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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev							
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	-	47.811	65.299	67.582	-	67.582	71.280	65.684	70.813	55.376	Continuing	Continuing
EQ9: Close Access Target Reconnaissance (CATR)	-	-	-	1.656	-	1.656	0.587	-	-	-	-	2.243
L67: Soldier Night Vision Devices	-	10.951	15.249	20.440	-	20.440	20.070	19.851	24.549	28.793	Continuing	Continuing
L70: Night Vision Dev Ed	-	5.875	21.533	27.696	-	27.696	33.103	27.585	17.326	9.469	Continuing	Continuing
L75: Profiler	-	2.545	3.046	2.108	-	2.108	4.129	3.897	3.601	3.744	-	23.070
L76: Dismounted Fire Support Laser Targeting Systems	-	0.063	4.912	4.662	-	4.662	6.047	6.321	14.651	5.390	Continuing	Continuing
L79: Joint Effects Targeting Systems (JETS)	-	28.377	20.559	11.020	-	11.020	7.344	8.030	10.686	7.980	Continuing	Continuing

Note

Project EQ9 Close Access Target Reconnaissance (CATR) is a new start in FY 2016.

A. Mission Description and Budget Item Justification

This program element provides night vision/reconnaissance, surveillance and target acquisition technologies required for U. S. defense forces to engage enemy forces twenty-four hours a day under conditions of degraded visibility due to darkness, adverse weather, battlefield obscurants, foliage and man-made structures. These developments and improvements to high performance night vision electro-optics, radar, laser, and thermal systems and integration of related multi-sensor suites will enable near to long range target acquisition, identification and engagement to include significant fratricide reduction, which will improve battlefield command and control in "around-the-clock" combat operations.

Project EQ9 focuses on a kit of electronic devices that collect, send back, and acquire data to provide near real time feedback in order to validate, follow, locate, or track a target (i.e., tagging, tracking, and locating (TTL)). Using electronic audio and/or video recorders, information obtained will validate movement and identify targets. In addition, threat monitoring can be integrated into existing operational tools, help to paint a clearer picture of the battlefield, pinpoint possible target locations, and identify and exploit enemy movements and patterns.

Project L67 develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. Further, this funding supports, near term, the development, test, and evaluation of the Family of Weapon Sights (FWS). In FY17 through FY19, this funding supports Pre-shot Threat Detection (PTD) through Engineering and Manufacturing Development (EMD). It focuses on adapting demonstrated technologies that

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<p>bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents.</p> <p>Project L70 focuses on night vision, reconnaissance, surveillance and target acquisition (RSTA) sensor and suites of sensors to provide well-defined surveillance and targeting capabilities for a variety of Current, Modular, and Future Force platforms. This project includes: 3rd Generation Improved Forward Looking Infra-Red (3rd GEN (IFLIR)), formerly called Improved Forward Looking Infra-Red (IFLIR) B-Kit development activities, and the Assistant Secretary of the Army for Acquisition, Logistics, and Technology ASA(ALT) Common Operating Environment (COE) effort to meet network interoperability requirements and improve the soldier-machine interface of the Program of Record (POR).</p> <p>Project L75 focuses on development of Profiler Block enhanced capabilities for meteorological (MET) measurement sensors and data. Improvements have reduced the footprint (less soldiers/vehicles) and complexity of the system, improved performance (accuracy), improved survivability, connectivity, no balloon sensor, multiple initialization data, and terrain visualization. The improved MET message data will increase lethality by enabling artillery a greater probability of first round hit with indirect fire systems. Profiler Block III provides a networked laptop configuration while further reducing the system's logistics footprint with the elimination of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) mounted shelter and trailer located in the Tactical Operations Center (TOC). The Profiler Virtual Module (PVM), a product improvement to the Block III, concept includes the following updates: update of weather model; update of software architecture removing legacy Block I code and creating a modular framework; development in conjunction with the Advanced Field Artillery Tactical Data System (AFATDS) program including AFATDS version II, to provide increased interoperability and usability; and to enable operation of the Profiler system in a virtual machine for use in the Common Operating Environment (COE) versions 2,3,4,and 5. This concept is a flexible approach that supports use of existing Block III hardware, increased accuracy during technical refresh of hardware with higher performance computers, and virtualization on the Command Post Computing Environment (CP CE) server.</p> <p>Project L76 matures technologies and capabilities which benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1, AN/PED-1A, and AN/PED-1B), Joint Effects Targeting System (JETS), and other precision targeting systems. These precision targeting and next generation systems are used by dismounted Soldiers to locate, identify, and target enemy assets. This project focuses on reducing weight, improving imaging performance, and increasing targeting accuracy. Targeting accuracy improvements will focus on developing and integrating affordable, non-magnetic, high accuracy, full-time (24/7), and all weather Azimuth and Vertical Angle Measurement (AVAM) devices, with reduced size, weight and power characteristics into the LLDR system. Long term goals include developing precision targeting capabilities that will operate in a Global Positioning System (GPS) denied environment, and integration of M-Code GPS (next-generation GPS) receivers into LLDR and JETS when available.</p> <p>Project L79 focuses on the Joint Effects Targeting System (JETS) which is an Army program with joint interest (Air Force and Marine Corps). Joint Effects Targeting System (JETS) will meet the one-man, hand-held precision targeting gap identified by the Fire Center of Excellence (FCOE). JETS is a light-weight, handheld system that will provide the single dismounted observer and Joint Terminal Attack Controller (JTAC) with a common, enhanced capability to rapidly acquire, accurately locate, positively identify, and precisely designate targets. JETS Target Location and Designation System (TLDS) will be able to interface with existing and future Service Forward Entry Systems (FESS)</p>		

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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		PE 0604710A / Night Vision Systems - Eng Dev			
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	43.382	65.333	66.635	-	66.635
Current President's Budget	47.811	65.299	67.582	-	67.582
Total Adjustments	4.429	-0.034	0.947	-	0.947
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	4.429	-0.034	0.947	-	0.947

