officer



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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

NEW FLYER BUSES - UP TO 900 CNG BUS CONTRACT/  
MODIFICATION NO. 9 & 10

1.	<b>Contract Number:</b> OP33202869		
2.	<b>Contractor:</b> New Flyer of America, Inc.		
3.	<b>Mod. Work Description:</b> Retrofit installation of Operator Barriers and Live Video Monitors, Option 1 escalation		
4.	<b>Contract Work Description:</b> Up to 900 Bus Buy		
5.	<b>The following data is current as of:</b> 8/7/15		
6.	<b>Contract Completion Status</b>		<b>Financial Status</b>
	<b>Contract Awarded:</b>	2/1/13	<b>Contract Award Amount:</b> \$302,094,178
	<b>Notice to Proceed (NTP):</b>	2/1/13	<b>Total of Modifications Approved:</b> \$196,558,163
	<b>Original Complete Date:</b>	7/31/15	<b>Pending Modifications (including this action):</b> \$6,043,492
	<b>Current Est. Complete Date (with this action):</b>	10/30/16	<b>Current Contract Value (with this action):</b> \$504,695,833
7.	<b>Contract Administrator:</b> Joe Marzano		<b>Telephone Number:</b> (213) 922-7014
8.	<b>Project Manager:</b> John Drayton		<b>Telephone Number:</b> (213) 922-5882

**A. Procurement Background**

This Board Action is to approve contract modification no. 10 for \$3,617,152 issued to New Flyer in support of a retrofit installation of a Live Video Monitoring System (LVMS) on 282 New Flyer buses and operator barriers on 427 New Flyer buses. This Board Action also includes approval of contract modification no. 9 for escalation accrued between January and March 2015 for Option 1 buses in the amount of \$2,426,340. The total value for contract modification no. 9 and 10 is \$6,043,492.

This contract modification will be processed in accordance with Metro's Acquisition Policy and the contract type is a Firm Fixed Price.

On January 24, 2013, Metro's Board of Directors approved board agenda item no. 54, to New Flyer of America, Inc., in the amount of \$302,094,178, for manufacturing and delivery of 550 forty-foot CNG transit buses exclusive of contract options for up to 350 additional buses for a total of 900 buses. On February 26, 2015, Metro's Board of Directors approved board agenda item no. 23 in the amount of \$193,979,571 to exercise Option 1 for 350 additional forty-foot CNG buses. Approval of this Board

recommendation item will increase the total value of the option purchase to \$196,405,911.

On October 23, 2014, Metro's Board of Directors approved board agenda item no. 10 for the installation of a LVMS on the 128 production buses. On January 20, 2015, staff executed contract modification no. 8 for the installation of operator barriers on 123 production buses. The recommended contract modification no. 10 is to retrofit operator barriers and LVMS on the remaining New Flyer fleet that currently does not have this equipment installed. The value of the contract modification is for a firm fixed amount of \$3,617,152 including, tax and delivery.

Attachment B shows that eight modifications have been issued to date for vehicle configuration changes, non-taxable ADA equipment tax adjustments, and corrections to Diagnostic Test Equipment pricing.

## **B. Cost/Price Analysis**

### Live Video Monitoring System & Operator Barriers

The recommended price for the LVMS and operator barriers has been determined to be fair and reasonable based upon an independent cost estimate, audit, cost analysis technical evaluation, fact finding and negotiations.

<b>Item</b>	<b>Proposed Amount</b>	<b>Metro Independent Cost Estimate</b>	<b>Negotiated Amount</b>
Live Video Monitoring System	\$1,262,125	\$1,258,961	\$1,104,426
Operator Barriers	\$2,781,358	\$2,902,347	\$2,512,726
Total	\$4,043,483	\$4,161,308	\$3,617,152

### Escalation for Option 1

The total contract value for Option 1 approved by the Board in February 2015 was based on projected escalation using the latest PPI figure (Dec '14) available at the time of board approval. The actual escalation costs for Option 1 are based on the March 2015 Producer Price Index for Truck and Bus Bodies, Series No. 1413. Between January and March 2015, the PPI increased 1.33% or \$2,426,340. The firm fixed price for Option 1 is \$196,405,911, including escalation, is determined to be fair and reasonable for the 350 option buses based upon adequate price competition for the base and option quantities, and a price analysis that included both base and option prices, including escalation prior to contract award.

## **C. Small Business Participation**

The Diversity and Economic Opportunity Department did not recommend a Disadvantaged Business Enterprise (DBE) participation goal for this rolling stock procurement. Transit Vehicle Manufacturers (TVM), as a condition of authorization to bid or propose on FTA-assisted transit vehicle procurements, must certify that it has complied with the requirements of 49 Code of Federal Regulations (CFR) Part 26.49(a). Only those transit vehicle manufacturers listed on FTA's certified list of

Transit Vehicle Manufacturers at the time of solicitation are eligible to bid. In compliance with 49 CFR Part 26.49, TVMs report direct to FTA.

**D. Living Wage Service Contract Worker Policy**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

**E. Prevailing Wage Applicability**

Prevailing wage is not applicable to this contract.

