



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-353



## Joint Mine Resistant Ambush Protected Vehicle (JOINT MRAP)

As of FY 2011 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance  
ACAT - Acquisition Category  
ADM - Acquisition Decision Memorandum  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
\$B - Billions of Dollars  
BA - Budget Authority/Budget Activity  
Blk - Block  
BY - Base Year  
CAPE - Cost Assessment and Program Evaluation  
CARD - Cost Analysis Requirements Description  
CDD - Capability Development Document  
CLIN - Contract Line Item Number  
CPD - Capability Production Document  
CY - Calendar Year  
DAB - Defense Acquisition Board  
DAE - Defense Acquisition Executive  
DAMIR - Defense Acquisition Management Information Retrieval  
DoD - Department of Defense  
DSN - Defense Switched Network  
EMD - Engineering and Manufacturing Development  
EVM - Earned Value Management  
FOC - Full Operational Capability  
FMS - Foreign Military Sales  
FRP - Full Rate Production  
FY - Fiscal Year  
FYDP - Future Years Defense Program  
ICE - Independent Cost Estimate  
IOC - Initial Operational Capability  
Inc - Increment  
JROC - Joint Requirements Oversight Council  
\$K - Thousands of Dollars  
KPP - Key Performance Parameter  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MDA - Milestone Decision Authority  
MDAP - Major Defense Acquisition Program  
MILCON - Military Construction  
N/A - Not Applicable  
O&M - Operations and Maintenance  
ORD - Operational Requirements Document  
OSD - Office of the Secretary of Defense  
O&S - Operating and Support  
PAUC - Program Acquisition Unit Cost

PB - President's Budget  
PE - Program Element  
PEO - Program Executive Officer  
PM - Program Manager  
POE - Program Office Estimate  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
SCP - Service Cost Position  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting  
U.S. - United States  
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

## Program Information

**Program Name**

Joint Mine Resistant Ambush Protected (MRAP) (Joint MRAP)

**DoD Component**

Navy

**Joint Participants**

Army; Marine Corps; Air Force; Special Operations Command

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## References

**SAR Baseline (Production Estimate)**

FY 2009 President's Budget dated February 1, 2008

**Approved APB**

DAE Approved Acquisition Program Baseline (APB) dated June 16, 2008

## Mission and Description

The Secretary of Defense designated the Joint Mine Resistant Ambush Protected (MRAP) as the nation's highest priority Department of Defense (DoD) acquisition program. The program's overarching objective is to produce and field the maximum number of survivable, safe, sustainable MRAP vehicles in the shortest period of time.

The MRAP Family of Vehicles (FoV) provides Warfighters platforms capable of mitigating the effects of Improvised Explosive Devices (IEDs), underbody mines, and Small Arms Fire (SAF) threats, which are currently the greatest casualty producers in the Overseas Contingency Operations (OCO). Four categories (CATs) of vehicles support the following range of missions:

- CAT I - Small unit combat operations in urban or confined areas that include mounted patrols, reconnaissance, security, convoy protection, communications, command and control, explosive ordnance disposal (EOD) operations, and combat service support. Configurable into cargo version, casualty evacuation (CASEVAC), and medical support variants. Carries up to seven personnel.
- CAT II - Ground logistics support operations that include convoy security, troop and cargo transport, limited combat engineering and EOD support, CASEVAC, and ambulance. Carries up to 11 personnel.
- CAT III - Mine/IED clearance operations that include route clearance. Carries up to six personnel.
- MRAP-All Terrain Vehicle (M-ATV) - Small unit combat operations in complex and highly restricted rural, mountainous, and urban terrain. The M-ATV provides better overall mobility characteristics than the original CAT I, II, and III MRAP vehicle variants and provides better survivability characteristics than any variant High Mobility Multipurpose Wheeled Vehicle (HMMWV). The M-ATV supports mounted patrols, reconnaissance, security, convoy protection, casualty evacuation, data interchange, and command and control functions. Carries up to five personnel.

## Executive Summary

The Joint Mine Resistant Ambush Protected (MRAP) requirements through Fiscal Year (FY) 09 have been funded with supplemental appropriations and continue to be resourced through Congressional Supplemental funding across all Services. A Program Decision Memorandum (PDM) was received in October 2008 for peacetime program management costs (approximately \$55M Joint per FY10-15) to be budgeted into baseline Service budgets beginning in FY10. All other program costs will remain budgeted via annual supplemental requests until Services are able to determine long term usage plans and add funding to baseline budgets. The Joint MRAP is utilizing a series of Low Rate Initial Production (LRIP) decisions approved by the Milestone Decision Authority (MDA) to acquire MRAP vehicles. Sixteen LRIP decisions have been executed by the Joint MRAP by December 31, 2009 in acquiring 22,880 vehicles (137 legacy vehicles are also included in the Joint MRAP Acquisition Objective (AO)).

Joint Requirements Oversight Council (JROC) Memorandum 001-10, dated January 4, 2010 has increased the AO by 4,000 vehicles to 26,882. LRIP 17 Acquisition Decision Memorandum (ADM), dated January 29, 2010 directed the Joint MRAP to order an additional 1,460 MRAP-All Terrain Vehicles (M-ATVs), 1,050 Dash with Independent Suspension Systems (ISS), 250 RG-31A3s with ISS, and 58 RG-33 for a total of 25,700 vehicles.

The Joint MRAP rapidly evolved from a small Rapid Deployment Capability component effort to a Joint Acquisition Category (ACAT) ID Major Defense Acquisition Program (MDAP). The Secretary of Defense designated the Joint MRAP as the nation's highest priority Department of Defense (DoD) acquisition program. The production capacity of multiple vendors employing Non-Developmental Item (NDI) systems has been leveraged to meet the program's overarching objective of producing and fielding the maximum number of survivable, safe, and sustainable MRAP vehicles in the shortest period of time. The requirements for MRAP FoV has grown from an initial 1,185 vehicles, through the 7,774 vehicles cited in the JROC approved Capability Production Document (CPD) version 1.0 of May 2007. On July 7, 2009, the JROC reviewed and validated the MRAP FoV CPD v1.1, which carries forward CPD v1.0 threshold requirements for MRAP vehicle categories (CATs) I through III (16,238 vehicle requirement) and includes additional threshold requirements for the new M-ATV (5,244 vehicles) variant. JROC Memorandum (JROCM) 147-09 increased the M-ATV requirement by 1,400 vehicles to 6,644. Per OSD(AT&L) direction on January 10, 2010, the Joint MRAP will, within 30 days upon receipt of the Joint Allocation Decision Board's (JADB) revised vehicle allocation, make changes to the Acquisition Program Baseline (APB) submitted for approval in August 2009 to incorporate the increased quantities of MRAP vehicles procured through LRIP 17 under the authority of JROCM 001-10. An APB will be resubmitted to ASN for accelerated staffing to OSD.

The Joint Program Office (JPO) continues to pursue increasingly survivable and mission capable MRAP vehicles via Capability Insertion (CI) including Rocket-Propelled Grenade (RPG) defeat, suspension upgrades, and Engineering Change Proposals (ECPs) across the Family of Vehicles (FoV). In mid-July 2008, MRAP production vehicle contractors were challenged to propose lighter, more maneuverable designs with the same or better survivability to meet emerging Theater requirements. The JPO has ordered 1,327 such vehicles. In December 2008, the JPO issued a full and open competition Request For Proposal (RFP) for an off-road capable M-ATV to fulfill joint urgent Operation Enduring Freedom (OEF) requirements for greater maneuverability in Afghanistan. Written proposals, armor samples, and Production Representative Vehicles (PRVs) were evaluated from February 2009 to March 2009. In April 2009, the JPO awarded five indefinite delivery, indefinite quantity (IDIQ) contracts for three additional PRVs to the selected vendors for additional mobility and ballistic testing. The JPO planned to select a single M-ATV producer and on June 30, 2009, the DoD announced the award of an initial production Delivery Order (DO) to Oshkosh Corporation to produce 2,244 M-ATV vehicles for use in Afghanistan. The first M-ATVs arrived in Afghanistan in October 2009 and began fielding in December 2009. Threats to Warfighters continue to evolve based on constantly changing techniques of adaptive enemies. To counter these threats, the JPO is using continuous feedback from Theater (Product Quality Deficiency Reports (PQDRs), weekly Video Teleconferences (VTCs), and monthly Joint Users Working Group meetings) and test results, to pursue increased capabilities for MRAP vehicles. These vehicles will be used to complement other tactical vehicles, including MRAPs already in the Theater of operations.