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) EQ9 / Close Access Target Reconnaissance (CATR)			
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
EQ9: Close Access Target Reconnaissance (CATR)	-	-	-	1.656	-	1.656	0.587	-	-	-	-	2.243
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note Project EQ9 Close Access Target Reconnaissance (CATR) is a new start in FY 2016.												
A. Mission Description and Budget Item Justification CATR is a kit of electronic devices that collect, send back, and acquire data to provide near real time feedback in order to validate, follow, locate, or track a target (i.e., tagging, tracking, and locating (TTL)). CATR will use electronic audio and/or video recorders to obtain information which is used to validate movement and identify targets. In addition, CATR allows for threat monitoring that can be integrated into existing operational tools, help to paint a clearer picture of the battlefield, pinpoint possible target locations, and identify and exploit enemy movements and patterns. FY 2016 base development dollars in the amount of \$1.656 million is for the preparation for post-Milestone C/Fielding decision and a Limited User Test (LUT).												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2014	FY 2015	FY 2016	
Title: Close Access Target Reconnaissance (CATR) Post Milestone C/Fielding Decision									-	-	1.656	
Description: Prepare for post-Milestone C/Fielding decision by conducting a Limited User Test and prepare acquisition documentation.												
FY 2016 Plans: In order for CATR to obtain a Milestone C/Fielding decision in FY16, a Limited User Test (LUT) will be conducted by the Army Test & Evaluation Command (ATEC). Funding is also to secure the type classification of the CATR Basic Set, participate in the logistics demonstration, review LUT test report, develop life cycle sustainment plan, and develop acquisition documents for a Post Milestone C/Fielding decision.												
Accomplishments/Planned Programs Subtotals									-	-	1.656	
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	
• Close Access Target Reconnaissance: Close	-	-	8.010	-	8.010	8.031	8.083	7.995	8.066	Continuing	Continuing	

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Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				Project (Number/Name) EQ9 / <i>Close Access Target Reconnaissance (CATR)</i>			
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<i>Access Target Reconnaissance (CATR) (B10002)</i>											
Remarks											
D. Acquisition Strategy											
CATR will utilize Quick Reaction Capability (QRC) equipment to refresh, re-kit existing, and field sets/systems in the Brigade Combat Teams (BCTs). CATR will transition to a procurement funded program upon successful completion of a Limited User Test (LUT) and Post Milestone C/Fielding decision.											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev						Project (Number/Name) EQ9 / Close Access Target Reconnaissance (CATR)			
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Project Management	MIPR	PdM GS, : Ft Belvoir, VA	0.000	-		-		0.146	Nov 2015	-		0.146	-	0.146	-
Subtotal			0.000	-		-		0.146		-		0.146	-	0.146	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Post MS C/ Fielding Decision Prep	C/FP	PdM GS, : Ft Belvoir, VA	0.000	-		-		0.442	Dec 2015	-		0.442	-	0.442	-
Subtotal			0.000	-		-		0.442		-		0.442	-	0.442	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Limited User Test	MIPR	ATEC : APG, MD	0.000	-		-		1.068	Nov 2015	-		1.068	-	1.068	-
Subtotal			0.000	-		-		1.068		-		1.068	-	1.068	-
			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			0.000	-		-		1.656		-		1.656	-	1.656	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																					
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev								Project (Number/Name) EQ9 / Close Access Target Reconnaissance (CATR)																			
Event Name										FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
										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
Limited User Test																																					

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) EQ9 / Close Access Target Reconnaissance (CATR)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Limited User Test	1	2016	2	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L67 / Soldier Night Vision Devices			
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
L67: Soldier Night Vision Devices	-	10.951	15.249	20.440	-	20.440	20.070	19.851	24.549	28.793	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. Further, this funding supports, near term, the development, test, and evaluation of the Family of Weapon Sights (FWS). In FY17 through FY19, this funding supports Pre-shot Threat Detection (PTD) through Engineering and Manufacturing Development (EMD). It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2014	FY 2015	FY 2016
Title: Enhanced Night Vision Goggle (ENVG) Description: The AN/PSQ-20 ENVG is a helmet-mounted passive device for the individual Soldier that fuses image intensification (night vision) and long wave infrared imagery (thermal) into a single, integrated image. It operates in high light conditions to total darkness (no light) and through battlefield obscurants. FY 2014 Accomplishments: Initiated production qualification testing for multiple (AN/PSQ-20) new contracts. FY 2015 Plans: Complete production qualification testing for multiple (AN/PSQ-20) new contracts.	0.135	1.600	-
Title: Family of Weapons Sights (FWS) Description: FWS is a family of weapon sights that enable combat forces to acquire and engage targets with small arms and to conduct surveillance and fire control under day/night obscurants, no-light, and adverse weather conditions. The family utilizes advancements in thermal and low light level sensor to produce Individual (I), Crew-Served (CS), and Sniper (S) weapon sights operable in-line with a day optic or in stand-alone mode. This project integrates a smaller pixel focal plane arrays in multiple large format sizes to improve sensitivity, clarity, and range, while simultaneously reducing the size, weight and power consumption of both the Crew-Served and Sniper variants. The FWS-I variant is a weapon mounted long-wave infrared sensor that enables Soldiers to fire quickly and accurately from any carry position and with significantly reduced exposure to enemy fire by providing	10.816	13.149	19.940

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
a wireless zeroed weapon aimpoint in the Soldier's goggle. Leveraging the success of the Individual variant development, the FWS-CS variant operates as the primary sight; it includes a wireless HMD and provides the Soldier, with input from a laser range device, a more accurate aimpoint that adjusted automatically for range, ammunition characteristics, and vertical angle. The FWS-S variant will provide Snipers with a large format high-definition display enabling forces to acquire and engage targets faster with small arms at longer ranges. FY 2014 Accomplishments: Awarded contract to design, build and deliver FWS-I systems for Government and Contractor testing. FY 2015 Plans: Continue FWS-I EMD. FY 2016 Plans: Complete Government and Contractor testing of FWS-I EMD systems in support of Milestone C, 4QFY16. Initiate FWS-CS and FWS-S EMD to design, build and deliver systems for Government and Contractor testing.				
Title: Small Tactical Optical Rifle Mounted (STORM) Engineering Change Proposal (ECP) Description: The AN/PSQ-23 STORM Micro-Laser Range Finder (MLRF) is a weapon-mounted multi-function laser system. It provides an eye safe laser range finder, digital compass, Infrared (IR) and visible aiming lights, and an IR illuminator for far target location with continuous range, accuracy, weight and power performance enhanced capabilities. Funding supports qualifying smaller, lighter, cheaper STORM variant (STORM SLX) with Soldiers. FY 2015 Plans: Complete Qualification test for ECP units.		-	0.500	-
Title: Laser Target Locator Module (LTLM) Engineering Change Proposal (ECP) Description: LTLM is a second generation Lightweight, Handheld Laser Target Locator with a direct view optic, un-cooled thermal camera, eye-safe laser range finder, digital magnetic compass, and an internal Selective Availability Anti Spoofing Module (SAASM) GPS receiver. Funding supports qualifying smaller, lighter, cheaper LTLM variant (LTLM II) with Soldiers. FY 2016 Plans: Conduct LTLM II qualification testing of ECP units.		-	-	0.500
Accomplishments/Planned Programs Subtotals		10.951	15.249	20.440

