Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army											Date: February 2015	
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 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	13.448	5.983	22.194	-	22.194	22.910	17.807	19.459	20.455	Continuing	Continuing
S51: *Aircrew Integrated Sys Ad*	-	0.159	0.161	0.152	-	0.152	0.157	0.153	0.198	0.198	Continuing	Continuing
S53: *Clothing And Equipment*	-	5.608	1.555	9.185	-	9.185	8.436	7.108	7.296	7.651	Continuing	Continuing
S54: *Small Arms Improvement*	-	4.117	1.578	7.449	-	7.449	9.089	6.152	7.557	7.643	Continuing	Continuing
VS4: *Soldier Protective Equipment*	-	3.564	2.689	5.408	-	5.408	5.228	4.394	4.408	4.963	Continuing	Continuing

Note

Change Summary Explanation:

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.

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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army	Date: February 2015
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*

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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	14.152	6.830	23.405	-	23.405
Current President's Budget	13.448	5.983	22.194	-	22.194
Total Adjustments	-0.704	-0.847	-1.211	-	-1.211
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.002			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-0.704	-0.845	-1.211	-	-1.211

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
S51: *Aircrew Integrated Sys Ad*	-	0.159	0.161	0.152	-	0.152	0.157	0.153	0.198	0.198	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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 laser eye protection, integrated power, wireless personal area networks, lightweight protective clothing, and tactile situational awareness cueing.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Aircrew Integrated Systems (ACIS) Advanced Development	0.159	0.161	0.152
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 2014 Accomplishments:*** Continued 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:*** 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 phase. ***FY 2016 Plans:*** Continue to resource laboratories to monitor and influence Air SS technologies to include advanced wireless battery charging and wireless personal area networks for transition into Air SS preplanned product improvements phase.			
Accomplishments/Planned Programs Subtotals	0.159	0.161	0.152

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• ACIS Engineering Development: *RDTE, A PE 0604601A PROJ S61-SDD*	13.716	1.742	3.463	-	3.463	3.893	3.880	3.812	1.861	Continuing	Continuing
• Aircrew Integrated Systems: *Aircraft Procurement, Army SSN AZ3110 - ACIS*	45.841	48.081	44.085	-	44.085	48.441	47.380	47.374	50.136	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Air Soldier System (Air SS) employs an incremental acquisition approach to improve the mission effectiveness, survivability, Situational Awareness, and safety of Army aircrews. These funds resource various government agencies and labs in the transition of emerging technologies to the Air SS program, including enchanced battlefield laser eye protection and tactile cueing.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	RO	Various Government : Huntsville, AL and Natick, MA	2.600	0.159		0.161		0.152		-		0.152	Continuing	Continuing	Continuing
		Subtotal	2.600	0.159		0.161		0.152		-		0.152	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.600	0.159		0.161		0.152		-		0.152	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

