



Customer Services, Operations, and Safety Committee

Board Information Item III

April 23, 2009

Operational Performance

Washington Metropolitan Area Transit Authority
Board Action/Information Summary

<input type="checkbox"/> Action <input checked="" type="checkbox"/> Information	MEAD Number:	Resolution: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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TITLE:

Operational Performance

PURPOSE:

To provide the Committee with monthly operational highlights and system performance trends for FY09.

DESCRIPTION:

Information contains operational highlights that have occurred during the first eight months of FY09 in the areas of on-time performance and reliability for Metrorail, Metrobus, MetroAccess and Vertical Transportation and rail car door malfunctions resulting in offloads.

FUNDING IMPACT:

No impact on funding.

RECOMMENDATION:

None



Operational Performance

Presented to the Board of Directors:

**Customer Service, Operations, and Safety
Committee**

April 23, 2009

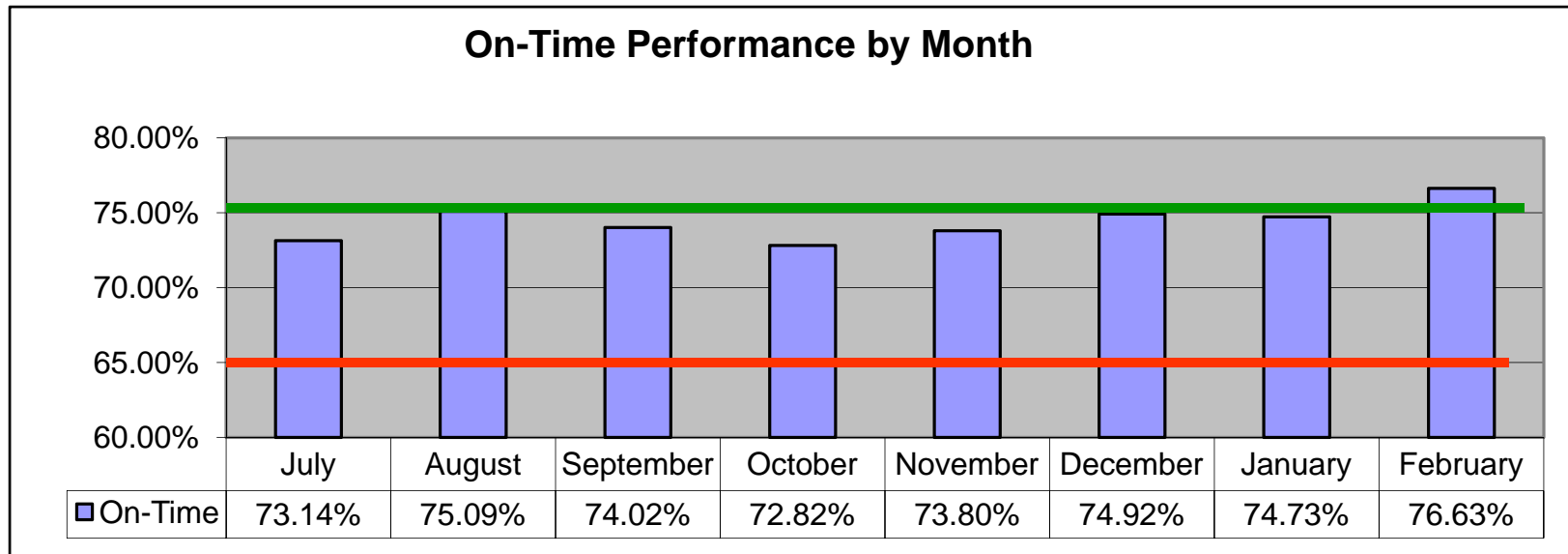




Bus On-Time Performance

DEFINITION – Measurement of time throughout the day (from beginning to end of service) for all routes by capturing the data recorded by the CAD/AVL whenever a bus encounters a time point. Parameters used by other agencies have a broad range and use selected time points vs. Metro using all time points.

CALCULATION – Difference between scheduled time and actual time arriving at a time point based on 2 min early and 7 min late parameters.