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L67 / Soldier Night Vision Devices			
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
• 603774A VT7: 603774A - Night Vision Systems Advanced Development (VT7)	8.760	3.050	7.292	-	7.292	9.152	5.626	4.908	6.949	Continuing	Continuing
• Helmet Mounted Enhanced Vision Devi: Helmet Mounted Enhanced Vision Devices (HMEVD) (SSN K36400)	109.548	134.365	97.968	-	97.968	133.853	125.149	76.822	91.465	Continuing	Continuing
• Thermal Weapon Sight (TWS): Thermal Weapon Sight (TWS) (SSN K22900)	10.074	2.000	-	-	-	-	-	-	-	-	12.074
• Family of Weapons Sights - Inividid: Family of Weapons Sights - Individual (FWS-I) (SSN K22002)	-	29.205	53.453	-	53.453	74.955	75.304	88.454	108.134	Continuing	Continuing
• Family of Weapons Sights - Crew Ser: Family of Weapons Sights - Crew Served (FWS-CS) (SSN K22003)	-	-	-	-	-	-	35.943	61.502	75.975	Continuing	Continuing
• Family of Weapons Sights - Sniper: Family of Weapons Sights - Sniper (FWS-S) (SSN K22004)	-	-	-	-	-	-	10.558	15.620	26.471	Continuing	Continuing
• Small Tactical Optical Rifle Mounte: Small Tactical Optical Rifle Mounted (STORM) (SSN K35110)	22.300	18.520	23.216	-	23.216	21.605	23.071	23.835	27.636	Continuing	Continuing
• Laser Target Locators: Laser Target Locators (LTL) (SSN B53800)	41.178	4.236	26.248	-	26.248	34.216	22.966	19.620	21.805	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
The various developmental programs in this project continue to exercise competitively awarded contracts using best value source selection procedures.											

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L67 / Soldier Night Vision Devices
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L67 / Soldier Night Vision Devices					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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 MGMT	Allot	Various : Various	0.946	0.928	Jun 2014	1.164	Dec 2014	1.358	Dec 2015	-		1.358	Continuing	Continuing	-
Subtotal			0.946	0.928		1.164		1.358		-		1.358	-	-	-
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Family of Weapon Sights-Individual (FWS-I)	MIPR	Various : Various	15.904	8.416	Mar 2014	11.768	Mar 2015	-		-		-	-	36.088	-
Family of Weapon Sights-Crew Served (FWS-CS)	MIPR	Various : Various	0.000	-		-		11.374	Apr 2016	-		11.374	-	11.374	-
Family of Weapon Sights-Sniper (FWS-S)	MIPR	Various : Various	0.000	-		-		5.755	Apr 2016	-		5.755	-	5.755	-
Subtotal			15.904	8.416		11.768		17.129		-		17.129	-	53.217	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Matrix Support	MIPR	NVESD : Ft Belvoir, VA	1.686	0.861	Jun 2014	0.221	Dec 2014	0.374	Dec 2015	-		0.374	Continuing	Continuing	-
Subtotal			1.686	0.861		0.221		0.374		-		0.374	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Government Test Support Activity	Various	Army Test and Evaluation Command : Various	41.560	0.746	Jun 2014	2.096	May 2015	1.579	Dec 2015	-		1.579	Continuing	Continuing	-
Subtotal			41.560	0.746		2.096		1.579		-		1.579	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army										Date: February 2015			
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>					Project (Number/Name) L67 / <i>Soldier Night Vision Devices</i>			
	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	60.096	10.951		15.249		20.440		-		20.440	-	-	-
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army

Date: February 2015

Appropriation/Budget Activity

2040 / 5

R-1 Program Element (Number/Name)

PE 0604710A / Night Vision Systems - Eng Dev

Project (Number/Name)

L67 / Soldier Night Vision Devices

Event Name	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
ENVG Production Qualification Testing (PQT)																												
(1) FWS-INDIVIDUAL (I) MS B																												
FWS-I Engineering and Manufacturing Development (EMD)																												
(2) FWS-I MS C																												
FWS-I Development/Operational Testing (D/OT)																												
(3) FWS-CREW SERVED (CS) MS B																												
FWS-CS Engineering and Manufacturing Development																												
(4) FWS-CS MS C																												
(5) FWS-SNIPER (S) MS B																												
FWS-S Engineering and Manufacturing Development																												
(6) FWS-S MS C																												
STORM Production Qualification Testing (PQT)																												
LTLM II Production Qualification Testing (PQT)																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																					
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev										Project (Number/Name) L67 / Soldier Night Vision Devices																	
Event Name										FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
										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
(1) PTD MS B																		B				EMD															
PTD Engineering and Manufacturing Development (EMD)																																					
(2) PTD MS C																																					
(3) Fused Vision Mobility Device (FVMD) MS B																																					
Fused Vision Mobility Device Engineering Manufacturing Development																																		EMD			

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	Project (Number/Name) L67 / <i>Soldier Night Vision Devices</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ENVG Production Qualification Testing (PQT)	3	2014	3	2015
FWS-INDIVIDUAL (I) MS B	3	2014	3	2014
FWS-I Engineering and Manufacturing Development (EMD)	3	2014	4	2016
FWS-I MS C	4	2016	4	2016
FWS-I Development/Operational Testing (D/OT)	1	2017	4	2017
FWS-CREW SERVED (CS) MS B	2	2016	2	2016
FWS-CS Engineering and Manufacturing Development	2	2016	2	2018
FWS-CS MS C	3	2018	3	2018
FWS-SNIPER (S) MS B	2	2016	2	2018
FWS-S Engineering and Manufacturing Development	2	2016	2	2018
FWS-S MS C	3	2018	3	2018
STORM Production Qualification Testing (PQT)	2	2015	4	2015
LTLM II Production Qualification Testing (PQT)	1	2016	3	2016
PTD MS B	2	2017	2	2017
PTD Engineering and Manufacturing Development (EMD)	2	2017	3	2019
PTD MS C	4	2019	4	2019
Fused Vision Mobility Device (FVMD) MS B	3	2019	3	2019
Fused Vision Mobility Device Engineering Manufacturing Development (EMD)	3	2019	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L70 / Night Vision Dev Ed			
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
L70: Night Vision Dev Ed	-	5.875	21.533	27.696	-	27.696	33.103	27.585	17.326	9.469	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project performs Engineering and Manufacturing Development (EMD) on high performance night vision, Reconnaissance, Surveillance, and Target Acquisition (RSTA) systems and other related systems that allow forces to locate and track enemy units in day, night, and all battlefield conditions, and through natural and man-made structures and obscurants. It also develops and integrates suites of these sensors to provide well-defined surveillance and targeting capabilities, as well as architectures for these sensors to communicate automatically. These efforts focus on meeting the requisite night vision and RSTA capabilities required for evolving Current Force, Modular Force, and Future Force systems.

