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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	81.081	96.478	79.855	-	79.855	74.510	63.703	57.065	69.574	Continuing	Continuing
033: ADV CREW SVC WPN	-	1.472	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S58: Soldier Enhancement Program	-	3.170	3.278	4.125	-	4.125	4.058	4.239	4.310	4.310	Continuing	Continuing
S60: Clothing & Equipment	-	6.119	5.537	5.450	-	5.450	4.563	3.683	6.065	10.965	Continuing	Continuing
S61: Acis Engineering Development	-	10.705	17.175	14.057	-	14.057	20.073	11.334	9.883	15.948	Continuing	Continuing
S62: Counter-Defilade Target Engagement - SDD	-	34.859	34.412	1.983	-	1.983	2.060	2.130	2.200	2.470	Continuing	Continuing
S63: Small Arms Improvement	-	17.759	19.617	18.201	-	18.201	14.479	14.494	14.608	14.691	Continuing	Continuing
S64: Common Remotely Operated Wpn Sys (CROWS)	-	0.173	0.000	14.864	-	14.864	15.000	15.000	10.000	12.191	Continuing	Continuing
S70: Personnel Recovery Support System (PRSS)	-	2.965	4.517	1.132	-	1.132	1.104	1.141	1.193	1.193	Continuing	Continuing
VS5: Soldier Protective Equipment	-	3.859	11.942	20.043	-	20.043	13.173	11.682	8.806	7.806	Continuing	Continuing
[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012 ^{##} The FY 2014 OCO Request will be submitted at a later date												
Note Change Summary Explanation: Fiscal Year 2012: Program decrease of \$2.314 million across all projects to higher priority Army efforts. Fiscal Year 2014: Program increases of \$14.864 million to Project S64 for the Common Remotely Operated Weapon System, \$6.880 million to Project VS5 for Soldier Protective Equipment engineering development efforts and \$3.551 million to Project S60 for Clothing and Equipment development efforts. Program decreases of \$4.760 million to Project S61 for ACIS Engineering development efforts and \$0.088 million to Project S63 for Small Arms improvement efforts.												

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A. Mission Description and Budget Item Justification FY 2014 budget request funds Infantry Support Weapons. This program element (PE) Engineering and Manufacturing Development (EMD) manages the Soldier as a system, with the goal of increasing Soldiers' combat effectiveness, increasing survivability, and improving the Soldiers' quality of life. It develops and tests prototypes of weapons, clothing, equipment, and other items useful to support the Soldier. Project 033 (Advanced Crew Served Weapon) develops the Lightweight .50 Caliber Machine Gun which enables the Soldier to effectively suppress and incapacitate exposed personnel targets out to 2,000 meters as well as providing a capability to defeat light armored vehicles out to 1,500 meters. The new .50 Caliber weapon will reduce weight and recoil, and eliminate manual adjustment of headspace and timing. Project S58 (Soldier Enhancement Program) supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons, and improved Soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids. Project S59 (Soldier Support Equipment) supports system development and prototyping of critical Soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness. Project S60 (Clothing and Equipment) supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility and sustainment affecting the quality of life of the individual Soldier. Project S61 (Aircrew Integrated Systems) provides System Development programs with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance Helicopter. Project S62 (Counter-Defilade Target Engagement) the XM25, Individual Airburst Weapon System (IAWS) delivers a 25mm programmable high explosive airburst (HEAB) round to defeat defilade and point areas targets out to approximately 600 meters. Accurate and lethal engagement of defilade targets at the squad level is the number one capability gap identified by the United States Army Infantry Center (USAIC). Project S63 (Small Arms Improvements) demonstrates engineering development models or integrated commercial items designed to enhance lethality, target acquisition, fire control, training effectiveness, and reliability for small arms weapon systems and ammunition. FY2011 new programs include Improved Weapons Coatings, Personal Defense Weapon, 30 Round 5.56mm Magazine, Modular Handgun and Precision Sniper Rifle. Project S64 (CROWS) continue enhancing CROWS capability and reliability, and to increase its application across combat and tactical platforms. This capability will enhance the Soldier's survivability, lethality and situational awareness. Project S70 (Personnel Recovery Support System) provides system research, development and testing of the Personal Recovery Support System/Personnel Recovery Support Equipment supporting operations to report and locate isolated, missing, detained or captured Soldiers.		

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Project VS5 (Soldier Protective Equipment) supports engineering and manufacturing development of Individual Soldier Ballistic Protection equipment. It will leverage advancements in technology to continue incremental improvements to body armor (to include improved outer tactical vests, plate carriers, and helmets) and other personal protective equipment.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014 Base</u>	<u>FY 2014 OCO</u>	<u>FY 2014 Total</u>
Previous President's Budget	83.395	96.478	59.408	-	59.408
Current President's Budget	81.081	96.478	79.855	-	79.855
Total Adjustments	-2.314	0.000	20.447	-	20.447
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-2.314	-	20.447	-	20.447

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT 033: <i>ADV CREW SVC WPN</i>			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
033: <i>ADV CREW SVC WPN</i>	-	1.472	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												
[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012 ^{##} The FY 2014 OCO Request will be submitted at a later date												
Note Type Classification-Limited Production and Milestone C were achieved June 2012. The termination plan was approved by the Army Acquisition Executive on September 27, 2012. Termination activities are ongoing.												
A. Mission Description and Budget Item Justification This project developed the Lightweight .50 Caliber Machine Gun which met the U.S. Army/SOCOM requirements for a Lightweight Enhanced .50 Caliber Machine Gun. The lightweight .50 Caliber machine gun system enables the Soldier to effectively suppress and incapacitate exposed personnel targets out to 2,000 meters, as well as providing a capability to defeat lightly armored vehicles out to 1,500 meters. The weapon system increases the warfighter's lethality while significantly reducing tactical load and supportability costs. The new .50 Caliber weapon reduces weight and recoil, and eliminates manual adjustment of headspace and timing.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Title: Integrated Logistics Support (ILS) Articles:										0.200 0	0.000	0.000
Description: Description: Provide ILS for the Lightweight .50 Caliber Machine Gun. FY 2012 Accomplishments: Completed ILS technical documentation, conducted logistics demonstration and provisioning conference for the weapon. ILS technical documentation for both the Blank Ammunition Firing Adapter (BFA) and the cradle stopped due to program termination.												
Title: Weapon System Design Test Articles:										1.272 0	0.000	0.000
Description: Description: Conduct weapon system design test. FY 2012 Accomplishments:												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army								DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>			PROJECT 033: <i>ADV CREW SVC WPN</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2012	FY 2013	FY 2014	
Completed Pre-Production Qualification Test to validate weapon design parameters and reliability. Completed Limited User Test to evaluate operational effectiveness of the XM806 weapon system. BFA design and build completed but testing stopped due to program termination.											
Accomplishments/Planned Programs Subtotals								1.472	0.000	0.000	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• G12800 Lightweight .50 Caliber MG: <i>Lightweight .50 Caliber Machine Gun (W&TCV G12800)</i>		25.183								0.000	25.183
Remarks											
D. Acquisition Strategy											
The Lightweight .50 Caliber Machine Gun was developed to meet the US Army Infantry Center (USAIC) Capability Production Document (CPD) for Enhanced .50 Caliber Machine Gun (M2A1). The development contractor was General Dynamics Armament and Technical Products (GDATP) of Williston, Vermont. Milestone C was approved by the Milestone Decision Authority (MDA) on June 19, 2012. The termination plan was approved by the Army Acquisition Executive on September 27, 2012. Termination activities are ongoing.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>						PROJECT 033: <i>ADV CREW SVC WPN</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	MIPR	PM Soldier Weapons:Picatinny Arsenal, NJ	0.290	0.250	Jul 2012	-		-		-		-	Continuing	Continuing	Continuing
Travel	Various	PM Soldier Weapons:Picatinny Arsenal, NJ	0.063	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.353	0.250		0.000		0.000		0.000		0.000			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware	Various	Gen Dyn and Arm Tech Prod.;Burlington, VT	6.515	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			6.515	0.000		0.000		0.000		0.000		0.000			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development (Weapon and Mount)	MIPR	ARDEC:Picatinny Arsenal, NJ	2.102	1.222	Mar 2012	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			2.102	1.222		0.000		0.000		0.000		0.000			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test/Limited User Test (DT/LUT)	Various	ATC:Aberdeen PG, MD	0.961	-		-		-		-		-	Continuing	Continuing	Continuing

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.961	0.000		0.000		0.000		0.000		0.000			

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	9.931	1.472	0.000	0.000	0.000	0.000			

Remarks

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S58: Soldier Enhancement Program			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S58: Soldier Enhancement Program	-	3.170	3.278	4.125	-	4.125	4.058	4.239	4.310	4.310	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
The Soldier Enhancement Program (SEP) was established in accordance with Congressional language in the National Defense Authorization Act for Fiscal Year 1990 and 1991. The purpose of the SEP is to increase the combat effectiveness of our Soldiers through the test and evaluation of lighter, more lethal infantry weapons and improved equipment. The SEP uses a Buy, Try and Decide methodology to evaluate Commercial Off The Shelf (COTS), Government Off The Shelf (GOTS) and Non-Developmental Items (NDI) that have the potential to enhance Soldier combat effectiveness. The SEP provides accelerated integration, modernization, and capability enhancement efforts of lighter, more lethal weapons and munitions; improved engagement optics; sights, lasers and fire controls; improved lighter more comfortable and versatile Soldier individual equipment; survivability enhancement gear; communications equipment and situational awareness aids. Initiatives are submitted by Soldiers and others via the SEP submission web application and are evaluated twice a year.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Soldier Enhancement Program (SEP). Articles: Description: Evaluate COTS/GOTS/NDI items with potential to enhance Soldier combat effectiveness. FY 2012 Accomplishments: On 18 May the SEP council approved 15 initiatives for evaluation with several others approved after the council meeting. These included Soldier Worn Integrated Power Equipment System (SWIPES), Soldier Power Manager (SPM), Modular Universal Battery Charger (MUBC), JP-8 Generator Set, M320 Grenade Launcher Holster, Squad Common Optic, Ice Cleats, Machine Gun Holographic Sight, Binocular Night Vision Device, general purpose lights, clip on thermal imager, Drop Zone Assembly Navigational Aid, Bunker Defeat Munitions Extended Range Sight, Tactical Communications and Protective System (TCAPS) and others. FY 2013 Plans: On 23 October the SEP council approved 6 initiatives for evaluation. These include Quick Release Mount, Thermal Weapon Sight clip-on adapter, Mortarmen Carrying Backpack, All purpose Adhesive light, Radio Super-capacitor adapter, and Hands Free Heads up display. These items are currently undergoing purchase and evaluation. Product evaluations will include safety testing									2.851	2.819	3.666	
									0	0		