— High Average – 75%

— Low Average – 65%



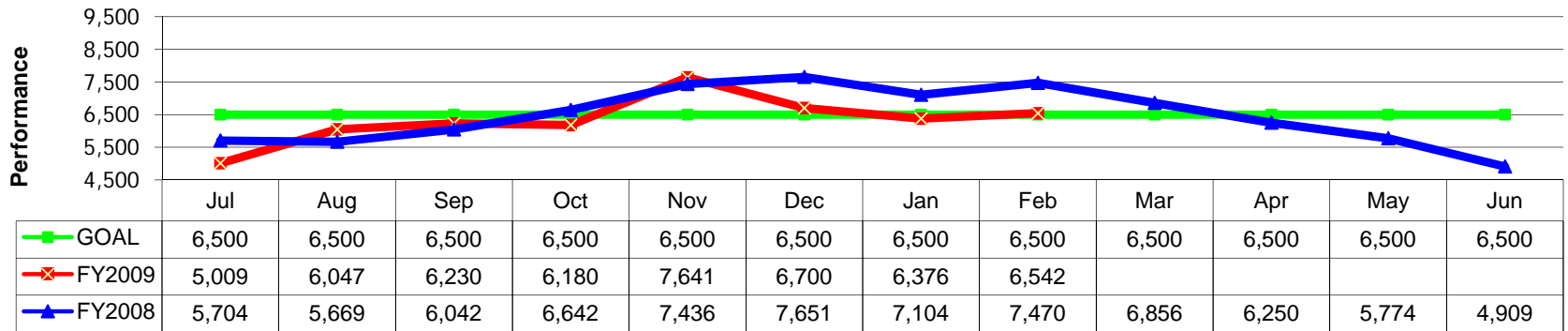
Bus Mean Distance Between Failures

DEFINITION – This measure identifies the number of miles traveled before a mechanical breakdown for the entire bus fleet

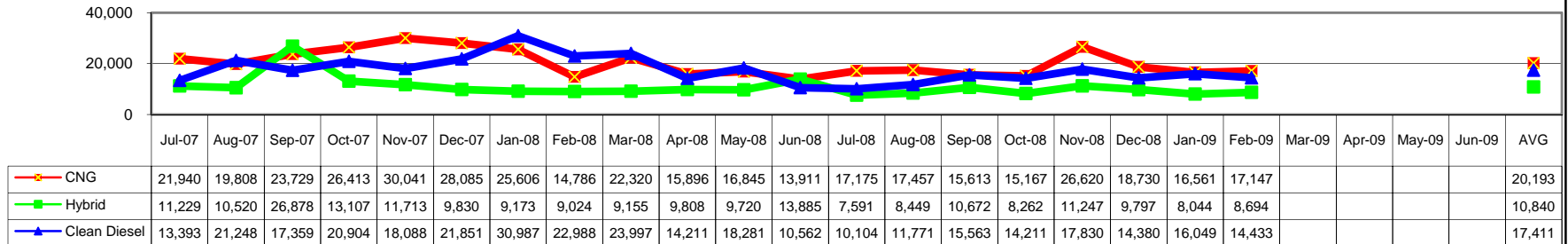
CALCULATION – Number of failures/miles = Mean Distance Between Failures (MDBF).

FY 2009 YTD – 6,248

BUS - Mean Distance Between Failures



Bus - MDBF by Fleet FY'08-FY'09 To Date



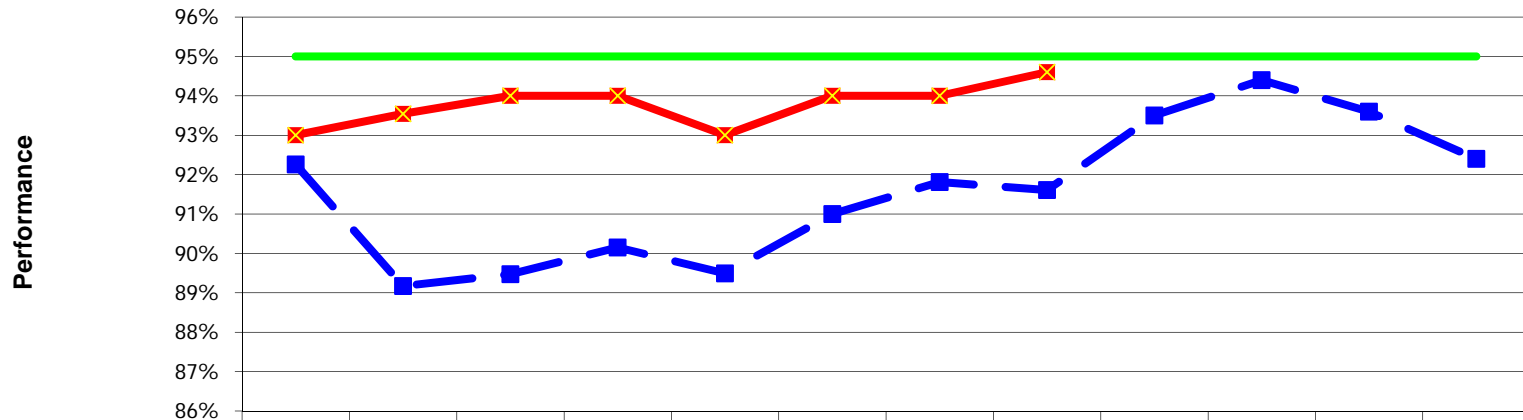
—x— CNG
 —■— Hybrid
 —▲— Clean Diesel



Rail On-Time Performance Summary

DEFINITION – Measured during peak service (AM/PM), identifying percentage of trains on each line **end-to-end** within a 2 minute headway deviation and measured mid-day non-peak and late night non-peak within a 50% headway deviation. This measures how well we are providing service.