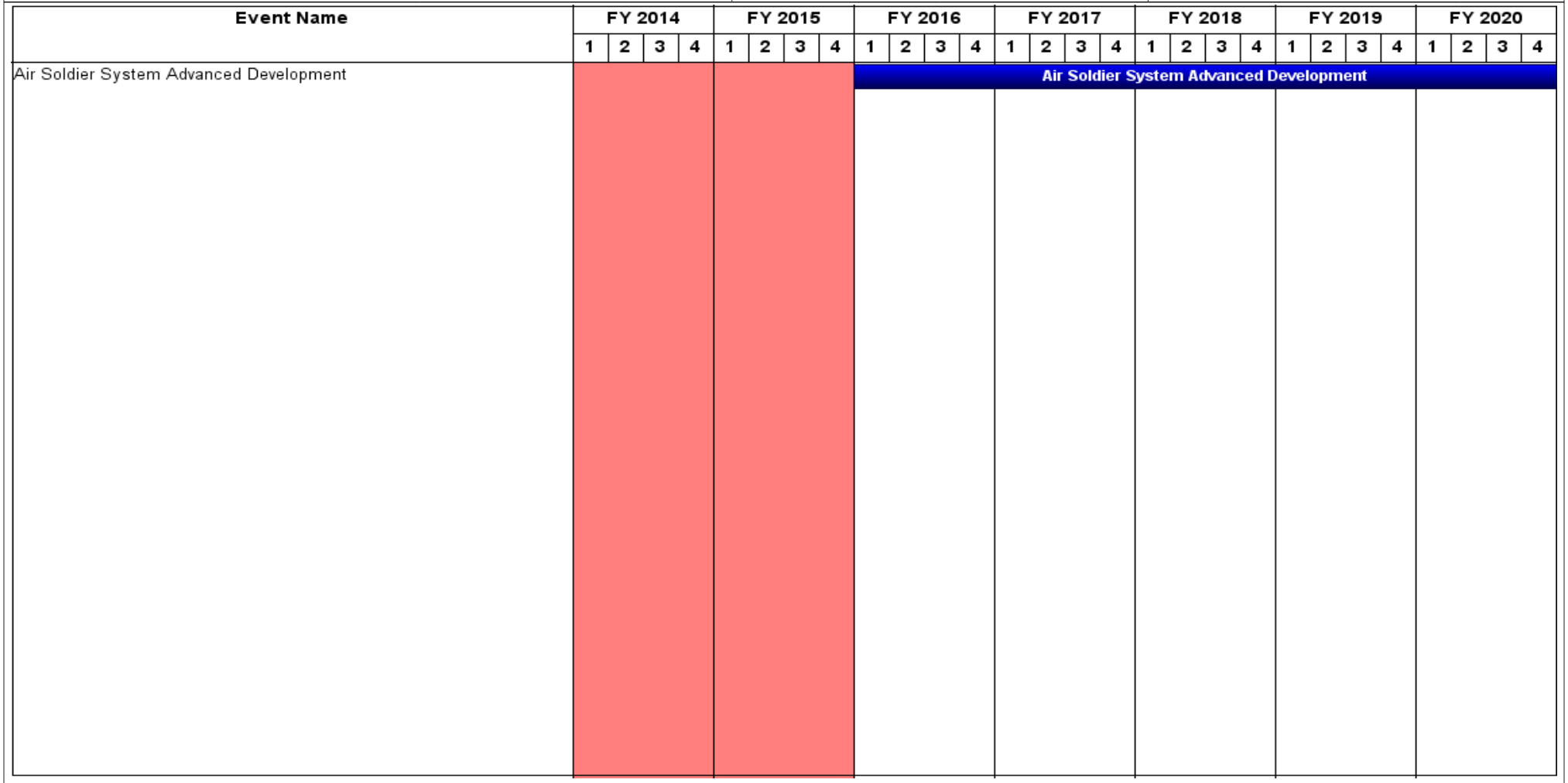

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S51 / *Aircrew Integrated Sys Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Air Soldier System Advanced Development	1	2016	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
S53: *Clothing And Equipment*	-	5.608	1.555	9.185	-	9.185	8.436	7.108	7.296	7.651	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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, insect protection and camouflage technologies, including evaluation and integration of fabrics appropriate for uniforms and equipment used in jungle/tropical and Arctic environments. It funds efforts to improve personnel parachutes, to include analysis of canopy cloth fabrics and pack volume techniques. 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)	FY 2014	FY 2015	FY 2016
Title: Soldier Uniforms and Clothing	3.119	1.555	6.191
Description: Develop and provide superior and sustainable integrated clothing for the Soldier in a rapidly changing global environment.			
FY 2014 Accomplishments: Funded maturing of new technology to reduce Soldier load and weight. Continued testing 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: Tactical/Personal Clothing. Continue to develop more durable FR fabrics for use in combat uniforms to improve service life of tactical uniforms.			
FY 2016 Plans: Tactical Clothing. Obtain MDD and initiate technical testing on Environmental Protection Ensemble (EPE) component prototypes to provide Soldiers protection in all extreme environmental conditions. Conduct evaluation and integration of fabrics appropriate for uniforms and equipment used in jungle/tropical and arctic environments. Transition to S60 with MSB in 4QFY16. Obtain MDD on upgraded Combat Vehicle Crewman (CVC) uniform to provide CVC military personal optimal performance. Transition to S60 2QFY17.			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Will continue to develop alternate insect 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 ***Description:*** Develop and provide superior and sustainable integrated individual equipment for the Soldier in a rapidly changing global environment. ***FY 2014 Accomplishments:*** Obtained Material Development Decision (MDD) for Parachute Navigational System (PARANAVSYS), further developed Government owned software to be evaluated at Development Testing (DT) 1, DT 2 and Operational Testing (OT). Procured and tested prototype thermal/ruggedized protective systems to support PARANAVSYS MS-B in 4QFY14. Tested current oxygen systems to determine altitude levels required on the Military Free Fall (MFF) Advanced Ram Air Parachute System (ARAPS). ***FY 2016 Plans:*** Load Carriage. Obtain Material Development Decision (MDD) and initiate technical testing on the Integrated Load Carriage System (ILCS). The ILCS will provide an integrated load carriage that interfaces with the Soldier Protection System (SPS). Transition to S60 with MS B in 4QFY16. Airdrop. Initiate characterization of canopy materials for the T-11 that could reduce pack thickness and include assessment of canopy signature. Also perform initial assessment of design/material changes to the T-11 that could reduce corner vent entanglements. Hydration. Initiate technical testing to provide the Individual Water Treatment Device (IWTD) with the capability to eliminate Toxic Industrial Chemicals/Toxic Industrial Materials (TICs/TIMs).	2.489	-	2.994
Accomplishments/Planned Programs Subtotals	5.608	1.555	9.185

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• 0604601A S60: *RDTE, 0604601A.S60, Clothing and Equipment*	5.266	2.518	4.180	-	4.180	7.154	10.897	10.765	6.651	Continuing	Continuing
• 121017 CFF OMA: *OMA, 121017, Central Funding and Fielding*	88.771	126.972	121.608	-	121.608	134.879	134.876	133.442	150.872	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S53 / *Clothing And Equipment*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• MA7801 OPA: *OPA, MA7801, Advanced Tactical Parachute System*	35.177	25.996	26.303	-	26.303	26.108	40.854	43.546	12.235	Continuing	Continuing

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In-House Support	TBD	PM SPIE : Ft. Belvoir, VA	13.291	0.997		-		0.800		-		0.800	Continuing	Continuing	Continuing
		Subtotal	13.291	0.997		-		0.800		-		0.800	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	MIPR	NSRDEC : Natick, MA	13.312	1.071		0.200		0.545		-		0.545	Continuing	Continuing	Continuing
Development Contracts	C/TBD	Various : Various	25.072	3.118		1.100		3.240		-		3.240	Continuing	Continuing	Continuing
		Subtotal	38.384	4.189		1.300		3.785		-		3.785	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various : Various	6.677	0.400		-		0.700		-		0.700	Continuing	Continuing	Continuing
		Subtotal	6.677	0.400		-		0.700		-		0.700	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing Costs	MIPR	various : Various	20.300	0.022		0.255		3.900		-		3.900	Continuing	Continuing	Continuing
		Subtotal	20.300	0.022		0.255		3.900		-		3.900	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	78.652	5.608		1.555		9.185		-		9.185	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S53 / *Clothing And Equipment*

