Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	52.480	27.072	58.393	6.762	65.155	50.312	40.492	27.931	26.773	Continuing	Continuing
0201: *Logistical Veh Sys Replacement (LVSR)*	1.242	0.100	0.560	-	0.560	2.397	2.182	1.740	1.731	Continuing	Continuing
2316: *Combat Service Support Eng Equip*	44.591	9.210	26.882	6.762	33.644	24.099	22.263	12.101	5.888	Continuing	Continuing
2509: *Motor Transport Mod*	4.509	14.928	12.438	-	12.438	9.254	2.196	1.498	1.082	Continuing	Continuing
2510: *MAGTF CSSE & SE*	-	-	13.974	-	13.974	9.066	7.455	6.550	6.156	Continuing	Continuing
2929: *Testing Measuring Diag Equip & SE*	1.375	1.479	2.043	-	2.043	2.076	2.099	2.119	2.145	Continuing	Continuing
9C90: *MTVR Mod*	0.763	1.355	2.496	-	2.496	3.420	4.297	3.923	9.771	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) provides funding for Marine Air-Ground Task Force requirements for Combat Service Support equipment improvement. It will enhance combat breaching capabilities of the ground combat elements, logistics, maintenance and transportation. The PE also provides improvements in all areas of Combat Service Support Equipment Vehicles by determining the replacement for the heavy, medium and light fleet vehicles. Alternative Power Sources for Communications Equipment (APSCE) is a suite of devices that provide the commander with the capability to use existing power to operate his communication equipment, computers and peripheral equipment instead of using batteries or fossil fuel generators. The Marine Corps Family of Automatic Test Systems (ATS), formerly TETS, provides automatic testing capability for use by technicians both in garrison and forward edge of the battlefield. This project includes improvements in all areas of the M1A1 main battle tank. The M1A1 tank provides armor protected firepower to the USMC ground combat element. Its advanced thermal sights provide superior target acquisition and target identification. High Performance Capabilities for Military Vehicles Project: This project is dedicated to applying the best practices of the motor sports industry to military vehicles including engineering expertise, equipment and technology. Marine Personnel Carrier Support System: Product Data Management and Technical Information Architecture Application development and integration includes requirements analysis, detailed system design, analysis of alternatives, implementation, and integration of a risk management tool.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*		R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	19.466	45.172	73.666	-	73.666
Current President's Budget	52.480	27.072	58.393	6.762	65.155
Total Adjustments	33.014	-18.100	-15.273	6.762	-8.511
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-18.100			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	33.755	-			
• SBIR/STTR Transfer	-0.640	-			
• Program Adjustments	-	-	-15.237	6.762	-8.475
• Rate/Misc Adjustments	-	-	-0.036	-	-0.036
• Congressional General Reductions Adjustments	-0.101	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 0201: *Logistical Veh Sys Replacement (LVSR)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0201: *Logistical Veh Sys Replacement (LVSR)*	1.242	0.100	0.560	-	0.560	2.397	2.182	1.740	1.731	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Logistics Vehicle System Replacement (LVSR) program is the replacement for the Logistics Vehicle System (LVS) fleet. The LVSR Modification line funds numerous and very important modifications and initiatives that are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, tool malfunctions, product quality deficiencies, beneficial suggestions and other issues that affect vehicle reliability, availability, maintainability and readiness. A proactive and focused approach ensures proper vehicle sustainment and life cycle management and it allows the flexibility to develop and implement improvements as needed to respond to the evolving needs of the Marine Corps.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: LVSR: Engineering Change Proposal (ECP) ***Articles:*** ***FY 2012 Plans:*** Funding will support Engineering Change Proposal (ECP) development and testing for all variants (cargo, tractor and wrecker) of the Logistics Vehicle System Replacement (LVSR). Continual changes in threat environment requires an on-going and proactive approach to address these changing threats. ***FY 2013 Base Plans:*** Funding will support Engineering Change Proposal (ECP) development and testing for all variants (cargo, tractor and wrecker) of the Logistics Vehicle System Replacement (LVSR). Continual changes in threat environment requires an on-going and proactive approach to address these changing threats.	- 0	0.050 0	0.280 0	-	0.280 0
Title: LVSR: Operational Test and Evaluation ***Articles:*** ***FY 2011 Accomplishments:*** Funding supported the completion of Initial Operational Test and Evaluation (IOT&E) for the Logistics Vehicle System Replacement (LVSR) Tractor and Wrecker variants.	0.808 0	-	-	-	-
Title: LVSR: Safety ***Articles:***	0.434 0	0.050 0	0.280 0	-	0.280 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 0201: *Logistical Veh Sys Replacement (LVSR)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
FY 2011 Accomplishments: Funding addressed safety and force protection concerns. Safety upgrades such as Blast Mitigation seats and floor mats will protect the occupants from Improvised Explosive Devices (IEDs) and incendiary threats. Rear camera development and testing provide additional visibility for enhanced operator situational awareness. These are important safety upgrades that improve the overall safety of the LVSR vehicle and its occupants. ***FY 2012 Plans:*** Funding will support safety modification development and testing required to meet the diverse environments of current and future operations of Marine Air-Ground Task Force (MAGTF) Expeditionary Maneuver Warfare. Incorporating new safety upgrades will protect the warfighter and LVSR vehicle from possible catastrophic events as warranted by continual changes in threat environment. ***FY 2013 Base Plans:*** Funding will support safety modification development and testing required to meet the diverse environments of current and future operations of MAGTF Expeditionary Maneuver Warfare. Incorporating new safety upgrades will protect the warfighter and LVSR vehicle from possible catastrophic events as warranted by continual changes in threat environment.					
Accomplishments/Planned Programs Subtotals	1.242	0.100	0.560	-	0.560

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/5093: *LVSR*	242.230	187.354	37.262	0.000	37.262	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/5050: *Motor T Mods (LVSR).*	0.000	62.400	5.935	0.000	5.935	36.857	16.373	7.103	5.075	Continuing	Continuing

D. Acquisition Strategy

The Logistics Vehicle System Replacement (LVSR) program consists of two separate phases. During the Engineering and Manufacturing Development (EMD) phase, two contracts were awarded to procure prototypes for developmental testing. The EMD phase winner was awarded a production contract to produce Low Rate Initial Production (LRIP) vehicles for operational testing. The LVSR Tractor and Wrecker variants have been designed and built, and are being tested under the LVSR Cargo production contract.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 0201: *Logistical Veh Sys Replacement (LVSR)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Variant Prototypes	Reqn	MCSC:Quantico, VA	13.793	-		-		-		-	0.000	13.793	
LVSR Source Selection	Reqn	MCSC:Quantico, VA	0.248	-		-		-		-	0.000	0.248	
FRC Prototypes	Reqn	DRS Systems, Inc.:St. Louis, MO	2.720	-		-		-		-	0.000	2.720	
FRC Prototypes	Reqn	TBD:Not Specified	0.637	-		-		-		-	0.000	0.637	
		Subtotal	17.398	-		-		-		-	0.000	17.398	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Engineer & Tech Support	WR	NTSC:Orlando, FL	0.194	-		-		-		-	0.000	0.194	
LVSR Engineer Change Support	Reqn	MCSC:Quantico, VA	1.454	-		-		-		-	0.000	1.454	
LVSR Engineer Change Support	Reqn	Oshkosh Corp:Oshkosh, WI	0.687	0.037	Mar 2012	0.215	Mar 2013	-		0.215	2.271	3.210	
LVSR Safety Mod Development	Reqn	Oshkosh Corp:Oshkosh, WI	0.434	0.037	Mar 2012	0.215	Mar 2013	-		0.215	3.774	4.460	
		Subtotal	2.769	0.074		0.430		-		0.430	6.045	9.318	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Operational T&E	WR	MCOTEA:Quantico, VA	4.552	-		-		-		-	0.000	4.552	
LVSR Operational T&E	Reqn	Oshkosh Corp:Oshkosh, WI	0.730	-		-		-		-	0.000	0.730	
LVSR Development Design & Test	Reqn	Oshkosh Corp:Oshkosh, WI	0.175	-		-		-		-	0.000	0.175	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Variant Test	MIPR	TACOM:Warren, MI	0.110	-		-		-		-	0.000	0.110	
LVSR Corrosion Test	WR	NSWC:Philadelphia, PA	0.217	-		-		-		-	0.000	0.217	
LVSR Development Test	MIPR	Aberdeen Test Center:Aberdeen, MD	3.445	0.026	May 2012	0.130	May 2013	-		0.130	0.909	4.510	
LVSR Development Test	Reqn	Oshkosh Corp:Oshkosh, WI	1.422	-		-		-		-	1.127	2.549	
LVSR Development and Test	WR	NSWC:Indian Head, MD	0.024	-		-		-		-	0.000	0.024	
LVSR Live Fire	Reqn	SURVICE:Not Specified	0.410	-		-		-		-	0.000	0.410	
FRC Modeling and Simulation	Reqn	NSWC:Carderock, MD	0.735	-		-		-		-	0.000	0.735	
FRC Developmental T&E	Reqn	NATC:Carson City, NV	0.505	-		-		-		-	0.000	0.505	
		Subtotal	12.325	0.026		0.130		-		0.130	2.036	14.517	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Contractor Support	Reqn	TBD:Not Specified	2.149	-		-		-		-	0.000	2.149	
LVSR Program Management Support	WR	MCSC:Quantico, VA	0.698	-		-		-		-	0.000	0.698	
FRC Contractor Support	Reqn	Sverdrup:Dumfries, VA	0.050	-		-		-		-	0.000	0.050	
FRC Program Management Support	WR	MCSC:Quantico, VA	0.050	-		-		-		-	0.000	0.050	
		Subtotal	2.947	-		-		-		-	0.000	2.947	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	35.439	0.100		0.560		-		0.560	8.081	44.180	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 0201: *Logistical Veh Sys Replacement (LVSR)*

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2316: *Combat Service Support Eng Equip*	44.591	9.210	26.882	6.762	33.644	24.099	22.263	12.101	5.888	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The M1A1 Mod Kit effort includes improvements in all areas of the M1A1 main battle tank and the Armored Vehicle Launched Bridge (AVLB). The M1A1 tank provides armor protected firepower to the USMC ground combat element. Efforts under the mod line pertaining to the M1A1 include improvements in lethality systems to increase armament accuracy, increase the crew's situational awareness through sensor enhancements and intra-vehicular data sharing, providing for off-board targeting improvement, and environmental testing of components. The AVLB provides the Marine Corps only armor-protected assault gap crossing capability. Continued funding is required to address obsolescence, address operational deficiencies to adapt the tank and AVLB to a changing operational environment and support user-defined product improvements. These improvements directly address Marine Corps Lessons Learned, after action reports, and will ensure maximum survivability, sustainability, and readiness.