Rail On Time Performance - Overall Average

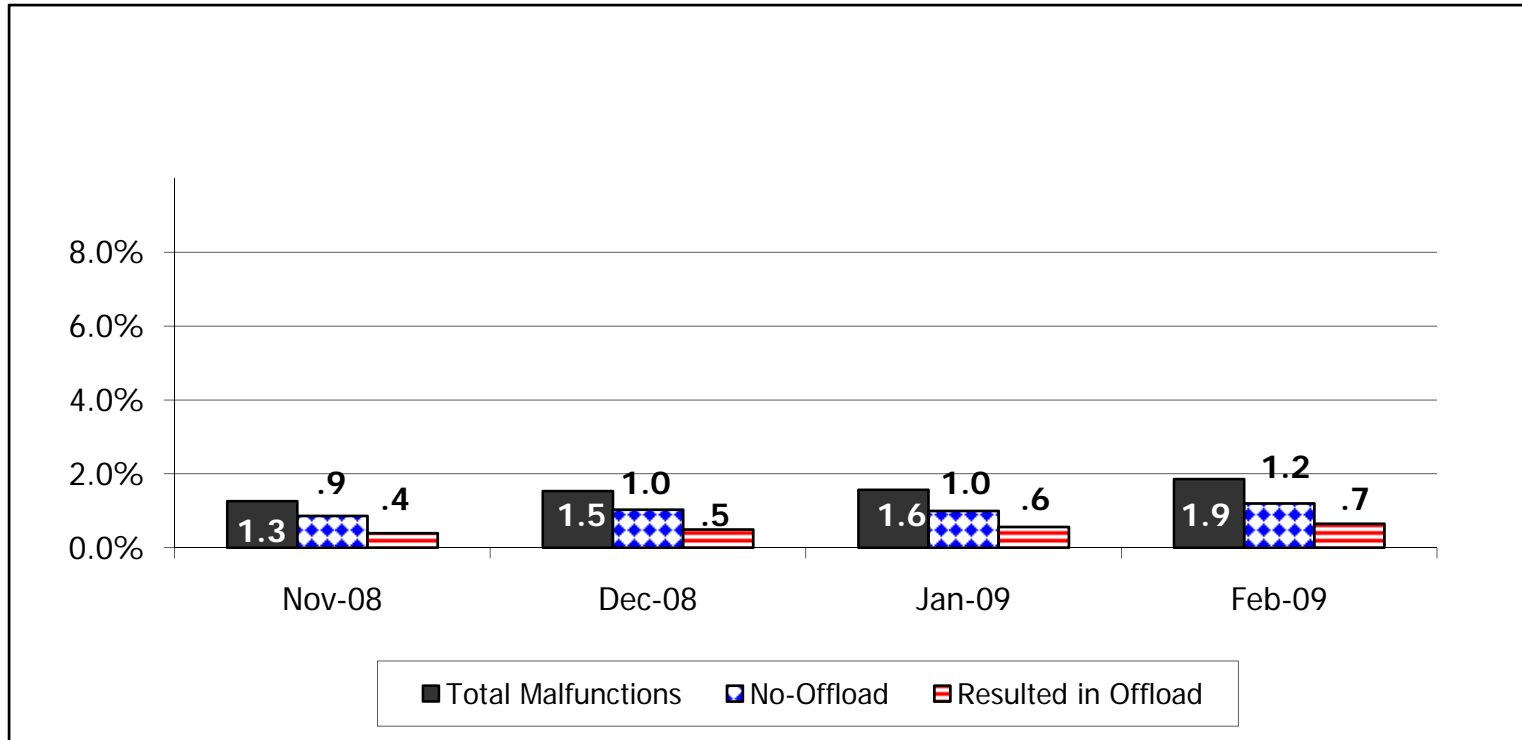


Performance	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Goal	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
FY2009	93%	94%	94%	94%	93%	94%	94%	95%				
FY2008	92%	89%	89%	90%	89%	91%	92%	92%	94%	94%	94%	92%

Red Line = 96% Blue Line = 91% Orange Line = 94% Green Line = 95% Yellow Line = 94%