The JPO has initiated common and variant specific improvements such as Independent Suspension Systems (ISS). ISS upgrades enhance durability and survivability in the rural, mountainous terrain in Afghanistan. Hundreds of MRAP Cougar CAT I and CAT II vehicles have been upgraded with ISS and fielded in OEF. Plans are underway to expand ISS to other

MRAP vehicles. A select number of MaxxPro, RG-31 A3, and RG-33 A1 vehicles destined for OEF will receive suspension upgrades. The JPO has established Government Furnished Equipment (GFE) integration facilities at the Space and Naval Warfare (SPAWAR) Systems Center, Charleston, SC; Orangeburg, SC; and Kuwait to integrate Service unique systems onto the various MRAP vehicles. The manufacturers deliver vehicles to SPAWAR for GFE integration and preparation for shipment prior to Theater transport. Vehicles produced in South Africa are delivered to the SPAWAR facility in Kuwait for GFE integration and shipment preparation.

As of December 31, 2009, 22,880 LRIP vehicles currently count against requirements and have been ordered under the MRAP vehicle contracts to meet DoD requirements.

There are no significant software related issues for this program at this time.

## Threshold Breaches

APB Breaches			Explanation of Breach
<b>Schedule</b>		<input checked="" type="checkbox"/>	<p>Schedule:</p> <p>Based on Milestone Decision Authority (MDA) staff guidance, a Full Rate Production Decision Review (FRPDR) milestone will not be required for the Joint Mine Resistant Ambush Protected (MRAP) because the total program objective is being achieved via a series of Low Rate Initial Production (LRIP) orders reviewed and approved individually by the MDA. The Joint MRAP has already acquired 22,880 of the 26,882 (Acquisition Objective) vehicle requirement negating the requirement for an FRP decision. A Program Deviation Report (PDR) was signed by the Program Executive Officer (PEO) on May 28, 2009.</p> <p>The Joint MRAP has reached the Follow-on Developmental Testing (DT) threshold of March 2009. When the Acquisition Program Baseline (APB) was approved, it was believed LRIP 10 vehicles, with their significant block Engineering Change Proposals (ECPs), would be the final component of DT. Subsequently, additional block ECPs as well as the Dash variant, were introduced to the MRAP Family of Vehicles (FoV) which displaced scheduled LRIP 10 DT. Testing for the Dash vehicle and the Cougar's vehicle's modified suspension system preempted the LRIP 10 testing in order to rapidly field vehicles in Operation Enduring Freedom (OEF). Changes to the Cougar vehicle's suspension system also inhibited LRIP 10 DT completion. DT for LRIP 10-13 vehicles will be complete by February 2010 (Threshold), as vehicle requirements and priorities have evolved since the point where the APB was signed. A PDR has been submitted to notify OSD(AT&amp;L) of schedule deviation.</p> <p>A revised APB (16,238 MRAP vehicles plus 5,244 M-ATVs) was submitted to ASN(RDA) for Service review and concurrence. A subsequent APB update will be required to incorporate the increased vehicle quantities procured through LRIP 17 under the authority of JROCM 001-10, dated January 4, 2010.</p> <p>Cost (RDT&amp;E and Procurement):</p> <p>The Acquisition Category (ACAT) ID Joint MRAP initial APB was signed by the USD(AT&amp;L) on June 16, 2008 baselining the program at 15,771 vehicles. Per OSD(AT&amp;L) direction, the APB has been updated and is based on Joint MRAP FoV Capability Production Document (CPD) version 1.1, JROC approved July 7, 2009, and the JROC Memorandum 115-09, which approved the requirement for 5,244 M-ATVs and established the total baseline vehicle allocation at 21,482 vehicles. The revised APB (16,238 MRAP vehicles plus 5,244 M-ATVs) was submitted to ASN(RDA) for Service review and concurrence. A subsequent update to the APB is required to incorporate the increased vehicle quantities procured through LRIP</p>
<b>Performance</b>		<input type="checkbox"/>	
<b>Cost</b>	RDT&E	<input checked="" type="checkbox"/>	
	Procurement	<input checked="" type="checkbox"/>	
	MILCON	<input type="checkbox"/>	
	Acq O&M	<input type="checkbox"/>	
<b>O&amp;S Cost</b>		<input checked="" type="checkbox"/>	
<b>Unit Cost</b>	PAUC	<input type="checkbox"/>	
	APUC	<input type="checkbox"/>	
Nunn-McCurdy Breaches			
<b>Current UCR Baseline</b>			
	PAUC	None	
	APUC	None	
<b>Original UCR Baseline</b>			
	PAUC	None	
	APUC	None	

17 under the authority of JROCM 001-10 establishing the current requirement at 26,882 vehicles.



Schedule Events					
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	
Milestone C	Feb 2007	Feb 2007	Feb 2007	Feb 2007	
LRIP	Apr 2007	Apr 2007	Apr 2007	Apr 2007	
First Unit Equipped (FUE)					
USMC	N/A	Apr 2007	Apr 2007	Apr 2007	(Ch-3)
U.S. Army	N/A	Nov 2007	Nov 2007	Nov 2007	(Ch-3)
MRAP I DT-C3 and Live Fire Test and Evaluation, Full Up System Level Testing					
Start	Oct 2007	Oct 2007	Apr 2008	Oct 2007	
Complete	Sep 2008	Sep 2008	Mar 2009	Sep 2008	
MRAP I IOT&E					
Start	Oct 2007	Oct 2007	Apr 2008	Oct 2007	
Complete	Jul 2008	Jul 2008	Jan 2009	Jul 2008	
IOC	Oct 2007	Oct 2007	Apr 2008	Oct 2007	
Full Rate Production Decision	Sep 2008	Sep 2008	Mar 2009	N/A <sup>1</sup>	(Ch-1)
Follow-on DT (includes MRAP II, expedient armor and ECPs)					
Start	Feb 2008	Feb 2008	Aug 2008	Feb 2008	
Complete	Sep 2008	Sep 2008	Mar 2009	Feb 2010 <sup>1</sup>	(Ch-2)
MRAP II IOT&E					
Start	Oct 2008	Oct 2008	Apr 2009	Oct 2008	
Complete	Apr 2009	Apr 2009	Oct 2009	Apr 2009	

<sup>1</sup> APB Breach

## Change Explanations

(Ch-1) Full Rate Production Decision Review (FRPDR): Changed from Sep 2008 to N/A. Based on Milestone Decision Authority (MDA) staff guidance, an FRPDR milestone will not be required for the Joint Mine Resistant Ambush Protected (MRAP) because the total program objective is being achieved via a series of Low Rate Initial Production (LRIP) orders reviewed and approved individually by the MDA. The Joint MRAP has already acquired 22,800 of the 26,882 vehicle requirement negating the requirement for an FRP decision. A Program Deviation Report (PDR) was signed by the Program Executive Officer (PEO) on May 28, 2009.