Route Reconnaissance and Clearance (R2C). A spiral development project enhances the capabilities of the R2C systems, a family of systems fielded in support of Operation Iraqi Freedom (OIF) via the Urgent Needs Statement (UNS) process. This research and development effort will integrate future vehicles, robots, and associated equipment to provide standoff detection, marking, and neutralization of Explosive Hazards such as mines and Improvised Explosive Devices (IEDs). Enhancements for R2C will provide capabilities not found in the current inventory to defeat explosive hazards and will protect Marines and equipment while conducting route and area clearance operations. The integration of the next generation of armored security and support vehicles, Vehicle Mounted Mine Detectors (VMMDs), specialized robots, and a new suite of detection, marking, and neutralization systems will enable maneuver commanders to make timely and informed decisions in avoiding or neutralizing explosive hazards that impede their missions. Multiple detection and marking capabilities will detect a broader spectrum of explosive hazards and achieve higher overall effectiveness rates, while standoff and remote-controlled detection, marking, and neutralization capabilities will enhance force protection and system survivability. Operational speeds and rates will increase, which will better support the maneuver force operational tempo.

The Assault Breacher Vehicle (ABV) is a tracked combat engineer vehicle that provides deliberate and in-stride breaching capability of minefields and complex obstacles to the Ground Combat Element (GCE) of the Marine Air Ground Task Force (MAGTF). The ABV combines crew protection and vehicle survivability with the speed and mobility to keep pace with the maneuver force. The ABV is employed by the Combat Engineer Battalion (CEB) as part of a synchronized operation to rapidly breach obstacles and create lanes for the MAGTF. FY 2011 funding will be used to develop a Counter Improvised Explosive Device (CIED) capability, integrate an Insensitive Munition (IM) compliant line charge and integrate mine roller capability for the system. Standoff CIED capability from under armor will provide a significant increase in system flexibility and lethality while improving crew protection. An IM compliant line charge will permit safe loading of the charge while on the transport vessel well deck, enabling the ABV to begin performing its mission immediately upon touching the beach. Thus, the crew will not be forced to load the line charge on the shore, possibly under fire. Integration of a mine roller will increase the ABVs "proofing" (verifies no mines in the lane) capability, thus increasing mine clearing performance.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2316: *Combat Service Support Eng Equip*

The Engineer Modification Kit line funds modifications and initiatives which are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, product quality deficiencies and other issues that affect vehicle reliability, availability and readiness. This proactive and focused approach ensures proper vehicle sustainment and life cycle management in response to evolving needs of the Marine Corps fleet. Operational needs to provide personnel survivability on engineer equipment is essential to current and future operations. Research and development funding develops and integrates new lighter, compact armor technology and supports ballistic testing for applications to existing and future acquisitions.

Corrosion Prevention and Control (CPAC): The useful life of Marine Corps assets will be extended through a comprehensive CPAC RDT&E program aimed at identifying and certifying new corrosion control products, materials, processes and procedures for legacy and new acquisition.

The Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) provides tactical mobility for Warfighters with multi-mission vehicles designed to support urgent operational needs, and protect personnel from the effects of improvised explosive devices (IEDs), underbody mines, and small arms fire threats. Five vehicle categories (CATs) are being tested, procured, fielded and sustained: Category I - Urban combat operations, ambulance. Category II - Multi-mission ops-convoy lead, troop transport, ambulance, utility vehicle. Category III - Mine/IED clearance ops, explosive ordnance disposal. MRAP All Terrain Vehicle (M-ATV)- Combat operations (ops) in rural, mountainous, urban terrain. Other Protected Vehicles- Specialty mission or unique configuration. Provides the same threshold ballistic, mine and IED protection as other MRAP vehicles. Includes the MRAP Recovery Vehicle (MRV) variant.

The Low Metallic Signature Mine Detector (LMSMD) will provide operational commanders the ability to maintain dismounted mobility by detecting landmines and explosive devices, and increase security for convoys by allowing engineers to sweep suspected IED sites with minimal exposure time. Integrate into existing C2 systems in order to maximize freedom of movement and situational awareness and reduce C-IED reaction times.

The Ground Combat Element, Engineer Squad Robot(ESR) with a lightweight back packable robot will support the maneuver commander with organic route and obstacle reconnaissance, urban scouting and breaching capabilities, explosive detection, interrogation and reduction in support of dismounted tactical maneuver across the spectrum of conflict. The Robot will be part of the T/E of Combat Engineer Squads in both active and reserve Combat Engineer Battalions (CEB), Marine Wing support Squadrons (MWSS) and additional systems are allocated for supporting establishments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Engineering Mod Kits	-	0.495	0.498	-	0.498
Articles:		0	0		0
FY 2012 Plans: Solve highest priority issues determined during the testing and integration of modifications for the Engineer Family of Systems.					
FY 2013 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Solve highest priority issues determined during the testing and integration of modifications for the Engineer Family of Systems					
Title: M1A1 Survivability/Lethality Program	1.906	-	-	-	-
Articles:	0				
FY 2011 Accomplishments: The M1A1 Survivability/Lethality Program effort includes critical product improvements such as, but not limited to, the application of additional armor, integration of counter-sniper fire technology, and improvement to existing secondary armanment systems. These improvements directly address Marine Corps Lessons Learned, after action reports, and will ensure maximum survivability.					
Title: M1A1 Modifications	1.406	1.794	1.326	-	1.326
Articles:	0	0	0		0
FY 2011 Accomplishments: This project evaluated enhancements to situational awareness needs such as attack detection, driver visibility, and fire control improvements. Modifications included safety, reliability, corrosion control, and technology up-grades to meet Marine Corps requirements. ***FY 2012 Plans:*** This project executes testing and evaluation of lethality enhancements - particularly alternative high explosive main gun rounds- as well as engineering support for upgrades to support situational awareness and mitigate operational and obsolescence-generated deficiencies with the tank. ***FY 2013 Base Plans:*** This project in conjunction with the Army, qualify tank turret systems as replacements to obsolescing units; address fire control system deficiencies; continue evaluation of attack-detection systems; develop plans for long-term modernization for the M1A1 in the Marine Corps inventory.					
Title: Route Reconnaissance and Clearance (R2C):	2.809	4.544	3.892	-	3.892
Articles:	0	0	0		0
FY 2011 Accomplishments:					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Integrated Automated Route Reconnaissance kits, vehicle optical sensor systems, and interrogation arm on CAT I and CAT II MRAPs. Provided Field User Evaluation for increment II which includes the shipment of CAT I, CAT II, and CAT III MRAPs, front end equipment, billeting, range costs, and data recorders. ***FY 2012 Plans:*** Funding will continue integratation of Automated Route Reconnaissance kits, vehicle optical sensor systems, and interrogation arm on CAT I and CAT II MRAPs. Provides Field User Evaluation for increment II which includes the shipment of CAT I, CAT II, and CAT III MRAPs, front end equipment, billeting, range costs, and data recorders. ***FY 2013 Base Plans:*** Continue development, integration and testing of events began in FY12. We will also begin funding of the preiminary efforts planned for increment III of the Route Recon. and clearance effort.					
Title: Assault Breacher Vehicle (ABV) ***Articles:*** ***FY 2011 Accomplishments:*** Included Three (3) identified system improvements/upgrades: Improved Counter Improvised Explosive Device (CIED) capability, integration of Insensitive Munitions (IM) compliant line charge, and integrated a vehicle width mine roller.	1.484 0	-	-	-	-
Title: MRAP Vehicles ***Articles:*** ***FY 2011 Accomplishments:*** MATV- Underbody Improvement Kits (UIK); LRIP 22- 100 USMC M-ATV's; LRIP 20- Wreckers- 15 USMC; Cougar ISS/Block Upgrades. Continue Ballistic testing on vehicle variants as multiple ECP's are applied. Perform Testing and Evaluation of capabilities requested in UUNS/JUONS and other planned survivabilty ECP's. ***FY 2013 Base Plans:*** N/A ***FY 2013 OCO Plans:*** Continue Ballistic testing on vehicle variants as multiple Engineering Change Proposals (ECPs) are applied.	34.717 0	-	- 0	6.762 0	6.762 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Perform Testing and Evaluation of capabilities requested in UUNS/JUONS and other planned survivabilty ECP's.					
Title: Engineer Squad Robot ***Articles:*** ***FY 2013 Base Plans:*** Baseline activities will focus on development and integration of current technologies to meet the KPP requirements of the ESR CPD : Reconnaissance Effectiveness, Availability, Reliability, Size, Speed/Mobility, Range, and Endurance	-	-	5.822 0	-	5.822 0
Title: Corrosion Prevention and Control (CPAC) ***Articles:*** ***FY 2011 Accomplishments:*** The CPAC continues to use Goverment labs for the Corrosion Products and Materials Processes (CPMP), expansion of Chemical Agent Resistant Coating (CARC) specification requirements to include the usage of high-build coatings, implementation of the use of aerosol CARC touch-up coatings, corrosion requirements for conformal coatings to reduce corrosion on electronics systems, and any other emerging research issues. ***FY 2012 Plans:*** The focus of the program's efforts will continue to utilize , Naval Surface NSWC and NRL to accomplish all developments. ***FY 2013 Base Plans:*** Program successes will continue testing and reviews across the inventory to explore options and opportunities to help manage the corrosion issues faced by our platforms.	2.269 0	2.377 0	1.959 0	-	1.959 0
Title: Low Metallic Signature MD ***Articles:*** ***Description:*** This system will allow operational commanders to maintain dismounted mobility by detecting landmines and explosive devices, and increase security for convoys by allowing engineers to sweep suspected IED sites with minimal exposure time. Integration into existing C2 systems will maximize freedom of movement and situational awareness and reduce C-IED reaction times. ***FY 2013 Base Plans:***	-	-	13.385 0	-	13.385 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Develop, integrate, test, evaluate and procure a new hand-held mine detector system to replace the current AN/PSS-14 Mine Detector Program of Record.					
Accomplishments/Planned Programs Subtotals	44.591	9.210	26.882	6.762	33.644