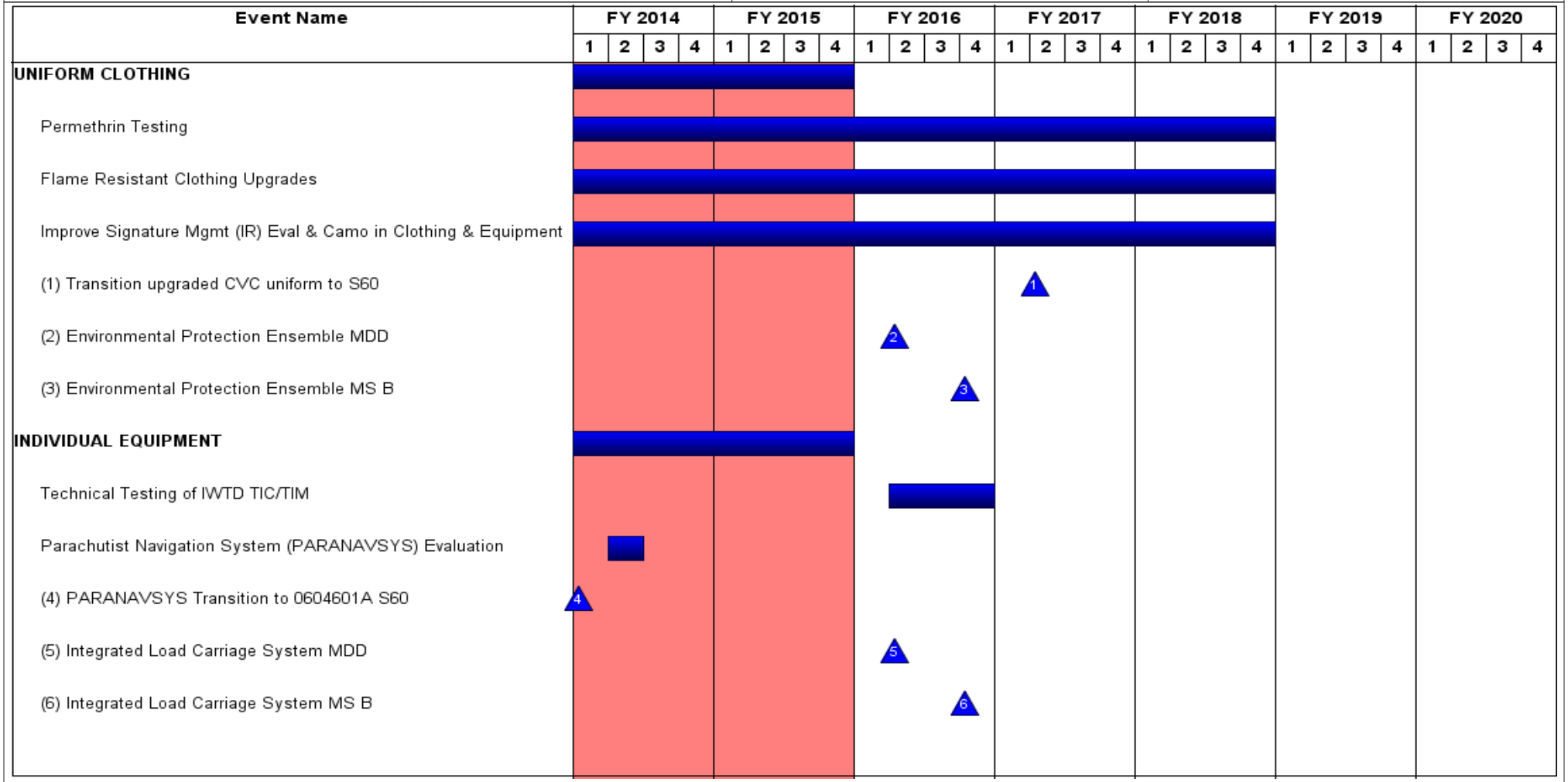

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S53 / *Clothing And Equipment*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
UNIFORM CLOTHING	1	2008	4	2015
Permethrin Testing	1	2011	4	2018
Flame Resistant Clothing Upgrades	1	2009	4	2018
Improve Signature Mgmt (IR) Eval & Camo in Clothing & Equipment	2	2012	4	2018
Transition upgraded CVC uniform to S60	2	2017	2	2017
Environmental Protection Ensemble MDD	2	2016	2	2016
Environmental Protection Ensemble MS B	4	2016	4	2016
INDIVIDUAL EQUIPMENT	1	2009	4	2015
Technical Testing of IWTD TIC/TIM	2	2016	4	2016
Parachutist Navigation System (PARANAVSYS) Evaluation	2	2014	2	2014
PARANAVSYS Transition to 0604601A S60	3	2013	3	2014
Integrated Load Carriage System MDD	2	2016	2	2016
Integrated Load Carriage System MS B	4	2016	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
S54: *Small Arms Improvement*	-	4.117	1.578	7.449	-	7.449	9.089	6.152	7.557	7.643	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

New starts in FY 2016 include Dynamic Tracking for Fire Controls, Sniper Rifle Fire Control (SRFC), Small Arms Deployable Sensor Networks, and Armaments for Robots.

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, robotic armament capability 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)	FY 2014	FY 2015	FY 2016
Title: New Weapons	1.016	0.400	2.269
Description: Description: Development of new small arms weapons			
FY 2014 Accomplishments: Lightweight Machine Gun: Acquisition community continued 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) now known as Next Generation Squad Weapon (NGSW). Next Generation Squad Weapon (NGSW): Lead support to Maneuver Center of Excellence (MCoE) initiated the development of requirements for the Next Generation Squad Weapon to include development and clarification of Key Performance Parameters (KPPs), Key System Attributes (KSAs), and Additional Performance Attributes (APAs). Also reviewed first Draft of the NGSW Capability Development Document and provided updates.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Next Generation Squad Weapon (NGSW): Acquisition community assist the United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) in the development of Next Generation Squad Weapon requirements to include a potential replacement for the M249 in the Automatic Rifle role. Support the Capability Development Document (CDD) and provide input to a Cost Benefit Analysis (CBA) for decision makers. Begin development of the Capabilities Production Document (CPD) for the NGSW. ***FY 2016 Plans:*** Next Generation Squad Weapon (NGSW): Will develop and review Capabilities Production Document (CPD) in support of United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) for the Next Generation Squad Weapon requirements. Begin development of Acquisition Strategy, and plan to support CPD and provide Analysis of Alternatives for stakeholders. Externally Powered Mounted Machine Gun: Transitions from FY2015 Research and Analysis. Will continue to evaluate and develop metrics for externally powered weapon stations. Will continue to provide information/assistance to the MCoE in the preparation of an Externally Powered Weapon Capability Development Document (CDD).			
Title: Small Arms Weapons Enhancements ***Description:*** Description: Enhancements and developments of small arms weapons ***FY 2014 Accomplishments:*** Individual Non-Lethal System: Continued studies on human effects at intended ranges. Increased Barrel Life/Replace Chrome: Conducted barrel studies to improve/enhance barrel life and eliminate chrome-lined weapon parts. Non-Standard Weapons Assessments: Evaluated on-going characterization studies of standard and non-standard weapons. Conducted market research of commercially available weapon systems that have characteristics for military suitability. ***FY 2015 Plans:*** Individual Non-Lethal System: Initiate analysis of alternatives and start review of requirements. Increased Barrel Life/Replace Chrome: Continue to conduct barrel studies to improve/enhance barrel life and eliminate chrome-lined weapon parts. Monitor contract progress in developing prototype barrel liners. Develop test plan for barrels, conduct testing at Government facility.	1.163	0.369	2.680

