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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	30.793	14.152	6.830	-	6.830	23.405	20.329	17.478	19.721	Continuing	Continuing
S51: Aircrew Integrated Sys Ad	-	0.141	0.164	0.161	-	0.161	0.153	0.158	0.155	0.200	Continuing	Continuing
S52: Soldier Support Equipment - Ad	-	4.510	0.410	0.845	-	0.845	-	-	-	-	-	5.765
S53: Clothing And Equipment	-	7.096	5.634	1.555	-	1.555	9.364	8.608	7.272	7.467	Continuing	Continuing
S54: Small Arms Improvement	-	4.533	4.258	1.579	-	1.579	8.441	6.296	5.624	7.613	Continuing	Continuing
VS4: Soldier Protective Equipment	-	14.513	3.686	2.690	-	2.690	5.447	5.267	4.427	4.441	-	40.471
# The FY 2015 OCO Request will be submitted at a later date.												
Note Change Summary Explanation: Fiscal Year 2012: Program Increase of \$6.087 million to Project S53 for T11/C17 Drop Test and Program Decrease of \$0.601 million to higher priority Army efforts. Fiscal Year 2014: Program Decreases of \$2.304 million to Project S52 Soldier Support Equipment AD, \$1.585 million to Project S53, \$1.172 million to Project S54 and \$7.895 million to Project VS4 Soldier Protective Equipment were realigned to higher priority Army efforts. Fiscal Year 2015: Program Decreases to \$0.845 million to Project S52 Solder Support Equipment AD.												
A. Mission Description and Budget Item Justification This Program Element (PE) for Advanced Component Development and Prototypes manages the Soldier as a system in order to increase combat effectiveness, test and deliver tangible products that save Soldier's lives, and improve Soldier's quality of life. It evaluates, develops, and tests emerging technologies and critical Soldier support systems to reduce technology risk. Project S49 funding (Ground Soldier System) The Nett Warrior (NW) program leverages commercial smart devices and secure Army tactical radios to provide the dismounted leader an integrated mission command and situational awareness system for use during combat operations. Project S51 funding (Aircrew Integrated Systems) supports component development and prototyping of critical Soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.												

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Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 Program Element (Number/Name) PE 0603827A I Soldier Systems - Advanced Development				
Project S52 funding (Soldier Support Equipment) supports design, manufacture and testing/evaluation of the Spark Gap (SG)-Shock Tube Initiator program as well as develop a technical data package. This funding will also support the preliminary testing of prototype hardware to begin any necessary modifications of design for the VBOT (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool) program.						
Project S53 funding (Clothing and Equipment) supports development of state-of-the-art technology to improve tactical and non-tactical clothing and individual equipment to enhance the lethality, survivability, and mobility of the individual Soldier.						
Project S54 funding (Small Arms Improvement) provides funds to develop, demonstrate and evaluate emerging technology for integration of systems, subcomponents and prototypes designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability for current and future small arms weapon systems and ammunition.						
Project VS4 funding (Soldier Protective Equipment) supports efforts to evaluate integrated technologies and representative or prototype systems that help expedite Individual Soldier Ballistic Protection technology transition from the laboratory to operational use.						
B. Program Change Summary (\$ in Millions)		FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget		32.050	14.159	23.133	-	23.133
Current President's Budget		30.793	14.152	6.830	-	6.830
Total Adjustments		-1.257	-0.007	-16.303	-	-16.303
• Congressional General Reductions		-0.398	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-0.131	-			
• Adjustments to Budget Years		-	-	-5.459	-	-5.459
• Other Adjustments 1		-0.728	-0.007	-10.844	-	-10.844

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S51 / Aircrew Integrated Sys Ad			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S51: Aircrew Integrated Sys Ad	-	0.141	0.164	0.161	-	0.161	0.153	0.158	0.155	0.200	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This project supports the Advanced Component Development and Prototyping of select Air Soldier System (Air SS) technologies. The Air SS provides improved safety, survivability, and human performance that amplifies the Warfighter's effectiveness and facilitates full-spectrum dominance of Army aircraft. 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 member life support equipment. The Air SS follows an evolutionary acquisition approach that integrates mature technologies to build to the full capability. Air SS reduces overall weight and bulk of aircrew equipment, increases situational awareness, and enhances aircrew mobility. This funding provides advanced development for the Air SS in technology areas supporting improved environmental cooling, integrated power, wireless personal area networks, lightweight protective clothing, and miniaturized communication devices.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Aircrew Integrated Systems (ACIS) Advanced Development									0.141	0.164	0.161	
									Articles: -	-	-	
Description: Advanced Component Development and Prototyping (ACDP) of critical aircrew support systems technology improvements and Advanced Development (AD) and risk reduction efforts required for transition into the Engineering Manufacturing Development (EMD) phase.												
FY 2013 Accomplishments: Funded laboratories to monitor and influence Air SS technologies to include wireless personal area network technologies and lightweight protective clothing materials for transition into the EMD phase.												
FY 2014 Plans: Continue advanced component development of Air Soldier System technology improvements and advanced development effort transition to engineering development including advanced helmet mounted display technologies and miniaturized communication devices.												
FY 2015 Plans:												