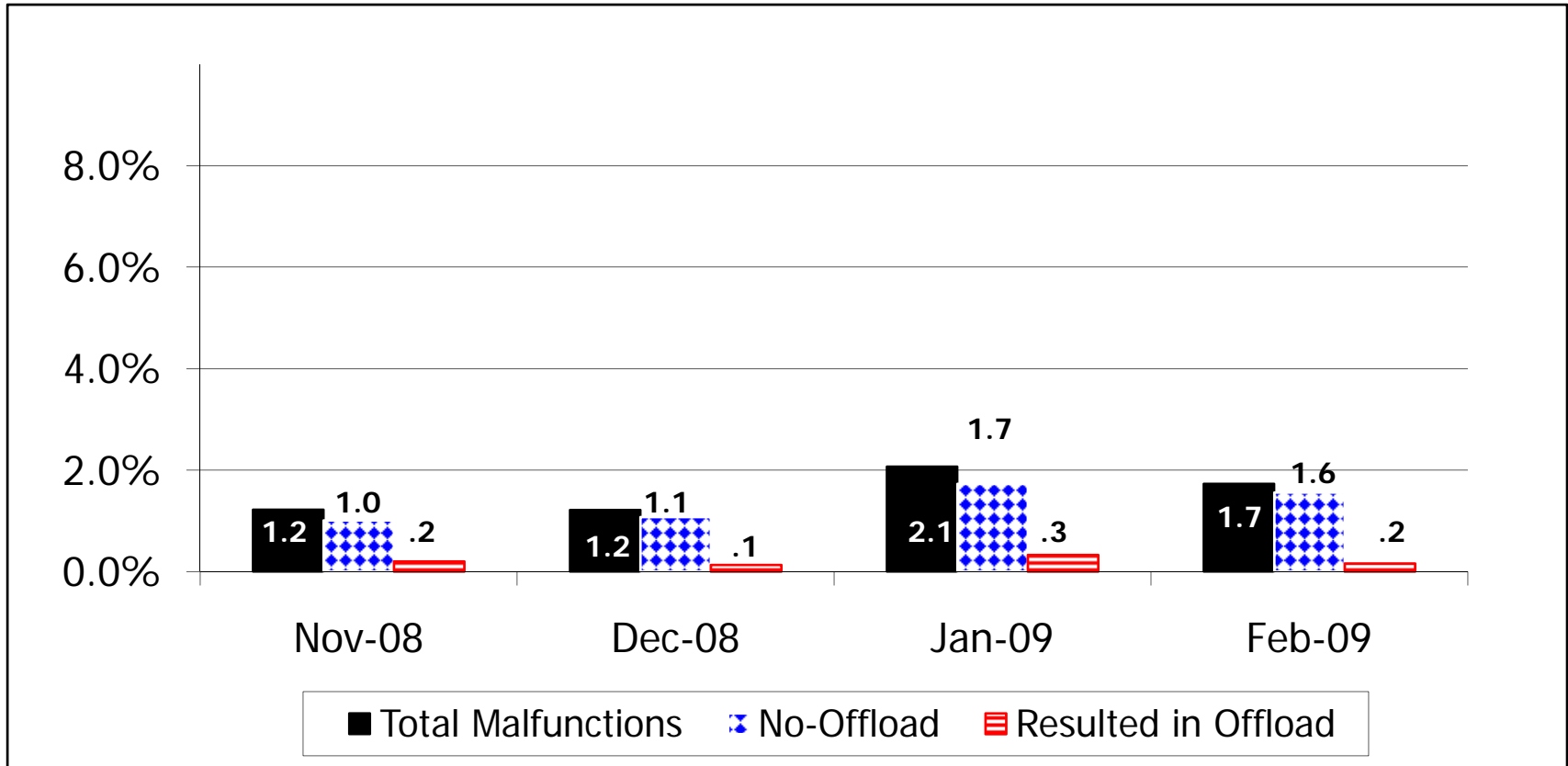
Rail Car Door Malfunctions – Peak Percentage of Trains Operated



262 trains per day during peak period x average 21 weekdays = 5,502 trains per month



Rail Car Door Malfunctions – Non-Peak Percentage of Trains Operated



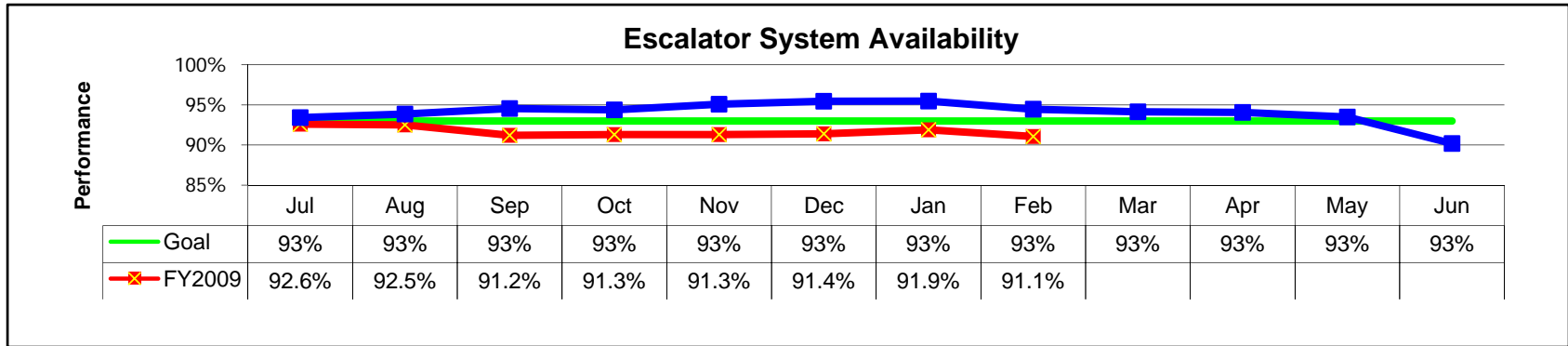
130 trains per day during non-peak period x average 21 weekdays = 2,730 trains per month