The project supports the 3rd Generation Improved Forward Looking Infra-Red (3rd GEN (IFLIR)) EMD program, which incorporates the next generation of forward looking infrared technologies. The 3rd GEN (IFLIR) EMD program will leverage critical technology development from the Advanced Thermal Imaging EMD and Combat Vehicle Advanced Sensor Technology (CVAST) effort to develop a common 3rd GEN (IFLIR) B-Kit for integration into US Army FLIR sensor systems in accordance with the approved I-FLIR Capability Development Document (CDD). The common 3rd GEN (IFLIR) B-Kit prescribed by the I-FLIR CDD will allow the Army to achieve economies of scale and avoid duplicative engineering and development costs. As a result, 3rd GEN (IFLIR) capabilities can be delivered at a lower cost to the Abrams, Bradley, reconnaissance systems, and potentially leverage 3rd GEN (IFLIR) components for airborne applications. The 3rd GEN (IFLIR) B-Kit provides Mid Wave Infrared and Long Wave Infrared digital video and the electronic interfaces required to integrate the 3rd GEN (IFLIR) technology with the host platform sensor. This 3rd GEN (IFLIR) technology enhances the war-fighters' survivability and lethality through increased identification range performance when integrated in current sensor packages, while enabling the detection of difficult or obscured targets and faster threat detection through automated processes. The 3rd GEN (IFLIR) B-Kit EMD program is also a key element in maintaining the Army FLIR industrial base.

This project also executes the Army Sensor Computing Environment (CE) effort which is part of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA-ALT) Common Operating Environment (COE) program. The Sensor CE effort focuses on increasing network interoperability across the enterprise and improving the Soldier-machine interface. This is done by defining, demonstrating and standardizing Sensor interfaces across the Army networks. Standardized interfaces delivered from this effort will be incorporated into current and future sensor systems and programs.

FY 2016 Base Funding in the amount of \$27.696 Million supports 3rd GEN (IFLIR) B-Kit EMD and finalization of milestone and contract award activities. Additionally, FY 2016 Base Funding supports the continued activities associated with meeting network interoperability requirements and improving the Soldier-machine interface in support of the Army's vision of the Common Operating Environment (COE).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Title: 3rd GEN (IFLIR)	5.000	14.230	-

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L70 / Night Vision Dev Ed		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
<p>Description: Development of the 3rd GEN (IFLIR) B-Kit. The 3rd GEN (IFLIR) B-Kit will represent the materiel solution in accordance with the I-FLIR CDD, resulting in a common sensor component for both Ground and Airborne host platforms.</p> <p>FY 2014 Accomplishments: FY 2014 Base Funding supports 3rd GEN (IFLIR) B-Kit component and platform sensor integration assessments. Funding also supports milestone and solicitation preparation activities.</p> <p>FY 2015 Plans: FY 2015 Base Funding supports Development Request For Proposal Release Review (DRFPRR) and source selection activities. In support of MSB, FY15 funding support will include comprehensive full sight performance trade studies, preparation of logistics documentation, test evaluation master plan documentation, and the program affordability analysis.</p>				
<p>Title: 3rd GEN (IFLIR) Milestone Activities</p> <p>Description: 3rd GEN (IFLIR) engineering and document preparation.</p> <p>FY 2016 Plans: FY 2016 Base Funding supports EMD engineering and logistics document preparation in support of a 2QFY16 Milestone B decision. Support includes preparation of core logistics analysis, system engineering plan, test and evaluation master plan, life cycle sustainment plan, independant logistics assessment.</p>		-	-	6.303
<p>Title: 3rd GEN (IFLIR) B-Kit EMD</p> <p>Description: 3rd GEN (IFLIR) EMD requirements and contract awards.</p> <p>FY 2016 Plans: FY 2016 Base Funding supports source selection activities, award of multiple contracts in support of 3rd GEN (IFLIR), and program management support. Contract awards will support development engineering activities and Preliminary Design Review (PDR).</p>		-	-	16.554
<p>Title: Common Operating Environment (COE)</p> <p>Description: This effort supports the Common Operating Environment vision by improving the network interoperability requirement and the Soldier-machine interface. Resultant improvements to be made on a program by program basis.</p> <p>FY 2014 Accomplishments: FY 2014 Base Funding supports continued development of meeting the network interoperability requirement and improving the Soldier-machine interface. Resultant improvements would be implemented through upgrades to fielded systems, or informing</p>		0.875	7.303	4.839