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Appropriation/Budget Activity 2040 / 4				R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>				Project (Number/Name) S51 / <i>Aircrew Integrated Sys Ad</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2013	FY 2014	FY 2015
Fund laboratories to monitor and influence Air SS technologies to include advanced wide field of view/high resolution helmet mounted display technologies and miniaturized communication devices for transition into Air SS preplanned product improvements EMD phase.												
Accomplishments/Planned Programs Subtotals										0.141	0.164	0.161
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
• ACIS Engineering Development: <i>RDTE, A PE 0604601A PROJ S61-SDD</i>	10.178	14.049	1.742	-	1.742	3.935	3.838	3.894	3.963	Continuing	Continuing	
• Aircrew Integrated Systems: <i>Aircraft Procurement, Army SSN AZ3110 - ACIS</i>	71.408	45.841	48.081	-	48.081	47.435	47.064	46.605	47.795	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
The Air SS follows an evolutionary acquisition approach which focuses on reducing weight and bulk while integrating capabilities including optimized survival equipment; an integrated Soldier-worn electronics suite; integrated wireless aircraft and survival communications capability; a digital day/night heads-up display for all Army aircraft platforms and reduced clothing layers with no loss of thermal protection. These funds resource various government agencies to transition critical technologies/products from the Advanced Component Development to the Engineering Manufacturing Development phase.												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S51 / Aircrew Integrated Sys Ad					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	RO	Various Government : Huntsville, AL and Natick, MA	2.459	0.141		0.164		0.161		-		0.161	Continuing	Continuing	Continuing
Subtotal			2.459	0.141		0.164		0.161		-		0.161	-	-	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.459	0.141		0.164		0.161		-		0.161	-	-	-
Remarks															

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S52 / Soldier Support Equipment - Ad			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S52: Soldier Support Equipment - Ad	-	4.510	0.410	0.845	-	0.845	-	-	-	-	-	5.765
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
The Spark Gap (SG)-Shock Tube Initiator is a system/adaptor that allows the Explosive Ordnance Detection (EOD) user to perform wireless/un-tethered standoff initiation of the Army shock tube. The adapter will accommodate shock tube that is cut in the field. The adapter will be the primary interface between Remote Activation Munitions System (RAMS) or similar firing device receivers and current shock tube used by U.S forces. The adapter must not possess any stored energy when emplace or enabled and be a reusable device. The adapter will provides the EOD technician means of rapidly emplacing demo to neutralize Improvised Explosive Devices (IEDs) and deliberate explosive devices reducing soldiers' time on target, and combat load.												
The Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool (VBOT) will be a factory loaded explosive tool used by EOD units to defeat suspected VBIEDs while reducing likelihood of collateral damage caused by fire. The program will modify a government-off-the-shelf design to meet current requirements and qualify that system for fielding. This Program was directed by the Vice Chief of Staff of the Army via the Capability Development for Rapid Transition process as a follow on to the urgently fielded capability called the VBIED Modular Disruption System (VMODS). VMODS was urgently fielded to replace a previous urgent fielding of MAXI-CANDLE which was no longer producible due to obsolete materials.												
The Gunshot Detection System (GDS) was identified by the Vice Chief of Staff of the Army for insertion into the Capabilities Development for Rapid Transition (CDRT) process. A Capabilities Production Document (CPD) was approved on 13 Feb 2009. The Active Protection System (APS)/Hostile Fire Detection (HFD) program intends to build off the Gunshot Detection System capabilities, and include additional vehicle threats and countermeasures.												
The FY 2015 Base funding in the amount of \$0.845 million will be in support of the Spark Gap (SG)-Shock Tube Initiator program and the VBOT (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool)programs.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Engineering Documentation for GDS									2.020	0.410	-	
									Articles: -	-	-	
Description: Development of required engineering documentation for this Program of Record (POR) and associated Program Management Office (PMO) support.												
FY 2013 Accomplishments:												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014	
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>	Project (Number/Name) S52 / <i>Soldier Support Equipment - Ad</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014
The FY2013 funds will provide for Performance Specification and Interface Control Documentation..			
FY 2014 Plans: This will provide for performance specification and analysis in support of the Capability Development Document (CDD) for Active Protection System (APS) / Hostile Fire Detection (HFD) requirements..			
Title: Engineering Services and Test Support for GDS		2.490	-
Articles:		-	-
Description: Perform engineering analysis and provide test support to Technology Readiness Assessment (TRA).			
FY 2013 Accomplishments: The FY2013 funds will be used to test Electro-Optical systems and Engineering Services.			
Title: Engineering Documentation for SG-Shock Tube Initiator		-	-
Description: Develop and prepare documentation for MDD: Spark Gap (SG)-Shock Tube Initiator			0.423
FY 2015 Plans: Develop and prepare documentation for MDD: Spark Gap (SG)-Shock Tube Initiator			
Title: Engineering Documentation for VBOT		-	-
Description: Develop and prepare documentation for MDD: (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool).			0.422
FY 2015 Plans: Develop and prepare documentation for MDD: (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool).			
Accomplishments/Planned Programs Subtotals		4.510	0.410
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy Strategy is under development and will be approved by the MDA once complete.			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development	Project (Number/Name) S52 / Soldier Support Equipment - Ad
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S52 / Soldier Support Equipment - Ad					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 / Milestone Preparation for GDS	Various	PM FLIR : Ft. Belvoir, VA	0.947	0.449		-		-		-		-	Continuing	Continuing	Continuing
Engineering Documentation for SG-Shock Tube Initiator	MIPR	PM CCS : Picatinny Ar, NJ	0.000	-		-		0.088		-		0.088	-	0.088	-
Engineering Documentation for VBOT	MIPR	PM CCS : Picatinny Ar, NJ	0.000	-		-		0.087		-		0.087	-	0.087	-
Subtotal			0.947	0.449		-		0.175		-		0.175	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Characterization Study for GDS	C/TBD	Night Vistion Electronics Sensors Directorate (NVESD) : FT Belvoir VA	1.939	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering Documentation for GDS	MIPR	PM Ground Sensors : Ft. Belvoir, VA	0.000	-		0.410		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.939	-		0.410		-		-		-	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Documentation for GDS	C/TBD	TBD : TBD	1.749	2.020		-		-		-		-	Continuing	Continuing	Continuing
Engineering Services and Test Support for GDS	C/TBD	TBD : TBD	1.276	2.041		-		-		-		-	-	3.317	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army													Date: March 2014		
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>				Project (Number/Name) S52 / <i>Soldier Support Equipment - Ad</i>					