(Ch-2) Follow-on Developmental Testing (DT) Complete: Changed from Mar 2009 to Feb 2010. The Joint MRAP has reached the follow-on DT threshold of March 2009. When the Acquisition Program Baseline (APB) was approved, it was believed LRIP 10 vehicles, with their significant block Engineering Change Proposals (ECPs), would be the final component of DT. Subsequently, additional block ECPs as well as the Dash variant were introduced to the MRAP Family of Vehicles (FoV). The Dash testing preempted the LRIP 10 testing in order to rapidly field the Dash in Operation Enduring Freedom (OEF). Changes to the Cougar vehicle's suspension system also inhibited LRIP 10 DT completion. DT for LRIP 10 vehicles will not be completed until February 2010 as vehicle requirements and priorities have evolved since the point where the APB was signed. DT for LRIP 10 - 13 vehicles is being extended until February 2010 due to Armored Utility Variant (AUV) and additional RG-31 (A3) testing. A PDR has been submitted to notify AT&L of schedule deviation.

(Ch-3) First Unit Equipped Milestones were added to the initial Acquisition Program Baseline (APB) signed June 16, 2008.

## Notes

Joint Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) Definitions:

MRAP I consists of the following three categories (CATs): CAT I, CAT II, and CAT III.

MRAP II were tested but not procured due to field commanders' requirements for lighter, more mobile vehicles for Operation Enduring Freedom (OEF).

MRAP-All Terrain Vehicle (M-ATV) will fulfill joint urgent OEF requirements for greater maneuverability in this Theater.

The Acquisition Category (ACAT) ID Joint MRAP APB, was signed June 16, 2008. Per OSD(AT&L) direction, the APB has been updated based on the Joint MRAP FoV Capability Production Document (CPD) version 1.1, Joint Requirements Oversight Council (JROC) approved July 7, 2009.

## Acronyms and Abbreviations

DT - Developmental Testing  
 ECP - Engineering Change Proposal  
 IOC - Initial Operational Capability  
 IOT&E - Initial Operational Test & Evaluation  
 LRIP - Low-Rate Initial Production  
 USMC - United States Marine Corps

## Performance

Performance Characteristics					
SAR Baseline Production Estimate	Current APB Production Objective/Threshold	Demonstrated Performance	Current Estimate		
<b>Materiel Availability</b>					
Each category of MRAP shall achieve a materiel availability of 0.75 (T), which includes a minimum Ao of 0.80 (T) which is measured continuously at the unit level over 96 hours and 288.3 miles (465 km) at 40 hours ALDT.	Each category of MRAP shall achieve a materiel availability of 0.90, which includes a min Ao of 0.97 which is measured continuously at the unit level over 96 hrs and 288.3 mi (465 km) at 40 hrs ALDT	Each category of MRAP shall achieve a materiel availability of 0.75, which includes a min Ao of 0.80 which is measured continuously at the unit level over 96 hrs and 288.3 mi (465 km) at 40 hrs ALDT	Am - 93.4%; Ao - 95.02%	Each category of MRAP FoV shall achieve a Am of 0.75, which includes a min Ao of 0.90, which is measured continuously at the unit level over 96 hrs and 288.3 mi (465 km) at 40 hrs ALDT. (T)	(Ch-1)
<b>Net-Ready</b>					
MRAP shall be interoperable with existing communications, sensors and counter-improvised explosive device equipment. It shall fully support execution of joint critical activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations.	MRAP should fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system should satisfy the technical rqmts for transition of Net-Centric military operations	MRAP shall be interoperable with existing communications, sensors and counter-improvised explosive device equipment. It shall fully support execution of joint critical activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical rqmts for transition to Net-Centric military operations	While JITC testing and certification was waived by the June 25, 2007 memorandum from JITC, demonstrated and actual operational performance of C2ISR suites of MRAP vehicles in Theater over the last two years has validated the NR KPP requirement. The MRAP Program Manager will periodically review the need to conduct interoperability testing IAW the June 25, 2001 Memorandum.	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an ATO by the DAA, and 5) Operationally	(Ch-1)

			effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.
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### Requirements Reference

Capability Production Document for MRAP Vehicle, Version 2.0, February 2008

### Change Explanations

(Ch-1) The Material Availability and Net Ready Performance Characteristics are updated to reflect the latest Joint Requirements Oversight Council (JROC) approved Capability Production Document , version 1.1 (CPD v 1.1) dated July 7, 2009. This updated CPD also includes the MRAP-All Terrain Vehicle (M-ATV).

### Acronyms and Abbreviations

ALDT - Administrative Logistics Down Time  
 Am - Materiel Availability  
 Ao - Operational Availability  
 ATO - Approval to Operate  
 C2ISR - Command and Control, Intelligence, Surveillance, And Reconnaissance  
 DAA - Designated Approval Authority  
 DISR - DoD IT Standards Registry  
 FoV - Family of Vehicles  
 GIG - Global Information Grid  
 hrs - hours  
 IAW - in accordance with  
 IT - Information Technology  
 JITC - Joint Interoperability Test Command  
 KIP - Key Interface Parameter  
 km - Kilometer  
 KPP - Key Performance Parameter  
 mi - miles  
 min - minimum  
 MOPP - Mission-Oriented Protective Posture  
 MRAP - Mine Resistant Ambush Protected  
 NCOW RM - Net-Centric Operations and Warfare Reference Model  
 NR - Net-Ready  
 rqmts - requirements  
 RWS - remote weapons station  
 T - Threshold  
 TV-1 - Technical View

## Track to Budget

### General Notes

In October 2008 DoD directed all Services to budget for peace time Program Management costs (approximately \$55M Joint per FY10-15) in Baseline Service budgets beginning in FY10. All other program costs will remain budgeted via annual Supplemental requests.

### RDT&E

Appn	BA	PE	
Army	2040 02	0602618A	
	<b>Project</b>	<b>Name</b>	
	HB1	Ballistics Technology	(Shared)
Navy	1319 07	0206624M	
	<b>Project</b>	<b>Name</b>	
	C2316	Marine Corps Combat Services Support	(Shared)
Army	2040 02	0604642A	
	<b>Project</b>	<b>Name</b>	
	E40	Light Tactical Wheeled Vehicles	(Shared)

### Procurement

Appn	BA	PE	
Navy	1109 06	0206315M	
	<b>Line Item</b>	<b>Name</b>	
	652000	EOD Systems	(Shared)
Navy	1810 05	0203475N	
	<b>Line Item</b>	<b>Name</b>	
	602800	Tactical Vehicles	(Shared)
Army	2035 01		
	<b>Line Item</b>	<b>Name</b>	
	D03001	MRAP	(Shared)
Air Force	3080 02	0203765F	
	<b>Line Item</b>	<b>Name</b>	
	822230	Medium Tactical Vehicle	(Shared)
Defense-Wide	0300 02	1160404BB	
	<b>Line Item</b>	<b>Name</b>	
	65	Tactical Vehicles (USSOCOM)	(Shared)

### Notes

Entries in the ICN column for 1109, 1810, 2035, and 3080 refer to Budget Line Items (BLI).

### Acq O&M

Appn	BA	PE
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Navy	1106 04		
	<b>Project</b>	<b>Name</b>	
	4A3G	Service Wide Transportation	(Shared)
Navy	1106 01		
	<b>Project</b>	<b>Name</b>	
	1A2A	Field Logistics	(Shared)
Navy	1804 04		
	<b>Project</b>	<b>Name</b>	
	4B1N	Service Wide Transportation	(Shared)
Navy	1804 01		
	<b>Project</b>	<b>Name</b>	
	1C7C	Equipment Maintenance	(Shared)
Army	2020 01		
	<b>Project</b>	<b>Name</b>	
	135	Additional Activities	(Shared)
Army	2020 04		
	<b>Project</b>	<b>Name</b>	
	421	Service Wide Transportation	(Shared)
Air Force	3400 04		
	<b>Project</b>	<b>Name</b>	
	041C	Service Wide Transportation	(Shared)
Defense-Wide	0100 01		
	<b>Project</b>	<b>Name</b>	
	1PL2	USSOCOM	(Shared)

**Notes**

Upon further review of the category definition for Acquisition Operations and Maintenance (Acq O&M) funding, it was determined that ACQ O&M should not be used for this program. Accordingly, the information provided in this section is included for historical and information purposes only. The Annual Funding section has been revised to remove the Acq O&M appropriation section and the Cost Variance Analysis section has been revised accordingly.

## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 2008 \$M			BY 2008 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	227.9	400.6	440.7	610.9 <sup>1</sup>	228.0	418.5	627.6
Procurement	20836.2	25750.7	28325.8	34520.4 <sup>1</sup>	21223.0	26654.4	35664.0
Flyaway	--	--	--	22911.2	--	--	23304.9
Recurring	--	--	--	22911.2	--	--	23304.9
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	11609.2	--	--	12359.1
Other Support	--	--	--	6487.2	--	--	7136.1
Initial Spares	--	--	--	5122.0	--	--	5223.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	949.4	0.0	--	0.0	964.0	0.0	0.0
Total	22013.5	26151.3	N/A	35131.3	22415.0	27072.9	36291.6

<sup>1</sup> APB Breach

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	100	100	226
Procurement	15274	15671	22656
Total	15374	15771	22882

#### Quantity Notes

## Cost and Funding

### Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY\$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	409.6	45.4	36.0	35.2	29.8	27.8	23.6	20.2	627.6
Procurement	25930.6	3507.1	1082.2	889.4	906.2	770.2	736.8	1841.5	35664.0
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2011 Total	26340.2	3552.5	1118.2	924.6	936.0	798.0	760.4	1861.7	36291.6
PB 2009 Total	22415.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22415.0
Delta	3925.2	3552.5	1118.2	924.6	936.0	798.0	760.4	1861.7	13876.6

#### Funding Notes

The Joint MRAP requirements through FY09 have been funded with supplemental appropriations and continue to be resourced through Congressional Supplemental funding across all Services. In October, 2008, DoD directed all Services to budget for peacetime program management costs (approximately \$55M Joint per FY10-15) in baseline Service budgets beginning in FY10. All other program costs will remain budgeted via annual Supplemental requests until Services are able to determine long term usage plans and add funding to baseline budgets.

All SOCOM M-ATV vehicles are being procured using Other Procurement, Army funding.

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	226	0	0	0	0	0	0	0	0	226
Production	0	21256	1400	0	0	0	0	0	0	22656
PB 2011 Total	226	21256	1400	0	0	0	0	0	0	22882
PB 2009 Total	100	15274	0	0	0	0	0	0	0	15374
Delta	126	5982	1400	0	0	0	0	0	0	7508

## Cost and Funding

### Annual Funding By Appropriation

Annual Funding								
2040   RDT&E   Research, Development, Test, and Evaluation, Army								
Fiscal Year	Quantity	TY \$M						Total Program
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support		
2007	--	--	--	--	--	--	--	20.0
2008	--	--	--	--	--	--	--	20.0
Subtotal	47	--	--	--	--	--	--	40.0

Annual Funding 2040   RDT&E   Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	--	--	--	--	--	20.1
2008	--	--	--	--	--	--	19.7
Subtotal	47	--	--	--	--	--	39.8

Annual Funding							
1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	--	--	--	--	--	150.0
2008	--	--	--	--	--	--	206.6
2009	--	--	--	--	--	--	13.0
2010	--	--	--	--	--	--	45.4
2011	--	--	--	--	--	--	36.0
2012	--	--	--	--	--	--	35.2
2013	--	--	--	--	--	--	29.8
2014	--	--	--	--	--	--	27.8
2015	--	--	--	--	--	--	23.6
2016	--	--	--	--	--	--	20.2
Subtotal	179	--	--	--	--	--	587.6

Annual Funding 1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	--	--	--	--	--	151.1
2008	--	--	--	--	--	--	204.5
2009	--	--	--	--	--	--	12.7
2010	--	--	--	--	--	--	43.9
2011	--	--	--	--	--	--	34.4
2012	--	--	--	--	--	--	33.0
2013	--	--	--	--	--	--	27.5
2014	--	--	--	--	--	--	25.2
2015	--	--	--	--	--	--	21.1
2016	--	--	--	--	--	--	17.7
Subtotal	179	--	--	--	--	--	571.1

Annual Funding								
1109   Procurement   Procurement, Marine Corps								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2005	73	36.0	--	--	36.0	7.0	43.0	
2006	--	--	--	--	--	--	--	
2007	3081	2133.7	--	--	2133.7	157.0	2290.7	
2008	761	1018.3	--	--	1018.3	517.7	1536.0	
2009	1365	639.0	--	--	639.0	384.0	1023.0	
2010	478	1220.1	--	--	1220.1	28.0	1248.1	
2011	--	--	--	--	--	235.5	235.5	
2012	--	--	--	--	--	175.5	175.5	
2013	--	--	--	--	--	178.8	178.8	
2014	--	--	--	--	--	158.2	158.2	
2015	--	--	--	--	--	146.5	146.5	
2016	--	--	--	--	--	131.8	131.8	
2017	--	--	--	--	--	128.0	128.0	
2018	--	--	--	--	--	96.0	96.0	
Subtotal	5758	5047.1	--	--	5047.1	2344.0	7391.1	

Annual Funding 1109   Procurement   Procurement, Marine Corps							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	73	37.7	--	--	37.7	7.3	45.0
2006	--	--	--	--	--	--	--
2007	3081	2124.7	--	--	2124.7	156.3	2281.0
2008	761	998.3	--	--	998.3	507.6	1505.9
2009	1365	619.5	--	--	619.5	372.2	991.7
2010	478	1167.5	--	--	1167.5	26.8	1194.3
2011	--	--	--	--	--	221.8	221.8
2012	--	--	--	--	--	162.6	162.6
2013	--	--	--	--	--	162.9	162.9
2014	--	--	--	--	--	141.7	141.7
2015	--	--	--	--	--	129.0	129.0
2016	--	--	--	--	--	114.1	114.1
2017	--	--	--	--	--	109.0	109.0
2018	--	--	--	--	--	80.4	80.4
Subtotal	5758	4947.7	--	--	4947.7	2191.7	7139.4

Annual Funding 1810   Procurement   Other Procurement, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2006	113	118.9	--	--	118.9	11.0	129.9
2007	365	265.2	--	--	265.2	29.0	294.2
2008	66	194.8	--	--	194.8	45.0	239.8
2009	65	45.0	--	--	45.0	--	45.0
2010	52	55.2	--	--	55.2	28.0	83.2
2011	--	--	--	--	--	27.4	27.4
2012	--	--	--	--	--	25.2	25.2
2013	--	--	--	--	--	25.7	25.7
2014	--	--	--	--	--	21.0	21.0
2015	--	--	--	--	--	20.9	20.9
2016	--	--	--	--	--	19.0	19.0
2017	--	--	--	--	--	19.2	19.2
2018	--	--	--	--	--	14.4	14.4
Subtotal	661	679.1	--	--	679.1	285.8	964.9

Annual Funding 1810   Procurement   Other Procurement, Navy								
Fiscal Year	Quantity	BY 2008 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2006	113	121.0	--	--	121.0	11.2	132.2	
2007	365	264.3	--	--	264.3	28.9	293.2	
2008	66	191.2	--	--	191.2	44.1	235.3	
2009	65	43.6	--	--	43.6	--	43.6	
2010	52	52.9	--	--	52.9	26.8	79.7	
2011	--	--	--	--	--	25.8	25.8	
2012	--	--	--	--	--	23.4	23.4	
2013	--	--	--	--	--	23.4	23.4	
2014	--	--	--	--	--	18.8	18.8	
2015	--	--	--	--	--	18.4	18.4	
2016	--	--	--	--	--	16.5	16.5	
2017	--	--	--	--	--	16.4	16.4	
2018	--	--	--	--	--	12.1	12.1	
Subtotal	661	673.0	--	--	673.0	265.8	938.8	