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Non-Standard Weapons Assessments: Conduct baseline testing of commercial weapon systems and perform capability analysis of unique weapon characteristics. Continue to conduct market research of commercially available weapon systems. Weapon Upgrades and Accessories: Continue to test, evaluate and analyze ongoing and new activities to enhance small arms weapons. ***FY 2016 Plans:*** Increased Barrel Life/Replace Chrome: Will perform barrel studies for alternate calibers (7.62mm, possibly 5.56mm) to improve/ enhance barrel life. Will utilize lesson-learned from initial prototype testing, further develop and acquire full length barrel liners for extended life testing and perform testing at Government facility. Non-Standard Weapons Assessments: Will conduct baseline testing of commercial weapon systems and perform capability analysis of unique weapon characteristics. Will continue to conduct market research of commercially available weapon systems. Additive Manufacturing (3D Printing): Transitions from FY2015 Research and Analysis. Will continue using Additive Manufacturing (3D Printing) methods to fabricate and test selected prototype weapon components for individual and crew served weapons. Recoil Reduction Mechanisms: Transitions from FY2015 Research and Analysis. Selected Recoil Reduction Mechanisms will be fabricated and tested for both individual and crew served weapons. Small Business Innovative Research (SBIR) Enhancements: Transitions from FY2015 Research and Analysis. Future efforts will continue to focus on improvements designed to enhance lethality, target acquisition and tracking, fire control, training effectiveness and reliablility of weapons. FY16 New Start Armaments for Robots: Will initiate the intelligence/networking and weapons design and functions for a man-in-the-loop, small caliber defensive armaments system on an unmanned ground vehicle including the Warfighter/Robot interface. FY16 New Start Small Arms Deployable Sensor Networks: Will transition a low cost, prototype munition from Armament Research, Development and Engineering Center (ARDEC) and integrate with the M320, 40mm rifle-mounted grenade launcher system. The munition will remotely deploy a sensor network comprised of 40mm grenade nodes containing an Electro Optical (EO) camera, acoustic and magnetic sensor components networked via robust ad-hoc wireless communications capable of transmitting streaming audio and imagery to provide increased situational awareness.			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Weapon Upgrades and Accessories: Will continue to test, evaluate and analyze ongoing and new activities to enhance small arms weapons.			
Title: Ammunition ***Description:*** Description: Small arms ammunition improvement ***FY 2014 Accomplishments:*** Extended Range/Guided 40mm Munition: Initiated coordination/participation on an ongoing Science &Technology (S&T) effort of guided, extended range small arms projectiles/munitions. Small Arms Ammunition Configuration Study: Initiated Small Arms Ammunition Configuration Study. ***FY 2015 Plans:*** Extended Range/Guided 40mm Munition: Continue coordination/participation on an ongoing Science & Technology (S&T) effort of guided, extended range small arms projectiles/munitions and determine effects on weapon mechanisms and recoil. Small Arms Ammunition Configuration Study: Will evaluate the operational benefit and cost of alternative technical approaches that mitigate capability gaps prescribed in the Small Arms Capabilities Based Assessment (CBA) ***FY 2016 Plans:*** Extended Range/Guided 40mm Munition: 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. Will initiate review of requirements for the system. Small Arms Ammunition Configuration Study: Will continue to evaluate the operational benefit and cost of alternative technical approaches that mitigate capability gaps prescribed in the Small Arms Capabilities Based Assessment (CBA).	0.638	0.300	0.500
Title: Combat Optics ***Description:*** Description: Improvement of small arms combat optics ***FY 2014 Accomplishments:*** Advanced Laser Protection for Optics (ALPO): Initiated market surveys of the state of laser blocking technologies. Awarded a SBIR Phase I for ALPO. Cross-coordinated with PM Abrams/Tank Automotive Research, Development and Engineering Center	0.050	0.050	0.500

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
(TARDEC), Armament Research, Development and Engineering Center (ARDEC), and Natick Soldier Research, Development and Engineering Center (NSRDEC) gather lessons learned and verified validity of technical path forward. ***FY 2015 Plans:*** Adaptive Lubricious Coatings: Evaluate advanced coatings and film technology for application both to optical surfaces for laser protection and to weapon components to increase reliability. Optics Upgrades: Continue engineering evaluation, verification and validation of weapon optics performance requirements. ***FY 2016 Plans:*** Advanced Laser Protection for Optics (ALPO): Transitions from FY2015 Research and Analysis. Technical efforts will focus on exploring laser protection solutions for fire control devices, for integration with documented optic requirements. Adaptive Lubricious Coatings: Will continue to evaluate advanced coatings and film technology for application both to laser optical surfaces for laser protection and to weapon components to increase reliability. Optics Upgrades: Will continue to evaluate state of the art advances in optical component technologies for inclusion in future products, including Mounted Machinegun Optic Capabilities Production Document (CPD), Fire Control Capability Development Document (CDD), and its associated annexes.			
Title: Fire Control ***Description:*** Description: Small arms fire control ***FY 2014 Accomplishments:*** Advanced Hyperspectral Target Acquisition: Evaluated and analyzed advance approaches to acquire targets with the use of hyperspectral imaging and assess the effect on current optical systems. Tested and assessed enhanced electro-optics for target detection, acquisition and identification. Precision Projectile Tracking: Established method for projectile tracking and displayed previous round impact information to the user. Completed initial atmospheric modeling. Completed and validated lab setup to simulate rotating projectile at extended range. Ballistic Kernel: Developed proof of concept Government-owned ballistic kernel, replete with demonstration/debugging hardware board, ballistic look-up tables, and initial ballistic solution algorithm. Interface Control Drawings for both the hardware (connectors) and software (gateways and protocols) provided. ***FY 2015 Plans:***	1.250	0.359	1.400