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Documentation for SG-Shock Tube Initiator	MIPR	ARDEC : Picatinny Ar, NJ	0.000	-		-		0.335		-		0.335	-	0.335	-
Engineering Documentation for VBOT	MIPR	ARDEC : Picatinny Ar, NJ	0.000	-		-		0.335		-		0.335	-	0.335	-
Subtotal			3.025	4.061		-		0.670		-		0.670	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		5.911	4.510		0.410		0.845	-		0.845	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 4		R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>		Project (Number/Name) S52 / <i>Soldier Support Equipment - Ad</i>	

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
System Characterization Study for GDS																												
Engineering Services and Test Support for GDS																												
Engineering Documentation for GDS																												
MDD for SG-Shock Tube Initiator																												
MDD for VBOT																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development	Project (Number/Name) S52 / Soldier Support Equipment - Ad	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Characterization Study for GDS	2	2012	2	2013
Engineering Services and Test Support for GDS	1	2012	4	2013
Engineering Documentation for GDS	2	2013	4	2014
MDD for SG-Shock Tube Initiator	4	2015	4	2015
MDD for VBOT	4	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S53 / Clothing And Equipment			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S53: Clothing And Equipment	-	7.096	5.634	1.555	-	1.555	9.364	8.608	7.272	7.467	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This funding supports efforts to evaluate and integrate technologies and representative or prototype systems that help expedite Soldier uniform and clothing technology transition from the laboratory to operational use. Efforts focus on proving out commonality across as broad a spectrum of users as possible to provide a modular, integrated uniform/clothing system from skin out and head-to-toe. It funds efforts to investigate new technologies and domestically available fabrics with Flame Resistance, moisture wicking and insect protection and camouflage technologies. New technologies are investigated to monitor health and improve Soldier survivability, reduce weight, and improve affordability, mobility and comfort in combat and training/administrative environments.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Soldier Uniforms and Clothing Articles: Description: Develop and provide superior and sustainable integrated clothing for the Soldier in a rapidly changing global environment. FY 2013 Accomplishments: Matured new technology to reduce Soldier load and weight. Improved concealment through integration of new fabric technologies to manage infrared signature. Will continue to test improvements in permethrin treatment and Flame Resistance (FR) capabilities for use in combat uniforms. Conducted initial evaluation of Military Free Fall (MFF) parachutist Extreme Environmental Protective Kit (gloves and face protection). FY 2014 Plans: Will continue to fund maturing of new technology to reduce Soldier load and weight. Will integrate new technologies and procure prototypes for environmental protection for MFF parachutists caused by higher altitudes and longer duration High Altitude, High Opening (HAHO) MFF operations. Will procure prototypes, conduct technical testing and cold weather chamber testing. Will continue to test improvements in Permethrin treatment and Flame Resistance (FR) capabilities for use in combat uniforms to adapt to improvements in textile technology. Initiated joint OSD/USMC/Army/ funded effort to develop and test spectral mitigation enhancements to combat uniforms. FY 2015 Plans:									3.907	3.119	1.555	
									-	-	-	