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/6520-1: *EOD Systems- R2C*	64.364	78.693	45.118	0.000	45.118	40.739	46.103	54.502	58.341	Continuing	Continuing
• PMC/6520-2: *EOD Systems- ABV*	32.085	8.100	20.595	0.000	20.595	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/6670: *CPAC*	0.485	0.485	0.484	0.000	0.484	0.579	0.576	0.586	0.596	Continuing	Continuing
• PMC/2061-1: *Modification Kits - M1A1 Mod Kits*	25.034	37.599	34.989	0.000	34.989	42.425	30.496	20.860	21.225	Continuing	Continuing
• PMC/2061-2: *Modification Kits - Armored Vehicle Launched Bridge*	0.000	12.169	8.545	0.000	8.545	5.200	0.000	0.000	0.000	Continuing	Continuing
• PMC/6520-5: *EOD Systems- MRAP*	180.000	0.000	39.150	13.481	52.631	0.000	2.996	3.047	3.099	Continuing	Continuing

D. Acquisition Strategy

(U) The M1A1 Survivability/Lethality: Program will utilize Army initiatives and programs (such as Belly Armor and Universal Headrest) as much as possible. However, it will also require modifications to some Army efforts (such as the Mine Resistant Seat and Rear View Sensor System). The USMC will research, develop, and evaluate programs to improve the survivability and lethality of the USMC tank. These efforts include the Improved Loader's Weapon Station, Laser Rangefinder/Designator, Laser Warning System, Tank Commander's Forward Unity Periscope upgrade, and Counter Sniper Protection Systems. When possible, these programs will use existing Army contracts and internal contracting activities when required.

(U) The M1A1 Modification: Program leverages Army developmental programs to create a system that more readily meets Marine Corps requirements. Modification includes safety, reliability, corrosion control, and technology up-grades to meet Marine Corps requirements. M1A1 Mods will exercise options on existing contracts of varying types to conduct research and analysis associated with the development of modifications and corrosion prevention to the M1A1 Tank and supporting platforms.

(U) Route Reconnaissance and Clearance (R2C): Starting in FY10, procure a fleet of standardized Route Reconnaissance and Clearance systems based upon the successful route clearance teams operating in Iraq; use Capabilities Production Documents for current systems and leverage contracts already in place. Concurrently support a research and development effort to integrate future vehicles with enhanced mobility and survivability, a suite of improved detection and marking capabilities, and robots with greater detection, marking, and neutralization capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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(U) Engineering Mod Kits: This is a roll-up line of various engineering efforts, modifications and other related items less than $5 Million each. This program provides for significant improvements to a various pieces of engineering equipment by enhancing their capabilities and improving readiness.

(U) Corrosion Prevention and Control (CPAC) Program The Program will execute the RDT&E Program through direct allocation of funding to the Naval Surface Warfare Center - Carderock Division Corrosion Research and Engineering Branch for comprehensive program aimed at identifying and certifying new corrosion control products, materials, processes and procedures for legacy and new acquisition.

(U) The Low Metallic Signature Mine Detector will develop, integrate, test, evaluate and procure a new hand-held mine detector system to replace the current AN/PSS-14 Mine Detector Program of Record. Ground Penetrating Radar (GPR) technology has improved significantly since the development of the AN/PSS-14, allowing greater efficiency, target discrimination, miniaturization, longer operating time and command & control. The Low Metallic Signature Mine Detector will be effective against low and non metallic devices, capable of identifying man-made objects, weigh less than 7 lbs, be capable of start-up and calibration in less than 60 seconds, and be integrated with existing C2 systems.
Estimated Production Cost is $24k per system.

(U) The Engineer Squad Robot (ESR) will focus on development and integration of current technologies to meet the KPP requirements of the ESR CPD with reconnaissance effectiveness, availability, reliability, size, speed/mobility, range, and endurance.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng Squad Robot	TBD	TBD:TBD	-	-		5.822	Nov 2012	-		5.822	Continuing	Continuing	Continuing
Low Metallic Signature MD	TBD	TBD:TBD	-	-		13.385	Nov 2012	-		13.385	Continuing	Continuing	Continuing
MRAP Engineering	TBD	TBD:TBD	-	-		-		3.404	Nov 2012	3.404	Continuing	Continuing	Continuing
M1A1 MODIFICATIONS	MIPR	TACOM:TACOM	2.303	0.586	Jan 2012	0.086	Jan 2013	-		0.086	Continuing	Continuing	Continuing
M1A1 MODIFICATIONS	MIPR	ABERDEEN PRV:APG, MD	1.813	0.400	Dec 2011	0.397	Dec 2012	-		0.397	Continuing	Continuing	Continuing
M1A1 MODIFICATIONS	MIPR	FORT BELVOIR:FORT BELVOIR, VA	0.200	0.158	Jan 2012	0.201	Jan 2013	-		0.201	Continuing	Continuing	Continuing
M1A1 MODIFICATIONS	MIPR	BENET LABS:WATERVELIET, NY	0.250	0.250	Jan 2012	0.247	Jan 2013	-		0.247	Continuing	Continuing	Continuing
M1A1 MODIFICATIONS	MIPR	PICATINNY ARSENAL:PICATINNY, NJ	0.414	0.400	Jan 2012	0.395	Jan 2013	-		0.395	Continuing	Continuing	Continuing
JAB Development	C/FFP	MCSC:Quantico, VA	2.225	-		-		-		-	Continuing	Continuing	Continuing
ABV CIED Dev and Integration	WR	NSWC:Panama City, FL	2.445	-		-		-		-	Continuing	Continuing	Continuing
R2C Sys Articles & Integration	WR	NSWC:Panama City, FL	4.660	1.439	Dec 2011	3.892	Nov 2012	-		3.892	Continuing	Continuing	Continuing
		Subtotal	14.310	3.233		24.425		3.404		27.829			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support-R2C	C/FP	EG&G:Stafford, VA	0.987	0.950	Nov 2011	-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.987	0.950		-		-		-			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MRAP Ballistic Survivability	MIPR	Aberdeen Proving Ground:Aberdeen, MD	-	-		-		0.460	Nov 2012	0.460	Continuing	Continuing	Continuing
MRAP FoV Ballistic Evaluations	MIPR	AEC:Aberdeen, MD	-	-		-		0.216	Nov 2012	0.216	0.000	0.216	
MRAP LFT&E MRAP	MIPR	Army Reseach Lab:Aberdeen, MD	-	-		-		0.226	Nov 2012	0.226	0.000	0.226	
MRAP Buffalo Testing Requirements	MIPR	Aberdeen Test Center:Aberdeen, MD	-	-		-		1.110	Nov 2012	1.110	0.000	1.110	
MRAP Ballistic SSP	MIPR	ATC:Aberdeen, MD	-	-		-		0.125	Nov 2012	0.125	0.000	0.125	
MRAP Operational & LFT&E	C/CR	Not Specified:Not Specified	-	-		-		0.956	Nov 2012	0.956	0.000	0.956	
MRAP Testing Support	Various	Various:Various	-	-		-		0.265	Nov 2012	0.265	0.000	0.265	
R2 Test Support	MIPR	Aberdeen Proving Ground:Aberdeen, MD	1.914	2.155	Nov 2011	-		-		-	Continuing	Continuing	Continuing
CPAC	WR	Naval Surface Warfare Center - Carderock:W. Bethesda, MD	3.441	1.869	Dec 2011	1.959	Nov 2012	-		1.959	Continuing	Continuing	Continuing
CPAC	WR	NRL:Key West, FL	1.000	0.508	Dec 2011	-		-		-	Continuing	Continuing	Continuing
Engineering Mod Kits	MIPR	Aberdeen Proving Grounds:Aberdeen, MD	-	0.495	Dec 2011	0.498	Nov 2012	-		0.498	Continuing	Continuing	Continuing
		Subtotal	6.355	5.027		2.457		3.358		5.815			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	21.652	9.210		26.882		6.762		33.644			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2316: *Combat Service Support Eng Equip*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2316: *Combat Service Support Eng Equip*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2316				
R2C Increment I Production	1	2012	2	2012
R2C Increment II Integration	2	2012	4	2012
R2C Increment II Production	2	2013	4	2013
R2C Increment III Integration	2	2013	4	2013
R2C Increment III IOT&E	3	2015	4	2015
Increment III Production	2	2016	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
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COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2509: *Motor Transport Mod*	4.509	14.928	12.438	-	12.438	9.254	2.196	1.498	1.082	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Marine Corps Tactical Motor Transportation Modification Program manages procurement and life cycle sustainment for more than 40,000 principle end items divided among four fleets: Light Fleet, Medium Fleet, Heavy Fleet, and Special Fleet. A sustained effort is maintained in the Marine Corps for development and testing in support of fleet Service Life Extension Program (SLEP) initiatives, vehicle quality deficiency resolutions, safety initiatives, environmental/state transportation mandated vehicle changes, and system component refresh modifications efforts. Given transportation asset operational availability declines at a steady rate over time, SLEP, Fleet overhauls, and enhanced depot level modifications are essential in maintaining a viable transportation capability in the Marine Corps Operating Forces.