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
and confirmation (if needed), purchase of up to a Brigade Combat Team quantity of hardware, and collection and analysis of user feedback/results. Since the last SEP Council over 50 proposals were submitted for consideration. These included stabilized binoculars, machine gun optic recoil rails, machine gun accessory bags, mandible protector for crew personnel, helmet retention system, aviation life support equipment tester, 40mm extended Range munitions, and others. These proposals were screened using the SEP Criteria (COTS/GOTS/NDI, Soldier Worn/Carried) by the SEP Council to determine which proposals merit further evaluation as new SEP initiatives. Product evaluations included safety testing and confirmation (as needed), purchase of up to a Brigade Combat Team quantity of hardware, and collection and analysis of user feedback/results.					
FY 2014 Plans: Anticipate over 100 proposals to be submitted. Those proposals that meet the SEP criteria will be considered by the SEP council for evaluation as new initiatives. Product evaluations will include safety testing and confirmation (if needed), purchase of up to a Brigade Combat Team quantity of hardware, and collection and analysis of user feedback/results. Anticipate approving and evaluating 21 initiatives.					
Title: Systems Engineering and Program Management.			0.319	0.459	0.459
Articles:			0	0	
Description: Systems Engineering and Program Management.					
FY 2012 Accomplishments: Provided technical evaluation of incoming SEP proposals received via the SEP submission web application. New proposals were screened to ensure that they met the basic SEP criteria of being COTS/GOTS/NDI that are worn or carried by Soldiers, as well as meeting user capability needs. Coordination with proponent schools and acquiring activities was conducted to support the May 2012 SEP Council meeting and post-SEP council product evaluations. Monitored prior year initiative execution such as the Modular Weapons Case, 5.56mm Dim Tracer, Army Emergency Bailout Parachute, AN/PEQ-16B Light Emitting Diode Mini-Integrated Illuminator Module and others to ensure adequate resourcing for completion and closeout.					
FY 2013 Plans: The SEP team monitors incoming proposals submitted via the SEP web application. To date proposals received include stabilized binoculars, machine guns optic recoil rails, machine gun accessory bags, mandible protector for crew personnel, helmet retention system, aviation life support equipment tester, 40mm extended Range munitions, and others. The SEP team coordinates with industry and the field to ensure that proposals submitted satisfy user needs and that the materiel alternatives are COTS/GTS/NDI solutions that can be readily purchased and evaluated. The SEP team performs analysis of incoming proposals in preparation for the FY13 SEP Council meetings to determine which proposals will be evaluated as SEP initiatives. Initiatives completing evaluations received recommendations to either transition the capability to the field or terminate the effort. The SEP team					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2012	FY 2013	FY 2014	
conducts coordination with proponent schools as part of the proposal screening process to ensure that SEP initiative evaluations inform the requirements process.											
<i>FY 2014 Plans:</i> The SEP team will monitor incoming proposals that are submitted via the SEP web application. Additionally, coordination will be performed with industry and the field to ensure that proposals submitted can satisfy user needs and that the materiel alternatives are COTS/GOTS/NDI solutions that can be readily purchased and evaluated. Analysis of incoming proposals will be performed in preparation for the FY14 SEP Council meetings to determine which proposals will be evaluated as SEP initiatives. Ongoing initiatives completing evaluations will receive recommendations as to whether the capability should transition to become an eventual fielded capability or the effort should be terminated. Coordination with proponent schools will also be conducted as part of the proposal screening process as well as to help ensure that SEP initiative evaluations inform the requirements process.											
Accomplishments/Planned Programs Subtotals								3.170	3.278	4.125	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPA3 MA6800: <i>Soldier Enhancement - Other Support Equipment - MA6800</i>	1.421	1.444	1.468		1.468	1.698	0.324	0.330	0.500	Continuing	Continuing
• OPA2 BA5300: <i>Soldier Enhancement - Comms & Electronics Equipment - BA5300</i>	1.843	1.843	1.030		1.030	2.223	2.141	1.893	2.000	Continuing	Continuing
• WTCV GC0076: <i>Soldier Enhancement - Smalls Arms Weapons - GC0076</i>	2.453	2.378	1.267		1.267	3.173	3.016	2.572	2.800	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
The Soldier Enhancement Program (SEP) focuses on Commercial Off The Shelf (COTS) and Government Off The Shelf (GOTS) initiatives, Soldier capability enhancements and integration efforts that lend themselves to accelerated acquisition and limited fielding in the near term (three years or less). New SEP candidates are reviewed and approved semi-annually. SEP items are procured from multiple appropriations, i.e., Other Procurement Army (OPA) and Weapons and Tracked Combat Vehicles (WTCV).											

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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
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Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	11.146	0.319	Dec 2011	0.459	Mar 2013	0.459	Mar 2014	-		0.459	Continuing	Continuing	Continuing
Subtotal			11.146	0.319		0.459		0.459		0.000		0.459			
Remarks Systems Engineering and Program Management includes in-house engineering support and integration services, conducting technical evaluations, market research and program reviews.															
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	35.887	1.911	Dec 2011	1.879	Jun 2013	2.484	Jun 2014	-		2.484	Continuing	Continuing	Continuing
Subtotal			35.887	1.911		1.879		2.484		0.000		2.484			
Remarks Candidates for the Soldier Enhancement Program are received, reviewed, and approved semi-annually. Contractual efforts are focused on procuring prototypes for testing.															
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	6.424	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			6.424	0.000		0.000		0.000		0.000		0.000			

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	11.806	0.940	Dec 2011	0.940	Aug 2013	1.182	Aug 2014	-		1.182	Continuing	Continuing	Continuing
Subtotal			11.806	0.940		0.940		1.182		0.000		1.182			

Remarks

Testing costs vary annually depending on number and type of items being evaluated.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	65.263	3.170		3.278		4.125		0.000		4.125			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY2040: Research, Development, Test & Evaluation, Army
BA 5: System Development & Demonstration (SDD)**R-1 ITEM NOMENCLATURE**

PE 0604601A: Infantry Support Weapons

PROJECT

S58: Soldier Enhancement Program

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SEP council proposal approval/prioritization 3Q FY12																												
SEP council proposal approval/prioritization 1Q FY13																												
Purchase and Test approved proposals 1-2Q FY13																												
SEP council proposal approval/prioritization 3Q FY13																												
Purchase and Test approved proposals 3-4Q FY13																												
SEP council proposal approval/prioritization 4QFY13																												
Purchase and Test approved proposals 1-2Q FY14																												
SEP council proposal approval/prioritization 3Q FY14																												
Purchase and Test approved proposals 3-4Q FY14																												
SEP council proposal approval/prioritization 4QFY14																												
Purchase and Test approved proposals 1-2Q FY15																												
SEP council proposal approval/prioritization 3Q FY15																												
Purchase and Test approved proposals 3-4Q FY15																												
SEP council proposal approval/prioritization 4QFY15																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army																			DATE: April 2013																		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)										R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons										PROJECT S58: Soldier Enhancement Program																	
										FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
										1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Purchase and Test approved proposals 1-2Q FY16										██																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S58: <i>Soldier Enhancement Program</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
SEP council proposal approval/prioritization 3Q FY12	3	2012	3	2012
SEP council proposal approval/prioritization 1Q FY13	1	2013	1	2013
Purchase and Test approved proposals 1-2Q FY13	1	2013	2	2013
SEP council proposal approval/prioritization 3Q FY13	3	2013	3	2013
Purchase and Test approved proposals 3-4Q FY13	3	2013	1	2014
SEP council proposal approval/prioritization 4QFY13	4	2013	4	2013
Purchase and Test approved proposals 1-2Q FY14	4	2013	2	2014
SEP council proposal approval/prioritization 3Q FY14	3	2014	3	2014
Purchase and Test approved proposals 3-4Q FY14	3	2014	1	2015
SEP council proposal approval/prioritization 4QFY14	4	2014	4	2014
Purchase and Test approved proposals 1-2Q FY15	4	2014	2	2015
SEP council proposal approval/prioritization 3Q FY15	3	2015	3	2015
Purchase and Test approved proposals 3-4Q FY15	3	2015	1	2016
SEP council proposal approval/prioritization 4QFY15	1	2016	1	2016
Purchase and Test approved proposals 1-2Q FY16	1	2016	2	2016
SEP council proposal approval/prioritization 3Q FY16	3	2016	3	2016
Purchase and Test approved proposals 3-4Q FY16	3	2016	1	2017
SEP council proposal approval/prioritization 4QFY16	4	2016	4	2016
Purchase and Test approved proposals 1-2Q FY17	4	2016	2	2017
SEP council proposal approval/prioritization 3Q FY17	3	2017	3	2017
Purchase and Test approved proposals 3-4Q FY17	3	2017	1	2018
SEP council proposal approval/prioritization 4QFY17	4	2017	4	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		PROJECT S58: <i>Soldier Enhancement Program</i>
		Start		End
Events		Quarter	Year	Quarter
Purchase and Test approved proposals 1-2Q FY18		4	2017	2
SEP council proposal approval/prioritization 3Q FY18		3	2018	3
Purchase and Test approved proposals 3-4Q FY18		3	2018	4