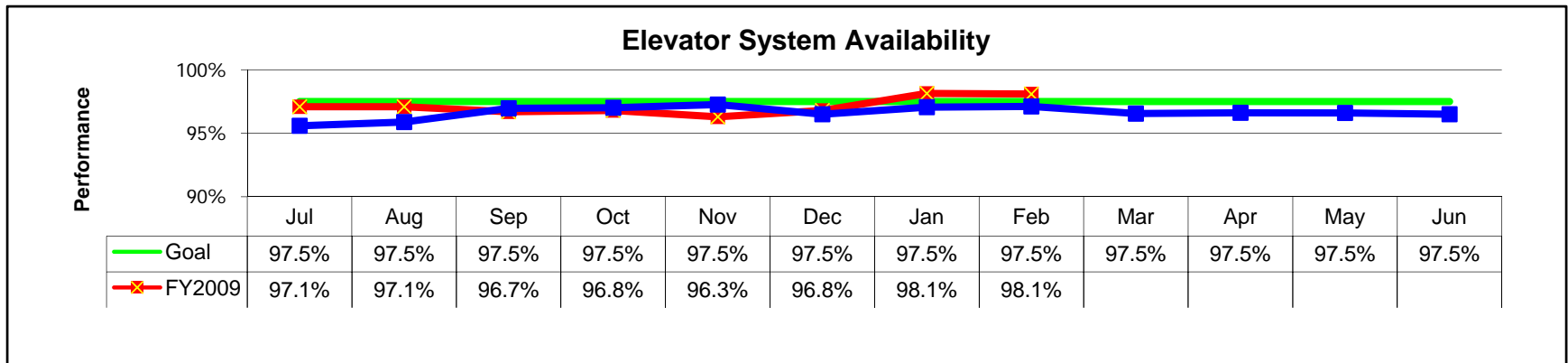
Escalators and Elevators Availability

DEFINITION – Percentage of time that the escalator or elevator system is available for service.

CALCULATION – Hours achieved divided by operating hours. Hours achieved = operating hours - (hours out of service both scheduled and unscheduled). Operating hours = revenue hours * number of units.



Escalator Availability AM peak is 90.3%; PM peak is 91.0%; mid-day non-peak 90.6%; late night non-peak 90.7%



Elevator Availability AM peak is 97.9%; PM peak is 98.1%; mid-day non-peak 97.9%; late night non-peak 98.2%



Escalators December to February Top 12

DEFINITION – Top 12 Escalators with the lowest availability for the past 90 days November 2008 thru January 2009.

CALCULATION – Ranked availability.

Dec - Feb Escalator		System	OOS	OOS	Date In	CIP	Details	Redundancy
STATION NAME	UNIT	Availability	Count	Hours	Service	Rehab Date		
CONGRESS HEIGHTS	#1	0.00%	7	1,735.00	13-Jan-01	FUTURE	Replace step band	1 of 3 entrance
COLUMBIA HEIGHTS	#4	0.00%	2	1,735.00	18-Sep-99	FUTURE	Replace bull gear	1 of 2 entrance
NAVY YARD	#2	10.74%	6	1,547.16	28-Dec-91	FUTURE	Replace all comb plates	1 of 3 entrance
FOGGY BOTTOM	#3	19.00%	4	1,405.28	1-Jul-77	FUTURE	Replace step chain	1 of 3 entrance
NAVY YARD	#3	19.29%	16	1,372.02	28-Dec-91	FUTURE	Replaced drive sprocket	1 of 3 entrance
FARRAGUT WEST	#3	26.91%	18	1,268.09	1-Jul-77	2-Apr-04	Safety WO Uni steps	1 of 3 entrance
METRO CENTER	#1	31.99%	11	1,177.03	1-Jul-77	FUTURE	Replaced AC drive	1 of 2 entrance
NAVY YARD	#1	41.14%	18	1,021.16	28-Dec-91	22-Jun-04	Replaced reducer	1 of 3 entrance
COLUMBIA HEIGHTS	#5	41.95%	4	1,007.14	18-Sep-99	FUTURE	Walker	1 of 2 entrance
L'ENFANT PLAZA	#4	44.53%	11	962.41	1-Jul-77	FUTURE	Replaced turn around	1 of 3 platform
MCPHERSON SQUARE	#5	44.72%	7	959.18	1-Jul-77	FUTURE	Replaced reducer	1 of 4 mezz
CAPITOL SOUTH	#3	48.65%	13	890.98	1-Jul-77	30-Nov-07	Replace bull gear	1 of 3 entrance

Repeater

FY09 Goal: 93%




Elevators December to February Top 12

DEFINITION – Top 12 Elevators with the most lowest availability November 2008 thru January 2009.