The HMMWV/ECV Modification Program will restore payload and performance to extend the service life and enhance the durability of those ECVs not replaced by JLTV out to 2030. This will be accomplished by exploring/evaluating various solutions based upon cost, weight, performance, and durability.

The Improved Recovery Vehicle (IRV) project includes improvements in all areas of the M88A2 Improved Recovery Vehicle. Continued funding is required to address obsolescence and support pre-planned product improvements. Additionally, funding will implement lessons learned and develop safety related Engineering Change Proposals (ECPs) to correct hazards noted during the standard day to day operation of the M88A2 Improved Recovery Vehicle.

P-19 Replacement will replace the aging A/S32P-19A Crash Fire Rescue fleet in support of expeditionary airfield operations and the supporting establishment. The vehicle will be outfitted with advanced fire suppression equipment and provide rescue and aircraft fire fighting capabilities to permanent and expeditionary airfields throughout the Marine Corps. The P-19 Replacement may also be employed to fight structure fires in support of base camps and as firefighting support to other elements of the MAGTF, such as ammunition supply points, Petroleum, Oil, and Lubricant (POL) distribution points, or hazardous material storage facilities.

MTVR trailer and Family of Tactical Trailers programs will explore options for "lightening the MAGTF" weight and cube attributes of our light and medium trailer fleet. Funds will explore technologies and other current and emerging options that can be employed to achieve optimum lift capability with constraints to the desired weight and cube. Transportation and expeditionary goals will be considered in the research and development phase for the trailer fleet.

Family of Materiel Handling Equipment will explore ways to armor or design survivability into the family of materiel handling family.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Improved Recovery Vehicle (IRV)	0.435	0.120	0.315	-	0.315
Articles:	0	0	0		0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
FY 2011 Accomplishments: This project initiated modernization efforts for M88-specific tools. Completed testing and finalized ECP for incorporation of the commander weapon station. Evaluated and tested potential quick recovery opportunities. ***FY 2012 Plans:*** This project continues joint participation with US Army on evaluation of prospective modifications, evaluating solutions to cold weather starting deficiencies and alternatives to wire cables used in recovery operations, evaluating improvements to the M88A2 drive train. Developmental efforts to modify the current fording kit to support operation with the new Automatic Fire Extinguishing System (AFES). ***FY 2013 Base Plans:*** This project develops long-term modernization plans for the M88A2 within the Marine Corps. Continue efforts to mitigate emergent operational deficiencies.					
Title: High Mobility Multi-Wheeled Vehicle ECV (HMMWV-ECV) ***Articles:*** ***FY 2011 Accomplishments:*** N/A ***FY 2012 Plans:*** To conduct trade studies, Modeling & Simulation, and preliminary kit designs. ***FY 2013 Base Plans:*** To finalize kit designs and to conduct developmental testing on vehicles equipped with pre-production kits.	0.312 0	13.218 0	1.498 0	-	1.498 0
Title: FRC: Flatrack ***Articles:*** ***Description:*** The Flatrack Refueling Capability (FRC) will consist of a 2,500 - 3,000 gal tank, an onboard pump, filter assembly, and required hoses and equipment. The FRC will be able to provide refueling support to Marine Corps forces in unimproved locations. The FRC is a LVSR-compatible system designed to provide over wing and underwing refueling a defueling for aircraft, and to provide refueling capability for the Marine Logistics MLG to meet its cross country requirements. ***FY 2011 Accomplishments:***	3.157 0	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Prototype testing began during 2nd quarter FY11.					
Title: P-19 Replacement ***Articles:*** ***Description:*** The Aircraft Rescue & Fire Fighting (ARFF) vehicle will be equipped with fire suppression compounds and extinguishing agents, handheld extinguishers, and specialized rescue tools used by firefighters for extinguishing aircraft or structural fires, providing protection for rescue personnel, cooling explosive ordnance, extricating wounded aircrew members, dispatching emergency response capabilities to crash and structural alarms, and supporting mutual aid agreements with local, state, and federal agencies. ***FY 2012 Plans:*** Source selection for the P-19 Replacement development effort is scheduled for first quarter FY12. Performing activity/location will be unknown until source selection is complete. ***FY 2013 Base Plans:*** Continue development of the P-19.	-	0.968 0	6.503 0	-	6.503 0
Title: Motor Transport Modification (MTM): Test ***Articles:*** ***FY 2011 Accomplishments:*** Continue testing, integration, and evaluation of Transportation Systems modifications identified for potential application on our Motor Transportation assets. ***FY 2012 Plans:*** Continue the testing, integration, and evaluation of Transportation Systems modifications identified for potential application on our Motor Transportation assets. ***FY 2013 Base Plans:*** Continue testing, integration, and evaluation of Transportation Systems modifications identified for potential application on our Motor Transportation assets.	0.605 0	0.622 0	0.632 0	-	0.632 0
Title: MTVR Trailers ***Articles:*** ***Description:*** The MTVR Trailer Program is a USMC initiative to replace the current M105 Cargo Trailer with a trailer capable of augmenting the MTVR's increased mobility without degrading its operational capabilities. This	-	-	2.497 0	-	2.497 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
program will develop and field a cargo trailer which will have greater mobility characteristics while increasing the payload capability to 12,000 lbs. ***FY 2013 Base Plans:*** Assess a new version of water and cargo trailers to replace those trailers that were terminated due to weight issues.					
Title: Family of Tactical Trailers ***Articles:*** ***Description:*** Funding will provide for the procurement and sustainment of the Marine Corps Family of Tactical Trailers. Additionally, it will sustain the existing legacy tactical trailer fleet including the M101/M101A3 trailers designed for the High Mobility Multipurpose Wheeled Vehicle (HMMWV) and the M870A2E1 trailer designed for the Logistics Vehicle System (LVS)/Logistical Vehicle System Replacement (LVSR). ***FY 2013 Base Plans:*** Assess a new version of water and cargo trailers to replace those trailers that were terminated due to weight issues.	-	-	0.499 0	-	0.499 0
Title: Family of Material Handling Equipment ***Articles:*** ***Description:*** The family of materiel handling equipment will explore techniques and technology to help in survivability of the various platforms while also working to help sustain Reliability, and performance of the equipment. ***FY 2013 Base Plans:*** Funds will be used to assess survivability of Materiel Handling Equipment.	-	-	0.494 0	-	0.494 0
Accomplishments/Planned Programs Subtotals	4.509	14.928	12.438	-	12.438

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/523000: *Motor T Mod*	2.843	1.804	2.803	0.000	2.803	2.885	2.966	3.018	3.197	Continuing	Continuing
• PMC/504500: *HMMWV*	0.000	0.000	8.052	0.000	8.052	8.111	8.160	8.184	8.203	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/509700-1: *Family of Tactical Trailers*	29.293	3.647	7.866	0.000	7.866	9.362	9.675	9.786	9.994	Continuing	Continuing
• PMC/206100: *IRV*	17.313	4.164	3.651	0.000	3.651	3.427	3.227	3.281	3.355	Continuing	Continuing
• PMC/463000: *IRV*	0.064	0.181	0.155	0.000	0.155	0.156	0.159	0.162	0.165	Continuing	Continuing
• PMC/500600: *P-19 Replacement*	0.000	0.000	0.000	0.000	0.000	11.940	36.297	27.540	33.729	Continuing	Continuing
• PMC/509700-2: *Flatrack*	0.000	0.000	11.890	0.000	11.890	4.291	4.456	4.515	4.645	Continuing	Continuing
• PMC/654500: *ITV*	28.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/ 509700: *MTVR Trailers*	17.176	43.027	36.046	0.000	36.046	11.840	7.701	1.000	1.000	Continuing	Continuing

D. Acquisition Strategy

Funding will focus on streamlined acquisitions of Commercial-Off-The-Shelf Non-Developmental Items (COTS/NDI) that can be identified, integrated, and tested in a short amount of time. Successful modifications and tests are intended for follow-on procurement and incorporation into existing system component upgrades, SLEPS, or rapid COTS/NDI fielding for the Fleet Marine Forces (FMF).

HMMWV Modification will take a three-phased approach. The first phase will include trade studies and preliminary design; the second phase will focus on final design and the building of component upgrade kits; the third phase will include Performance and RAM testing of production-representative kitted vehicles against the requirements in the 2004 HMMWV ORD. Expect a high degree of development and testing in FY13/14, to include testing of production-representative kits in FY14.

The Flatrack Refueling Capability (FRC) program original acquisition strategy consisted of a joint procurement contract with the US Army. FY07 RDTE funds were used to procured two protoypes developed by DSR Systems, Inc. After development and initial testing the Army decided not to procure the DSR system. The revised acquisition strategy will only include US Marine Corps requirements. Further anaylsis has resulted in a new acquistion strategy focused on contracting for commerically available items via a Small Business Set Aside procurement. These funds will procure one prototype for developmental testing and Field Users Evaluation (FUE).

The Medium Tactical Vehicle Replacement (MTVR) Trailer program's original acquisition strategy consisted of procuring three variants of trailers that would have greater mobility characteristics, while maximizing the commonality of parts, across the three trailer platform. FY05 RDTE funds were used to procure six prototypes trailers (two of each variants) developed by Choctaw Manufacturing Developing Contractors (CMDC). After successful completion of Pre-production Qualification Testing (PPQT), the program transitioned from the Engineering and Manufacturing Development (EMD) phase to the Production and Development phase, in which a series of tests were conducted that proved the production trailers met the MTVR Trailer performance specification and ensured the operational effectiveness and suitability of trailers.