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S60: Clothing & Equipment			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S60: Clothing & Equipment	-	6.119	5.537	5.450	-	5.450	4.563	3.683	6.065	10.965	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This funding supports engineering and manufacturing development tasks related to individual clothing, equipment and personnel parachutes with the goal of enhancing the survivability, mobility and quality of life of the individual Soldier. It funds system integration and formal Developmental Testing/Operational Testing of preproduction and production representative systems leveraging advancements in materials, fabrication techniques, moisture management, flame resistance, antimicrobial treatments, insect protection, extreme environmental protection and chemical/biological protection to increase the capabilities and durability of tactical and non-tactical clothing and individual equipment.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Soldier Uniforms and Clothing									3.134	3.537	3.659	
									Articles: 0	0		
Description: Develop and provide superior and sustainable integrated clothing for the Soldier in a rapidly changing global environment.												
FY 2012 Accomplishments: Environmental Clothing and Equipment. Conducted user evaluation for Extended Cold Weather Clothing System (ECWCS) Generation (GEN) III product improvement to incorporate flame resistant (FR) capabilities. Developed Memorandum of Agreement (MOA) with Users on Flame Resistant Environmental Ensemble (FREE) requirements, conducted final pattern prove out of Program of Record material solution and obtained Milestone C decision. Conducted user evaluation of the Hot Weather Mountain Combat Boot. Downselected Program of Record Mountain Combat Boot.												
FY 2013 Plans: Environmental Clothing and Equipment: Environmental Clothing and Equipment. Will conduct efforts to improve components of the Extended Cold Weather Clothing System (ECWCS) to provide protection to Military Free Fall (MFF) parachutists due to increased altitudes and duration of MFF flights. Test alternate flame resistant fabrics for use in ECWCS Layer 5.												
Flame Resistant Clothing. Will complete technical development of printing and color shade standards required for all uniform fabrics and findings to potentially implement a family of camouflage patterns to replace the current Universal Camouflage Pattern.												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons		PROJECT S60: Clothing & Equipment
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Will complete testing to support transition of Rapid Fielding Initiative Army Combat Pant (ACP) and Army Combat Shirt (ACS) to Programs of Record. Will test improvements to Army Aircrew Combat Uniform (A2CU) to include collar height to clear skin gap, replacing velcro on pockets to eliminate foreign objects/debris hazards. Evaluating A2CU female variant.				
Clothing Bag. Will continue to refine designs and incorporate new materials into the clothing bag, including the Army Service Uniform (ASU), following results of the FY12/13 web survey. Conduct user evaluation of the Improved Physical Fitness Uniform (IPFU) ensemble. Will initiate development of an improved garrison Food Service Uniform that incorporates commercial standards for burn protection, stain resistance and professional appearance.				
FY 2014 Plans: Environmental Clothing and Equipment. Conduct market survey, technical testing, procure prototypes and user evaluation garments, conduct user evaluation, conduct Cold Chamber tests, and procure user evaluation items for the Intermediate Cold Wet Boot (ICWB) to resolve sole traction concerns at the lower end of its performance range to prevent slippage. Finalize production specifications for the Mountain Combat Boot, Hot Weather and Temperate Weather variants.				
Flame Resistant Clothing. Will conduct market survey, technical testing, procure prototypes and user evaluation garments, conduct user evaluation, conduct Pyroman burn tests, and develop patterns for the Enhanced Combat Vehicle Crewmember Coveralls (eCVC). Will conduct market survey, technical testing, procure prototypes and user evaluation garments, conduct user evaluation, conduct Pyroman burn tests, and develop patterns for the Army Aircrew Combat Uniform–Alternate (A2CU-A); and transfer to sustainment in 4Q FY14. Optimize performance of selected Phase IV camouflage family across Near Infrared spectrum.				
Clothing Bag. Will continue to refine designs and incorporate new materials and designs into clothing bag items. Will finalize patterns and Technical Data Package for the next Generation Physical Fitness Uniform providing improved fit, moisture wicking and antimicrobial capabilities. Will develop patterns, obtain fit test of Army Service Uniform (ASU) garments and conduct fit test to address women's concerns in fit and function of the ASU. Will procure prototypes garments of the Garrison Food Service Uniform. Conduct technical testing and user evaluation that incorporates commercial standards for burn protection, stain resistance and professional appearance.				
Title: Individual Equipment		2.985	2.000	1.791
Articles:		0	0	
Description: Develop and provide superior and sustainable integrated individual equipment for the Soldier in a rapidly changing global environment.				
FY 2012 Accomplishments:				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>Clothing & Equipment</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
Load Carriage/NBC/Hydration. Conducted limited user evaluation of Modular Lightweight Load-carrying Equipment (MOLLE) components, including improved medic set, various pouches, and hydration carrier, for transition to sustainment in 3Q FY13. Completed a Family of Camouflage testing for use on Organizational Clothing and Individual Equipment. Personnel Airdrop. Completed developmental testing of the Advanced RAM Air Parachute System (ARAPS). FY 2013 Plans: Load Carriage/NBC/Hydration. Will continue to refine design and incorporate new material/technologies that pertain to form, fit and function of load bearing equipment with intent to lighten Soldier load. Will complete technical development of printing and color shade standards required for all equipment fabrics and findings to implement the Phase IV effort for a family of global camouflage. Will complete technical development of the Army Mountaineering Kit (AMK) with MS C planned for 3Q FY13. Will conduct limited user evaluation of Improved MOLLE medic bag with incorporated changes for user community and plan to transition to sustainment in 3Q FY13. Will complete technical development of the Individual Water treatment Device (Phase I, Filtration) with transition with MS C in 1Q FY14. Personnel Airdrop. Will conduct testing to evaluate the minimum opening altitude for the Advanced Emergency Bailout Parachute. Will Complete Operational Testing (OT) of the Military Free Fall (MFF) Advanced Ram Air Parachute (ARAPS), which significantly increase MFF altitude and flight duration, increasing range of MFF operations achieve MS C in 1Q FY14. FY 2014 Plans: Load Carriage/NBC/Hydration. Will continue to refine design and incorporate new material/technology that pertain to form, fit, and function of load bearing equipment with intent to lighten the load. Will conduct market survey, conduct technical testing, and procure prototypes and conduct limited user evaluation of the Airborne Medium Rucksack to provide a riggable rucksack to enhance the mobility of all airborne Soldiers immediately upon landing on drop zones. Personnel Airdrop. Will develop and test alternate solutions to improve reliability of the curve pin used on T-11 and MC-6 parachutes to hold the parachute into pack tray assembly. Will procure assets and conduct Developmental testing (DT) and down select the Parachutist Navigational System (PARANAVSYS) which provides Global Positioning System (GPS) navigation capability to MFF Parachutists. Will procure DT assets and conduct DT on MC-6 Control Lines to improve durability and reduce control line breakages under High Performance turns by MFF Parachutists.			
Accomplishments/Planned Programs Subtotals		6.119	5.537
			5.450

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT S60: <i>Clothing & Equipment</i>			
C. Other Program Funding Summary (\$ in Millions)											
	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Line Item											
• Clothing and Individual Eqp S53: <i>RDTE, 0603827.S53, Clothing and Equipment</i>	11.307	7.189	5.637		5.637	7.836	5.548	5.096	7.153	Continuing	Continuing
• Central Funding and Fiedling: <i>OMA, 121017, Central Funding and Fielding</i>	67.248	73.639	103.484		103.484	161.773	165.014	217.679	205.582	Continuing	Continuing
• Advanced Tactical Parachute System: <i>OPA, MA7801, Advanced Tactical Parachute System</i>	52.185	46.130	46.650		46.650	44.939	42.656	40.859	12.000	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Acquisition strategies for these programs vary in methods to include the following: (1) Quick fixes in 12-24 months or less from concept to Type Classification (TC); (2) modernization improvements which require limited RDT&E and are completed in more than 24-48 months from inception to Type Classification; and (3) fully integrated development that requires substantial RDT&E funding and is completed in four years or more.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons						PROJECT S60: Clothing & Equipment			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In-House Support	Various	PM SPIE:Various	6.825	0.750		0.478		0.400		-		0.400	Continuing	Continuing	Continuing
Subtotal			6.825	0.750		0.478		0.400		0.000		0.400			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	Various	NSRDEC:Natick, MA	12.169	0.878		1.000		1.000		-		1.000	Continuing	Continuing	Continuing
Development Contracts	Various	Various:Various	34.814	2.098		2.000		2.000		-		2.000	Continuing	Continuing	Continuing
Subtotal			46.983	2.976		3.000		3.000		0.000		3.000			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	Various	Various:Various	13.723	0.973		0.859		0.850		-		0.850	Continuing	Continuing	Continuing
Subtotal			13.723	0.973		0.859		0.850		0.000		0.850			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	Various	Various:Various	13.638	1.420		1.200		1.200		-		1.200	Continuing	Continuing	Continuing
Subtotal			13.638	1.420		1.200		1.200		0.000		1.200			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			81.169	6.119		5.537		5.450		0.000		5.450			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		
			PROJECT S60: <i>Clothing & Equipment</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Camo Decision																												
Transition FREE to Production																												
Garrison Food Service Uniform Improvements																												
Garrison Food Service Uniform Milestone C																												
Transition A2CU improvements to DLA Troop Support																												
Mountain Combat Boot MS C & transition to sustainment																												
Military Free Fall Environmental Protection Improvements																												
ARAPS DV Testing																												
ARAPS Operational Testing																												
ARAPS MS-C																												
MOLLE Upgrades																												
Mountaineering Kit User Eval																												
Mountaineering Kit MS-C																												
Improved Medic Bag Transition to DLA Troop Support																												
Next Gen MOLLE																												
IWTD Incr I Tech Development																												
IWTD Incr 1 Milestone C																												
IWTD II Product Prove Out																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>Clothing & Equipment</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Camo Decision	3	2013	3	2013
Transition FREE to Production	3	2012	3	2012
Garrison Food Service Uniform Improvements	1	2014	4	2015
Garrison Food Service Uniform Milestone C	1	2016	1	2016
Transition A2CU improvements to DLA Troop Support	3	2015	3	2015
Mountain Combat Boot MS C & transition to sustainment	2	2014	2	2014
Military Free Fall Environmental Protection Improvements	1	2017	4	2018
ARAPS DV Testing	2	2012	4	2012
ARAPS Operational Testing	1	2013	3	2013
ARAPS MS-C	1	2014	1	2014
MOLLE Upgrades	1	2013	4	2013
Mountaineering Kit User Eval	1	2013	3	2013
Mountaineering Kit MS-C	3	2013	3	2013
Improved Medic Bag Transition to DLA Troop Support	3	2013	3	2013
Next Gen MOLLE	1	2014	2	2015
IWTD Incr I Tech Development	1	2013	4	2013
IWTD Incr 1 Milestone C	1	2014	1	2014
IWTD II Product Prove Out	1	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S61: Acis Engineering Development			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S61: Acis Engineering Development	-	10.705	17.175	14.057	-	14.057	20.073	11.334	9.883	15.948	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This project conducts Engineering and Manufacturing Development (EMD) for improved Army aircrew safety, survivability, and human performance capabilities. These funds resource the integration and qualification of the Air Soldier System (Air SS) program. The Air SS addresses capability gaps identified during combat operations in Iraq and Afghanistan including the effects of weight and bulk, limited situational awareness, and lack of functionally integrated aircrew life support equipment. Currently Army aircrews must trade off Air Warrior life support capabilities to ensure compatibility with the confined space of rotary wing crew stations. The Air SS addresses these and other gaps defined in the Air SS CDD using a Soldier as a System approach to provide improved situational awareness; provide terrain, weather, threat, and obstacle avoidance information to reduce aircraft mishaps and fatalities; provide modern heads-up display technologies that increase the Soldier's ability to operate safely in degraded visual environments; and provide the capability to perform missions up to 11.0 hours in extreme environmental and chemical/biological threat conditions. The Air SS follows an evolutionary acquisition approach with two sub-increments that build to the full capability. Sub-increment 1a provides optimized survival equipment and integrated lightweight body armor reducing bulk and increasing mobility and crew member performance; layered clothing ensemble with active thermal regulation and chemical/biological protection for aviation Soldiers in all aircraft platforms; an integrated Soldier-worn electronics suite with integrated portable power that combines the functionality of bulky and separate situational/spatial awareness and life support systems and their separate batteries. Sub-increment 1b is the final and full Air SS capability that completely replaces the legacy Air Warrior system. This is the full integration of Air Soldier System capabilities necessary to meet the Air SS KPP threshold requirement for a 25% weight and bulk reduction over the legacy Air Warrior Aviation Life Support Equipment system. Sub-increment 1b provides improved safety and Soldier survivability, increased situational awareness, and reduced pilot/crew member workload through an integrated gear carriage and extraction system that builds upon the Air SS capabilities developed under sub-increment 1a. Sub-increment 1b also enhances the previous Air SS integrated electronics suite by adding an integrated wireless aircraft and survival communications capability to reduce weight and bulk; a wide field of view high resolution day/night helmet mounted display for the AH-64 platforms; and optimized laser eye protection. This program does not duplicate any aircraft platform program efforts.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Aircrew Integrated Systems (ACIS) Engineering Development									10.705	17.175	14.057	
									Articles: 0	0		
Description: Integration, evaluation, testing, and qualification of Air Soldier System multi-phased capabilities as technologies mature.												
FY 2012 Accomplishments:												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S61: Acis Engineering Development			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
Continued development of initial Air SS sub-increment 1a capabilities including the integration and evaluation of improved cooling and integrated Soldier and power data system. Began head tracking, Soldier display, aircraft-mounted mission display, Soldier computer module integration and evaluation, integrated layered clothing system, and aircraft integration. Primary activities included the finalization of subsystem and component specifications and interface control documents, manufacture and evaluation of early design prototypes, and the development and delivery of initial technical and logistics documentation.											
FY 2013 Plans: Continues Air Soldier System improvements, integration, evaluation, testing, and qualification including head tracking, Soldier display, aircraft-mounted mission display, Soldier computer module, integrated layered clothing system, and aircraft integration. Primary activities include completion of detail design, manufacture of production representative prototypes and laboratory qualification test activities.											
FY 2014 Plans: Will develop Air Soldier System sub increment 1b capabilities and will complete development of Air Soldier System sub increment 1a capabilities including the manufacture and delivery of additional production representative prototypes, completion of system level qualification activities, and the final delivery of technical, programmatic, and logistics support documentation. System level tests will include the formal developmental and operational flight test activities and formal logistics/maintenance demonstrations.											
Accomplishments/Planned Programs Subtotals									10.705	17.175	14.057
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• Aircrew Integrated Sys Adv Dev: RDTE, A PE 0603827A, PROJ S51 - Adv Dev	0.150	0.141	0.164		0.164	0.164	0.157	0.160	2.157	Continuing	Continuing
• Aircrew Integrated Systems: Aircraft Procurement, Army SSN AZ3110 - ACIS	62.746	77.381	45.841		45.841	16.347	14.080	0.008	2.920	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
The Engineering and Manufacturing Development (EMD) phase efforts for the Aircrew Integrated Systems program includes integration, evaluation, testing, and qualification of select Air Soldier System subsystems and components as technologies mature. The Air Soldier System follows an evolutionary acquisition approach with two sub-increments that build to the full capability. Through the two sub-increments, the Air Soldier System program focuses on reducing weight and bulk											