CALCULATION – Ranked by availability.

Dec - Feb Elevator		System	OOS	OOS	Date In	CIP	Details	Redundancy
STATION NAME	UNIT	Availability	Count	Hours	Service	Rehab Date		
PENTAGON	#4	83.68%	4	283.17	16-Dec-01	FUTURE	Replace SMC motherboard	1 of 2 entrance
BETHESDA	#1	87.59%	7	215.37	25-Aug-84	27-Jun-02	Replaced hoistway sill	1 of 2 mezz
DEANWOOD	#1	88.56%	3	198.44	17-Nov-78	5-Aug-03	Replaced cab glass	Single mezz
FRIENDSHIP HEIGHTS	#4	88.67%	1	196.61	25-Aug-84	6-Jun-03	Replaced hoist rope	1 of 4 mezz
PRINCE GEORGE'S PLAZA	#4	88.74%	2	195.41	1-May-01	FUTURE	Replaced door clutch	Single serving ped bridge
WHEATON	#1	89.75%	40	177.79	22-Sep-90	12-Apr-04	Shortened car ropes	Single mezz
NAVY YARD	#2	89.76%	1	177.63	28-Dec-91	FUTURE	Replace packing	1 of 2 mezz
EASTERN MARKET	#1	91.45%	8	148.33	1-Jul-77	5-Aug-03	Safety Work Order	1 of 2 mezz
VAN NESS	#1	90.49%	9	164.98	5-Dec-81	14-Nov-02	Repaired sheave	1 of 2 mezz
GALLERY PLACE	#2	92.27%	8	134.15	27-Mar-76	27-Apr-02	Replaced controller	1 of 2 mezz
MEDICAL CENTER	#2	93.11%	8	119.61	25-Aug-84	17-Apr-03	Reprogrammed CPU	1 of 2 mezz
CAPITOL HEIGHTS	#2	93.17%	13	119.34	22-Nov-80	20-Aug-07	Replaced pick up rollers	1 of 2 mezz