Annual Funding								
2035   Procurement   Other Procurement, Army								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2007	2450	1837.2	--	--	1837.2	247.8	2085.0	
2008	10411	10957.1	--	--	10957.1	2882.9	13840.0	
2009	1310	1623.7	--	--	1623.7	629.3	2253.0	
2010	870	1603.7	--	--	1603.7	452.7	2056.4	
2011	--	--	--	--	--	703.0	703.0	
2012	--	--	--	--	--	608.2	608.2	
2013	--	--	--	--	--	619.6	619.6	
2014	--	--	--	--	--	517.1	517.1	
2015	--	--	--	--	--	502.8	502.8	
2016	--	--	--	--	--	460.2	460.2	
2017	--	--	--	--	--	459.0	459.0	
2018	--	--	--	--	--	344.2	344.2	
Subtotal	15041	16021.7	--	--	16021.7	8426.8	24448.5	

Annual Funding 2035   Procurement   Other Procurement, Army							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	2450	1838.7	--	--	1838.7	248.0	2086.7
2008	10411	10788.0	--	--	10788.0	2838.5	13626.5
2009	1310	1580.0	--	--	1580.0	612.4	2192.4
2010	870	1539.8	--	--	1539.8	434.7	1974.5
2011	--	--	--	--	--	664.2	664.2
2012	--	--	--	--	--	565.1	565.1
2013	--	--	--	--	--	566.1	566.1
2014	--	--	--	--	--	464.6	464.6
2015	--	--	--	--	--	444.2	444.2
2016	--	--	--	--	--	399.7	399.7
2017	--	--	--	--	--	392.0	392.0
2018	--	--	--	--	--	289.1	289.1
Subtotal	15041	15746.5	--	--	15746.5	7918.6	23665.1

Annual Funding 3080   Procurement   Other Procurement, Air Force								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2007	262	159.7	--	--	159.7	10.3	170.0	
2008	276	471.3	--	--	471.3	145.7	617.0	
2009	280	242.0	--	--	242.0	65.0	307.0	
2010	--	--	--	--	--	53.8	53.8	
2011	--	--	--	--	--	44.6	44.6	
2012	--	--	--	--	--	33.9	33.9	
2013	--	--	--	--	--	34.6	34.6	
2014	--	--	--	--	--	30.1	30.1	
2015	--	--	--	--	--	28.1	28.1	
2016	--	--	--	--	--	26.2	26.2	
2017	--	--	--	--	--	25.6	25.6	
2018	--	--	--	--	--	19.2	19.2	
Subtotal	818	873.0	--	--	873.0	517.1	1390.1	

Annual Funding 3080   Procurement   Other Procurement, Air Force								
Fiscal Year	Quantity	BY 2008 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2007	262	161.9	--	--	161.9	10.4	172.3	
2008	276	468.1	--	--	468.1	144.7	612.8	
2009	280	237.2	--	--	237.2	63.7	300.9	
2010	--	--	--	--	--	52.1	52.1	
2011	--	--	--	--	--	42.7	42.7	
2012	--	--	--	--	--	31.9	31.9	
2013	--	--	--	--	--	32.0	32.0	
2014	--	--	--	--	--	27.4	27.4	
2015	--	--	--	--	--	25.1	25.1	
2016	--	--	--	--	--	23.0	23.0	
2017	--	--	--	--	--	22.1	22.1	
2018	--	--	--	--	--	16.3	16.3	
Subtotal	818	867.2	--	--	867.2	491.4	1358.6	

Annual Funding 0300   Procurement   Procurement, Defense-Wide								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2007	309	283.7	--	--	283.7	93.2	376.9	
2008	69	400.3	--	--	400.3	120.8	521.1	
2009	--	--	--	--	--	159.0	159.0	
2010	--	--	--	--	--	65.6	65.6	
2011	--	--	--	--	--	71.7	71.7	
2012	--	--	--	--	--	46.6	46.6	
2013	--	--	--	--	--	47.5	47.5	
2014	--	--	--	--	--	43.8	43.8	
2015	--	--	--	--	--	38.5	38.5	
2016	--	--	--	--	--	37.1	37.1	
2017	--	--	--	--	--	35.2	35.2	
2018	--	--	--	--	--	26.4	26.4	
Subtotal	378	684.0	--	--	684.0	785.4	1469.4	

Annual Funding 0300   Procurement   Procurement, Defense-Wide							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	309	283.2	--	--	283.2	93.0	376.2
2008	69	393.6	--	--	393.6	118.7	512.3
2009	--	--	--	--	--	154.5	154.5
2010	--	--	--	--	--	63.0	63.0
2011	--	--	--	--	--	67.8	67.8
2012	--	--	--	--	--	43.3	43.3
2013	--	--	--	--	--	43.4	43.4
2014	--	--	--	--	--	39.4	39.4
2015	--	--	--	--	--	34.0	34.0
2016	--	--	--	--	--	32.3	32.3
2017	--	--	--	--	--	30.1	30.1
2018	--	--	--	--	--	22.2	22.2
Subtotal	378	676.8	--	--	676.8	741.7	1418.5

## Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
<b>Approval Date</b>	2/7/2007	10/30/2009
<b>Approved Quantity</b>	215	22882
<b>Reference</b>	ADM approved by ASN(RD&A)	ADM approved by OUSD (AT&L) LRIP 16, dated October 30, 2009
<b>Start Year</b>	2007	2007
<b>End Year</b>	2007	2012

To support the immediate and pressing need to protect US Armed Forces from the threats presented in Theater, a single manufacturer was incapable of producing the vehicles in quantities and on the schedule required. Multiple manufacturers, multiple production contracts, and multiple Low Rate Initial Production (LRIP) delivery orders were awarded to meet the requirement. When aggregated, the sum of these LRIP awards exceeds 10% of the currently approved program. The unusual and compelling urgency to produce and field vehicles as quickly as possible in order to protect the lives of Service members in a hostile combat environment prevented the Department from limiting LRIP to the traditional 10% of the planned procurement prior to completing Initial Operational Test & Evaluation (IOT&E). The requirement evolved from 1,185 vehicles to 22,882 vehicles as the original decision for multiple LRIP awards as a reasonable ramp-up of industrial capacity required to support the Full Rate Production (FRP) upon completion of IOT&E was overshadowed by the urgency to provide more vehicles to Theater. The risks of early (pre-IOT&E) production were mitigated by personal MDA oversight through incremental LRIP approvals. All LRIP approvals were based on limited testing and comprehensive JPO task force efforts to resolve management issues expeditiously. Empirical metrics of saved lives and increased operational flexibility to commanders on the ground have validated these decisions.

## Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Description
Singapore	7/24/2009	15	38.8	SN-P-LAM: Sale of 15 CAT II vehicles to the Defence Science & Technology Agency
Yemen	6/30/2009	4	5.0	B9-P-LBB: Sale of 4 CAT I A2 vehicles to the US Department of Defense under Section 1206 of the NDAA, FY 2009.
Canada	11/14/2008	48	49.5	CN-P-LIK: Sale of 34 CAT II and 14 CAT III vehicles to Canadian Ministry of Defense (MoD).
United Kingdom	10/31/2008	14	18.6	UK-P-LTV: Sale of 14 CAT III vehicles to the British MoD.
United Kingdom	7/16/2008	54	33.5	UK-P-LTW: Sale of 15 CAT I, 15 CAT II, and 24 modified CAT II vehicles to the British MoD.
France	7/11/2008	5	5.8	FR-P-LHA: Sale of 5 modified CAT III vehicles to France's Delegation Generale Pour L'Armement.
United Kingdom	4/29/2008	157	87.6	UK-P-LTS: Sale of 151 modified CAT I and 6 CAT I vehicles to the British MoD.
Italy	2/21/2008	19	25.0	IT-P-LGE: Sale of 6 modified CAT II and 4 CAT III vehicles to the Italian MoD at a cost of
				IT-P-LGE, Amendment 2: Date of Sale: 06/16/2009. Sale of 3 CAT II and 6 modified CAT II vehicles to the Italian MoD at a cost of
Canada	5/3/2007	10	9.0	CN-P-LIB: Sale of 10 modified CAT II and CAT III vehicles to Canadian Ministry of Defense (MoD).
				CN-P-FBV: Is the omnibus contract for follow-on support of vehicles procured under for CN-P-LIB and CN-P-LIK cases. The follow-on contract will consist of spares, training, and FSR support.
United Kingdom	8/10/2006	282	195.0	UK-P-LTQ and UK-P-LTR: Two separate sales of 108 and 174 modified CAT II vehicles to the British MoD.
				UK-P-FAA: Consists of acquiring two Field Service Representatives (FSRs) to support the UK Husky vehicles.