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S61: <i>Acis Engineering Development</i>
while integrating capabilities tailorable for aircrew on all Army aircraft platforms including optimized survival equipment, suite of integrated Soldier-worn electronics, integrated wireless aircraft and survival communications capability, and reduced clothing layers. A day and night heads-up display, external audio, and enhanced laser eye protection against multiple wavelengths of laser threats will be integrated onto the common HGU-56/P helmet. Integration, testing, and qualification efforts are accomplished through a combination of contracts with industry and by Military Interdepartmental Purchase Requests (MIPRs) to other government agencies. Contracts with industry include competed CPFF and FFP designed to appropriately share risk between industry and the government. E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S61: Acis Engineering Development					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allot	Various Government:Huntsville, Alabama	1.503	0.359		0.278		0.712		-		0.712	Continuing	Continuing	Continuing
Subtotal			1.503	0.359		0.278		0.712		0.000		0.712			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior and Air Soldier System Development	C/TBD	Various Government:Various Locations	29.983	9.399		14.329		9.967		-		9.967	Continuing	Continuing	Continuing
Subtotal			29.983	9.399		14.329		9.967		0.000		9.967			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	RO	Various Government:Various Locations	1.137	0.947		0.754		0.626		-		0.626	Continuing	Continuing	Continuing
Subtotal			1.137	0.947		0.754		0.626		0.000		0.626			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental and Operational Testing	RO	Various Activities:Various Locations	6.035	-		1.814		2.752		-		2.752	Continuing	Continuing	Continuing
Subtotal			6.035	0.000		1.814		2.752		0.000		2.752			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army										DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons					PROJECT S61: Acis Engineering Development				
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	38.658	10.705		17.175		14.057		0.000		14.057				

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		
			PROJECT S61: <i>Acis Engineering Development</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Air SS Prelim Design Review (PDR), Sub-increment 1a																												
Air SS Critical Design Review (CDR), Sub-increment 1a																												
Air SS Developmental Testing (DT), Sub-increment 1a																												
Air SS Operational Test (OT), Sub-increment 1a																												
Air SS Milestone C/Full Rate Product (FRP), Sub-increment 1a																												
Air SS Prelim Design Review (PDR), Sub-increment 1b																												
Air SS Critical Design Review (CDR), Sub-increment 1b																												
Air SS Develop Testing Sub-increment 1b																												
Air SS Milestone C/Low Rate Initial Product, Sub-increment 1b																												
Air SS Initial Operat Test & Eval, Sub-increment 1b																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S61: <i>Acis Engineering Development</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Air SS Prelim Design Review (PDR), Sub-increment 1a	1	2013	1	2013
Air SS Critical Design Review (CDR), Sub-increment 1a	4	2013	4	2013
Air SS Developmental Testing (DT), Sub-increment 1a	2	2014	2	2014
Air SS Operational Test (OT), Sub-increment 1a	2	2014	3	2014
Air SS Milestone C/Full Rate Product (FRP), Sub-increment 1a	3	2014	3	2014
Air SS Prelim Design Review (PDR), Sub-increment 1b	1	2015	1	2015
Air SS Critical Design Review (CDR), Sub-increment 1b	3	2015	3	2015
Air SS Develop Testing Sub-increment 1b	4	2015	1	2016
Air SS Milestone C/Low Rate Initial Product, Sub-increment 1b	3	2016	3	2016
Air SS Initial Operat Test & Eval, Sub-increment 1b	1	2017	3	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S62: Counter-Defilade Target Engagement - SDD			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S62: Counter-Defilade Target Engagement - SDD	-	34.859	34.412	1.983	-	1.983	2.060	2.130	2.200	2.470	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
The Maneuver Center of Excellence (MCoE), FT Benning, GA (User Community) identifies the Counter Defilade Target Engagement (CDTE) as a critical capability gap for our Soldiers in combat. The number one materiel solution to mitigate the critical capability gap (defeating defilade (hidden) targets from 15-500m) is the XM25. The XM25 provides the Infantry Soldier with a leap-ahead overmatch capability that dramatically increases lethality, range, and capability through the use of a family of low-velocity programmable 25mm ammunition and allows the Soldier to engage defilade targets with a high degree of accuracy while posing minimal burden, in terms of weight and size. The XM25 fires 25mm munitions including high-explosive airburst (HEAB), armor-piercing, breaching, less-than-lethal, and training rounds. The XM25 comes with a target acquisition/fire control that integrates thermal capability with direct-view optics, laser rangefinder, compass, fuze setter, ballistic computer, and internal display. The XM25 has a 500-meter point target range and a 700-meter area target range capable of defeating defilade targets.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Engineering and Manufacturing Development/Fabricate									26.769	23.120	0.000	
									Articles: 0	0		
Description: Description: Engineering Development and Fabrication												
FY 2012 Accomplishments: Completed producibility design improvements specific to weight reduction, reliability and survivability of the weapon system, ammunition, the weapon system battery, target acquisition/fire control (TA/FC), and the ammunition magazine based on user feedback of the early prototypes in Afghanistan's Forward Operational Assessment (FOA) 1B. Initiated prototype manufacturing tooling. Built ten (10) weapon prototypes to support contractor weapon system assessments and verification testing. Initiated build of twenty-five (25) additional weapon prototypes for government qualification testing. Finalized weapon system design for Critical Design Review (CDR).												
FY 2013 Plans: Fabricate and integrate design enhancements to the weapons system and subsystems, target acquisition/fire control (TA/FC) and ammunition identified through contractor subsystem testing and the Forward Operational Assessment (FOA). Assemble prototype												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons	PROJECT S62: Counter-Defilade Target Engagement - SDD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
systems to include weapon, TA/FC and ammunition for additional government testing. Complete build of thirty-six (36) weapon system for the second Forward Operational Assessment (FOA) 2.				
Title: Engineering and Training Development Description: Description: Engineering and Training Development FY 2012 Accomplishments: Provided engineering support required for producibility design improvements specific to reliability and survivability of the weapon system battery, ammunition, target acquisition/fire control (TA/FC) and ammunition magazine. Engineering support was necessary for all testing to meet Army performance objectives. Prepared documentation to perform technical design, performance and safety reviews. FY 2013 Plans: Provide engineering support for weapons systems, subsystems, target acquisition/fire control (TA/FC) and software design enhancements required to perform technical design reviews to include, combined system verification reviews, and production readiness review to update system engineering master plans and integrate technical design efforts. Conduct training efforts for Limited User Test (LUT). Development of new equipment training (NET) and training materials. FY 2014 Plans: Will continue to provide engineering support for engineering changes and pre-planned product improvements to the weapon system.		Articles: 2.300 0	2.500 0	0.100
Title: Development / Operational Test and Evaluation Activities Description: Description: Test and Evaluate FY 2012 Accomplishments: Contractor conducted weapon system and subsystem performance testing for reliability, simulated natural environments (hot, cold, sand, and rain), electromagnetic environmental effects (E3) testing, human factors and rough handling tests. Weapon also sustained various prequalification testing. The target acquisition/fire control (TA/FC) and all ammunition variants completed developmental and safety testing and evaluation. FY 2013 Plans: Conduct Government and contractor test efforts of weapon system including the target acquisition/fire control (TA/FC) and ammunition that include the following: Enhancements to address safety risks, Pre-Production Qualification tests, Electromagnetic		Articles: 5.481 0	8.000 0	1.633