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Advanced Hyperspectral Target Acquisition: Continue to evaluate and analyze advance approaches to acquire targets with the use of hyperspectral imaging and assess the effect on current optical systems to include advanced hyperspectral target acquisition. Precision Projectile Tracking: Refine projectile production methods and packaging. Illumination and imaging hardware will be refined, and software will be tested and validated. Complete prototypes will be fired, and tracking verification will be conducted. ***FY 2016 Plans:*** Advanced Hyperspectral Target Acquisition: Will continue to evaluate and analyze advanced approaches to acquire targets with the use of hyperspectral imaging and incorporate technology into prototype hardware. FY 2016 New Start Dynamic Tracking for Fire Control: Armament Research, Development and Engineering Center (ARDEC) developed target solution algorithms and laser beam steering that will be integrated into optics and Fire Control Systems. Systems will be tested for ability to track targets and improve probability of hit (P(h)). FY16 New Start Sniper Rifle Fire Control (SRFC): Will evaluate and assess enhanced multi-functional fire control technologies which will improve small arms accuracy and lethality, and will substantially reduce user's cognitive load during tactical operation. These technologies can be transitioned to the following capability requirements: Mounted Machinegun Optic Capabilities Production Document (CPD); Fire Control Capability Development Document (CDD), Crew Served Annex; Fire Control CDD, Squad Annex; and Fire Control CDD, Precision Annex. Fire Control Upgrades: Will continue oversight of integration and test of advanced fire control systems for small arms platforms, with focus on modular integration. Will continue to conduct human factors evaluation of Soldier-System interface between the Soldier and fire control. Will continue to evaluate impact of automated target designation on Soldier engagement time.			
Title: Research and Analysis ***Description:*** Research and analysis of small arms ***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; Externally Powered Mounted Machine Gun, Extended Range/ Guided 40mm Munition, Precision Projectile Tracking, Advanced Laser Protection for Optics, Additive Manufacturing (3D Printing), Recoil Reduction Mechanisms, Adaptive Lubricious Coatings, Armaments for Robots, Dynamic Tracking for Fire Control, Small	-	0.100	0.100

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Arms Deployable Sensor Network, and Small Business Innovative Research enhancements and the Small Arms Ammunition Configuration Study. ***FY 2016 Plans:*** Will initiate Market Research and Benefit Analysis of Armaments for Robots, Dynamic Tracking for Fire Control, and Small Arms Deployable Sensor Networks.			
Accomplishments/Planned Programs Subtotals	4.117	1.578	7.449

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• Small Arms Improvement: *RDTE S63, Program Element 0604601A - Infantry Support Weapons*	17.387	11.095	20.303	-	20.303	22.665	19.926	19.542	19.732	Continuing	Continuing
• Joint Service Small Arms Program: *RDTE 627, Program Element 0603607A - Joint Service Small Arms Program (JSSAP)*	4.902	7.318	5.150	-	5.150	5.839	5.787	5.874	5.990	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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Allot	PM Soldier Weapons, : Picatinny Arsenal	2.226	0.289	Mar 2014	0.054	Mar 2015	0.680	Dec 2015	-		0.680	Continuing	Continuing	Continuing
		Subtotal	2.226	0.289		0.054		0.680		-		0.680	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	MIPR	Army Research Development Engineering Centers, : Multiple	8.523	0.998	Mar 2014	-		1.150	Dec 2015	-		1.150	Continuing	Continuing	Continuing
		Subtotal	8.523	0.998		-		1.150		-		1.150	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering	MIPR	Army Research Development Engineering Centers, : Multiple	10.805	1.600	Mar 2014	0.899	Mar 2015	4.085	Dec 2015	-		4.085	Continuing	Continuing	Continuing
		Subtotal	10.805	1.600		0.899		4.085		-		4.085	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	MIPR	Army Test and Evaluation Centers, : Multiple	6.377	1.230	Mar 2014	0.625	Mar 2015	1.534	Dec 2015	-		1.534	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	6.377	1.230		0.625		1.534		-		1.534	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	27.931	4.117		1.578		7.449		-		7.449	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