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army								Date: February 2015			
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				Project (Number/Name) L70 / <i>Night Vision Dev Ed</i>			
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016	
<p>future programs. This effort continues the Army Sensor Computing Environment (CE) effort in support of the Common Operating Environment (COE) vision.</p> <p>FY 2015 Plans: FY 2015 Base Funding supports continued development of the COE program to include meeting the network interoperability requirement and improving the Soldier-machine interface. Specific FY15 activities include configuration management and specification development and implementation.</p> <p>FY 2016 Plans: FY 2016 Base Funding supports continued development of the COE program to include meeting the network interoperability requirement and improving the soldier-machine interface. Specific FY16 activities include continuation of configuration management, specification development & implementation, and execution of demonstrations and experimentation for transition into Army programs.</p>											
Accomplishments/Planned Programs Subtotals								5.875	21.533	27.696	
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
• ABRAMS Tank Improvement Program: <i>Abrams Tank Improvement Program (PE 0203735A)</i>	97.901	102.495	77.603	-	77.603	143.636	76.870	62.709	64.193	Continuing	Continuing
• BRADLEY Improvement Program: <i>Bradley Improvement Program (PE 0203735A)</i>	73.642	76.192	73.775	-	73.775	113.999	83.848	57.647	30.846	Continuing	Continuing
• LRAS3 (K38300): <i>Long Range Advanced Scout Surveillance System (LRAS3) (K38300) OPA2</i>	5.183	-	-	-	-	-	-	-	-	-	5.183
Remarks											
D. Acquisition Strategy											
<p>Materiel Development Decision (MDD) received from the Army Acquisition Executive (AAE) and ADM signed 22-Dec-2014 allowing the program to enter the acquisition lifecycle at Milestone B (MSB) as an ACAT II program with the Milestone Decision Authority (MDA) delegated to PEO IEW&S. Remaining Fiscal Year 2015 activities will focus on finalization of contract solicitation, Development Request For Proposal Release Review (DRFPRR), Source Selection activities, and preparation for MSB.</p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	Project (Number/Name) L70 / <i>Night Vision Dev Ed</i>
<p>Following the MDD/ADM decision, DRFPRR will be conducted to release multiple Requests for Proposals (RFP). Following source selection and MSB approval the 3rd GEN (IFLIR) program plans to award multiple competitive, cost plus type Engineering Manufacturing Development (EMD) contracts structured to mitigate technical and industrial base risks. Additional Fiscal Year 2015 activities include continued development of meeting the network interoperability requirement and improving the Soldier-machine interface in support of the Army's vision of the Common Operating Environment (COE).</p> <p><u>E. Performance Metrics</u> N/A</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L70 / Night Vision Dev Ed					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Project Management	C/FP	PM TS : Ft. Belvoir, VA	9.425	0.196	Mar 2014	1.593	Feb 2015	1.623	Feb 2016	-		1.623	-	12.837	9.454
Subtotal			9.425	0.196		1.593		1.623		-		1.623	-	12.837	9.454
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
FY 2012-FY 2013: Develop, Fab, and Qual of a common Ground Platform Engine with Block II EOCCM	C/TBD	Various : Various	0.049	-		-		-		-		-	-	0.049	-
3rd GEN (IFLIR) Engineering/Document Prep	C/TBD	Various : Various	8.057	4.004	Mar 2014	11.289	Mar 2015	3.307	Jan 2016	-		3.307	-	26.657	-
3rd GEN (IFLIR) B-Kit EMD	C/CPIF	Various : Various	0.000	-		-		16.554	Mar 2016	-		16.554	-	16.554	-
PSS P3I: CE COE	C/FP	Various : Various	5.634	0.479	Mar 2014	7.103	Mar 2015	4.639	Mar 2016	-		4.639	-	17.855	8.904
Subtotal			13.740	4.483		18.392		24.500		-		24.500	-	61.115	8.904
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
3rd GEN (IFLIR) Support	C/TBD	Various : Various	26.528	0.996	Mar 2014	1.348	Mar 2015	1.373	Mar 2016	-		1.373	-	30.245	27.995
COE Support	C/TBD	Various : Various	0.594	0.200	Mar 2014	0.200	Mar 2015	0.200	Mar 2016	-		0.200	Continuing	Continuing	-
Subtotal			27.122	1.196		1.548		1.573		-		1.573	-	-	27.995

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				Project (Number/Name) L70 / <i>Night Vision Dev Ed</i>				

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Test Support	MIPR	Various : Various	15.850	-		-		-		-		-		-	15.850	15.850
Subtotal			15.850	-		-		-		-		-		-	15.850	15.850

	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	66.137	5.875		21.533		27.696		-		27.696	-	-	62.203

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																					
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev								Project (Number/Name) L70 / Night Vision Dev Ed																			
Event Name										FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
										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
3rd GEN (IFLIR) - Spec Development, Trade Studies, Analyses, & Miles																																					
(1) 3rd GEN (IFLIR) Materiel Development Decision (MDD)														1																							
(2) 3rd GEN (IFLIR) Development Request For Proposal Release Review														2																							
(3) 3rd GEN (IFLIR) B-Kit MSB																		3																			
(4) 3rd GEN (IFLIR) EMD/Contract Awards																		4																			
3rd GEN (IFLIR) B-Kit EMD																																					
3rd GEN (IFLIR) B-Kit - Test & Platform Integration Activities																																					
Common Operating Environment, Development																																					

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	Project (Number/Name) L70 / <i>Night Vision Dev Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
3rd GEN (IFLIR) - Spec Development, Trade Studies, Analyses, & Milestone Prep	1	2012	2	2016
3rd GEN (IFLIR) Materiel Development Decision (MDD)	1	2015	1	2015
3rd GEN (IFLIR) Development Request For Proposal Release Review (DRFPRR)	2	2015	2	2015
3rd GEN (IFLIR) B-Kit MSB	2	2016	2	2016
3rd GEN (IFLIR) EMD/Contract Awards	2	2016	2	2016
3rd GEN (IFLIR) B-Kit EMD	2	2016	2	2022
3rd GEN (IFLIR) B-Kit - Test & Platform Integration Activities	3	2020	2	2022
Common Operating Environment, Development	2	2012	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L75 / Profiler			
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
L75: Profiler	-	2.545	3.046	2.108	-	2.108	4.129	3.897	3.601	3.744	-	23.070
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Profiler provides meteorological (MET) wind speed, wind direction, temperature, barometric pressure, and humidity information required for use in the Advance Field Artillery Tactical Data System (AFATDS). All of these are required for precise targeting and terminal guidance. Profiler uses a numerical mesoscale weather model to build a four-dimensional MET model (height, width, depth, and time) that includes terrain effects to cover an operational area of 500 kilometers. By providing more accurate MET messages, Profiler will enable the artillery to have a greater probability of a first round hit with indirect fire systems. This capability increases the lethality of field artillery systems such as the Multiple Launch Rocket System (MLRS), Paladin, self-propelled or towed howitzers, and mortars. Analysis determined that Profiler Block I satisfied the requirements of Profiler Block II leading to a decision to proceed directly to Profiler Block III. The Profiler Block I used a ground tactical meteorological (TACMET) sensor and MET data from the Air Force Weather Agency (AFWA) broadcast over communications satellites with the weather model to provide highly accurate MET data covering 60 kilometers. Profiler Block III replaces Profiler Block I and provides a networked laptop configuration that enhances system efficiencies and reduces the system's operational and logistics footprint with the elimination of support vehicles, trailers, external sensors and was tested out to the range of 500 kilometers. The Profiler Block III configuration consists of one computer with a common operating system co-located within the tactical Command Post (CP) with a direct interface to the CP local area network (LAN). The Profiler Virtual Module system can function in a manual or automatic mode allowing for an operator to manually create MET messages or for MET to be automatically generated in response to requests from any connected AFATDS computer. A significant Operations and Support cost is realized through this improved configuration. The Profiler Virtual Module will address emerging requirements and system long-term software sustainment challenges. The Profiler Virtual Module concept includes the following updates: update of the MET weather model which enables the use of Gridded Binary Version 2 data; update of software architecture removing legacy Block I code and creating a modular framework; development in conjunction with the AFATDS program, including AFATDS version II, to provide increased interoperability and usability; and to enable operation of the Profiler system in a virtual machine for use in the Common Operating Environment (COE) versions 2,3,4 and 5. This concept is a flexible approach that supports use of existing Block III hardware, increased accuracy during technical refresh of hardware with higher performance computers, and virtualization on the Command Post Computing Environment (CP CE) server.