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army								DATE: April 2013					
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons			PROJECT S62: Counter-Defilade Target Engagement - SDD					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2012		FY 2013		FY 2014	
Environmental Effects (E3) testing, Simulated Natural Environment Test, Limited User Testing (LUT). Plan, coordinate, and resource Initial Operational Test and Evaluation (IOT&E) and Live Fire Test and Evaluation (LFT&E). FY 2014 Plans: Will continue to conduct Government test efforts to evaluate engineering changes and pre-planned product improvements to the weapons system.													
Title: Program Management Description: Description: Program Management FY 2012 Accomplishments: The Program Management office provided oversight of all engineering support and test activities throughout the fiscal year. Managed the life cycle mission of the program to include future acquisition and sustainment plans. Provided oversight of design improvements, weapon system assessments, developmental, verification and prequalification testing. Prepared documentation to perform technical design, performance and safety reviews. FY 2013 Plans: Continue Program Management oversight to achieve Milestone C and transition to Low Rate Initial Production (LRIP). FY 2014 Plans: Will continue to provide Program Management oversight post Milestone C required to test and evaluate engineering changes and pre-planned product improvements to weapon system.								Articles: 0.309 0		0.792 0		0.250	
Accomplishments/Planned Programs Subtotals								34.859		34.412		1.983	
C. Other Program Funding Summary (\$ in Millions)													
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost		
• G16101: (G16101) Integrated Air Burst Weapon System Family		0.506	69.147		69.147	71.208	71.196	72.387	87.784	Continuing	Continuing		
• E92500: (E92500) CTG, 25MM, XM1083 High Explosive Air Burst (HEAB)		4.506	8.801		8.801	14.392	31.108	31.663		0.000	90.470		
• E92510: (E92510) CTG, 24MM, XM1081 Target Practice (TP)			1.500		1.500	1.500	1.500	1.500		0.000	6.000		

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>			PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2014</u>	<u>FY 2014</u>	<u>FY 2014</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Complete</u>	<u>Total Cost</u>
<u>Remarks</u>											
D. Acquisition Strategy											
The XM25 transitioned from the Technology and Development phase to Engineering and Manufacturing Development (EMD) phase by achieving Milestone B in December 2010. The EMD phase completes development of the XM25 and verifies training solutions for the Milestone C approval in FY 2014. Research and Development acquisition strategy is to use sole source contracting with ATK (formerly known as Alliant Techsystems), Plymouth, MN. RDT&E initiatives will continue post Milestone C for engineering changes and pre-planned product improvements to include family of munitions and target acquisition/fire control development.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>						PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	Performed by Government:Various Activities	1.906	0.309	Feb 2012	0.792	Feb 2013	0.250	Feb 2014	-		0.250	Continuing	Continuing	Continuing
Subtotal			1.906	0.309		0.792		0.250		0.000		0.250			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Design, Develop & Fabricate	SS/CPFF	ATK:Plymouth, MN	38.566	26.769	Feb 2012	23.120	Feb 2013	-		-		-	Continuing	Continuing	Continuing
Subtotal			38.566	26.769		23.120		0.000		0.000		0.000			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	Various	Various:Multiple	4.130	2.100	Feb 2012	2.300	Feb 2013	0.100	Feb 2014	-		0.100	Continuing	Continuing	Continuing
Training Development Support	MIPR	PEO STRI:PEO STRI	0.400	0.200	Feb 2012	0.200	Feb 2013	-		-		-	Continuing	Continuing	Continuing
Subtotal			4.530	2.300		2.500		0.100		0.000		0.100			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental/System Tests and Articles	SS/CPFF	Performed by Contractor:ATK, Plymouth, MN	14.854	-		-		-		-		-	0.000	14.854	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>							R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental/ Operational Tests	Various	Performed by Government:Various Activities	0.000	5.481	Feb 2012	8.000	Feb 2013	1.633	Feb 2014	-		1.633	Continuing	Continuing	Continuing
Subtotal			14.854	5.481		8.000		1.633		0.000		1.633			

Remarks
In FY 2014, funding will be used to continue target acquisition/fire control and family of munitions development and operational test efforts on engineering changes to weapon systems.

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	59.856	34.859	34.412	1.983	0.000	1.983			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		
			PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Forward Operational Assessment (FOA) 2																												
MS C/Type Classification-Limited Procurement																												
Production Qualification Test (PQT)																												
Initial Operational Test & Evaluation (IOT&E)																												
Low Rate Initial Production (LRIP)																												
Type Classification - Standard																												
Full Rate Production (FRP)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Forward Operational Assessment (FOA) 2	2	2013	3	2013
MS C/Type Classification-Limited Procurement	1	2014	2	2014
Production Qualification Test (PQT)	2	2014	2	2014
Initial Operational Test & Evaluation (IOT&E)	2	2014	1	2015
Low Rate Initial Production (LRIP)	1	2014	1	2015
Type Classification - Standard	1	2015	1	2015
Full Rate Production (FRP)	2	2015	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S63: Small Arms Improvement			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S63: Small Arms Improvement	-	17.759	19.617	18.201	-	18.201	14.479	14.494	14.608	14.691	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
New starts in FY 2014 include M3 Multi-Role Anti-Armor Anti-Personnel Weapon System (MAAWS), Squad Designated Marksman Rifle (SDM), Gain Twist Rifling, Powered Rail, Mounted Machine Gun Optic, Advanced Coatings, XM1116 12 Gauge Non-Lethal Extended Range and transitions Squad Common Optic and Integrated Fire Control for Small Arms from Advanced Component Development and Prototypes, Project S54, Program Element 0603827A Project S54.												
A. Mission Description and Budget Item Justification												
The Small Arms Improvement Engineering and Manufacturing Development (EMD) program provides funds to transition components or prototypes from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4) and other domestic and foreign sources of small arms weapons to demonstrate, test and evaluate capability near or at planned operational requirements. Small arms systems include weapons ranging up to 40 millimeter in caliber. Current and future efforts focus on system improvements designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability of weapons to include ammunition when developing and/or evaluating standard and non-standard weapons. Focus areas include system development, integration, demonstration, test and evaluate components, prototypes and operational system prototypes of small arms weapons and/or enhancements. Benefits include continuous improvements to small arms weapons, fire control equipment, optics, gun barrels, ancillary equipment, training devices, component mounts, weapon mounts, and weapon/ammunition interface of current small arms fleet or new weapon systems.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: New Weapons									10.687	9.545	6.289	
									0	0		
Description: Description: Development of new weapons												
FY 2012 Accomplishments:												
Individual Carbine Competition (ICC): Completed Phase I and initiated Phase II of competitive test and inspection program.												
Conducted scoring conferences of test data for source selection process.												
Precision Sniper Rifle (PSR): Evaluated PSR acquisition options and strategies.												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons	PROJECT S63: Small Arms Improvement		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Modular Handgun System (MHS): Conducted meetings to discuss, plan and prepare program documentation; initiated integrated product team charter and acquisition plan; planned and conducted terminal effects test; released Request for Information (RFI) to industry, received and sorted all responses to RFI. FY 2013 Plans: ICC: Down select individual carbine competitors from competitive evaluation/testing phase to conduct system testing and user evaluation of remaining weapons. Perform down-selection of most qualified vendors and award three competitive contracts. PSR: Evaluate on-going initiatives of the Precision Sniper Rifle. Initiate development and engineering testing efforts to support new Capability Development Documents. FY 2014 Plans: ICC: Complete the source selection efforts, down selecting to a single Individual Carbine. Complete the cost benefit analysis in support of Milestone C and initiate low rate initial production. Will complete Production Qualification Testing and Initial Operational Test & Evaluation and transition program to Full Rate Production. PSR: Will continue development and engineering testing efforts to support new Capability Development Documents. FY2014 New Start Squad Designated Marksman Rifle (SDM) supports requirement definition and analysis process. MHS: Will select commercially available Modular Handgun System (MHS) for the Army. Will conduct Developmental and Operational Testing on the selected MHS. Will review and reduce test data. Will prepare and plan for transition from research, development, test and evaluation (RDT&E) to low rate initial production (LRIP). Will update Acquisition Plan and Systems Engineering Plan as required. FY2014 New Start M3 Multi-Role Anti-Armor Anti-Personnel Weapon System (MAAWS): Will conduct testing, evaluation, and documentation required for Type Classification Standard.				
Title: Small Arms Weapons Enhancements Articles: Description: Description: Enhancements and developments of small arms weapons FY 2012 Accomplishments: M4 Carbine Product Improvement Program (PIP): Completed technical testing and evaluation of the rail system hardware bid samples. Completed testing of new bolt bid samples and based upon the cost/performance findings the bolt initiative was cancelled. Suppressors: Completed Test Operational Procedures for measurement of suppressor performances. Developed draft operational relevant human perception (detection and localization) model for suppressor performances. Developed draft Capability Development Document.		4.622 0	7.597 0	4.512