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Appropriation/Budget Activity 2040 / 4				R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S53 / Clothing And Equipment			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015
Tactical/Personal Clothing. Continue to develop alternate vector protection with lower toxicity for all combat uniform fabrics (i.e., Army Combat Shirt, Army Combat Pants, FR Army Combat Uniform). Continue to develop more durable FR fabrics for use in combat uniforms to improve service life of tactical uniforms.											
Title: Individual Equipment									3.189	2.515	-
Articles:									-	-	-
Description: Develop and provide superior and sustainable integrated individual equipment for the Soldier in a rapidly changing global environment.											
FY 2013 Accomplishments: Matured new technology to reduce Soldier load and weight.											
FY 2014 Plans: Conduct Limited User Evaluation and laboratory purification efficacy testing of the Individual Water treatment Device (Phase I, Filtration) after transition to MS B in 4QFY14.											
Obtain Material Development Decision (MDD) for Parachute Navigational System (PARANAVSYS), further development of Government owned software to be evaluated at Development Testing (DT) 1, DT 2 and Operational Testing (OT), if applicable											
Accomplishments/Planned Programs Subtotals									7.096	5.634	1.555
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0604601A S60: RDTE, 0604601A.S60, Clothing and Equipment	4.942	5.447	2.519	-	2.519	4.612	6.967	10.819	10.844	Continuing	Continuing
• 121017 CFF OMA: OMA, 121017, Central Funding and Fielding	51.773	103.460	127.085	-	127.085	126.907	179.862	172.351	188.833	Continuing	Continuing
• MA7801 OPA: OPA, MA7801, Advanced Tactical Parachute System	32.765	37.118	26.322	-	26.322	26.515	31.354	46.185	48.860	Continuing	Continuing
Remarks											

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D. Acquisition Strategy Programs pursue normal transition through Engineering and Manufacturing Development (EMD) to production. This Project continues to exercise competitively awarded contracts using best value source selection procedures.		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S53 / Clothing And Equipment					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	TBD	PM SPIE : Ft. Belvoir, VA	12.284	1.007		0.997		-		-		-	Continuing	Continuing	Continuing
Subtotal			12.284	1.007		0.997		-		-		-	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	NSRDEC : Natick, MA	12.278	1.034		1.048		0.200		-		0.200	Continuing	Continuing	Continuing
Development Contracts	C/TBD	Various : Various	21.917	3.155		3.167		1.100		-		1.100	Continuing	Continuing	Continuing
Subtotal			34.195	4.189		4.215		1.300		-		1.300	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	6.177	0.500		0.400		-		-		-	Continuing	Continuing	Continuing
Subtotal			6.177	0.500		0.400		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing Costs	TBD	various : Various	18.900	1.400		0.022		0.255		-		0.255	Continuing	Continuing	Continuing
Subtotal			18.900	1.400		0.022		0.255		-		0.255	-	-	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			71.556	7.096		5.634		1.555		-		1.555	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army							Date: March 2014			
Appropriation/Budget Activity 2040 / 4			R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development			Project (Number/Name) S53 / Clothing And Equipment				
	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 4		R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>		Project (Number/Name) S53 / <i>Clothing And Equipment</i>	

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
UNIFORM CLOTHING																												
Permethrin Testing																												
Flame Resistant Clothing Upgrades																												
Test & Evaluate MFF Environmental Clothing																												
Transition MFF Environmental Clothing to 0604601A S60																												
Improve Signature Mgmt (IR) Eval & Camo in Clothing & Equipment																												
INDIVIDUAL EQUIPMENT																												
IWTD Transition to S60																												
Parachutist Navigation System (PARNAVSYS) Evaluation																												
PARNAVSYS Transition to 0604601A S60																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>	Project (Number/Name) S53 / <i>Clothing And Equipment</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
UNIFORM CLOTHING	1	2008	4	2015
Permethrin Testing	1	2011	4	2018
Flame Resistant Clothing Upgrades	1	2009	4	2018
Test & Evaluate MFF Environmental Clothing	1	2013	2	2016
Transition MFF Environmental Clothing to 0604601A S60	3	2016	3	2016
Improve Signature Mgmt (IR) Eval & Camo in Clothing & Equipment	2	2012	4	2018
INDIVIDUAL EQUIPMENT	1	2009	4	2015
IWTD Transition to S60	4	2014	4	2014
Parachutist Navigation System (PARNAVSYS) Evaluation	2	2014	2	2014
PARNAVSYS Transition to 0604601A S60	3	2013	3	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S54 / Small Arms Improvement			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S54: Small Arms Improvement	-	4.533	4.258	1.579	-	1.579	8.441	6.296	5.624	7.613	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
Note												
New starts in FY 2015 include Additive Manufacturing (3D Printing), Recoil Reduction Mechanisms, Adaptive Lubricious Coatings, and Externally Powered Mounted Machine Gun.												
A. Mission Description and Budget Item Justification												
The Small Arms Improvement Advanced Component Development and Prototypes (ACD&P) program provides funds to mature, demonstrate, test and evaluate emerging technology from Joint Service Small Arms Program (JSSAP), Project 627, Program Element 0603607A, (Budget Activity 3), Defense Advanced Research Projects Agency (DARPA), Department of Energy National Laboratories, Research Development & Engineering Centers (RDECs) and other domestic and foreign sources for small arms weapons systems and technology. Small arms systems include weapons ranging up to 40 millimeter in caliber. Current and future efforts focus on improvements designed to enhance lethality, target acquisition and tracking, fire control, training effectiveness and reliability of weapons to include ammunition when developing and/or evaluating standard and non-standard weapons. Focus areas include the maturing of technology through testing and evaluation of sub-system or system prototypes which demonstrates light weight materials, wear resistant/protective/anti-reflective coatings, observation/situational awareness improvements and equipment enhancements. Benefits include continuous improvements to small arms weapons, fire control equipment, optics, gun barrels, training devices, suppressors, component mounts, weapon mounts, and weapon/ammunition interface.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: New Weapons Articles: Description: Description: Development of new small arms weapons FY 2013 Accomplishments: Acquisition community assisted the United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) in the development of a Lightweight Machine Gun requirement. Developed plan and schedule of Engineering Manufacturing Development (EMD) phase of the Lightweight Machine Gun. FY 2014 Plans:									0.335	1.016	0.400	
									-	-	-	