Prior to requesting a fielding decision, the Marine Corps Senior Leadership halted the original MTVR Trailer program due to concerns the trailers were oversized and did not meet the CMC goal to lighten the MAGTF. By direction of Marine Corps Combat Development and Integration Division, the MTVR Trailer program has recently

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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been restructured to re-design the cargo trailer and cease procurement of the Water and General Purpose trailers. The revised acquisition strategy will be to assist the Capabilities Development Directorate (CDD), Logistics Integration Division (LID) with the study to determine the Marine Corps' long term water and power distribution requirements. The RDT&E funds for the MTVR Trailer program will be used to build prototypes and conduct necessary tests to support the study results for water and power distribuiton trailers.

The Family of Tactical Trailer (FTT) acquisition strategy will use RDT&E funding to explore current and new technological options that can be to used to achieve optimum lift within the desired weight and cube constraints in support of the "Lightening the MAGTF" initiative. Transportation and expeditionary goals will be considered in the research and development phase for the light and medium/heavy trailer fleet.

The Improved Recovery Vehicle (IRV) program also leverages Army developmental projects to create a system that more readily meets Marine Corps Heavy Recovery Vehicle requirements. Improvements include safety, reliability, and technology upgrades.

P-19 Replacement will supplant the aging A/S32P-19A fleet in support of expeditionary airfield operations and the supporting establishment. The vehicle will be outfitted with advanced fire suppression equipment and provide rescue and aircraft fire fighting capabilities to permanent and expeditionary airfields throughout the Marine Corps. The P-19 Replacement may also be employed to fight structure fires in support of base camps and as firefighting support to other elements of the MAGTF, such as ammunition supply points, Petroleum, Oil, and Lubricants (POL) distribution points, or hazardous material storage facilities.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Family of Tactical Trailers	MIPR	TBD:TBD	-	-		0.499	Dec 2012	-		0.499	Continuing	Continuing	Continuing
MTVR Trailers	MIPR	TBD:TBD	-	-		2.497	Dec 2012	-		2.497	Continuing	Continuing	Continuing
IMPROVED RECOVERY VEH	MIPR	TACOM:WARREN, MI	0.966	0.120	Dec 2011	0.315	Sep 2013	-		0.315	Continuing	Continuing	Continuing
Motor Trans Mod	MIPR	TBD:TBD	2.751	0.622	Dec 2011	0.639	Dec 2012	-		0.639	Continuing	Continuing	Continuing
FRC	C/FFP	Heil CO:Athens, TN	4.600	-		-		-		-	0.000	4.600	
P-19 Replacement	MIPR	TBD:TBD	-	0.968	May 2012	6.496	Feb 2013	-		6.496	Continuing	Continuing	Continuing
		Subtotal	8.317	1.710		10.446		-		10.446			

Remarks

Source selection for the P-19 Replacement development effort is not yet complete. Performing activity/location will be unknown until source selection is complete.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Family of Material Handling	MIPR	ATC:APG MD	-	-		0.494	Nov 2012	-		0.494	Continuing	Continuing	Continuing
NATC Developmental Testing	C/FFP	NATC:NV	0.796	-	Feb 2012	-		-		-	0.000	0.796	
HMMWV Sys Dev & Demonstration	C/FFP	TBD:TBD	1.912	5.800	Aug 2012	-		-		-	0.000	7.712	
HMMWV Technology Development	C/FFP	TBD:TBD	-	2.818	Aug 2012	-		-		-	0.000	2.818	
HMMWV Test	C/FFP	NATC:NV	-	3.600	Apr 2013	1.498	Oct 2012	-		1.498	3.025	8.123	
		Subtotal	2.708	12.218		1.992		-		1.992			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HMMWV Program Management and travel	C/FFP	TBD:VA	-	1.000	Feb 2012	-		-		-	0.000	1.000	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	1.000		-		-		-	0.000	1.000	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.025	14.928		12.438		-		12.438			

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2509				
P-19 Replacement Engineering Manfacturing & Dev	2	2012	4	2014
Milestone B	1	2012	1	2012
Contract Award	1	2012	1	2012
PDR	3	2012	3	2012
Official Design Review/DRR	4	2013	4	2013
System Verification Review	4	2014	4	2014
Production Readiness Review	4	2014	4	2014
HMMWV Modification				
Award Task Order	1	2012	1	2012
Design Development	2	2012	3	2012
Cost Benefit Analysis	2	2012	3	2012
Task Order Award	4	2012	4	2012
Build and Integrate	4	2012	2	2013
Automotive Performance Testing	3	2013	4	2013
Endurance Testing	3	2013	2	2014
Tech Data Package (TDP)	4	2012	3	2014
Proof of Principle	2	2014	3	2014
Final Testing	3	2014	4	2014
Production, Installation	4	2014	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
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COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2510: *MAGTF CSSE & SE*	-	-	13.974	-	13.974	9.066	7.455	6.550	6.156	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Enhanced Environmental Control Unit (E2CU) program is the second generation of a family of environmental control units from 9000 BTU to 60,000 BTU/Hr cooling output. The E2CU program will provide tactical Heating, Ventilation and Air Conditioning (HVAC) & superior reliability for all MAGTF units in all operational concepts. E2CU will replace all legacy ECUs starting in 2015 in the following sizes: 9000 BTU/Hr; 18,000 BTU/Hr; 36,000 BTU/Hr; and 60,000 BTU/Hr. These higher reliability and higher efficiency sets will use EPA-approves refrigerants, will be more energy efficient, be more mobile, easier to repair & quieter than their predecessors. A significant average fuel efficiency improvement over the current ECU family has been demonstrated. With environmental control systems consuming 50-70% of tactical electric power in theater, this savings will be a significant contribution to reducing the USMC fuel demand, and lightening the MAGTF. The Warfighter benefit includes a decreased logistics footprint, less reliance on petroleum-derived fuels, increased local energy security & reduced tanker losses (fewer on the road). The operational imperative to reduce fuel usage will consequently reduce refueling operations & exposing Marines to hazardous fuel convoy operations.

The Family of Mobile Electric Power Equipment consists of skid & trailer mounted tactical generators ranging from 1 to 200 kilowatts, Mobile Electric Power Distribution Systems, Floodlight Sets, Load Banks & Electrician's Tool Kits. This equipment is procured & fielded to provide electricity on the battlefield. Combat, combat support & combat service support units all require tactical power to operate weapons systems, Command, Control, Communications, Computers and Intelligence (C4I) systems, medical & messing facilities, environmental control equipment, & water purification systems. With over 10,000 generators and floodlight sets using diesel enngines in the Operating Forces, improving their fuel efficiency and reliability will be a significant contribution to reducing the USMC fuel demand, and lightening the MAGTF. The Warfighter benefit includes a decreased logistics footprint, less reliance on petroleum-derived fuels, increased local energy security & reduced tanker losses (fewer on the road). The operational imperative to reduce fuel usage will consequently reduce refueling operations & exposing Marines to hazardous fuel convoy operations. Four discrete efforts will be pursued as follows: (1) Hybrid Generator: Funding to integrate new AMMPS 10kW Generator and energy storage devices onto a Light Tactical Trailer. Will provide capability to deliver 10kW steady state, supply up to 13kW peak demand for several hours using stored energy, provide 3kW silent operations for several hours (battery only). Will transition into production of a unit that can be integrated with the AMMPS generator. (2) Next generation power distribution. Intelligent power management devices that can integrate with existing MEPDIS-R Power Distribution Boxes and AMMPS generators. Provides capability for safe, efficient centralized power distibution from a single source to multiple loads, Automatic phase balancing of loads, power monitoring and data collection/ dissemination for remote system monitoring. (3) Next-generation FLS: Funding to integrate new 10kW AMMPS Generator and a new light tower onto a Light Tactical Trailer. Provides tactical lighting and exportable 3-phase electrical power. Will transition into production of a unit that can be integrated with the AMMPS generator. (4) Integration and product qualification testing of new 1kW diesel generator for USMC-unique applications. Generator procurement will be by customers on a DoD contract.

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Renewably Energy is the next generation Solar Portable Alternative Communications Energy System (SPACES) and the Ground Renewable Expeditionary Energy System (GREENS)will be focus on the improvement in the area of smaller, lighter and more efficient system. These R&D efforts will focus on achieving the Marine Corps goal of lighting the MAGTF and the individual Marine combat load though reduced battery weight and logistical fuel resupply needs.

BMASS is the next generation Battery Management and Sustainment System (BMASS), will be focused on the development of making the next generation of the Suitcase Portable Charger smaller, lighter, more efficient and high power. In addition, development of a capability which will allows the Marine Corps to transport and maintain lithium batteries throughout the fleet in a safe and expeditionary manor.

The Squad Electric Power Program will focus on further weight reduction of the Squad Electric Power System and increasing survivability and durability of the system.