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>Small Arms Improvement</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
Improved Cleaning Kits: Divided cleaning kits components into two separate kits for the individual and team to reduce size and cost. Sniper Upgrades: Conducted system testing and evaluation of components enhancements of the M110 Semi-Automatic Sniper System. Initiated characterization testing of the Compact Semi-Automatic Sniper System. Conducted technical and operational testing of XM2010 Enhanced Sniper Rifle. XM205 Tripod: Submitted final report for Milestone C and transitioned program to production. Shock Reduction: Developed and finalized scope of work to measure recoil. FY 2013 Plans: M4 Carbine Product Improvement Program: Award hardware delivery orders to conduct final test and evaluation of the rail system. Weapons Reliability Program: Transition initiative from Small Arms Improvement, Project S54, Program Element 0603827A (Budget Activity 4). Suppressors: Complete test plan of small arms suppressors. Improved Cleaning Kits: Award competitive contract for the updated cleaning kits. Sniper Upgrades: Continue system testing and evaluation of components enhancements of the M110 Semi-Automatic Sniper System, M110E1 Compact Semi-Automatic Sniper Systems and XM2010 Enhanced Sniper Rifle. Shock Reduction: Complete assessment of 3D recoil and shock spectrum measurement techniques to determine viability of introducing new standard for testing small arms weapons for felt recoil and weapon device shock survivability. FY 2014 Plans: M4 Carbine PIP: Will transition M4 Carbine Product Improvements initiatives to M4 Carbine Modification procurement program. Suppressors: Will conduct test and evaluation of small arms suppressors. Sniper Upgrades: Will perform, evaluate and analyze engineering, development and testing of sniper upgrades. Weapons Reliability Program: Will complete design of experiments test cycle to determine root cause of weapon reliability. Initiate modeling, prototyping and assessment of component upgrades. Will conduct performance verification testing of proposed weapon system modifications. Will implement new test standard of measuring small arms felt recoil. Will continue studies and evaluate increased barrel life/ chrome replacement, protective coatings, reduced recoil, 3D/Additive manufacturing methods. Will assess weapons reliability testing of functional impact with the introduction of enhanced performance ammunition on current small caliber weapon designs. Areas of potential impact include weapon system reliability, durability, and maintainability. Will transition barrel twist optimization from Small Arms Improvement, Project S54, Program Element 0603827A (Budget Activity 4). FY2014 New Start Powered Rail, Gain Twist Rifling and Advanced Coatings.			
Title: Ammunition		1.600	1.632
			0.200

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons	PROJECT S63: Small Arms Improvement		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Articles: 0 Description: Improvement of small arms ammunition FY 2012 Accomplishments: Completed root cause analysis testing for Indiana Ordnance incident of the XM1112 40mm Low Velocity Airburst Non-Lethal Munitions (ANLM). Transitioned Micro Electro-Mechanical System (MEMS) safe and arm mechanisms to Program Executive Office Ammunition. FY 2013 Plans: Build hardware and complete developmental testing and evaluation of the XM1112 ANLM. Transition the ANLM program to Program Executive Office Ammunition. FY2014 New Start XM1116 12 Gauge Non-Lethal Extended Range. FY 2014 Plans: Will evaluate effect of new ammunition on small arms weapons.		0	0	
Title: Combat Optics Articles: 0 Description: Improvement of combat optics FY 2012 Accomplishments: Conducted market research of optics industry. Initiated engineering support and evaluation of weapon optics performance requirements. Developed test plans and scheduled human factors testing of continuous variable systems in support of Squad Common Optic Capability Development Document. FY 2013 Plans: Transition Squad Common Optic from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4). Draft acquisition plan and operational assessment of commercial of the shelf optics to validate a common power optic across weapon platforms. FY 2014 Plans: Will continue engineering support and services to include engineering evaluations, verification and validation of weapon optics performance requirements to include protective and anti-reflective coatings. Will obtain and test bid samples of a Squad Common Optic. FY2014 New Start Mounted Machine Gun Optic. Transition Squad Common Optic from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4).		0.100 0	0.100 0	0.700
Title: Fire Control		0.750	0.743	6.500

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S63: Small Arms Improvement				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Articles:										0	0	
Description: Description: Improvement of small arms fire control												
FY 2012 Accomplishments: M320 Grenade Launcher: Completed market survey and documentation to initiate a new Grenadier Sighting System (GSS). Completed market survey to evaluate industrail base for a Build to Print capability for M320 production.												
FY 2013 Plans: M320 Grenade Launcher: Complete acquisition plan and strategy of a new Grenadier Sighting System (GSS).												
FY 2014 Plans: M320 Grenade Launcher: Will complete bid sample test of GSS and award competitive contract. Integrated Fire Control for Small Arms: Will complete transition of the integrated fire control for small arms program from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4) and initiate engineering manufacturing development phase. Will evaluate hyperspectral tracking of targets.												
Accomplishments/Planned Programs Subtotals										17.759	19.617	18.201
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• Small Arms Improvement: RDTE S54, Program Element 0603827A - Soldier Systems - Advanced Development	4.362	4.690	4.690		4.690	6.172	5.569	5.186	5.700	Continuing	Continuing	
• M4 Carbine MODS: WTCV, GB3007, M4 Carbine MODS	41.892	27.243	10.300		10.300	16.128	16.152	8.800	18.491	Continuing	Continuing	
• M16 Rifle Mods: WTCV, GZ2800, M16 Rifle MODS	3.476	18.728	2.136		2.136	3.974	3.798	3.394	3.500	Continuing	Continuing	
• Sniper Rifle MODS: WTCV, GZ1500, Sniper Rifle MODS	1.994	14.113	7.017		7.017	2.018	2.019	2.053	3.986	Continuing	Continuing	
• M249 SAW MODS: WTCV, GZ1290, M249 Squad Automatic Weapon (SAW) MODS	8.480	4.996	7.608		7.608	7.607	6.201	6.368	5.800	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S63: Small Arms Improvement			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• M240 Medium Machine Gun MODS: WTCV, GZ1300, M240 Medium Machine Gun MODS	15.718	6.806	2.719		2.719	5.885	5.568	4.847	5.000	Continuing	Continuing
• M2 .50 CAL Heavy Machine Gun MODS: WTCV, GB4000, M2 .50 CAL Heavy Machine Gun MODS	48.856	39.974	33.691		33.691	48.553	59.199	63.570	53.961	Continuing	Continuing
• Modification Less Than \$5.0M: WTCV, GC0925, Modifications Less Than \$5.0M	2.973	3.072	1.569		1.569	4.048	3.796	3.232	3.548	Continuing	Continuing
Remarks											
In support of Small Arms Requirements, components or prototypes developed in Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4) is transitioned to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5) to conduct engineering and manufacturing development. Once the component, prototype or operational prototype achieves Milestone C and type classification the item transitions to small arms weapon production or modification program.											
D. Acquisition Strategy											
Primary strategy is to mature and finalize design efforts, award Research, Development, Test and Evaluation (RDT&E) hardware contracts, and test and evaluate systems that result in type classification and follow-on production contract awards.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S63: Small Arms Improvement					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Allot	PM Soldier Weapons,:Picatinny Arsenal	4.042	2.475	Jan 2012	2.904	Apr 2013	0.500	Mar 2014	-		0.500	Continuing	Continuing	Continuing
Travel	MIPR	PM Soldier Weapons,:Picatinny Arsenal	0.579	0.205	Jan 2012	0.250	May 2013	0.139	Mar 2014	-		0.139	Continuing	Continuing	Continuing
Subtotal			4.621	2.680		3.154		0.639		0.000		0.639			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fabrication	C/CPFF	Various,:Multiple	0.000	-		0.300	May 2013	1.200	Mar 2014	-		1.200	Continuing	Continuing	Continuing
Hardware Development	MIPR	Army Research Development Engineering Centers,:Multiple	6.741	0.388	Feb 2012	0.100	Feb 2013	0.750	Mar 2014	-		0.750	Continuing	Continuing	Continuing
Subtotal			6.741	0.388		0.400		1.950		0.000		1.950			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering	MIPR	Army Research Development Engineering Centers,:Multiple	18.934	7.888	Jan 2012	8.380	Apr 2013	8.412	Mar 2014	-		8.412	Continuing	Continuing	Continuing
Logistics	MIPR	TACOM,:Warren	1.304	1.291	Jan 2012	1.383	Apr 2013	1.200	Mar 2014	-		1.200	Continuing	Continuing	Continuing
Human Research and Engineering	MIPR	Army Research Laboratory,:Aberdeen Proving Ground	1.724	0.598	Dec 2011	0.600	Apr 2013	0.500	Mar 2014	-		0.500	Continuing	Continuing	Continuing
Subtotal			21.962	9.777		10.363		10.112		0.000		10.112			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S63: Small Arms Improvement					
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	MIPR	Army Developmental Test Command,:Aberdeen Proving Ground	10.581	3.767	Feb 2012	4.200	Apr 2013	4.500	Mar 2014	-		4.500	Continuing	Continuing	Continuing
Operational Testing	MIPR	Army Test and Evaluation Command,:Aberdeen Proving Ground	5.024	1.047	Feb 2012	1.200	May 2013	0.800	Mar 2014	-		0.800	Continuing	Continuing	Continuing
Validation Testing	MIPR	Army Test and Evaluation Centers,:Multiple	4.612	0.100	Dec 2011	0.300	May 2013	0.200	Mar 2014	-		0.200	Continuing	Continuing	Continuing
Subtotal			20.217	4.914		5.700		5.500		0.000		5.500			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			53.541	17.759		19.617		18.201		0.000		18.201			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		
			PROJECT S63: <i>Small Arms Improvement</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
M3 Multi-Role Anti-Armor Anti-Personnel Weapon System (MAAWS)																												
Squad Designated Marksman Rifle (SDM)																												
Sub-Compact Weapon																												
Lightweight Machine Gun																												
Gain Twist Rifling																												
Powered Rail																												
Squad Common Optic																												
Mounted Machine Gun Optic																												
Integrated Fire Control for Small Arms																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>Small Arms Improvement</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
M3 Multi-Role Anti-Armor Anti-Personnel Weapon System (MAAWS)	1	2014	4	2016
Squad Designated Marksman Rifle (SDM)	1	2014	4	2017
Sub-Compact Weapon	1	2015	4	2017
Lightweight Machine Gun	1	2015	4	2018
Gain Twist Rifling	1	2014	4	2014
Powered Rail	1	2014	4	2017
Squad Common Optic	1	2014	4	2015
Mounted Machine Gun Optic	1	2014	4	2016
Integrated Fire Control for Small Arms	1	2014	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S64: Common Remotely Operated Wpn Sys (CROWS)			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S64: Common Remotely Operated Wpn Sys (CROWS)	-	0.173	0.000	14.864	-	14.864	15.000	15.000	10.000	12.191	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
Project S64 is a new start in FY 2014.												
A. Mission Description and Budget Item Justification												
The Maneuver Support Center of Excellence (MSCoE) at FT Leonard Wood, MO (user community) has identified development of the next increment of the Common Remotely Operated Weapon Station (CROWS) as a critical improvement for the Soldier in the combat environment. By addressing the capability gap of non-turreted, lightly armored vehicles where the gunner is exposed to enemy fire, the current CROWS system provides the ability to rapidly and accurately locate and engage the enemy while allowing platform gunners to remain under armor, thereby providing greater protection and increasing overall lethality. Additional capabilities pursued in Increment Two (2) include: increased accuracy of weapons fire; improved system survivability from direct fire and fragmentation weapons; vehicle commander display and firing override ability; laser designator; future generation Forward Looking Infrared (FLIR); auto-zoom; auto-tracking; auto-detection and targeting; net-ready capabilities; integration of future weapon systems; additional sensors for simultaneous 360-degree situational awareness; through-sight video recording; increased elevation and depression of weapon muzzle limits; fixed-site emplacement capability; gunshot detection sensors; an objective requirement for wireless remote operation of the CROWS and the application of external targeting data for precision engagement. In addition to these capabilities, parallel development efforts will be pursued for the current increment, to include improvements to component reliability that will extend system life and value engineering design changes that will limit the cost and quantity of parts and reduce the system's logistics footprint. New start in FY 2014.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Design, Develop & Fabricate CROWS Increment II									0.000	0.000	9.867	
Description: Description: Design, Develop & Fabricate												
FY 2014 Plans:												
As a prerequisite to developing improvements involving enhanced sensors, infrared sights, video capabilities and situational awareness, the contractor will design and fabricate an improved fire control unit (FCU) processor, to include ethernet channels in the system's slip ring, in order to facilitate the greater data through-put required.												
Title: Engineering Support									0.103	0.000	2.150	
Articles:									0			