FY2016 Base funding in the amount of \$2.108 million supports the development and coding of requirements for Profiler Virtual Module Common Operating Environment (COE) Version 2 in support of Command Post Computing Environment (CP CE). Includes conversion of the MET model for Profiler Virtual Module and support for the implementation of Digital Terrain and Elevation Data (DTED) upgrades and improved elevation algorithms. Formal Qualification Testing/Developmental Testing (FQT/DT) and Management Services will be required in FY16.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2014	FY 2015	FY 2016
Title: Profiler Virtual Module development	2.545	-	-
Description: Profiler Virtual Module provides software architecture to create a modular framework.			

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L75 / Profiler		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Profiler Virtual Module development				
Title: Profiler Virtual Module COE V2/3 development Description: Implementation of COEV2/3 requirements and Digital Terrain and Elevation Data (DTED) upgrades and improved elevation algorithms. FY 2015 Plans: Implementation of COEV2 requirements and Digital Terrain and Elevation Data (DTED) upgrades and improved elevation algorithms. FY 2016 Plans: Implementation of COEV3 requirements and Digital Terrain and Elevation Data (DTED) upgrades and improved elevation algorithms.		-	1.946	1.058
Title: Support cost for conversion of the MET model for Profiler Virtual Module Description: Conversion of the MET model for Profiler Virtual Module FY 2015 Plans: Conversion of the MET model for Profiler Virtual Module and support for the implementation of Digital Terrain and Elevation Data (DTED) upgrades and improved elevation algorithms. FY 2016 Plans: Conversion of the MET model for Profiler Virtual Module and support for the implementation of Digital Terrain and Elevation Data (DTED) upgrades and improved elevation algorithms.		-	0.500	0.500
Title: Formal Qualification Testing/Developmental Testing (FQT/DT) Description: FQT/DT FY 2015 Plans: Formal Qualification Testing/Developmental Testing (FQT/DT) FY 2016 Plans: Formal Qualification Testing/Developmental Testing (FQT/DT)		-	0.400	0.400
Title: Management Services		-	0.200	0.150

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army							Date: February 2015				
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>			Project (Number/Name) L75 / <i>Profiler</i>					
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2014	FY 2015	FY 2016		
Description: Cost for Project Management											
FY 2015 Plans: Project Management											
FY 2016 Plans: Project Management											
Accomplishments/Planned Programs Subtotals							2.545	3.046	2.108		
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
• Profiler (K27900): <i>Profiler (K27900)</i>	3.027	3.115	4.057	-	4.057	0.563	0.376	-	-	-	11.138
Remarks											
D. Acquisition Strategy											
<p>The Profiler Block III acquisition strategy decision brief to the Milestone Decision Authority (MDA) was presented in January 2010. The Acquisition Decision Memorandum (ADM) authorizing initiation of Profiler Block III was signed by the MDA on 23 February 2010. A limited competitive Firm-Fixed Price (FFP)/Cost Plus Fixed Fee (CPFF) contract was awarded via the Strategic Services Sourcing (S3) contract to build, test and deliver the Block III software to support eight (8) Profiler Block III Production Representative Prototype Systems (PRPS). The Block III program is on schedule and entered production and fielding in the first quarter of FY13.</p> <p>The revised Profiler Acquisition Strategy was approved by the MDA on 28 March 2012 for a product improvement to the Profiler Block III for a Virtual Module supporting the Command Post Computing Environment of the Common Operating Environment (COE).</p>											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L75 / Profiler					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Project Management	Allot	PM Terrestrial Sensors : Various	2.623	0.270	Mar 2014	0.200	Nov 2014	0.150	Nov 2015	-		0.150	Continuing	Continuing	Continuing
Subtotal			2.623	0.270		0.200		0.150		-		0.150	-	-	-
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Award efforts for s/w porting to laptop	C/FP	Mantech : Red Bank, NJ	5.495	-		-		-		-		-	-	5.495	-
Initiate backup sensor effort	Various	Army Research Lab : various	1.191	-		-		-		-		-	-	1.191	-
Profiler Virtual Module SW development and data gathering	MIPR	SEC, FSED : Ft. Sill, Oklahoma	0.000	1.785	Mar 2014	-		-		-		-	Continuing	Continuing	-
Profiler Virtual Module COE V2/3/4 development and data gathering	MIPR	SEC, FSED : Ft. Sill, Oklahoma	0.000	-		1.946	Apr 2015	1.058	Apr 2016	-		1.058	Continuing	Continuing	-
Subtotal			6.686	1.785		1.946		1.058		-		1.058	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Matrix Support	MIPR	CECOM : Aberdeen, MD	3.015	-		-		-		-		-	-	3.015	-
Sys Engr/Technical Assistance	MIPR	Various : Various	1.917	-		-		-		-		-	-	1.917	-
Conversion of MET model for Profiler Virtual Module	MIPR	ARL, Various : WSMR, NM	1.267	0.490	Mar 2014	0.500	Mar 2015	0.500	Mar 2016	-		0.500	Continuing	Continuing	Continuing
Subtotal			6.199	0.490		0.500		0.500		-		0.500	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				Project (Number/Name) L75 / <i>Profiler</i>					

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Test Planning and Preparation	Various	ATEC, Various, CECOM, PRD, : Dir, APG, MD	1.557	-		-		-		-		-	-	1.557	-
Formal Qualification Test/ Developmental Test and test ramp up activities	MIPR	ATEC : Various	0.000	-		0.400	Jul 2015	0.400	Jul 2016	-		0.400	Continuing	Continuing	Continuing
Limited User Test	MIPR	ATEC, : Various	1.552	-		-		-		-		-	-	1.552	-
Conduct Block III Austere Testing	MIPR	ARL, ATEC, : Aberdeen Proving Ground, MD	0.339	-		-		-		-		-	-	0.339	-
Subtotal			3.448	-		0.400		0.400		-		0.400	-	-	-