 Repeater

FY09 Goal: 97.5%

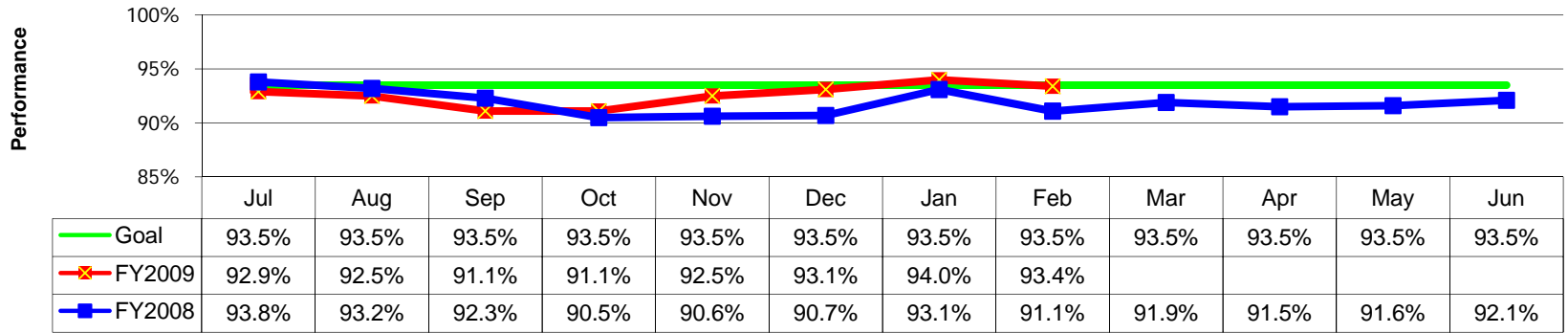


MetroAccess

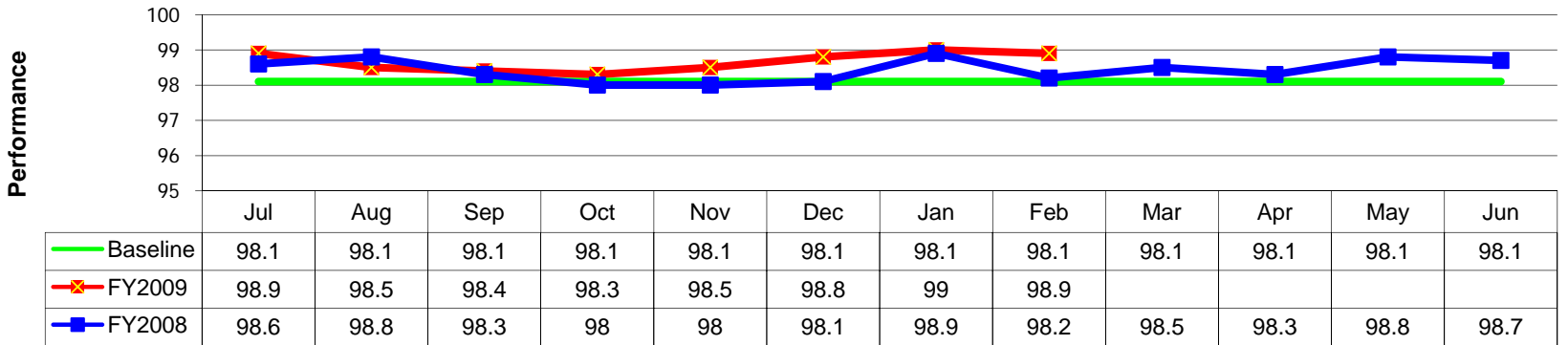
DEFINITION – Percentage of on-time pickup within a 30-minute window.

CALCULATION – (Total on-time trips including “no shows” to which were initially on-time/sum of total completed trips (including “no shows” to which we were initially late) and missed trips = MetroAccess On-Time Performance.

MACS - On-time Performance



**Trips Delivered Within a 60 Minute Window
(No Lower Than 98.1%)**



DEFINITION – Percentage of trips delivered within a 60 minute window.

CALCULATION – Percentage of trips delivered within a 60 minute window.

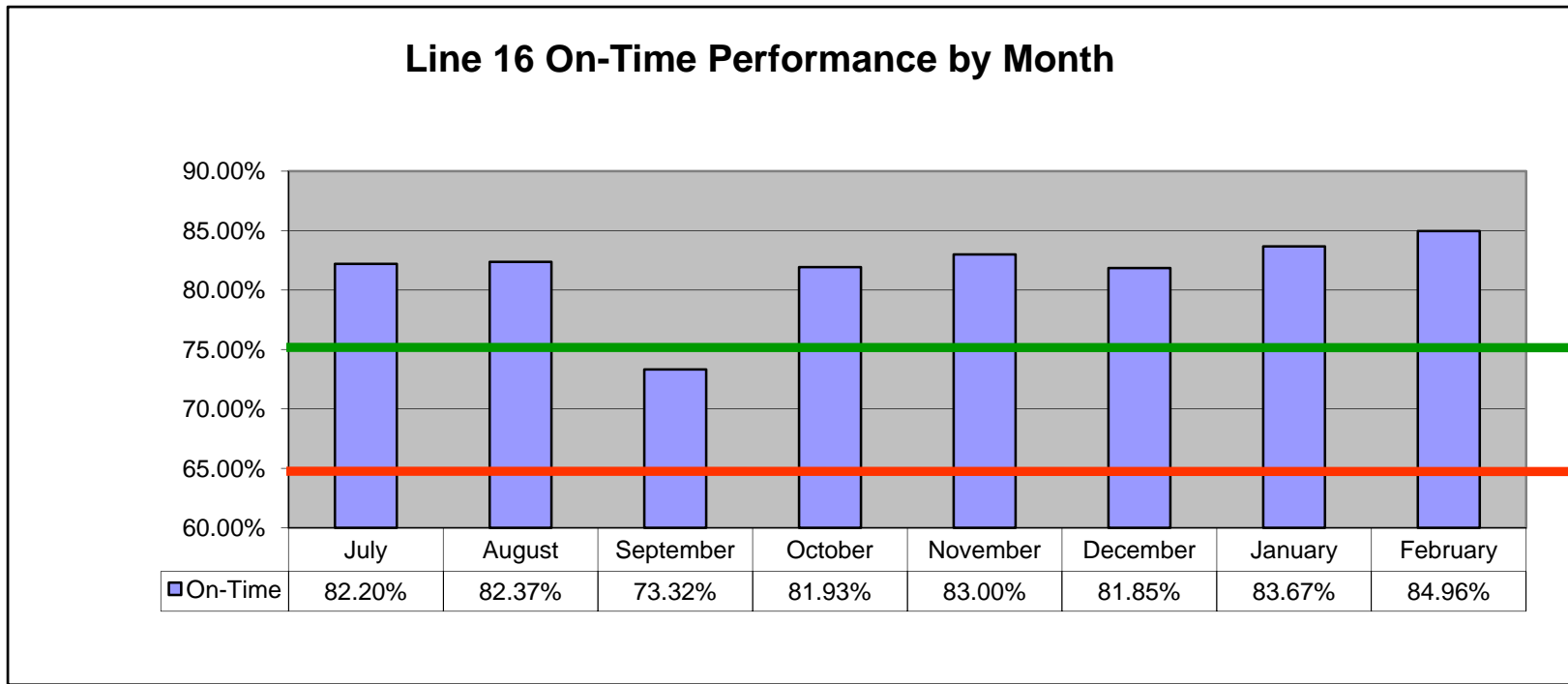
Appendix



Bus On-Time Performance

DEFINITION – Measurement of time throughout the day (from beginning to end of service) for the 16 line by capturing the data recorded by the CAD/AVL whenever a bus encounters a time point. Parameters used by other agencies have a broad range and use selected time points vs. Metro using all time points.