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons	PROJECT S64: Common Remotely Operated Wpn Sys (CROWS)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Description: Description: Government Engineering Support. FY 2012 Accomplishments: Provided engineering support and oversight of design improvements; preparation of the performance specifications for increased elevation and other system improvements. FY 2014 Plans: Will provide engineering support and oversight of design improvements; preparation of the performance specifications for the contractor; development of new processor and slip-ring that facilitates target acquisition and designation, command override, infrared and video capabilities.				
Title: Development Test and Evaluation Articles: Description: Description: Test and Evaluation FY 2012 Accomplishments: Conducted human research and engineering development testing and evaluation of increased elevation and other system improvement. FY 2014 Plans: Will develop testing and evaluation criteria and documentation, to include a Test and Evaluation Master Plan (TEMP). Will conduct initial developmental testing and evaluation of improvements.		0.017 0	0.000	0.852
Title: Program Management Articles: Description: Description: Program Management. FY 2012 Accomplishments: Provided management oversight of increased elevation design and development, to include engineering support, contract actions and test activities throughout the fiscal year. FY 2014 Plans: The program management office and the proponents in the user community at the Maneuver Support Center will provide oversight of product design and development, to include engineering support, contract actions and test activities throughout the fiscal year. Will facilitate approximately six test events at various government laboratories to test prototype units of the improved fire control		0.053 0	0.000	1.995

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army							DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>			PROJECT S64: <i>Common Remotely Operated Wpn Sys (CROWS)</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2012	FY 2013	FY 2014		
unit processor and system slip ring, in order to quantify performance with the most current sensors and effectors. Will manage the life cycle of the program to include future acquisition and sustainment plans.											
Accomplishments/Planned Programs Subtotals							0.173	0.000	14.864		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• CROWS (G04700, W&TCV): W&TCV, G04700, CROWS	14.890	56.725	56.580		56.580	56.911	56.945	57.898	59.250	0.000	359.199
Remarks											
D. Acquisition Strategy											
The Common Remotely Operated Weapon Station (CROWS) uses a single-step acquisition approach in its strategy. The CROWS achieved Type Classification Standard in 3QFY11, Full Materiel Release in 3QFY12, with Full Rate Production scheduled 4QFY12, in accordance with the Capability Production Document (CPD) Increment One (1), as clarified in June 2009.											
The program objective is to continue developing, improving and fielding the CROWS on Up-Armored High Mobility Multipurpose Wheeled Vehicles (UA-HMMWV), M1A2 Abrams Main Battle Tank and other combat vehicles to the Army Acquisition Objective (AAO) in accordance with the Basis of Issue Plan (BOIP). In addition, the program supports new and emerging urgent requirements like the integration of the Mine Resistant Ambush Protected (MRAP) family of vehicles, Ground Combat Vehicles, Joint Lightweight Tactical Vehicles (JLTV) and fixed site mounting systems.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>						PROJECT S64: <i>Common Remotely Operated Wpn Sys (CROWS)</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	MIPR	PM Soldier Weapons:Picatinny Arsenal, NJ	0.000	0.053	Sep 2012	-		1.012	Jan 2014	-		1.012	Continuing	Continuing	0.000
User Community/ Proponency	MIPR	Maneuver Support Center of Excellence (MSCoE):FT Leonard Wood, MO	0.000	-		-		0.983	Jan 2014	-		0.983	Continuing	Continuing	0.000
Subtotal			0.000	0.053		0.000		1.995		0.000		1.995			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Design, Develop and Fabricate	SS/ FFPLOE	TBD Contractor:TBD	0.000	-		-		9.867	Jun 2014	-		9.867	Continuing	Continuing	0.000
Subtotal			0.000	0.000		0.000		9.867		0.000		9.867			0.000
Remarks Contractor for this effort will be the winner of the full and open competitive contract, scheduled for award 4QFY2012 for production and sustainment.															
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	MIPR	ARDEC:Picatinny Arsenal, NJ	0.000	0.103	Sep 2012	-		2.150	Jan 2014	-		2.150	Continuing	Continuing	0.000
Subtotal			0.000	0.103		0.000		2.150		0.000		2.150			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>							R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>					PROJECT S64: <i>Common Remotely Operated Wpn Sys (CROWS)</i>			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test Planning and Execution	Various	Various:Multiple	0.000	0.017	Oct 2012	-		0.852	Jan 2014	-		0.852		Continuing	Continuing	0.000
Subtotal			0.000	0.017		0.000		0.852		0.000		0.852				0.000

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.173	0.000	14.864	0.000	14.864			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		
			PROJECT S64: <i>Common Remotely Operated Wpn Sys (CROWS)</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Design, Develop & Fabricate																												
Engineering Development																												
Engineering Development - Increased Elevation																												
Development Test & Evaluation																												
Development Test & Evaluation - Increased Elevation																												
Program Management																												
Program Management - Increased Elevation																												
Milestone C																												
Low Rate Initial Production																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S64: <i>Common Remotely Operated Wpn Sys (CROWS)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design, Develop & Fabricate	3	2014	2	2018
Engineering Development	2	2014	2	2018
Engineering Development - Increased Elevation	4	2012	2	2013
Development Test & Evaluation	2	2014	2	2018
Development Test & Evaluation - Increased Elevation	1	2013	1	2013
Program Management	2	2014	4	2018
Program Management - Increased Elevation	4	2012	2	2013
Milestone C	2	2018	2	2018
Low Rate Initial Production	2	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S70: Personnel Recovery Support System (PRSS)			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S70: Personnel Recovery Support System (PRSS)	-	2.965	4.517	1.132	-	1.132	1.104	1.141	1.193	1.193	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note Not applicable for this item.												
A. Mission Description and Budget Item Justification This project provides the continued maturation of PRSS products that enable operations to report and locate isolated, missing, detained or captured Soldiers. The PRSS program consists of the enhancement of existing products to ensure continued successful interoperability within the relevant theater of operations, and the demonstration of a prototype encrypted Personal Reporting Device (PRD) that operates over a secure architecture.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Development of Personnel Recovery Support System (PRSS) Articles: Description: Integration, evaluation, testing, and qualification of PRSS products to ensure continued successful interoperability within the relevant theater of operation, and development of a PRD that operates over a secure architecture. FY 2012 Accomplishments: Successfully completed developmental, operational, and OCONUS testing and validated PRSS system enhancements. Developed next-generation PRSS 1b software, firmware, and waveform and began developmental testing of prototype PRD and receiver. FY 2013 Plans: Complete development of prototype PRD and receiver and conduct PRSS 1b system level test and evaluation, including system integration. FY 2014 Plans: Complete PRSS 1b system level test and evaluation, to include end-to-end network testing and operational testing.									2.965	4.517	1.132	
									0	0		
Accomplishments/Planned Programs Subtotals									2.965	4.517	1.132	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT S70: Personnel Recovery Support System (PRSS)			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• Personnel Recovery Support Sys OPA: Other Procurement, Army, G01101-Personnel Recovery Support System (PRSS)	8.509	11.222	26.526		26.526	25.938	17.369	11.793	9.187	Continuing	Continuing
• Aircrew Integrated Systems APA: Aircraft Procurement, Army AZ3110-ACIS includes funding of Personnel Recovery Support Equipment aircraft mods	62.746	77.381	45.841		45.841					0.000	185.968
Remarks											
Aircraft Procurement, Army SSN of AZ3110 - ACIS primarily includes the funding of traditional Aircrew Integrated Systems efforts including Air Warrior and Air Soldier System requirements as well as support Personnel Recovery Support System (PRSS) platform interoperability production program.											
D. Acquisition Strategy											
Execute PRSS program development effort for performance optimization through contracts with industry and Military Interdepartmental Purchase Requests to other Governmental agencies. Perform continuing development and test of new waveforms on an annual basis to mitigate potential security compromises to the PRSS system.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons						PROJECT S70: Personnel Recovery Support System (PRSS)			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allot	Various Government:Huntsville, Alabama	0.243	0.338		0.343		0.285		-		0.285	Continuing	Continuing	Continuing
Subtotal			0.243	0.338		0.343		0.285		0.000		0.285			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Personnel Recovery Support System Development Systems Engineering	SS/FP	Various:Product Development	1.451	1.844		3.347		0.310		-		0.310	Continuing	Continuing	Continuing
Subtotal			1.451	1.844		3.347		0.310		0.000		0.310			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	RO	Various Organizations:Various Locations	0.389	0.583		0.452		0.337		-		0.337	Continuing	Continuing	Continuing
Subtotal			0.389	0.583		0.452		0.337		0.000		0.337			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	RO	Various Organizations:Various Locations	0.400	0.200		0.375		0.200		-		0.200	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT S70: <i>Personnel Recovery Support System (PRSS)</i>				

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost		Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.400	0.200		0.375		0.200		0.000		0.200				
Project Cost Totals			2.483	2.965		4.517		1.132		0.000		1.132				