	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	18.956	2.545		3.046		2.108		-		2.108	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																
Appropriation/Budget Activity										R-1 Program Element (Number/Name)								Project (Number/Name)														
2040 / 5										PE 0604710A / Night Vision Systems - Eng Dev								L75 / Profiler														
Event Name	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020							
	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				
Profiler Block III Fielding																																
Profiler Block III Fielding																																
Profiler Virtual Module SW development and data gathering																																
Profiler Virtual Module SW dev.& data gathering for model verification																																
Profiler Virtual Module COE V2 in support of CP CESW development																																
CP CESW develop and data gathering																																
Formal Qualification Test/Developmental Test																																
FQT/DI																																
Profiler Virtual Module COE V2 in support of CP CE, System Integration																																
SIL																																
Profiler Virtual Module COE V2 in support of CP CE, FQT Delta test																																
FQT Delta																																
Profiler Virtual Module Baseline Fielding																																
PVM Baseline Fielding																																
Tech Refresh																																
Tech Refresh																																
Profiler Virtual Module COE V2 and AFATDS V2(7.0) fielding																																
PVM Fielding																																
PVM COE V3 and AFATDS V2(7.1) in support of CPCE SW developme																																
CPCE SW develop and data gathering																																
Profiler Virtual Module COEV3 and AFATDS V2(7.1) fielding																																
PVM Fielding																																
PVM COE V4 and AFATDS V2(7.1) in support of CPCE SW developme																																
CPCE SW develop and data gathering																																
Profiler Virtual Module COE V4 and AFATDS V2(7.1) fielding																																
PVM Fielding																																

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																	Date: February 2015											
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>								Project (Number/Name) L75 / <i>Profiler</i>										
Event Name	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
PVM COE V5 and AFATDS V2(7.2) in support of CPCE SW developme																					<div style="background-color: blue; color: black; text-align: center; padding: 2px;"> CPCE SW develop and data gathering </div>							

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	Project (Number/Name) L75 / <i>Profiler</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Profiler Block III Fielding	1	2013	4	2014
Profiler Virtual Module SW development and data gathering	1	2014	4	2014
Profiler Virtual Module COE V2 in support of CP CESW development	1	2015	4	2015
Formal Qualification Test/Developmental Test	4	2015	4	2015
Profiler Virtual Module COE V2 in support of CP CE, System Integration Lab Test	1	2016	1	2016
Profiler Virtual Module COE V2 in support of CP CE, FQT Delta test	1	2016	2	2016
Profiler Virtual Module Baseline Fielding	1	2015	4	2015
Tech Refresh	4	2015	2	2016
Profiler Virtual Module COE V2 and AFATDS V2(7.0) fielding	2	2016	2	2017
PVM COE V3 and AFATDS V2(7.1) in support of CPCE SW development and test	2	2016	3	2017
Profiler Virtual Module COEV3 and AFATDS V2(7.1) fielding	4	2017	4	2018
PVM COE V4 and AFATDS V2(7.1) in support of CPCE SW development and test	4	2017	1	2019
Profiler Virtual Module COE V4 and AFATDS V2(7.1) fielding	2	2019	2	2020
PVM COE V5 and AFATDS V2(7.2) in support of CPCE SW development and test	2	2019	3	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L76 / Dismounted Fire Support Laser Targeting Systems			
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
L76: Dismounted Fire Support Laser Targeting Systems	-	0.063	4.912	4.662	-	4.662	6.047	6.321	14.651	5.390	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project matures technologies and capabilities which benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1, AN/PED-1A, and AN/PED-1B), Joint Effects Targeting System (JETS), and other precision targeting systems. These precision targeting and next generation systems are used by dismounted Soldiers to locate, identify, and target enemy assets. This project focuses on reducing weight, improving imaging performance, and increasing targeting accuracy. Targeting accuracy improvements will focus on developing and integrating affordable, non-magnetic, high accuracy, full-time (24/7), and all weather Azimuth and Vertical Angle Measurement (AVAM) devices, with reduced size, weight, and power characteristics into the LLDR system. Long term goals include developing precision targeting capabilities that will operate in a Global Positioning System (GPS) denied environment, and integration of M-Code GPS (next-generation GPS) receivers into LLDR and JETS when available.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2014	FY 2015	FY 2016
Title: Azimuth and Vertical Angle Measurement (AVAM) development	0.063	4.312	4.062
Description: AVAM is a non-magnetic based inertial navigation materiel solution for targeting devices. This AVAM effort improves azimuth accuracy leading to reduced collateral damage and improved target engagement. Celestial navigation systems provide a supplemental high accuracy, low cost azimuth measurement capability in order to provide 24/7 precision target capability.			
FY 2014 Accomplishments: Funded the development of emerging smaller, lightweight, low cost precision AVAMs that can be integrated with the Lightweight Laser Designator Rangefinder (LLDR) and Joint Effects Targeting System (JETS).			
FY 2015 Plans: Continue funding the development of improved precision AVAM devices and the development of better celestial navigation systems for application to the LLDR and the Joint Effects Targeting System (JETS), and fund the investigation of integration of emerging high accuracy capabilities into the current portfolio of targeting systems.			
FY 2016 Plans: Continue funding the development of an improved precision AVAM integrated with the LLDR. Initiate the development of celestial navigation systems with improved operational availability for application to the LLDR and the JETS.			
Title: Laser development	-	0.500	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				Project (Number/Name) L76 / <i>Dismounted Fire Support Laser Targeting Systems</i>				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2014	FY 2015	FY 2016
Description: Development of lightweight, low cost, multi-spectral, and more efficient lasers. FY 2015 Plans: Continue funding of development of lightweight, low-cost, multi-spectral, and more efficient lasers. FY 2016 Plans: Continue funding of development of lightweight, low-cost, multi-spectral, and more efficient lasers.												
Title: Target Acquisition Development Description: Focuses on development of improvements to optical detection, recognition, and identification of targets for precision targeting systems. FY 2015 Plans: Initiate improvements to imaging performance, recognition, and identification of targets. FY 2016 Plans: Continue improvements to imaging performance, recognition, and identification of targets.										-	0.100	0.100
Accomplishments/Planned Programs Subtotals										0.063	4.912	4.662
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	
• LLDR Mod-of-In-Service (SSN KA3100): <i>Lightweight Laser Designator Rangefinder (LLDR) Modification-of-In-Service (SSN KA3100)</i>	38.037	14.085	22.314	-	22.314	22.863	28.387	31.946	50.315	Continuing	Continuing	
• JETS (SSN K32101): <i>Joint Effects Targeting System (JETS) (SSN K32101)</i>	-	-	47.212	-	47.212	51.110	48.857	43.493	73.587	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
This project continues to exercise competitively awarded contracts using best value source selection procedures.												