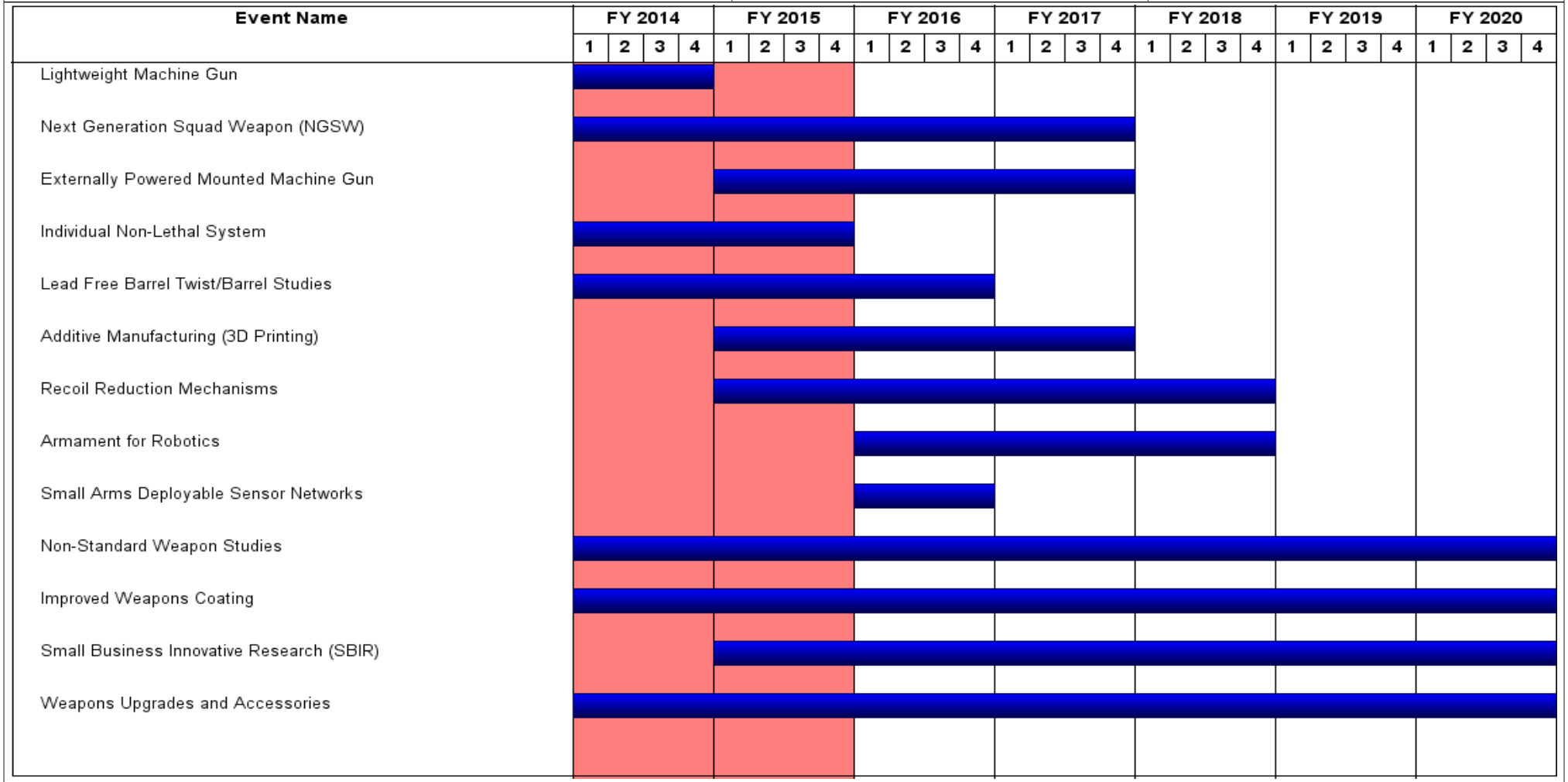

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

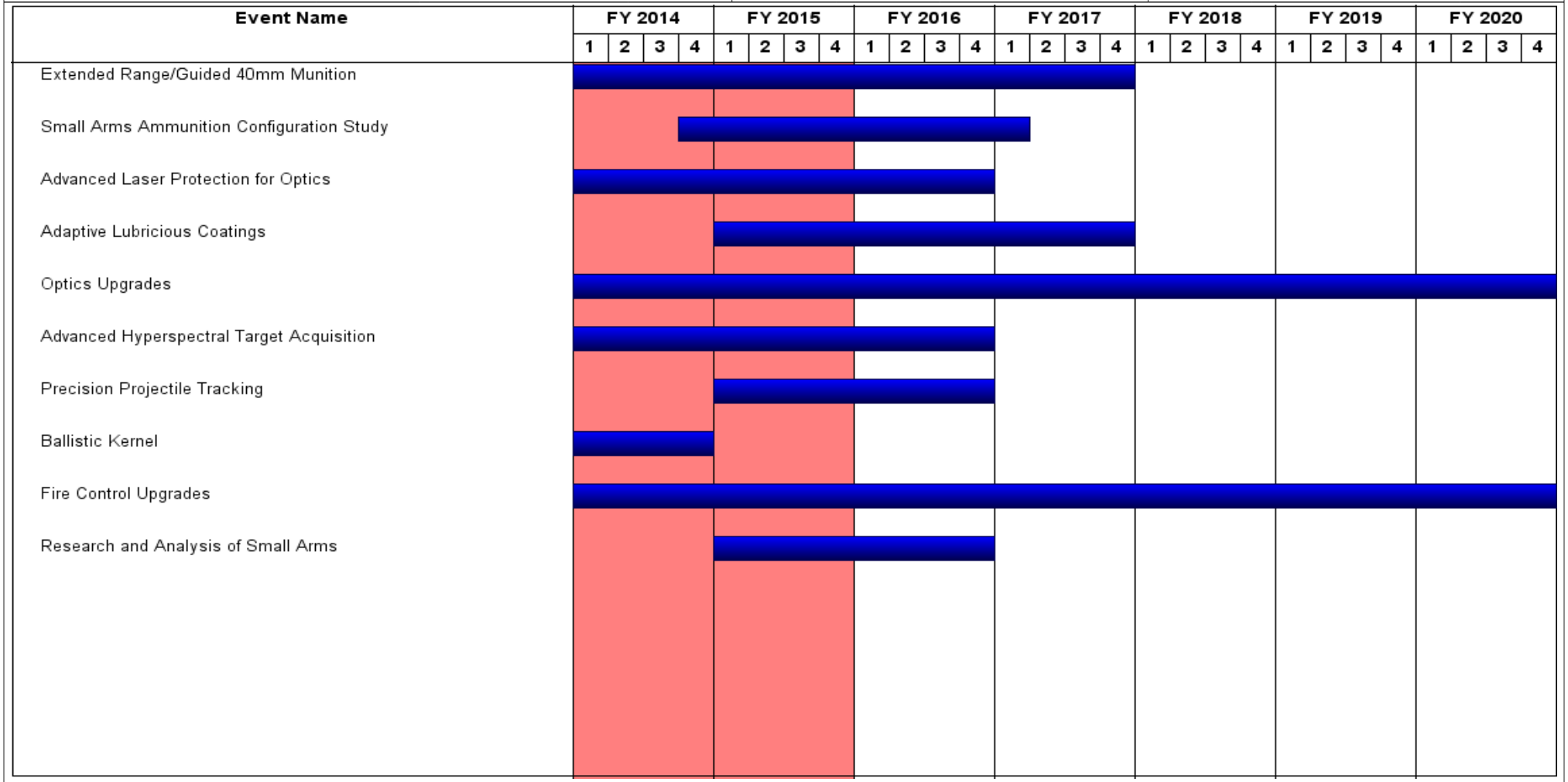

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Lightweight Machine Gun	3	2011	4	2014
Next Generation Squad Weapon (NGSW)	1	2014	4	2017
Externally Powered Mounted Machine Gun	1	2015	4	2017
Individual Non-Lethal System	1	2013	4	2015
Lead Free Barrel Twist/Barrel Studies	1	2011	4	2016
Additive Manufacturing (3D Printing)	1	2015	4	2017
Recoil Reduction Mechanisms	1	2015	4	2018
Armament for Robotics	1	2016	4	2018
Small Arms Deployable Sensor Networks	1	2016	4	2016
Non-Standard Weapon Studies	4	2011	4	2020
Improved Weapons Coating	1	2012	4	2020
Small Business Innovative Research (SBIR)	1	2015	4	2020
Weapons Upgrades and Accessories	1	2010	4	2020
Extended Range/Guided 40mm Munition	1	2014	4	2017
Small Arms Ammunition Configuration Study	4	2014	1	2017
Advanced Laser Protection for Optics	1	2014	4	2016
Adaptive Lubricious Coatings	1	2015	4	2017
Optics Upgrades	1	2010	4	2020
Advanced Hyperspectral Target Acquisition	1	2014	4	2016
Precision Projectile Tracking	1	2015	4	2016
Ballistic Kernel	1	2014	4	2014
Fire Control Upgrades	1	2008	4	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Research and Analysis of Small Arms	1	2015	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
VS4: *Soldier Protective Equipment*	-	3.564	2.689	5.408	-	5.408	5.228	4.394	4.408	4.963	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This funding supports the 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 6.5 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)	FY 2014	FY 2015	FY 2016
Title: Soldier Protective Equipment	3.564	2.689	5.408

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 2014 Accomplishments:

Continued FY13 efforts initiated in FY13 to develop Soldier Protection System (SPS) Integrated Soldier Sensor System (ISSS) Developmental Testing (DT) 1 prototypes and continued planning for FY15 characterization and human factors testing. Monitored and provided guidance to SPS ISSS contractors to refine design, power management and component integration. Conducted Preliminary Design Review (PDR) of the SPS ISSS test candidates in 2QFY14 and obtained Post PDR Assessment Acquisition Decision Memorandum on 15 May 14. In 2QFY14 completed SPS DT 1 system level plate testing, Vital Torso Protection (VTP), including SPS Torso Protection (TP) ballistic testing. Continued to integrate new and emerging technologies at the SPS component and subsystem level and transitioned mature components and subsystems to System Capability & Manufacturing Process Demonstration (SC&MPD)/VS 5. Evaluate component and subsystem technologies across the PPE portfolio (extremities, torso and vital torso, head and face protection) to counter emerging ballistic/blast threats. Continued efforts to test, characterize, and increase durability and functional service life of existing personal protective systems. Continued development and evaluation of ballistic inserts for female and small statured Soldiers, and plan to transition to SC&MPD/VS 5 through 2QFY15 as the components and subsystems mature. Completed validation testing of multi-sized head forms with expected transition to Army and National Institute of Justice (NIJ) certified testing laboratories to standardize testing of multiple size helmet and acceptance testing