The On Board Vehicle Power is to focus on flexibility and efficiency of research and development to save fuel at idle conditions and imporve energy efficiency.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Enhanced Environmental Control Unit	-	-	2.998	-	2.998
Articles:			12		12
FY 2013 Base Plans: Develop new 36,000 BTU/Hr and 60,000 BTU/Hr enviornmental control units (ECUs).					
Title: Mobile Power Equipment	-	-	4.985	-	4.985
Articles:			6		6
FY 2013 Base Plans: Hybrid generator Development: Award three one-year RDTE contracts to develop hybrid generator on a Light Tactical Trailer. Each contractor to produce 2 for total of 6 test articles. Plan for Government testing in FY14. Articles: Next generation Power Distribution System: Award three one-year RDTE contracts to develop next generation power distribution system Each contractor to produce 2 for total of 6 test articles. Plan for Government testing in FY14. Articles: Next generation Floodlight Set (FLS): Plan for FY14 contract award.					
Title: Advanced Power Sources	-	-	5.991	-	5.991
Articles:			34		34
Description: Solar Portable Alternative Communications Energy System(SPACES)					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Ground Renewable Expeditionary Energy Systems (GREENS) Suitcase Portable Charger Squad Electric Power On-Board Vehicle Power (OBVP) ***FY 2013 Base Plans:*** Development of new SPACES: Award three one-year RDT&E contract to develop more efficient SPACES. Each contractor to produce 2 of each size for total of 6 test articles. Plan for government testing in late FY13. Development of new GREENS: Award two one-year RDT&E contract to develop more efficient GREENS. Each contractor to produce 2 of each size for total of 6 test articles. Plan for government testing in FY14. Development of new Suitcase Portable Charger - Award two one-year RDT&E contract to develop more efficient Charger. Each contractor to produce 3 of each size for total of 6 test articles. Plan for government testing in late FY13. Naval Surface Warfare Center Carderock Division, Carderock, MD will procure batteries and conduct study. Development of Squad Electric Power - Award three one-year RDT&E contract to develop Squad Electric Power. Each contractor to produce 2 of each size for total of 6 test articles. Plan for government testing in late FY13. On Board Vehicle Power, fuel efficiency study - Award two one-year RDT&E contract to develop more fuel efficient OBVP kits . Each contractor to produce 2 each for total of 4 test articles. Plan for government testing in late FY13.					
Accomplishments/Planned Programs Subtotals	-	-	13.974	-	13.974

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/6054-1: *Environmental Control Equipment*	32.505	21.374	11.252	2.316	13.568	21.457	22.241	23.033	23.834	0.000	210.648
• PMC/6366-2: *Mobile Power Equipment*	45.899	68.633	31.440	11.330	42.770	35.750	40.250	38.000	38.750	0.000	310.052

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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/6366-3: *Advanced Power Sources*	15.443	10.509	24.773	8.917	33.690	26.677	50.436	32.010	32.680	0.000	201.445

D. Acquisition Strategy

Initial focus on development of more efficient 30,000 BTU/Hr and 60,000 BTU/Hr size model Environmental Control Units (ECUs), since they make up the greatest percentage of the inventory and are used extensively for shelter heating and cooling. Full and open competition. Three contractors to develop and deliver prototypes in two size models. Government testing to validate performance. Single contractor to produce both models using multi-year ID/IQ production contract. Low Rate Initial Production (LRIP), followed by LRIP testing, then Full Rate Production (FRP) to procure using PMC funds on annual Delivery Orders . ECUs are organically supported by Marines.

Initial focus on development of Hybrid Generator Systems using AMMPS generators beginning in FY13, and Power Distribution, followed by New Floodlight Set development in FY14. For each effort, strategies are very similar: Full and open competition. Three contractors to develop and deliver prototypes in two size models. Government testing to validate performance. Single contractor to produce both models using multi-year ID/IQ production contract. LRIP, followed by LRIP testing, then Full Rate Production to procure using PMC funds on annual Delivery Orders . All equipment is organically supported by Marines. The 1KW Generator effort will be to integrate and test these generators in USMC unique applications. Generators will be procured by others on a DoD contract.

The acquisition strategy for the Renewable Energy Program is to focus on improvements for the next generation Solar Portable Alternative Communications Energy System (SPACES) and the Ground Renewable Expeditionary Energy System (GREENS). These R&D efforts will focus on achieving the Marine Corps goal of lighting the MAGTAF and the individual Marine combat load though reduced battery weight and logistical fuel resupply needs. In particular the development will focus on making these systems smaller, lighter and more efficient. In addition this development effort will also focus on development needed to transition the Office of Naval Research (ONR), Reliable S (SAP - Service Accessable Point) Update Protocal (RSUP), Future Naval Capability (FNC) effort.

The acquisition strategy for the Battery Management and Sustainment System (BMASS) is to focus on the development of the next generation portable Marine Corps charger and a Portable Lithium Battery Maintainer . These R&D efforts will focus on developing a capability which allow the Marine Corps the ability to support battery needs in all locations and environments of operation (Land, sea and air). In particular the development will focus on making the next generation of the Suitcase Portable Charger smaller, lighter, more efficient and high power. It will also focus on development of a capability which allows the Marine Corps to transport and maintain lithium batteries throughout the fleet in a safe and expeditionary manor.

The acquisition strategy for the Squad Electric Power Program is to is to focus on the transition of the ONR Squad Electric Power FNC effort. this R&D effort will focus on achieving the Marine Corps goal of lighting the individual Marines combat load though reduced battery weight and increase interoperability of Marine Corps gear. In particular the effort will focus on further weight reduction of the Squad Electric Power System and increasing survivability and

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durability of the system.

The acquisition Strategy for the On Board Vehicle Power Program is to focus on the continued adaptation and development of technologies transitioned from the Office of Naval Research Future Naval Capability. Primary focus will be on adaptation for different vehicle platform models (M1151, M1165) as well as updates to system configuration due to Armor requirement changes. Further, changes in deployment methodology with command guidance to focus on flexibility and efficiency will drive research and development to save fuel at idle conditions and improve energy export efficiency.

E. Performance Metrics

EECU: Energy efficiency; size; weight; EPA-approved refrigerant; affordability; organically supportable.
MOBILE POWER: Energy efficiency; size; weight; affordability; organically supportable.
SPACES - 50% size reduction of controller, 50% reduction in panel surface area, 50% increase in panel efficiency
GREENS - 20% reduction in weight, 50% increase in power capability, 20% reduction in volume
BMASS: N/A
SQUAD ELECTRIC POWER PROGRAM: N/A
OBVP- N/A

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ECU DEVELOPMENT	TBD	TBD:TBD	-	-		2.996	Nov 2012	-		2.996	0.000	2.996	
HYBRID DISTRIB DEVELOPMENT	TBD	TBD:TBD	-	-		2.300	Nov 2012	-		2.300	0.000	2.300	
POWER DISTRIB DEVELOPMENT	TBD	TBD:TBD	-	-		2.700	Nov 2012	-		2.700	0.000	2.700	
SPACES	C/IDIQ	CTQ:TBD	-	-		0.700	May 2013	-		0.700	0.000	0.700	
GREENS	C/IDIQ	CTQ:TBD	-	-		1.200	Apr 2013	-		1.200	0.000	1.200	
PORTABLE BATTERY CHARGER	C/IDIQ	TBD:TBD	-	-		0.493	Apr 2013	-		0.493	0.000	0.493	
PORTABL BATTERY CHARGER	C/IDIQ	TBD:TBD	-	-		0.300	May 2013	-		0.300	0.000	0.300	
SQUAD ELECTRIC POWER	C/IDIQ	TBD:TBD	-	-		0.500	Apr 2013	-		0.500	0.000	0.500	
MTVR DEVELOPMENT	C/IDIQ	TBD:TBD	-	-		0.500	Apr 2013	-		0.500	0.000	0.500	
HMMWV	C/IDIQ	TBD:TBD	-	-		0.300	May 2013	-		0.300	0.000	0.300	
		Subtotal	-	-		11.989		-		11.989	0.000	11.989	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SPACES	MIPR	NSWC:CADEROCK, MD	-	-		0.497	Dec 2012	-		0.497	0.000	0.497	
GREENS	MIPR	NSWC:CADEROCK, MD	-	-		0.300	Dec 2012	-		0.300	0.000	0.300	
SQUAD ELECTRIC POWER	MIPR	NSWC:CADEROCK, MD	-	-		0.195	Dec 2012	-		0.195	0.000	0.195	
MTVR TESTING	MIPR	ABERDEEN TEST CENTER:ABERDEEN, MD	-	-		0.250	Dec 2012	-		0.250	0.000	0.250	

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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HMMWV TESTING	MIPR	ABERDEEN TEST CENTER:ABERDEEN, MD	-	-		0.150	Dec 2012	-		0.150	0.000	0.150	
		Subtotal	-	-		1.392		-		1.392	0.000	1.392	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM support for development and test mgmt	C/FFP	TBD:Quantico, VA	-	-		0.593	Oct 2012	-		0.593	0.000	0.593	
		Subtotal	-	-		0.593		-		0.593	0.000	0.593	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		13.974		-		13.974	0.000	13.974	

Remarks

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Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
HYBRID GENERATOR				
Milestone B	1	2013	1	2013
Contract Award: Schedule Detail	2	2013	2	2013
Engr/Mfg Development: Schedule Detail	3	2013	4	2013
Milestone C LRIP: Schedule Detail	4	2014	4	2014
Eng/Mfg Develop (Milestone C): Schedule Detail	1	2014	2	2014
Govt Testing: Schedule Detail	2	2014	3	2014
Milestone C FRP: Schedule Detail	4	2015	4	2015
Milestone C Production: Schedule Detail	2	2015	2	2015
1st Production D.O.: Schedule Detail	1	2016	1	2016
FRP: Schedule Detail	1	2016	1	2016
2nd Prod D.O.: Schedule Detail	1	2017	1	2017
Production: Schedule Detail	1	2017	4	2017
LRIP PVT MS C: Schedule Detail	2	2015	3	2015
LRIP: Schedule Detail	2	2015	2	2015
FIELDING: Schedule Detail	1	2017	4	2017
OPERATIONS SUPPORT: Schedule Detail	1	2017	4	2017
POWER DISTRIBUTION				
MS B: Schedule Detail	1	2013	1	2013
CONTRACT AWARD: Schedule Detail	2	2013	2	2013
EMD: Schedule Detail	2	2013	2	2013
MS C LRIP: Schedule Detail	4	2014	4	2014