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development	Project (Number/Name) S54 / Small Arms Improvement		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Acquisition community continue to assist the United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) in the development of Lightweight Machine Gun requirements to include a potential Common Lightweight Automatic Weapon System (CLAWS).				
FY 2015 Plans: Acquisition community to continue to assist the United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) in the development of Lightweight Machine Gun requirements to include a potential Common Lightweight Automatic Weapon System (CLAWS) to include configuration/caliber study. FY 2015 New Start Externally Powered Mounted Machine Gun: Will analyze and evaluate various externally powered weapons for adaptability and performance to be mounted on remote weapon stations.				
Title: Small Arms Weapons Enhancements		0.756	1.892	0.370
Articles:		-	-	-
Description: Enhancements and developments of small arms weapons				
FY 2013 Accomplishments: Conducted weapons studies for small arms weapons and evaluated improved manufacturing technologies. Conducted characterization studies of standard and non-standard weapons. Conducted barrel studies to improve/enhance barrel life. Weapon Evaluation: Tested and evaluated foreign non-standard rifles. Weapons Reliability Study: Transitioned Weapons Reliability program to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5) and performed root cause analysis of weapon stoppages identified in baseline test firing from FY 2012.				
FY 2014 Plans: Continue to test, evaluate and analyze on-going and new activities to enhance small arms weapons including suppressor design/fabrication, recoil reduction methods and use of nanostructure materials. Test and demonstrate system coatings such as protective, water-repellant and lubricious coatings for weapon and optical systems. Based on prior studies continue weapon studies for small arms lethal and non-lethal weapons. Continue to evaluate on-going characterization studies of standard and non-standard weapons. Continue to conduct barrel studies to improve/enhance barrel life and eliminate chrome-lined weapon parts. Continue to conduct barrel twist optimization studies to apply to engineering and manufacturing development of weapon enhancements. Investigate weapon/electro-optics applicability and design for robotic platforms to assist in military missions from intelligence gathering to threat engagement.				
FY 2015 Plans: FY 2015 New Start Additive Manufacturing (3D Printing): Processes will be examined for potential fabrication of weapon components using metal, plastic and composite materials.				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 4		R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>		Project (Number/Name) S54 / <i>Small Arms Improvement</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2013	FY 2014	FY 2015
FY 2015 New Start Recoil Reduction Mechanisms: Methods and techniques will be analyzed and evaluated to mitigate recoil encountered with the use of high performance ammunition. Will continue weapon studies for small arms lethal and non-lethal weapons. Will continue to evaluate on-going characterization studies of standard and non-standard weapons. Will continue to conduct barrel studies to improve/enhance barrel life and eliminate chrome-lined weapon parts. Will monitor contract progress in developing prototype barrel liners. Develop test plan for barrels, conduct testing at Government facility.					
Title: Ammunition Description: Description: Small arms ammunition improvement FY 2014 Plans: Initiate coordination/participation on an ongoing Science &Technology (S&T) effort of guided, extended range small arms projectiles/munitions for observation and target acquisition, and precision munitions with enhanced lethality. Participate in engineering tests to assess effects on weapon and warfighter. Evaluate results of munitions' maneuverability and on-target effects. Initiate coordination/participation in an ongoing S&T effort aimed at using small arms munitions to deploy mini-sensors. FY 2015 Plans: Will continue coordination/participation on an ongoing Science &Technology (S&T) effort of guided, extended range small arms projectiles/munitions for observation and target acquisition, and precision munitions with enhanced lethality. Participate in engineering tests to assess effects on weapon and warfighter. Evaluate results of munitions' maneuverability and on-target effects. Initiate coordination/participation in an ongoing S&T effort aimed at using small arms munitions to deploy mini-sensors.			Articles: - -	0.300 -	0.300 -
Title: Combat Optics Description: Description: Improvement of small arms combat optics FY 2013 Accomplishments: Transitioned the Squad Common Optics initiative to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5) and validated the concept of variable powered optics for multiple small arms platforms. FY 2014 Plans: Continue to perform, evaluate and analyze combat optics and upgrade research and development efforts to mature optic technology such as Dynamic Image Gun Sight Optic and precision optics. Provide engineering support and services to include engineering evaluations, verifications and validation of weapon system performance requirements. Conduct studies, evaluation,			0.216 -	0.100 -	0.050 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014	
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>	Project (Number/Name) S54 / <i>Small Arms Improvement</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014
and testing to include the Mounted Machine Gun Optic (MMO) and anti-reflection coatings, water-repellant coatings, laser protection devices/coatings and hyperspectral/multi-spectral imaging to include laser protection for optics.			
FY 2015 Plans: FY 2015 New Start Adaptive Lubricious Coatings: Will evaluate advanced coatings and film technology for application to optical surfaces for laser protection.			
Title: Fire Control		3.226	0.950
Description: Description: Small arms fire control		-	-
FY 2013 Accomplishments: Integrated Fire Control for Small Arms: Completed Phase II and initiated Phase III to finalize design, fabricate prototypes and conduct test and evaluation. Initiated transition of the Integrated Fire Control for small arms to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5).			
FY 2014 Plans: Evaluate and analyze advance approaches to acquire targets with the use of hyperspectral imaging and assess the effect on current fire control systems to include advanced hyperspectral target acquisition. Test and assess enhanced electro-optics for target detection, acquisition, identification, and projectile/munition guidance as required for extended range projectiles and munitions. Analyze and evaluate precision projectile/trajectory tracking approaches.			
FY 2015 Plans: Will continue to evaluate and analyze advance approaches to acquire targets with the use of hyperspectral imaging and assess the effect on current fire control systems to include advanced hyperspectral target acquisition. Will analyze and evaluate precision projectile tracking approaches including a method to monitor the true projectile flight path to a minimum range of one-mile.			
Title: Research and Analysis		-	-
Description: Research and analysis of small arms			0.100
FY 2015 Plans: Conduct Market Research and Benefit Analysis of ongoing small arms initiatives to refine requirements and identify multiple solution sets. The following programs will be evaluated in FY 2015; Precision Projectile Tracking, Advanced Laser Protection for Optics, and Small Business Innovative Research enhancements.			
Accomplishments/Planned Programs Subtotals		4.533	4.258
			1.579