### Notes

Since 2006, MRAP International Programs has placed on contract the following vehicle procurements: United Kingdom (507 vehicles), Italy (19 vehicles), Canada (58 vehicles), France (5 vehicles), Singapore (15 vehicles), and Yemen (4 vehicles). International Programs continues to work with each international customer, industry, U.S. Marine Corp, and U.S. Army on vehicle configuration, production schedules, transportation, spare parts, training, performance specifications, statements of work, and other efforts on existing and new contracts.

As of December 31, 2009, MRAP International Programs had 13 active cases:

**CANADA:**

**CN-P-LIB** consists of five (5) Cougar (Joint EOD Rapid Response Vehicle-JERRV) and five (5) Buffalo A1 (CAT III) vehicles. All Canadian vehicles have been delivered. Additional contracts were awarded for additional spares for non-battle damaged vehicles on April 13, 2009 and May 20, 2009.

**CN-P-LIK** consists of 14 Buffalo A2 (CAT III) and 34 Cougar (CAT II 6x6) vehicles. All Buffalo vehicles have been delivered, and are fitted with VOSS-II GYROCAM Systems. All Cougar vehicles have been delivered.

**CN-P-FBV** is the omnibus contract for follow-on support of vehicles procured under for CN-P-LIB and CN-P-LIK cases. The follow-on contract will consist of spares, training, and Field Service Representative (FSR) support.

**FRANCE:**

**FR-P-LHA** consists of five (5) Buffalo A1 (CAT III) vehicles. All vehicles were delivered. Standard spares and emergency replacement parts were delivered by September 30, 2009. Additional spares have been requested to repair a downed vehicle.

**ITALY:**

**IT-P-LGE** consists of six (6) Cougar (CAT II 6x6) vehicles and four (4) Buffalo A1 vehicles. All four (4) Buffalo vehicles were delivered in March 2008. Six (6) Cougar vehicles were delivered in September 2008, modified at SPAWAR, and arrived in Livorno, IT on March 19, 2009.

**IT-P-LGE Amendment 2** Contract awarded June 16, 2009 for an additional procurement of three (3) Buffalo A1 and six (6) Cougar EOD vehicles which were delivered in November 2009. Three (3) Buffalo A1 vehicles were delivered July 31, 2009, modified at SPAWAR Charleston, and en-route to Livorno, Italy as of December 31, 2009. The six (6) Cougar EOD vehicles will complete modifications in Spring 2010.

**SINGAPORE:**

**SN-P-LAM** consists of 15 Navistar MaxxPro Dash vehicles. LOA signed by Singapore on July 3, 2009. Contract awarded to Navistar Defense on July 24, 2009. All vehicles have been accepted and delivered to Singapore. Vehicle integration of radios and weapons stations is in process. Complete integration of Command and Control and Trooper variants scheduled for January 30, 2010.

**UNITED KINGDOM:**

**UK-P-FAA** consists of acquiring two Field Service Representatives (FSRs) to support the UK Husky vehicles.

**UK-P-LTQ / UK-P-LTR** consists of two separate sales of 108 Cougar (CAT II) and 174 MASTIFF (MK II), a Cougar 6x6 variant vehicle. All 108 Cougar vehicles have been delivered. The 174 MASTIFF II vehicles production contract is complete.

**UK-P-LTS** consists of 151 RIDGBACK (RB), a Cougar 4x4 variant vehicle and six (6) USMC (CAT I) Cougars. All deliveries are complete.

**UK-P-LTV** consists of 14 Buffalo A2 (CAT III). All Buffalo vehicles have been delivered and accepted by the UK.

**UK-P-LTW** consists of 30 U.S. Cougar (15 CAT I 4x4 and 15 CAT II 6x6) and 24 MASTIFF II (CAT II Cougar 6x6 variant) vehicles. The 30 U.S. Cougar vehicles were delivered in August 2008. All MASTIFF vehicles were delivered by March 2009.

### **YEMEN:**

**B9-P-LBB** consists of the purchase of four (4) Cougar CAT I A2 vehicles. This is funded as a Section 1206 NDAA. The contract was awarded June 30, 2009. The basic contract for the vehicle was completed with FPII on September 11, 2009 and a contract amendment for spares and FSR support was completed on September 30, 2009. Options to support the training and maintenance requirements are being evaluated.

The potential for future MRAP vehicle FMS requests is significant. Coalition country requests will be reviewed based on dates of their Letters of Request for Pricing and Availability. All other non-coalition requests will be referred to Defense Security Cooperation Agency (DSCA) to address after the U.S. and Coalition surge requirements have been met. In the past year, South Korea, Romania, Lithuania, Finland, New Zealand, Greece, Georgia, and Japan have submitted Letters of Request (LOR) for procurement of MRAP vehicles.

### **International Cooperative Programs:**

The MRAP Vehicle Program has demonstrated enhanced reciprocal defense trade and cooperation through the award of multiple contracts to foreign sources for both MRAP vehicles and MRAP vehicle armor per the guidance set forth in 10 United States Code (U.S.C.) 2350a.

## **Nuclear Costs**

None

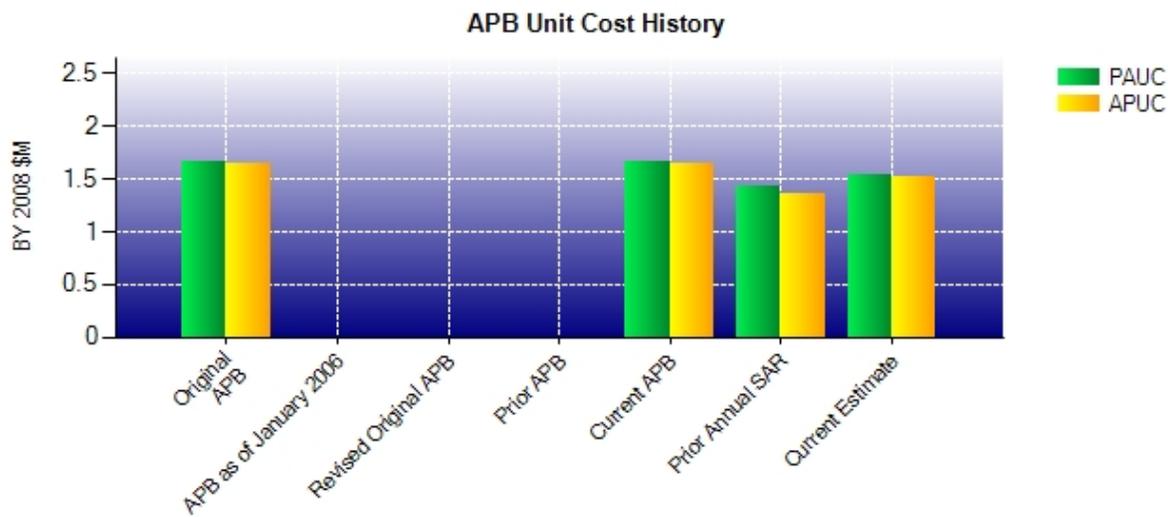
## Unit Cost

### Unit Cost Report

Item	BY 2008 \$M	BY 2008 \$M	% Change
	Current UCR Baseline (Jun 2008 APB)	Current Estimate (Dec 2009 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	26151.3	35131.3	
Quantity	15771	22882	
Unit Cost	1.658	1.535	-7.42
<b>Average Procurement Unit Cost</b>			
Cost	25750.7	34520.4	
Quantity	15671	22656	
Unit Cost	1.643	1.524	-7.24