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE		
2040: Research, Development, Test & Evaluation, Army			PE 0604601A: Infantry Support Weapons		
BA 5: System Development & Demonstration (SDD)			PROJECT		
			S70: Personnel Recovery Support System (PRSS)		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRSS Upgrades & Adaptations to New Platforms																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S70: <i>Personnel Recovery Support System (PRSS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
PRSS Upgrades & Adaptations to New Platforms	1	2015	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons				PROJECT VS5: Soldier Protective Equipment			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
VS5: Soldier Protective Equipment	-	3.859	11.942	20.043	-	20.043	13.173	11.682	8.806	7.806	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This funding supports the System Development and Demonstration (SDD) phase of Engineering and Manufacturing Development (EMD) tasks related to Individual Soldier Ballistic Protection. It funds system integration and formal Developmental Testing/Operational Testing (DT/OT) of production representative systems leveraging advancements in technology to continue incremental improvements (sizing, functionality, heat management and reduction of weight/bulk) of body armor, and the transition of new technologies into production as they mature. It funds efforts to assess head protection component technologies to mitigate the effects of ballistic/blast and non-ballistic impact (crash) threats. It also funds effort to increase eyewear ballistic/blast protection, and transition products to production.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Soldier Protective Equipment									3.859	11.942	20.043	
									Articles: 0	0		
Description: Funding line established in FY12. Effort was previously executed in Program Element 0604601 S60. Effort is to increase the Warfighter lethality and mobility, by optimizing Soldier protection while effectively managing all life cycle aspect of Personal Protective Equipment (PPE).												
FY 2012 Accomplishments: Completed incremental enhancements to the Improved Outer Tactical Vest (IOTV) (soft armor subsystem) of Interceptor Body Armor (IBA) system and transitioned to production in FY12. Design enhancements included a more robust quick-release technology for improved functionality. Additionally the IOTV (Gen III) included other design features to improve comfort, mobility and functionality, especially to female and small statured Soldiers. Continued efforts to evaluate and test Family of Concealable Body Armor (FoCBA) system. Awarded FoCBA Increment 1 prototype contracts in March 12, and completed Limited User Evaluations and initiated system characterization testing in August 12. Initiated eyewear characterization testing (laser testing, penetration testing, fielding of view/area of coverage testing) to support FY13 Authorized Protective Eyewear List (APEL) and Qualified Products List (QPL) requalification. Initiated and completed the protective eyewear head form development. Head form will support ballistic testing of eyewear development and production acceptance testing. Initiated and completed the Enhanced Combat Helmet (ECH) qualification testing. Obtained a Type Classified Limited Procurement decision and transitioned the ECH												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army							DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons			PROJECT VS5: Soldier Protective Equipment				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2012	FY 2013	FY 2014		
to production (OMA, 121017, Central Funding & Fielding) in June 12. Initiated and conducted Soldier Protection Benchmark Evaluation (SPBE), Phase I.											
FY 2013 Plans: Complete System Capability & Manufacturing Process Demonstration (SC&MPD) phase for the Family of Concealable Body Armor (FoCBA) in 1Q FY13. Obtain a Milestone C Decision Type Classification Standard and transition to production (OMA, 121017, Central Funding & Fielding) for the FOCBA in 2Q FY13. Obtain 1QFY13 Materiel Development Decision (MDD) and initiate System Capability & Manufacturing Process Demonstration (SC&MPD) phase for the Soldier Protective System (SPS). FY13 efforts will focus on contract awards to support the integration of SPS Vital Torso, Extremity, Torso and Integrated head, face and eye protective subsystems. Additional FY13 efforts will concentrate the integration of more mature Vital Torso, soft armor (torso and extremities) subsystems to enhance SPS form, fit and comfort for female and small statured Soldiers. Will award SPS prototyping contracts, conduct preliminary design reviews, and initiate Characterization Testing including the Phase II Soldier Protective Benchmark Evaluation and Soldier System Integration Exercise through 1Q FY14. Initiate APEL/QPL requalification program (including Universal Prescription Lens Carrier) in 1Q FY13 and complete APEL/QPL requalification by 1Q FY14											
FY 2014 Plans: Initiate and complete Phase II Soldier Protective Benchmark Evaluation and Soldier System Integration Exercises in 1Q FY14. Complete APEL/QPL requalification program (including Universal Prescription Lens Carrier) by 1Q FY14. Continue Soldier Protective System (SPS) System Capability & Manufacturing Process Demonstration (SC&MPD) efforts. FY14 efforts will focus on the completion of Characterization Testing by 1QFY14, and awarding contract options to support continued refinement and integration (build-test-fix-build) of the SPS subsystems (Vital Torso, Torso Protection, Head Protection, Extremity Protection and Integrated Soldier Sensor Suite transitioned from Integrated System Design/VS 4). Conduct Critical Design Reviews and award contract options for formal Developmental Test (DT) hardware, Human Factors and System-Level test items. Conduct DT in 4Q FY14 through 1Q FY15. Support development of the SPS Capability Production Document and prepare for a Milestone C Decision (Type Classification - Low Rate Initial Production (OMA, 121017, Central Funding and Fielding)) by 2Q FY15.											
Accomplishments/Planned Programs Subtotals							3.859	11.942	20.043		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• VS4 6.4 RDTE: RDTE, 0603827A.VS4, Soldier Protective Equipment	1.786	14.984	3.688		3.688	7.243	4.756	6.270	7.150	0.000	45.877

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>			PROJECT VS5: <i>Soldier Protective Equipment</i>			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OMA: OMA, 121017, Central Funding & Fielding	67.248	73.639	103.484		103.484	161.773	165.014	217.679	205.582	0.000	994.419
Remarks											
D. Acquisition Strategy											
Acquisition strategies vary in methods to include the following: (1) Low Risk Enhancements in 12-24 months or less to integrate, validate and make a production decision; (2) modernization (through spares) improvements which require limited RDT&E funding and are completed in 24-48 months and inserted as engineering changes to existing or pending production contracts; and (3) fully integrated development that requires substantial RDT&E funding and is completed in four years or more.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons						PROJECT VS5: Soldier Protective Equipment			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SETA Support	Various	PM SPE:various	0.000	0.200		0.300		0.400		-		0.400	Continuing	Continuing	0.000
Subtotal			0.000	0.200		0.300		0.400		0.000		0.400			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev/Integ Contracts	Various	Various:Various	0.000	1.276		8.714		15.197		-		15.197	Continuing	Continuing	0.000
Prod Sys Engineering Spt	MIPR	various:various	0.000	0.669		0.928		1.096		-		1.096	Continuing	Continuing	0.000
Subtotal			0.000	1.945		9.642		16.293		0.000		16.293			0.000
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various:Various	0.000	0.600		0.600		0.600		-		0.600	0.000	1.800	0.000
Subtotal			0.000	0.600		0.600		0.600		0.000		0.600	0.000	1.800	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DT/Ballistic & OT Test Costs	MIPR	Various DTC & OTC:Various DTC & OTC	0.000	1.114		1.400		2.750		-		2.750	Continuing	Continuing	0.000
Subtotal			0.000	1.114		1.400		2.750		0.000		2.750			0.000
Project Cost Totals			0.000	3.859		11.942		20.043		0.000		20.043			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army							DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601A: Infantry Support Weapons			PROJECT VS5: Soldier Protective Equipment				
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract		
Remarks											

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		
			PROJECT VS5: <i>Soldier Protective Equipment</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete development of Family of Concealable Body Army (FoCBA)																												
FoCBA Milestone C Decision																												
Initiate/complete APEL/QPL requalification Program																												
Soldier Protection Bench Mark Evaluation & Sldr Sys Integr Exercise																												
Soldier Protection System (SPS) Material Development Decision (MDD)																												
SPS Milestone B Decision																												
SPS System Capability & Manufacturing Process Dev (SC&MPD) phase of EMD																												
Award SPS component/subsystem contracts																												
SPS Critical Design Review (CDR)																												
Conduct Initial Characterization Testing (ballistic & non-dest eval)																												
Award SPS components/subsystem contract options																												
Conduct Developmental Test (ballistic & non dest eval)																												
SPS Milestone C Decision																												
Initiate SPS Incr/SC&MPD Improvements thru FY19																												
SPS system testing (ballistic & non ballistic; IOT&E) thru FY19																												
SPS CDRs/PRRs - Transition mature subsystems to production FY15																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army																				DATE: April 2013																			
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE										PROJECT																			
2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)										PE 0604601A: Infantry Support Weapons										VS5: Soldier Protective Equipment																			
										FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018					
										1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
SPS CDRs/PRRs - Transition mature subsystems to production FY16																																							
SPS CDRs/PRRs - Transition mature subsystems to production FY17																																							
SPS CDRs/PRRs - Transition mature subsystems to production FY18																																							

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT VS5: <i>Soldier Protective Equipment</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Complete development of Family of Concealable Body Army (FoCBA)	1	2013	1	2013
FoCBA Milestone C Decision	2	2013	2	2013
Initiate/complete APEL/QPL requalification Program	1	2013	1	2014
Soldier Protection Bench Mark Evaluation & Sldr Sys Integr Exercise	4	2013	1	2014
Soldier Protection System (SPS) Material Development Decision (MDD)	2	2013	2	2013
SPS Milestone B Decision	2	2013	2	2013
SPS System Capability & Manufacturing Process Dev (SC&MPD) phase of EMD	2	2013	1	2015
Award SPS component/subsystem contracts	3	2014	3	2014
SPS Critical Design Review (CDR)	2	2014	2	2014
Conduct Initial Characterization Testing (ballistic & non-dest eval)	1	2014	1	2015
Award SPS components/subsystem contract options	3	2014	3	2014
Conduct Developmental Test (ballistic & non dest eval)	4	2014	1	2015
SPS Milestone C Decision	2	2015	2	2015
Initiate SPS Incr/SC&MPD Improvements thru FY19	3	2015	4	2018
SPS system testing (ballistic & non ballistic; IOT&E) thru FY19	1	2016	4	2018
SPS CDRs/PRRs - Transition mature subsystems to production FY15	3	2015	3	2015
SPS CDRs/PRRs - Transition mature subsystems to production FY16	3	2016	3	2016
SPS CDRs/PRRs - Transition mature subsystems to production FY17	3	2017	3	2017
SPS CDRs/PRRs - Transition mature subsystems to production FY18	3	2018	3	2018