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
in FY15. Supported the Sustainment Center of Excellence (SCoE) in developing requirements for the Next Generation Advanced Bomb Suit (NGABS). ***FY 2015 Plans:*** Conduct SPS ISSS human factors/limited user evaluations and subsystem development and characterization testing 3QFY15, and transition to SC&MPD/VS5 to buy DT/OT test items by 1QFY16. Initiate development of SPS system Modeling & Simulation as a research and diagnostic tool. Continue FY14 SPS Integrated System Design (ISD) efforts to integrate new and emerging technologies at the component and subsystem level, with a focus on reducing weight and bulk at the system, subsystem and component level. Continue to evaluate component and subsystem technologies across the PPE portfolio (extremities, torso and vital torso, head and face protection) to counter known and emerging ballistic/blast threats. Continue efforts to characterize and increase durability and functional service life of existing personal protective systems. Initiate efforts for reduced weight, increased performance, scalability, and integration for the NGABS. Complete Developmental Testing 2 (DT2) of the contractor's candidate Torso and Extremity Protection (TEP), Integrated Head Protection System (IHPS), and Vital Torso Protection (VTP) systems. Complete DT2 of the Government designed TEP candidates in order to inform the Milestone C decision in 3QFY15. ***FY 2016 Plans:*** Continue to evaluate component and subsystem technologies across the PPE portfolio (extremities, torso and vital torso, head and face protection) to counter emerging ballistic/blast threats. Will continue efforts to reduce SPS weight and bulk at the system, subsystem and component level - planned focus in FY16 includes reducing the aerial density of soft armor systems while maintaining same or better performance. Will also further develop and test other SPS subsystems, to include new plate sizes and enhanced extremity protection. Will also develop and perform initial validation testing of a vital torso plate smart sensor. Conduct systems development and testing to include improvements for varying operational environments (cold, tropical). Continue blast, ballistic and characterization testing of SPS Subsystems and ancillary components. Will continue efforts to characterize and increase durability and functional service life of existing personal protective systems at the subsystem/component level. Complete an MDD and initiate a Technology Development phase for SPS Increment 2 in 4QFY16. Continue efforts for reduced weight, increased performance, scalability, and integration for the NGABS.			
Accomplishments/Planned Programs Subtotals	3.564	2.689	5.408

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• Soldier Protective Equipment VS5: *RDTE, 0604601A.VS5, Soldier Protective Equipment*	19.367	4.830	15.175	-	15.175	13.827	10.842	10.282	4.969	-	79.292