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>	Project (Number/Name) S54 / <i>Small Arms Improvement</i>	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Small Arms Improvement: <i>RDTE S63, Program Element 0604601A - Infantry Support Weapons</i>	13.201	17.836	4.393	-	4.393	14.294	14.408	14.496	17.805	Continuing	Continuing
• Joint Service Small Arms Program: <i>RDTE 627, Program Element 0603607A - Joint Service Small Arms Program (JSSAP)</i>	5.478	5.027	7.321	-	7.321	5.143	5.875	5.823	5.913	Continuing	Continuing

Remarks

In support of Small Arms Initial Capability and Capability Development Requirements, advanced technology of Small Arms Weapons is transitioned from Joint Service Small Arms Program (JSSAP), Project 627, Program Element 0603607A, (Budget Activity 3) to Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4). After the technology is demonstrated and/or validated the program transitions to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5) for engineering and manufacturing development.

D. Acquisition Strategy

Primary strategy is to study, develop, demonstrate and evaluate emerging technologies that ultimately lead to enhancing/improving the small arms inventory.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) S54 / Small Arms Improvement					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	1.826	0.400	May 2013	0.430	Mar 2014	0.054	Mar 2015	-		0.054	Continuing	Continuing	Continuing
Subtotal			1.826	0.400		0.430		0.054		-		0.054	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	MIPR	Army Research Development Engineering Centers, : Multiple	7.335	1.188	May 2013	0.998	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Subtotal			7.335	1.188		0.998		-		-		-	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	9.080	1.725	Apr 2013	1.600	Mar 2014	0.900	Mar 2015	-		0.900	Continuing	Continuing	Continuing
Subtotal			9.080	1.725		1.600		0.900		-		0.900	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Test and Evaluation Centers, : Multiple	5.157	1.220	Apr 2013	1.230	Mar 2014	0.625	Mar 2015	-		0.625	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014		
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>				Project (Number/Name) S54 / <i>Small Arms Improvement</i>				

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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			5.157	1.220		1.230		0.625		-		0.625	-	-	-

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	23.398	4.533	4.258	1.579	-	1.579	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army										Date: March 2014			
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>					Project (Number/Name) S54 / <i>Small Arms Improvement</i>			