Item	BY 2008 \$M	BY 2008 \$M	% Change
	Original UCR Baseline (Jun 2008 APB)	Current Estimate (Dec 2009 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	26151.3	35131.3	
Quantity	15771	22882	
Unit Cost	1.658	1.535	-7.42
<b>Average Procurement Unit Cost</b>			
Cost	25750.7	34520.4	
Quantity	15671	22656	
Unit Cost	1.643	1.524	-7.24

**Unit Cost History**



Item	Date	BY 2008 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jun 2008	1.658	1.643	1.717	1.701
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	Jun 2008	1.658	1.643	1.717	1.701
Prior Annual SAR	Dec 2007	1.432	1.364	1.458	1.389
Current Estimate	Dec 2009	1.535	1.524	1.586	1.574

**SAR Unit Cost History**

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1.458	-0.006	-0.155	0.000	0.000	-0.024	0.000	0.313	0.128	1.586

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1.389	-0.006	-0.133	0.000	0.000	0.008	0.000	0.316	0.185	1.574

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	N/A	Feb 2007	Feb 2007
IOC	N/A	N/A	Oct 2007	Oct 2007
Total Cost (TY \$M)	N/A	N/A	22415.0	36291.6
Total Quantity	N/A	N/A	15374	22882
PAUC	N/A	N/A	1.458	1.586

## Cost Variance

Summary TY \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Production Estimate)	228.0	21223.0	--	964.0	22415.0
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	--	--	--	--	--
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	--	--	--	--	--
Current Changes					
Economic	-0.6	-139.7	--	-3.4	-143.7
Quantity	+169.1	+7246.0	--	--	+7415.1
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+231.1	+182.5	--	-960.6	-547.0
Other	--	--	--	--	--
Support	--	+7152.2	--	--	+7152.2
Subtotal	+399.6	+14441.0	--	-964.0	+13876.6
Total Changes	+399.6	+14441.0	--	-964.0	+13876.6
Current Estimate	627.6	35664.0	--	--	36291.6

Summary BY 2008 \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Production Estimate)	227.9	20836.2	--	949.4	22013.5
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	--	--	--	--	--
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	--	--	--	--	--
Current Changes					
Economic	--	--	--	--	--
Quantity	+167.4	+7028.3	--	--	+7195.7
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+215.6	+181.5	--	-949.4	-552.3
Other	--	--	--	--	--
Support	--	+6474.4	--	--	+6474.4
Subtotal	+383.0	+13684.2	--	-949.4	+13117.8
Total Changes	+383.0	+13684.2	--	-949.4	+13117.8
Current Estimate	610.9	34520.4	--	--	35131.3

Previous Estimate: December 2007

#### Cost Variance Notes

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.6
Quantity variance resulting from an increase of 126 prototype vehicles from 100 to 226 (Quantity)	+167.4	+169.1
Adjustment for current and prior escalation. (Estimating)	+0.6	+0.6
Revised estimate to include Developmental Test (DT) and Operational Test (OT) through FY16. (Estimating)	+215.0	+230.5
<b>RDT&amp;E Subtotal</b>	<b>+383.0</b>	<b>+399.6</b>

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-139.7
Quantity variance resulting from an increase of 2058 vehicles from 3700 to 5758 (USMC). (Quantity)	+2420.2	+2502.9
Quantity variance resulting from an increase of 117 vehicles from 544 to 661 (Navy). (Quantity)	+150.0	+154.6
Quantity variance resulting from an increase of 5041 vehicles from 10000 to 15041 (Army). (Quantity)	+3963.6	+4084.4
Quantity variance resulting from an increase of 121 vehicles from 697 to 818 (Air Force). (Quantity)	+195.6	+200.1
Quantity variance resulting from an increase of 45 vehicles from 333 to 378 (DoD). (Quantity)	+298.9	+304.0
Adjustment for current and prior escalation. (Estimating)	+100.9	+102.1
Adjustment for current and prior escalation. (Support)	+37.0	+37.6
Decrease in Initial Spares (USMC) - the 2007 SAR spares costs were based on estimated spares in FY07 and FY08. The actual costs of spares in those years were lower. (Support)	-28.5	-22.0
Decrease in Initial Spares (Navy) - the 2007 SAR spares' costs were based on estimated spares in FY07 and FY08. The actual costs of spares in those years were lower. (Support)	-31.1	-31.0
Increase in Initial Spares (Army). (Support) (QR)	+1245.7	+1284.4
Increase in Initial Spares (Air Force). (Support) (QR)	+20.4	+21.7
Increase in Initial Spares (DoD). (Support) (QR)	+40.2	+40.5
Increase in Other Support (USMC). (Support) (QR)	+889.8	+1014.1
Increase in Other Support (Navy). (Support) (QR)	+133.8	+151.3
Increase in Other Support (Army). (Support) (QR)	+3345.7	+3769.8
Increase in Other Support (Air Force). (Support) (QR)	+243.5	+266.6
Increase in Other Support (DoD). (Support) (QR)	+577.9	+619.2
Flyaway cost in FY07 was different in SAR '07 vs. SAR '09 though the quantities were the same; estimated costs used in 2007 and actuals used in 2009 (Army) (Estimating)	+161.9	+161.8
Flyaway cost in FY07 was different in SAR '07 vs. SAR '09 though the quantities were the same; estimated costs used in 2007 and actuals used in 2009 (AF) (Estimating)	+15.7	+15.5
Flyaway cost in FY07 was different in SAR '07 vs. SAR '09 though the quantities were the same; estimated costs used in 2007 and actuals used in 2009 (DoD) (Estimating)	-91.0	-91.2

Refinement in cost estimate. (USMC) (Estimating)	-6.9	-6.9
Refinement in cost estimate. (Navy) (Estimating)	+0.8	+1.0
Refinement in cost estimate. (Army) (Estimating)	+0.1	+0.1
Refinement in cost estimate. (Air Force) (Estimating)	+0.1	+0.2
Refinement in cost estimate. (DoD) (Estimating)	-0.1	-0.1
Procurement Subtotal	+13684.2	+14441.0

(QR) Quantity Related

Acq O&M	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	-3.4
Adjustment for current and prior escalation. (Estimating)	+3.4	+3.4
Deletion of acquisition-related Operations & Maintenance (O&M) costs, which were reported previously but are not considered part of the Joint MRAP acquisition program (USMC). (Estimating)	-316.1	-320.0
Deletion of acquisition-related Operations & Maintenance (O&M) costs, which were reported previously but are not considered part of the Joint MRAP acquisition program (Navy). (Estimating)	-37.9	-38.0
Deletion of acquisition-related Operations & Maintenance (O&M) costs, which were reported previously but are not considered part of the Joint MRAP acquisition program (Army). (Estimating)	-531.4	-538.0
Deletion of acquisition-related Operations & Maintenance (O&M) costs, which were reported previously but are not considered part of the Joint MRAP acquisition program (Air Force). (Estimating)	-45.6	-46.0
Deletion of acquisition-related Operations & Maintenance (O&M) costs, which were reported previously but are not considered part of the Joint MRAP acquisition program (DoD). (Estimating)	-21.8	-22.0
Acq O&M Subtotal	-949.4	-964.0

**Change Explanations Notes**

CE - Cost Estimate  
 DT - Developmental Test  
 FY - Fiscal Year  
 MILCON - Military Construction  
 O&M - Operations and Maintenance  
 OT - Operational Test  
 Proc - Procurement  
 QR - Quantity Related  
 RDT&E - Research, Development, Test, and Evaluation  
 USMC - United States Marine Corps

## Contracts

### General Notes

The difference in initial and current contract price is due to an increase in vehicle quantity and modifications.