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• Central Funding & Fielding: *OMA, 121017, Central Funding & Fielding*	88.771	126.972	121.608	-	121.608	134.879	134.876	133.442	150.872	-	891.420

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SETA Support	TBD	PM SPE : Ft. Belvoir, VA	0.200	0.100		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.200	0.100		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev/Sys Engineering Spt	MIPR	Various : Various	2.659	1.293		1.000		1.908		-		1.908	Continuing	Continuing	-
Dev/Integ Contracts	TBD	Various : various	10.461	0.771		0.999		1.500		-		1.500	Continuing	Continuing	Continuing
		Subtotal	13.120	2.064		1.999		3.408		-		3.408	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various : various	0.800	0.400		-		1.000		-		1.000	Continuing	Continuing	Continuing
		Subtotal	0.800	0.400		-		1.000		-		1.000	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DT (Ballistic/Non-ballistic) Testing	MIPR	Various : Various	2.179	1.000		0.690		1.000		-		1.000	Continuing	Continuing	Continuing
		Subtotal	2.179	1.000		0.690		1.000		-		1.000	-	-	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	16.299	3.564		2.689		5.408		-		5.408	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) VS4 / *Soldier Protective Equipment*	

	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** VS4 / *Soldier Protective Equipment*

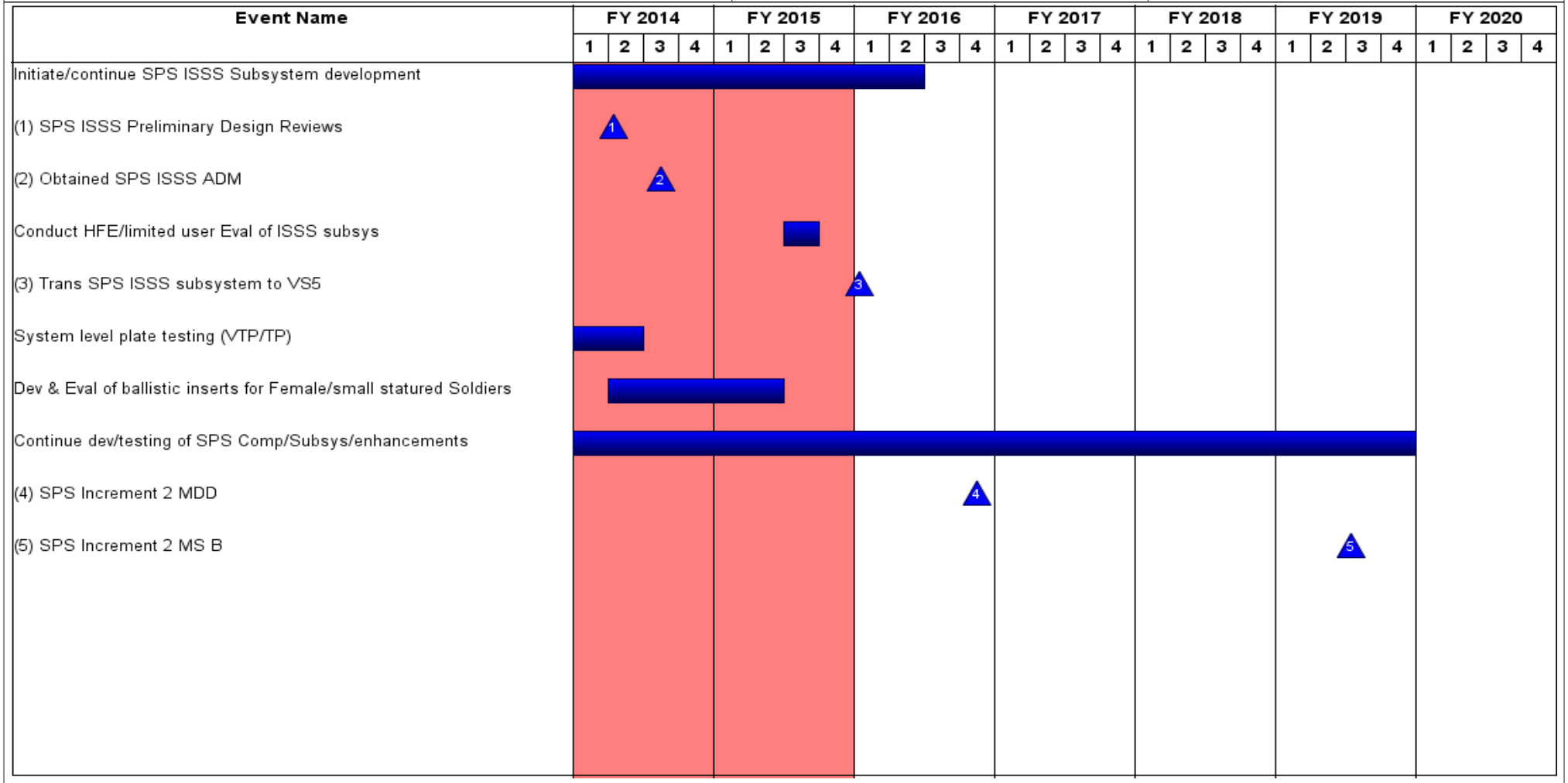

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** VS4 / *Soldier Protective Equipment*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Initiate/continue SPS ISSS Subsystem development	1	2013	2	2016
SPS ISSS Preliminary Design Reviews	2	2014	2	2014
Obtained SPS ISSS ADM	3	2014	3	2014
Conduct HFE/limited user Eval of ISSS subsys	3	2015	3	2015
Trans SPS ISSS subsystem to VS5	1	2016	1	2016
System level plate testing (VTP/TP)	1	2014	2	2014
Dev & Eval of ballistic inserts for Female/small statured Soldiers	2	2014	2	2015
Continue dev/testing of SPS Comp/Subsys/enhancements	1	2014	4	2019
SPS Increment 2 MDD	4	2016	4	2016
SPS Increment 2 MS B	3	2019	4	2019