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Caseless/Cased Telescoped Ammo Tech & Support Planning																												
Lightweight Machine Gun																												
Combat Lightweight Automatic Weapon System (CLAWS)																												
Externally Powered Mounted Machine Gun																												
Individual Non-Lethal System																												
Lead Free Barrel Twist/Barrel Studies																												
Additive Manufacturing (3D Printing)																												
Recoil Reduction Mechanisms																												
Non-Standard Weapon Studies																												
Improved Weapons Coating																												
Small Business Innovative Research (SBIR)																												
Weapons Upgrades and Accessories																												
Extended Range/Guided 40mm Munition																												
Advanced Laser Protection for Optics																												
Adaptive Lubricious Coatings																												
Optics Upgrades																												
Integrated Fire Control Small Arms																												
Advanced Hyperspectral Target Acquisition																												
Precision Projectile Tracking																												
Fire Control Upgrades																												
RESEARCH AND ANALYSIS																												
Research and Analysis of Small Arms																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>	Project (Number/Name) S54 / <i>Small Arms Improvement</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Caseless/Cased Telescoped Ammo Tech & Support Planning	3	2011	4	2014
Lightweight Machine Gun	3	2011	4	2014
Combat Lightweight Automatic Weapon System (CLAWS)	1	2014	4	2017
Externally Powered Mounted Machine Gun	1	2015	4	2017
Individual Non-Lethal System	1	2013	1	2016
Lead Free Barrel Twist/Barrel Studies	1	2011	4	2016
Additive Manufacturing (3D Printing)	1	2015	4	2017
Recoil Reduction Mechanisms	1	2015	4	2017
Non-Standard Weapon Studies	4	2011	4	2019
Improved Weapons Coating	1	2012	4	2019
Small Business Innovative Research (SBIR)	1	2015	4	2019
Weapons Upgrades and Accessories	1	2010	4	2019
Extended Range/Guided 40mm Munition	1	2014	4	2017
Advanced Laser Protection for Optics	1	2014	4	2016
Adaptive Lubricious Coatings	1	2015	4	2017
Optics Upgrades	1	2010	4	2019
Integrated Fire Control Small Arms	1	2010	4	2013
Advanced Hyperspectral Target Acquisition	1	2014	4	2016
Precision Projectile Tracking	1	2015	4	2016
Fire Control Upgrades	1	2008	4	2019
RESEARCH AND ANALYSIS	1	2015	4	2015
Research and Analysis of Small Arms	1	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) VS4 / Soldier Protective Equipment			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VS4: Soldier Protective Equipment	-	14.513	3.686	2.690	-	2.690	5.447	5.267	4.427	4.441	-	40.471
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This funding supports the Integrated Systems Design (ISD) phase of Engineering and Manufacturing Development (EMD) efforts to evaluate and integrate technologies and prototype systems that help expedite Individual Soldier Ballistic Protection technology transition from the laboratory to operational use. It continues incremental improvement of body armor to reduce Soldier load and improve comfort/functionality based on operational feedback. It advances efforts to mature manufacturing readiness levels of advanced high performance fibers and composites for next-generation combat helmets, and supports transition to System Capability and Manufacturing Process Demonstration (SC&MPD) phase of EMD. It continues to increase eyewear ballistics/blast protection, and incorporates advancements in laser eye protection, as well as advancements in variable transition lens technology into ballistic goggles and spectacles.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Soldier Protective Equipment									14.513	3.686	2.690	
									Articles: -	-	-	
Description: Funding line established in FY12. Effort was previously executed in Program Element 0603827 S53. Effort is to increase the Warfighter lethality and mobility by optimizing Soldier protection while effectively managing all life cycle aspects of Personal Protective Equipment (PPE).												
FY 2013 Accomplishments:												
Obtained a Materiel Development Decision (MDD) for the Soldier Protection System (SPS) in 1QFY13 and a Milestone B Decision in 3QFY13. Initiated SPS Integrated System Design (ISD) phase, released five SPS subsystems solicitations in 2QFY13. Awarded SPS Integrated Soldier Sensor System (ISSS) and Vital Torso Protection System (VTPS) development contracts in 4QFY13. Completed seven FY12 Broad Agency Announcement (BAA) contracts and awarded eleven new BAA contracts/contract options through 4QFY13 to continue ballistic and blast characterization testing of SPS Vital Torso, Extremity, Torso and Integrated head, face and eye protective subsystems. Continued efforts on reducing weight, and bulk and increasing durability in terms of functional service life. Incorporated the Self-diagnostic Smart Sensor into the Vital Torso Protection (VTP) solicitation released in 2QFY13 and awarded VTPS contract in 4QFY13. Initiated development of alternate shaped ballistic inserts for female and small statured Soldiers and will transition to System Capability & Manufacturing Process Demonstration (SC&MPD/VS 5) through FY15 as the components and subsystems mature. Completed development and accepted delivery of five sets (25 total)												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army							Date: March 2014				
Appropriation/Budget Activity 2040 / 4			R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development			Project (Number/Name) VS4 / Soldier Protective Equipment					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2013	FY 2014	FY 2015		
multi-sized head forms in 3QFY13. Initiated testing to validate and secure accreditation of the multi-sized head forms as an Army standard test apparatus in 4QFY13.											
FY 2014 Plans: Continue FY13 efforts to develop SPS ISSS prototypes for characterization and human factors testing. Continue to refine SPS ISSS design, power management and component integration. Conduct Preliminary Design Review (PDR) of the SPS ISSS test candidates in 2QFY14 for FY15 user evaluation and characterization testing. Conduct CDR of the Vital Torso Protection System Self-diagnostic Smart Sensor and transition to SC&MPD/VS5 to procure prototypes for SPS Phase II characterization and Human Factors testing through 2QFY15. Continue SPS ISD efforts to integrate new and emerging technologies at the component and subsystem level. Initiate transition of mature components and subsystems to SC&MPD/VS 5 through 2QFY15. Continue to evaluate component and subsystem technologies across the PPE portfolio (extremities, torso and vital torso, head and face protection) from emerging ballistic/blast threats. Continue efforts to reduce SPS weight and bulk at the system, subsystem and component level. Continue efforts to increase durability and functional service life of existing personal protective systems. Continue development of ballistic inserts for female and small statured Soldiers and transition to SC&MPD/VS 5 through 2QFY15 as the components and subsystems mature. Complete validation/accreditation of multi-sized head forms and transition to Army and National Institute of Justice (NIJ) certified testing laboratories to support SPS helmet development and acceptance testing in FY15 and beyond.											
FY 2015 Plans: Conduct SPS ISSS limited user evaluations and characterization testing 1-2QFY15 and transition to SC&MPD/VS5 to buy DT/OT test items by 1QFY16. Continue FY14 SPS ISD efforts to integrate new and emerging technologies at the component and subsystem level. Continue to evaluate component and subsystem technologies across the PPE portfolio (extremities, torso and vital torso, head and face protection) from emerging ballistic/blast threats. Continue efforts to reduce SPS weight and bulk at the system, subsystem and component level. Continue efforts to increase durability and functional service life of existing personal protective systems. Continue to transition mature SPS subsystems and components to SC&MPD/VS 5 through 4QFY16.											
Accomplishments/Planned Programs Subtotals							14.513	3.686	2.690		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Soldier Protective Equipment VS5: RDTE, 0604601A.VS5, Soldier Protective Equipment	10.646	20.032	4.833	-	4.833	16.737	13.057	10.329	10.350	-	85.984