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APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MS C EMD: Schedule Detail	1	2014	1	2014
GVT TESTING: Schedule Detail	2	2014	3	2014
MS C FRP: Schedule Detail	4	2015	4	2015
MS PRODUCTION: Schedule Detail	2	2015	2	2015
LRIP PVT: Schedule Detail	2	2015	3	2015
LRIP: Schedule Detail	2	2015	3	2015
1ST PROD D.O.: Schedule Detail	1	2016	1	2016
FRP: Schedule Detail	1	2016	1	2016
2ND PROD D.O.: Schedule Detail	1	2017	1	2017
PRODUCTION: Schedule Detail	1	2017	4	2017
FIELDING: Schedule Detail	1	2017	4	2017
O/S: Schedule Detail	1	2017	4	2017
FLOODLIGHT SET				
MS B: Schedule Detail	1	2014	1	2014
CONTRACT AWARD: Schedule Detail	2	2014	2	2014
EMD: Schedule Detail	3	2014	3	2014
MS C LRIP: Schedule Detail	4	2015	4	2015
MS C EMD: Schedule Detail	1	2015	2	2015
GVT TESTING: Schedule Detail	2	2015	3	2015
MS C FRP: Schedule Detail	4	2016	4	2016
PRODUCTION: Schedule Detail	2	2016	2	2016
LRIP PVT: Schedule Detail	2	2016	3	2016
LRIP: Schedule Detail	2	2016	3	2016
1ST PROD D.O.: Schedule Detail	1	2017	1	2017
FRP: Schedule Detail	1	2017	1	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
1KW INTEGRATION				
INTEGRATION	2	2015	2	2015
GVT TESTING: Schedule Detail	2	2016	3	2016
O/S: Schedule Detail	1	2017	4	2017
ENVIRONMENTAL CONTROL UNIT				
MS B	1	2013	1	2013
C/AWARD: Schedule Detail	2	2013	2	2013
EMD: Schedule Detail	3	2013	4	2013
MS C LRIP: Schedule Detail	4	2014	4	2014
M/S C EMD: Schedule Detail	1	2014	2	2014
DT: Schedule Detail	2	2014	3	2014
MS C FRP: Schedule Detail	4	2015	4	2015
MS C PRODUCTION: Schedule Detail	2	2015	2	2015
LRIP TEST: Schedule Detail	2	2015	3	2015
LRIP: Schedule Detail	2	2015	3	2015
1ST PROD D.O.: Schedule Detail	1	2016	1	2016
FRP: Schedule Detail	2	2016	4	2016
2ND PROD D.O.: Schedule Detail	1	2017	1	2017
PRODUCTION: Schedule Detail	1	2017	4	2017
FIELDING: Schedule Detail	1	2017	4	2017
O/S: Schedule Detail	1	2017	4	2017
BMASS				
C/AWARD: Schedule Detail	2	2013	2	2013
BMASS TECHNICAL REVIEWS: Schedule Detail	3	2013	4	2013
BMASS TECH DEVELOP: Schedule Detail	3	2013	4	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
EMD: Schedule Detail	3	2013	4	2013
TESTING: Schedule Detail	3	2013	4	2013
TECH REVIEWS: Schedule Detail	2	2014	2	2014
LOGISTIC REVIEWS: Schedule Detail	1	2014	1	2014
TECH DEVELOP: Schedule Detail	1	2014	2	2014
BMASS EMD (1): Schedule Detail	1	2014	2	2014
BMASS EMD(2): Schedule Detail	1	2014	4	2014
BMASS TESTING: Schedule Detail	2	2014	4	2014
BM PROD: Schedule Detail	3	2014	4	2014
BMASS TECH REVIEWS: Schedule Detail	2	2015	2	2015
B M TESTING: Schedule Detail	2	2015	3	2015
PRODUCTION: Schedule Detail	1	2015	4	2015
BMASS PROD: Schedule Detail	1	2016	4	2016
B PROD: Schedule Detail	1	2017	4	2017
SQUAD ELECTRIC POWER				
C/AWARD: Schedule Detail	3	2013	3	2013
TECH REVIEWS: Schedule Detail	3	2013	3	2013
SUAD TECH DEVELOP: Schedule Detail	2	2013	4	2013
SQUAD TESTING: Schedule Detail	1	2013	3	2014
SQUAD TECH REVIEWS: Schedule Detail	4	2014	4	2014
LOG REVIEWS: Schedule Detail	2	2014	2	2014
TECH DEVELOP: Schedule Detail	1	2014	2	2014
EMD: Schedule Detail	2	2014	4	2014
TESTING: Schedule Detail	3	2014	3	2014
TECH REV: Schedule Detail	4	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
LOG REV: Schedule Detail	3	2015	3	2015
SQUAD EMD: Schedule Detail	1	2015	3	2015
SQ TESTING: Schedule Detail	3	2015	4	2015
SQ PRODUCTION: Schedule Detail	4	2015	4	2017
ON-BOARD VEHICLE POWER				
C/AWARD: Schedule Detail	2	2013	2	2013
TECH REVIEWS: Schedule Detail	3	2013	3	2013
LOG REVIEWS: Schedule Detail	4	2013	4	2013
TECH DEVELOPMENT: Schedule Detail	3	2013	3	2016
EMD: Schedule Detail	1	2014	3	2015
OBVP EMD: Schedule Detail	2	2016	4	2016
TESTING: Schedule Detail	3	2014	3	2015
OBVP TESTING: Schedule Detail	1	2016	3	2017
PRODUCTION: Schedule Detail	2	2015	4	2017
RENEWABLE ENERGY				
C/AWARDS (S): Schedule Detail	3	2013	3	2013
C/AWARD (G): Schedule Detail	3	2013	3	2013
TECH REVIEWS (S): Schedule Detail	3	2013	3	2013
TECH REVIEWS (G): Schedule Detail	3	2013	3	2013
TECH DEVELOP (S): Schedule Detail	3	2013	1	2014
TECH DEVELOP (G): Schedule Detail	3	2013	1	2014
EMD (S): Schedule Detail	4	2013	1	2015
TESTING (S): Schedule Detail	3	2013	1	2014
TEST (S): Schedule Detail	3	2014	1	2015
TECH REV (S): Schedule Detail	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
LOG REV (S): Schedule Detail	2	2014	2	2014
LOG REV (G): Schedule Detail	3	2014	3	2014
TESTING (G): Schedule Detail	3	2013	4	2013
TEST (G): Schedule Detail	3	2014	1	2015
C/A ONR SYS: Schedule Detail	3	2015	3	2015
TECH REV (G): Schedule Detail	2	2015	2	2015
TECH REV (ONR SYS): Schedule Detail	4	2015	4	2015
LOG REV (ONR SYS): Schedule Detail	4	2015	4	2015
TECH DEVEL (ONR SYS): Schedule Detail	3	2015	1	2016
EMD (ONR SYS): Schedule Detail	3	2015	2	2016
TEST (ONR): Schedule Detail	2	2015	3	2015
TEST (ONR SYS): Schedule Detail	3	2015	2	2016
PRODUCTION (S): Schedule Detail	2	2015	4	2017
PRODUCTION (G): Schedule Detail	1	2015	4	2017
PRODUCTION (ONR SYS): Schedule Detail	2	2016	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2929: *Testing Measuring Diag Equip & SE*	1.375	1.479	2.043	-	2.043	2.076	2.099	2.119	2.145	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Marine Corps Family of Automatic Test Systems (ATS) formerly called Third Echelon Test Sets (TETS), provides automatic test program capability for use by technicians both in garrison and the forward edge of the battlefield; specifically in the areas of interactive electronic technical manuals, condition/predictive based maintenance, and embedded sensors and prognostics.

The Marine Corps Automatic Test Equipment (MCATE) program provides development of sustainment technology for automatic test equipment used in organizational/ intermediate maintenance facilities.

The Autonomic Logistics (AL) provides platform-based situational awareness to Marine Corps ground weapon systems. Embedded Platform Logistics System (EPLS) interfaces to a weapon system data bus to collect and process sensor data into actionable information. EPLS provides systems health, fuel and ammo levels, mobile and troop load information to the combatant commander and his supporting staff.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Marine Corps Automated Test Equipment	1.153	1.228	2.043	-	2.043
Articles:	0	0	0		0
Description: Overall thrust of this program is to develop advanced technology concepts for automatic test and integrate these subsystems and components into system prototypes for field experiments and/or tests in a simulated environment. The focus is on demonstrating the military utility of technologies and applying them to our ATS acquisition programs. A primary secondary thrust is to prevent obsolescence in our current automatic test systems by identifying new technologies that can be implemented immediately.					
FY 2011 Accomplishments: Researched specifications for a new general purpose automatic test system. Developed prototype laser tester and common Elector Optic tester to provide a smaller capability that can be used forward of established bases. Identified replacement technologies for obsolete parts in legacy automatic test systems such as an instrument controller and oscilloscope.					
FY 2012 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Activities will continue research of new testing techniques to prevent obsolescence of legacy automatic test systems (ATS). Identify replacements for signal generators and RF down-converters to prevent ATS obsolescence. Identify testing techniques for new infrared sighting assemblies. ***FY 2013 Base Plans:*** Activities will continue research of new testing techniques to prevent obsolescence of legacy systems. Develop integration techniques to address new testing solutions into fielded automatic test systems.					
Title: Autonomic Logistics	0.222	0.251	-	-	-
Articles:	0	0			
FY 2011 Accomplishments: Activities focused on investigating the integration of the Embedded Platform Logistics System (EPLS) applications with external USMC logistics applications. ***FY 2012 Plans:*** Activities will focus on continuous integration of the Embedded Platform Logistics System (EPLS) applications with external USMC logistics applications.					
Accomplishments/Planned Programs Subtotals	1.375	1.479	2.043	-	2.043

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/41811: *Calibration*	10.004	2.176	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	48.668
• PMC/41812: *TETS*	0.000	0.000	7.078	0.000	7.078	7.199	7.324	7.456	7.583	0.000	155.812
• PMC/41813: *Autonomic Logistics*	1.019	1.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	120.364

D. Acquisition Strategy

Automatic Test Systems (ATS) and Marine Corps Automatic Test Equipment (MCATE) program's work is being done through Marine Corps Systems Command (MCSC) contracts and in-house at Marine Corps Logistics Base (MCLB), Albany, GA, and Naval Air Systems Command (NAVAIR), Pax River, MD.