CALCULATION – Difference between scheduled time and actual time arriving at a time point based on 2 min early and 7 min late parameters.



High Average – 75%

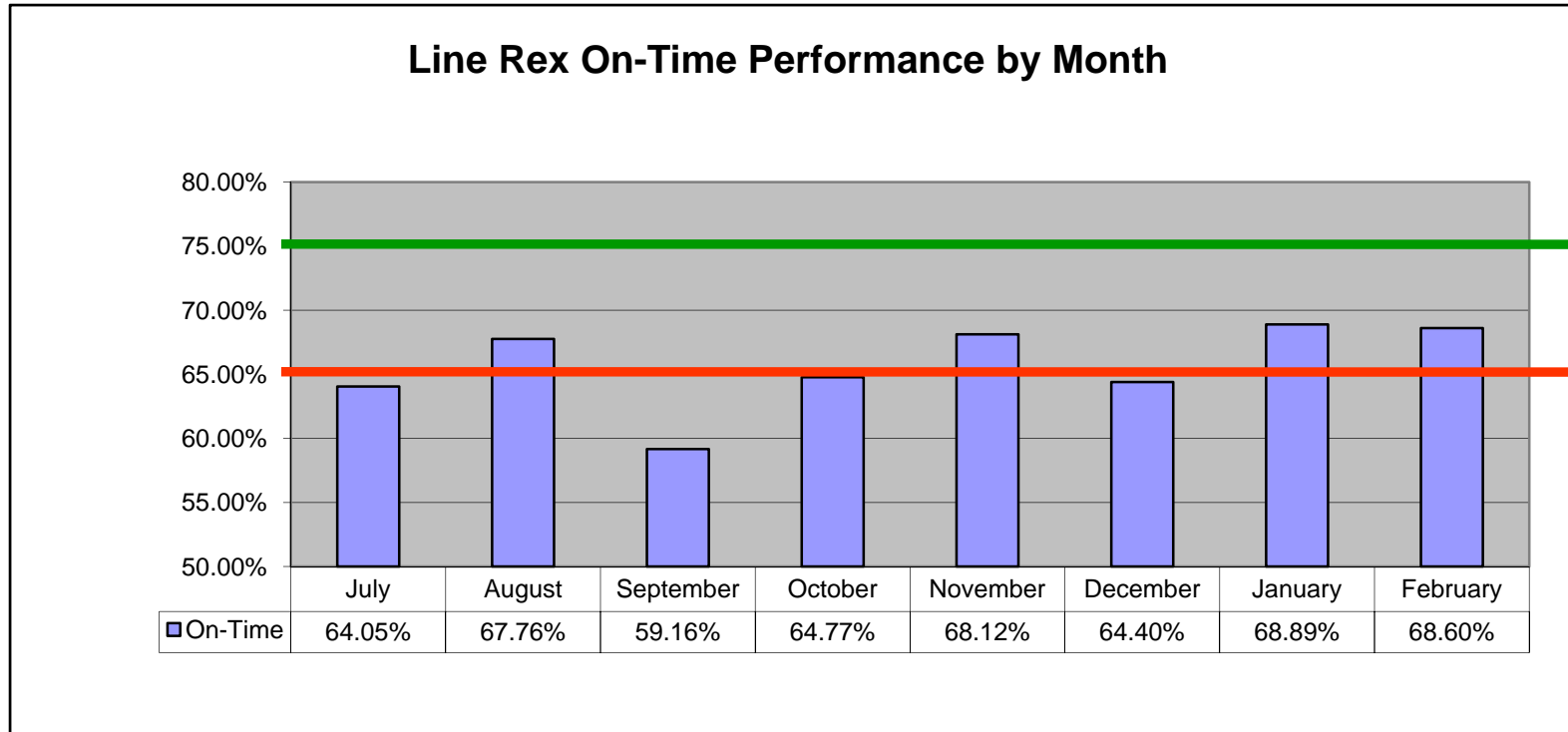
Low Average – 65%



Bus On-Time Performance

DEFINITION – Measurement of time throughout the day (from beginning to end of service) for the Rex line by capturing the data recorded by the CAD/AVL whenever a bus encounters a time point. Parameters used by other agencies have a broad range and use selected time points vs. Metro using all time points.

CALCULATION – Difference between scheduled time and actual time arriving at a time point based on 2 min early and 7 min late parameters.



 **High Average – 75%**

 **Low Average – 65%**