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014	
Appropriation/Budget Activity 2040 / 4				R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) VS4 / Soldier Protective Equipment			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Central Funding & Fielding: OMA, 121017, Central Funding & Fielding	51.773	103.460	127.085	-	127.085	126.907	179.862	172.351	188.833	-	950.271
Remarks											
D. Acquisition Strategy											
Programs pursue refinement and integration of new technology at the component and subsystem level, culminating in the transition of mature technologies (TRL 6-7) to EMD and production. This project continues to exercise competitively awarded contracts using best value source selection procedures.											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603827A / Soldier Systems - Advanced Development				Project (Number/Name) VS4 / Soldier Protective Equipment					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	TBD	PM SPE : Ft. Belvoir, VA	0.100	0.100		0.100		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.100	0.100		0.100		-		-		-	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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/Sys Engineering Spt	MIPR	Various : Various	0.375	2.284		1.500		1.000		-		1.000	Continuing	Continuing	-
Dev/Integ Contracts	TBD	Various : various	0.611	9.850		0.686		1.000		-		1.000	Continuing	Continuing	Continuing
Subtotal			0.986	12.134		2.186		2.000		-		2.000	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.300	0.500		0.400		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.300	0.500		0.400		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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/Non-ballistic) Testing	MIPR	Various : Various	0.400	1.779		1.000		0.690		-		0.690	Continuing	Continuing	Continuing
Subtotal			0.400	1.779		1.000		0.690		-		0.690	-	-	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1.786	14.513		3.686		2.690		-		2.690	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army							Date: March 2014		
Appropriation/Budget Activity 2040 / 4			R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>			Project (Number/Name) VS4 / <i>Soldier Protective Equipment</i>			
	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Remarks									

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 4		R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>			Project (Number/Name) VS4 / <i>Soldier Protective Equipment</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Soldier Protection System (SPS) Material Development Decision (MDD)	■																											
Initiate/continue SPS ISSS Subsystem development	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
SPS Milestone B Decision			■	■																								
Award SPS ISSS Subsystem contract				■	■																							
Conduct SPS VTP Smart Sensor PDR -Trans to VS5		■	■																									
SPS ISSS Preliminary Design Reviews							■	■																				
Conduct Testing (ballistic, non-destr eval, HFE) VTP Subsystem					■	■	■	■																				
Conduct SPS ISSS user eval and characterization testing											■	■	■	■														
Conduct CDR & Trans SPS ISSS subsystem to VS5											■	■	■	■														
Continue dev/testing of SPS Comp/Subsys/ enhancements													■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1st Transition of mature SPS Incr 1 components & subsys to VS5																	■	■										
2nd Transition of mature SPS Incr 1 components & subsys to VS5																					■	■						
3rd Transition of mature SPS Incr 1 components & subsys to VS5																										■	■	

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / <i>Soldier Systems - Advanced Development</i>	Project (Number/Name) VS4 / <i>Soldier Protective Equipment</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Soldier Protection System (SPS) Material Development Decision (MDD)	1	2013	1	2013
Initiate/continue SPS ISSS Subsystem development	1	2013	2	2016
SPS Milestone B Decision	3	2013	3	2013
Award SPS ISSS Subsystem contract	4	2013	4	2013
Conduct SPS VTP Smart Sensor PDR -Trans to VS5	2	2013	2	2013
SPS ISSS Preliminary Design Reviews	3	2014	3	2014
Conduct Testing (ballistic, non-destr eval, HFE) VTP Subsystem	1	2014	3	2014
Conduct SPS ISSS user eval and characterization testing	1	2015	2	2015
Conduct CDR & Trans SPS ISSS subsystem to VS5	2	2015	3	2015
Continue dev/testing of SPS Comp/Subsys/enhancements	1	2016	4	2019
1st Transition of mature SPS Incr 1 components & subsys to VS5	3	2017	3	2017
2nd Transition of mature SPS Incr 1 components & subsys to VS5	3	2018	3	2018
3rd Transition of mature SPS Incr 1 components & subsys to VS5	3	2019	3	2019