**CONTRACT MODIFICATION AUTHORITY (CMA) SUMMARY**  
**NEW FLYER BUSES - UP TO 900 CNG BUS CONTRACT**

<b>Request for Change. (RFC) No.</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Cost</b>
N/A	<b>Award Base Contract</b>	<b>Approved</b>	<b>\$302,094,178</b>
1	Updated ADA Equipment and Safety Provisions	Approved	\$2,936,786
1a	Correction to bus unit price for non-taxable ADA Equipment not accounted for in the proposal price	Approved	(\$717,994)
2	Period of Performance extension for the first 275 buses from June 30, 2014 to October 31, 2014	Approved	\$0
3	PLC cover color change and two (2) additional stop request buttons per bus	Approved	\$54,243
4	Change from 3 position bicycle rack to 2 position bicycle rack	Approved	(\$52,924)
5	Additions/reductions in quantities of special tools, diagnostic test equipment, training aids, and AMS server upgrade	Approved	(\$428,920)
5a	Correction to BAFO Pricing Form PF-4 Diagnostic Test Equipment, AMS Server Price	Approved	(\$692,075)
6	Installation of Live Video Monitoring System as a cut-in on remaining 128 production buses	Approved	\$964,877
7	Change from 2 position bicycle rack to 3 position bicycle rack	Approved	\$14,698
8	Installation of operator barriers on 123 production buses	Approved	\$499,901
N/A	Exercise Option No.1 for up to 350 buses	Approved, Pending Execution	\$193,979,571
9	Option 1 escalation	Pending Board Approval	\$2,426,340
10	Retrofit Installation of Operator Barriers and Live Video Monitoring System on remaining New Flyer fleet	Pending Board Approval	\$3,617,152
	<b>Total – Approved Change Orders/Modifications (excluding Options)</b>		<b>\$2,578,592</b>
	<b>Total – Pending Change Orders/Modifications</b>		<b>\$6,043,492</b>
	<b>Total Amount – Option 1 including Escalation</b>		<b>\$196,405,911</b>
	<b>Total Contact Value including Option 1 and Change Orders/Modifications</b>		<b>\$504,695,833</b>
	<b>Increased CMA requested</b>		<b>0</b>
	<b>Total CMA including this action</b>		<b>\$30,209,418</b>
	<b>Remaining CMA for Future Changes</b>		<b>\$21,587,334</b>



## FUNDING/EXPENDITURE PLAN

## NEW FLYER BUSES - UP TO 900 CNG BUS CONTRACT

In Thousands	900 CNG Buses (Forecast expenses thru FY15) <sup>i</sup>	FY16	FY17	Total	% of Total
<b>Uses of Funds</b>					
Bus Acquisition <sup>1</sup>	296,009.1	100,617.2	97,000.0	493,626.3	97.4%
Professional Services	855.1			855.1	0.2%
Labor	2,052.4	500	500	3,052.4	0.6%
Travel	940.7			940.7	0.2%
Spare Parts, Training, Service Manuals	5,094.6			5,094.6	1.0%
Contingency	3,490.6			3,490.6	0.7%
<b>Total Project Cost</b>	<b>\$308,442.5</b>	<b>\$101,117.2</b>	<b>\$97,500.0</b>	<b>\$507,059.7</b>	<b>100.0%</b>

In Thousands	900 CNG Buses (Forecast expenses thru FY15)	FY16	FY17	Total	% of Total
<b>Sources of Funds</b>					
BOS	4,000.0			<b>4,000.0</b>	0.8%
Prop C 40%	16,300.0			<b>16,300.0</b>	3.2%
TDA Article 4	63,230.0	16,217.2	12,800.0	<b>92,247.2</b>	18.2%
Measure R 35%	15,272.5			<b>15,272.5</b>	3.0%
Prop 1B PTMISEA	162,470.0			<b>162,470.0</b>	32.0%
CMAQ	22,170.0			<b>22,170.0</b>	4.4%
Federal Bus Capital	25,000.0			<b>25,000.0</b>	4.9%
Fed 5307		50,000.0	50,000.0	<b>100,000.0</b>	19.7%
Fed 5339		34,900.0	34,700.0	<b>69,600.0</b>	13.7%
<b>Total Project Funding</b>	<b>\$308,442.5</b>	<b>\$101,117.2</b>	<b>\$97,500.0</b>	<b>\$507,059.7</b>	<b>100%</b>

<sup>i</sup> Budget approved for New Flyer 900 bus contract in February 2015.

Transit Agencies Using Operator Barriers

Agency	City	Bus Type	# Buses Equiped	Barrier Type	Length of Service	Notes
CTA	Chicago, IL	Novabus	250	Full enclosure	1 year	Tempered glass fully enclosed operators compartment
CTA	Chicago, IL	New Flyer	1030	1/2 area glass	6 years	Originally designed as "snowball" barriers, now CTA is working to retrofit to full enclosure
CTA	Chicago, IL	New Flyer Xcelsior Electric	2	Full enclosure	1 year	OEM supplied by New Flyer, similar to LACMTA design
Metro	New York, NY	New Flyer		Full enclosure	3 years	First released in 2012
Metro	New York, NY	Orion NG Hybrid	852	Full enclosure	2 years	
Port Authority	Pittsburgh, PA	Gillig LF Diesel	60	Full enclosure	1 year	
Port Authority	Pittsburgh, PA	Gillig LF Diesel	90	Full enclosure		Current production
MTA	Baltimore, MD	New Flyer		Full enclosure	3 years	First released in 2012
MUNI	San Francisco, CA	New Flyer		Full enclosure	2 years	First released in 2013
WMATA	Washington DC	New Flyer		Full enclosure	2 years	First released in 2013
WMATA	Washington DC	NABI		Full enclosure		
GCRTA	Cleveland, OH	NABI		Full enclosure		
DART	Dallas, TX	NABI		Full enclosure		
MDTA	Miami, FL	NABI		Full enclosure		