Autonomic Logistics (AL) Embedded Platform Logistics System's (EPLS) work is being done through Naval Sea Systems Command (NAVSEA), Washington, District of Columbia.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Study & Hardware (MCATE) 6	C/FFP	NAVAIR:Pax River, MD	-	-		0.245	Dec 2012	-		0.245	0.000	0.245	
Study & Hardware (MCATE) 2	C/FFP	MCSC:Quantico, VA	0.425	-		-		-		-	0.000	0.425	
Study & Hardware (MCATE) 4	C/FFP	MCSC:Quantico, VA	-	0.505	Mar 2012	0.650	Jan 2013	-		0.650	0.000	1.155	
Study & Hardware (MCATE) 5	C/FFP	MCSC:Quantico, VA	-	0.409	Jan 2012	0.400	Dec 2012	-		0.400	0.000	0.809	
		Subtotal	0.425	0.914		1.295		-		1.295	0.000	2.634	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support (AL)	C/CPFF	NAVSEA:Washington,District of Columbia	-	0.251	Nov 2011	-		-		-	0.000	0.251	
Engineering Support (MCATE)	WR	MCLB:Albany, GA	2.890	0.314	Nov 2011	0.748	Nov 2012	-		0.748	0.000	3.952	
		Subtotal	2.890	0.565		0.748		-		0.748	0.000	4.203	

Remarks

Autonomic Logistics (AL) FY12 funds will focus on the integration of the Embedded Platform Logistics System applications with external USMC logistics. Autonomic Logistics (AL) applications include Embedded Platform Logistics System (EPLS), the EPLS MIMOSA data Repository (EMDR), and the Electronic Maintenance Support System (EMSS).

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.315	1.479		2.043		-		2.043	0.000	6.837	

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9C90: *MTVR Mod*	0.763	1.355	2.496	-	2.496	3.420	4.297	3.923	9.771	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The MTVR Modification program line funds numerous and very important modifications and initiatives that are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, tool malfunctions, product quality deficiencies, beneficial suggestions and other issues that affect vehicle reliability, availability, maintainability and readiness. A proactive and focused approach ensures proper vehicle sustainment and life-cycle management and it allows the program office the flexibility to develop and implement improvements as needed to respond to the evolving needs of the Marine Corps.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Medium Tactical Vehicle Replacement (MTVR): Fuel Economy/Energy Efficiency	-	0.300	0.500	-	0.500
Articles:		0	0		0
FY 2012 Plans: Funding will support PMO participation in the Office of Naval Research (ONR) Future Naval Capability (FNC) initiative for fuel economy improvements for the MTVR vehicles, which supports the CMC priorities for reducing costs, logistics footprint and improved environment.					
FY 2013 Base Plans: Funding will support PMO participation in the Office of Naval Research (ONR) Future Naval Capability (FNC) initiative for fuel economy improvements for the MTVR vehicles, which supports the CMC priorities for reducing costs, logistics footprint and improved environment.					
Title: Medium Tactical Vehicle Replacement (MTVR): Engineering Change Proposal (ECP)	0.170	0.300	0.500	-	0.500
Articles:	0	0	0		0
FY 2011 Accomplishments: Funding supported Transportability test and ECP development for the MTVR program. Transportability testing helps to evaluate the current maximum safe MTVR lifting weight, evaluate, engineer and price vehicle upgrades to lift MTVRs at highway Gross Vehicle Weight Rating (GVWR). Important data from this testing prevented issues which could have negatively impacted deployments and the ability of other services or agencies to transport the MTVR.					
FY 2012 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Funding will support Engineering Change Proposal (ECP) development and testing for the MTVR program. Continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested. ***FY 2013 Base Plans:*** Funding will support Engineering Change Proposal (ECP) development and testing for the MTVR program. Continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested.					
Title: Medium Tactical Vehicle Replacement (MTVR): Safety	0.358	0.205	0.499	-	0.499
Articles:	0	0	0		0
FY 2011 Accomplishments: Funding supported the development and testing of several very important safety upgrades which improved the overall safety of the MTVR vehicle and its occupants. Safety upgrades identified were: Blast Mitigation seats Floor Pads Rear Camera Vehicle Egress Modifications These upgrades addressed safety and force protection concerns identified in OIF and OEF that improved operator visibility and provided occupants another means for quick egress and protection from IED's and other incendiary threats. ***FY 2012 Plans:*** Funding will support Engineering Change Proposal (ECP) development , testing and modifications required to meet the diverse environments of current and future operations of MAGTF Expeditionary Maneuver Warfare for the MTVR program. Incorporating new safety upgrades to protect the warfighter and MTVR from possible catastrophic events as a result of continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested. ***FY 2013 Base Plans:*** Funding will support Engineering Change Proposal (ECP) development , testing and modifications required to meet the diverse environments of current and future operations of MAGTF Expeditionary Maneuver Warfare for the MTVR program. In response to protect the warfighter and MTVR from possible catastrophic events as a					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
result of continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested.					
Title: Medium Tactical Vehicle Replacement (MTVR): Integration ***Articles:*** ***FY 2012 Plans:*** Funding will support development and testing of components related to the integration of brackets and cables to accommodate add-on components and equipment (such as Blue Force Tracker (BFT), radio jammers, Intercoms, Drivers Vision Enhancer (DVE), etc) for both CONUS and OCONUS vehicles. Continual changes in threat environment requires on-going vehicle modifications which need to be incorporated into the MTVR fleet of vehicles to address new and changing threats. ***FY 2013 Base Plans:*** Funding will support development and testing of components related to the integration of brackets and cables to accommodate add-on components and equipment (such as Blue Force Tracker (BFT), radio jammers, Intercoms, Drivers Vision Enhancer (DVE), etc) for both CONUS and OCONUS vehicles. Continual changes in threat environment requires on-going vehicle modifications which need to be incorporated into the MTVR fleet of vehicles to address new and changing threats.	-	0.200 0	0.500 0	-	0.500 0
Title: Medium Tactical Vehicle Replacement (MTVR): Modeling & Simulation (M&S) ***Articles:*** ***FY 2011 Accomplishments:*** Funding supported the development of an Analytic Dynamics and Structures (ADAMS) software model which addressed modeling and simulation needs for the MTVR vehicle platforms. This effort provided valuable insight into the dynamic performance characteristics of the various configurations of MTVR vehicles which increased operational effectiveness and improved efficiencies. ***FY 2012 Plans:*** Funding will provide continued support to address operational effectiveness and improved efficiencies of the MTVR vehicles with the use of the ADAMS software model. ***FY 2013 Base Plans:*** Funding will provide continued support to address operational effectiveness and improved efficiencies of the MTVR vehicles with the use of the ADAMS software model.	0.235 0	0.350 0	0.497 0	-	0.497 0
Accomplishments/Planned Programs Subtotals	0.763	1.355	2.496	-	2.496

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/505000: *MTVR Modifications*	5.226	41.789	44.334	0.000	44.334	2.102	7.498	9.503	10.033	Continuing	Continuing
• PMC/508800: *MTVR*	95.757	98.224	10.466	0.000	10.466	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The strategy for the MTVR Modification initiative is to be proactive in our approach. This will aid in the prevention of parts obsolescence, potential safety concerns, and support the needs of the Marine Corps. A proactive and focused approach ensures proper vehicle sustainment and life-cyle management and it allows the program office the flexibility to develop and implement improvements as required to respond to evolving needs. The anticipated life of the MTVR was partially based on the vehicle being at curb weight a large percentage of its life time. Due to the addition of the MTVR Armor System, various other components and the current high optempo, it is anticipated that the MTVR life expectancy will be lessened. It is important to ensure MTVR sustainment in any and all circumstances and this Modification line supports this effort.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prototype Development & Testing	SS/T&M	Oshkosh:Warren, MI	18.500	-		-		-		-	0.000	18.500	
		Subtotal	18.500	-		-		-		-	0.000	18.500	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ECP Development	SS/T&M	Oshkosh:Warren, MI	3.945	0.200	Mar 2012	0.250	Mar 2013	-		0.250	0.713	5.108	
Integration	SS/T&M	Oshkosh:Warren, MI	1.750	0.200	Apr 2012	0.300	Apr 2013	-		0.300	0.000	2.250	
Safety Initiatives	SS/T&M	Oshkosh:Warren, MI	3.325	0.160	Jul 2012	0.249	Jul 2013	-		0.249	0.700	4.434	
Energy Efficiency	Various	TBD:TBD	-	0.300	May 2012	0.500	May 2013	-		0.500	19.800	20.600	
		Subtotal	9.020	0.860		1.299		-		1.299	21.213	32.392	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Modeling and Simulation (SIL)	MIPR	TARDEC:Warren, MI	0.235	0.350	Apr 2012	0.497	Apr 2013	-		0.497	0.300	1.382	
Component Upgrade, Prototype Testing	MIPR	APG:Aberdeen, MD	1.250	0.100	Jul 2012	0.300	Jul 2013	-		0.300	0.000	1.650	
Operational Testing	WR	MCOTEA:Quantico, VA	2.750	-		-		-		-	0.000	2.750	
Live Fire Testing	MIPR	ARL:Aberdeen, MD	2.520	-		-		-		-	0.000	2.520	
Modeling and Simulation	C/BA	Not Specified:Not Specified	1.495	-		-		-		-	0.000	1.495	
Component Upgrade, Prototype Testing	MIPR	NATC:NV	1.952	0.045	Jul 2012	0.400	Jul 2013	-		0.400	0.000	2.397	
		Subtotal	10.202	0.495		1.197		-		1.197	0.300	12.194	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.722	1.355		2.496		-		2.496	21.513	63.086	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*