### Contract Identification

**Appropriation:** Procurement  
**Contract Name:** FPII Sole Source  
**Contractor:** FORCE PROTECTION INDUSTRIES, INC  
**Contractor Location:** Ladson, SC 29456-3895  
**Contract Number:** M67854-07-D-5006  
**Contract Type:** Firm Fixed Price (FFP), Indefinite Delivery Indefinite Quantity (IDIQ)  
**Award Date:** November 14, 2006  
**Definitization Date:** August 03, 2007

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
190.9	N/A	279	202.6	N/A	279	202.6	202.6

### Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

### Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP/IDIQ) contract.

### Notes

As of December 31, 2009, the FPII (Sole Source) contract is more than 90% complete and will no longer be reported.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MRAP PRIME VEHICLE CONTRACTORS - MANUFACTURERS  
**Contractor:** BAE US COMBAT SYSTEMS  
**Contractor Location:** SANTA CLARA, CA 95050  
**Contract Number:** M67854-07-D-5025  
**Contract Type:** Firm Fixed Price (FFP), Indefinite Delivery Indefinite Quantity (IDIQ)  
**Award Date:** January 25, 2007  
**Definitization Date:** January 25, 2007

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1320.9	N/A	1731	2144.8	N/A	2264	2144.8	2144.8

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP/IDIQ) contract.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MRAP Prime Vehicle Contractors - Manufacturers  
**Contractor:** General Dynamics Land Systems, (Canadian Commercial Corp.)  
**Contractor Location:** London, Ontario Canada  
**Contract Number:** M67854-07-D-5028  
**Contract Type:** Firm Fixed Price (FFP), Indefinite Delivery Indefinite Quantity (IDIQ)  
**Award Date:** January 25, 2007  
**Definitization Date:** January 25, 2007

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
686.6	N/A	620	1237.9	N/A	1384	1237.9	1237.9

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP/IDIQ) contract.

**Notes**

Contractor Location:  
 General Dynamics Land Systems - Canada  
 London, Ontario, Canada

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MRAP PRIME VEHICLE CONTRACTORS - MANUFACTURERS  
**Contractor:** BAE-TVS (formerly ARMOR HOLDINGS, INC)  
**Contractor Location:** SEALY, TX 77474  
**Contract Number:** M67854-07-D-5030  
**Contract Type:** Firm Fixed Price (FFP), Indefinite Delivery Indefinite Quantity (IDIQ)  
**Award Date:** January 25, 2007  
**Definitization Date:** January 25, 2007

**Contract Price**

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1047.1	N/A	1838	2086.2	N/A	2864	2086.2	2086.2

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP/IDIQ) contract.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MRAP PRIME VEHICLE CONTRACTORS - MANUFACTURERS  
**Contractor:** FORCE PROTECTION INDUSTRIES, INC  
**Contractor Location:** LADSON, SC 29456-3895  
**Contract Number:** M67854-07-D-5031  
**Contract Type:** Firm Fixed Price (FFP), Indefinite Delivery Indefinite Quantity (IDIQ)  
**Award Date:** January 25, 2007  
**Definitization Date:** January 25, 2007

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1726.4	N/A	2863	2354.0	N/A	2787	2354.0	2354.0

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP/IDIQ) contract.

**Notes**

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MRAP PRIME VEHICLE CONTRACTORS - MANUFACTURERS  
**Contractor:** NAVISTAR DEFENSE (formerly IMG)  
**Contractor Location:** WARRENVILLE, IL 60555  
**Contract Number:** M67854-07-D-5032  
**Contract Type:** Firm Fixed Price (FFP), Indefinite Delivery Indefinite Quantity (IDIQ)  
**Award Date:** January 25, 2007  
**Definitization Date:** January 25, 2007

**Contract Price**

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
2792.2	N/A	4471	5732.7	N/A	6440	5732.7	5732.7

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP/IDIQ) contract.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MRAP-All Terrain Vehicle (M-ATV)  
**Contractor:** Oshkosh Corporation  
**Contractor Location:** Oshkosh, WI 54901  
**Contract Number:** W56HZV-09-D-0111  
**Contract Type:** Firm Fixed Price (FFP), Indefinite Delivery Indefinite Quantity (IDIQ)  
**Award Date:** June 30, 2009  
**Definitization Date:** June 30, 2009

**Contract Price**

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
5817.2	N/A	6644	5817.2	N/A	6644	5817.2	5817.2

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP/IDIQ) contract.

**Notes**

This is the first time this contract is being reported.

## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	217	215	226	95.13%
Production	18233	18515	22656	81.72%
Total Program Quantity Delivered	18450	18730	22882	81.85%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	36291.6	Years Appropriated	6
Expended to Date	19135.0	Percent Years Appropriated	42.86%
Percent Expended	52.73%	Appropriated to Date	29892.7
Total Funding Years	14	Percent Appropriated	82.37%

### Deliveries to Date:

On July 7, 2009, the Joint Requirements Oversight Council (JROC) reviewed and validated the Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) Capability Production Document (CPD) version 1.1, which carries forward CPD v1.0 threshold requirements for MRAP vehicle categories (CATs) I through III (16,238 vehicle requirement) and includes additional threshold requirements for the new MRAP-All Terrain Vehicle (M-ATV) (5,244 vehicles) variant. JROC Memorandum (JROCM) 147-09 increased the M-ATV requirement by 1,400 vehicles to 6,644.

Per JROCM 001-10 dated January 4, 2010, the MDA (USD(AT&L)), issued an Acquisition Decision Memorandum (ADM) on January 29, 2010 authorizing an approved acquisition objective of 25,700.

## Operating and Support Cost

### Assumptions and Ground Rules

1. Assets for all Services remain active for 15 years (Fiscal Year (FY) 2009 - 2023).
2. Estimate includes personnel, training, facilities, vehicle and component repair, sustainment overhauls (Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF)) and spares replenishment assuming 7,000 miles per vehicle per year for (non-Special Operations Command (SOCOM) and 12,000 miles per year (SOCOM).
3. The OSD Cost Assessment Program Evaluation (CAPE) office completed an Independent Cost Estimate (ICE) on the Operations and Support (O&S) portion of the Joint MRAP in September 2008. This was based on \$3.0B per fiscal year and spares replenishment at \$10.00 per mile. Based on observed costs subsequent to the CAPE ICE, the Joint Program Office Estimate (JPOE) has been updated at approximately \$7.00 per mile.

#### Cost Estimate Reference:

None

#### Sustainment Strategy:

None

#### Antecedent Information:

None

Unitized O&S Costs BY2008 \$K		
Cost Element	Joint MRAP Vehicle Program Average Annual Cost For All Vehicles	No Antecedent (Antecedent)
Mission Pay & Allowance	70.706	--
Unit Level Consumption	42.564	--
Intermediate Maintenance	--	--
Depot Maintenance	15.172	--
Contractor Support	13.683	--
Sustaining Support	18.860	--
Indirect	--	--
Other	1.542	--
<b>Total</b>	<b>162.527</b>	<b>--</b>

#### Unitized Cost Comments:

None

Item	Total O&S Cost \$M			
	Joint MRAP Vehicle Program		No Antecedent (Antecedent)	
	Current Production APB Objective/Threshold	Current Estimate		
<b>Base Year</b>	0.0	0.0	<b>55233.1<sup>1</sup></b>	N/A
<b>Then Year</b>	0.0	N/A	66151.8	N/A

<sup>1</sup> APB O&S Cost Breach

#### Total O&S Cost Comment

None

**Disposal Estimate Details**

**Date of Estimate:**

**Source of Estimate:**

**Disposal/Demilitarization Total Cost (BY 2008 \$M):**