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L76 / Dismounted Fire Support Laser Targeting Systems
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L76 / Dismounted Fire Support Laser Targeting Systems					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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 Support	Allot	PM-SSL : Ft. Belvoir VA 22060	0.000	0.007	May 2014	0.100	Feb 2015	0.050	Dec 2015	-		0.050	-	0.157	-
Subtotal			0.000	0.007		0.100		0.050		-		0.050	-	0.157	-
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
AVAM Development and Integration	TBD	Various : TBD	0.000	0.056	May 2014	4.212	Feb 2015	3.402	Nov 2015	-		3.402	Continuing	Continuing	-
Laser Development	TBD	Various : TBD	0.000	-		0.500	Feb 2015	0.500	Nov 2015	-		0.500	Continuing	Continuing	-
Target Acquisition Development	TBD	Various : TBD	0.000	-		0.100	Feb 2015	0.100	Nov 2015	-		0.100	Continuing	Continuing	-
Subtotal			0.000	0.056		4.812		4.002		-		4.002	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Matrix Support	MIPR	Various : Various	0.000	-		-		0.060	Jan 2016	-		0.060	Continuing	Continuing	-
Science and Engineering Support	SS/CPFF	Johns Hopkins University : Laurel, MD	0.000	-		-		0.550	Jan 2016	-		0.550	Continuing	Continuing	-
Subtotal			0.000	-		-		0.610		-		0.610	-	-	-
			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			0.000	0.063		4.912		4.662		-		4.662	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																											
Appropriation/Budget Activity 2040 / 5												R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev								Project (Number/Name) L76 / Dismounted Fire Support Laser Targeting Systems																							
Event Name												FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020							
												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				
Azimuth and Vertical Angle Measurement (AVAM) Development and Inte																																											
(1) LLDR 24/7 AVAM Production Cut-in																												1															
(2) LLDR GPS denied capability Production cut-in																																				2							
Improved Laser Development and Integration																																											
(3) Improved LLDR Laser cut-in																												3															
Improved Target Acquisition Development and Integration																																											
(4) Improved LLDR Target Acquisition cut-in																												4															
Competitive Development of Improved LLDR Prototype																																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	Project (Number/Name) L76 / <i>Dismounted Fire Support Laser Targeting Systems</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Azimuth and Vertical Angle Measurement (AVAM) Development and Integration	2	2014	4	2021
LLDR 24/7 AVAM Production Cut-in	2	2018	2	2018
LLDR GPS denied capability Production cut-in	2	2020	2	2020
Improved Laser Development and Integration	2	2014	4	2021
Improved LLDR Laser cut-in	2	2018	2	2018
Improved Target Acquisition Development and Integration	1	2015	4	2021
Improved LLDR Target Acquisition cut-in	2	2018	2	2018
Competitive Development of Improved LLDR Prototype	2	2019	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)			
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
L79: Joint Effects Targeting Systems (JETS)	-	28.377	20.559	11.020	-	11.020	7.344	8.030	10.686	7.980	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Joint Effects Targeting System (JETS) is an Army program with joint interest (Air Force and Marine Corps). JETS will meet the one-man, hand-held precision targeting gap identified by the Fire Center of Excellence (FCOE). JETS is a light-weight, handheld system that will provide the single dismounted observer and Joint Terminal Attack Controller (JTAC) with a common, enhanced day and night thermal capability to rapidly acquire, accurately locate, positively identify, and precisely designate targets. JETS Target Location and Designation System (TLDS) will be able to interface with existing and future Service Forward Entry Systems (FESs).												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2014	FY 2015	FY 2016	
Title: Joint Effects Targeting System (JETS) Engineering and Manufacturing Development (EMD)									27.395	17.735	9.605	
Description: JETS is a lightweight mission equipment set for the dismounted forward observers and Joint Terminal Attack Controllers (JTAC). JETS provides observers and controllers the means to call for fire and control delivery of air, ground and naval surface fire support, including using precision munitions and effects (both lethal and non-lethal).												
FY 2014 Accomplishments: Continued EMD. Will complete initial build of up to 30 prototypes and begin contractor qualification testing. Will develop supportability products and initiate production planning.												
FY 2015 Plans: Continue EMD phase activities with two prime contract vendors, including build of prototypes, contractor testing, government testing of prototypes, and refine supportability and production planning.												
FY 2016 Plans: Complete EMD phase by refurbishing EMD prototypes and implementing corrective actions following Government Developmental Testing. Will also fund Initial Operational Testing and Evaluation.												
Title: Azimuth and Vertical Angle Measurement (AVAM) Development									0.962	2.824	1.415	
Description: Focuses on improvements to azimuth accuracy by use of inertial navigation solutions (non-magnetic) for advanced precision AVAM solutions to provide high accuracy full-time (24/7) target location as well as celestial navigation systems that provide lightweight and low cost part-time precision AVAM for target location.												
FY 2014 Accomplishments:												

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Army								Date: February 2015			
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				Project (Number/Name) L79 / <i>Joint Effects Targeting Systems (JETS)</i>			

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Funded the development of precision AVAM and risk mitigation, and the development of improved celestial navigation systems.			
FY 2015 Plans: Fund the development of precision AVAM and risk mitigation, and funds the development of improved celestial navigation systems, and explore the integration of both forward observer application to the JETS.			
FY 2016 Plans: Fund the development of low size, weight, power, and cost precision AVAM for future integration into JETS. Continue the development of improved celestial navigation systems, and analyze the integration of both improvements to the JETS design for incorporation as an Engineering Change Proposal (ECP).			
Title: Laser Development Description: Focuses on development of lightweight, low-cost, multi-spectral, and more efficient lasers. FY 2014 Accomplishments: Initiated government engineering efforts to develop lasers with lower size, weight, power, and cost.	0.020	-	-
Accomplishments/Planned Programs Subtotals	28.377	20.559	11.020

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
• Joint Effects Targeting System: <i>Joint Effects Targeting System (SSN K32101)</i>	-	-	47.212	-	47.212	51.110	48.857	43.493	73.587	Continuing	Continuing
Remarks											
D. Acquisition Strategy 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 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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 Support	Allot	PM-SSL : Ft Belvoir, VA 22060	0.680	0.565	Oct 2013	1.472	Feb 2015	0.342	Jan 2016	-		0.342	-	3.059	-
Subtotal			0.680	0.565		1.472		0.342		-		0.342	-	3.059	-
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
AVAM Development	C/T&M	A-Tech Corp : Albuquerque, NM 87123	8.545	-		-		-		-		-	Continuing	Continuing	-
AVAM Development 2	C/T&M	Various : Various	0.000	0.962	Mar 2014	2.824	Feb 2015	1.415	Nov 2015	-		1.415	Continuing	Continuing	-
JETS TLDS EMD prototype development, integration, and test - Contractor BAE	C/CPFF	BAE Systems Information and Electronics : Nashua NH 03060-6909	7.800	11.688	Mar 2014	6.557	Feb 2015	3.960	Nov 2015	-		3.960	Continuing	Continuing	-
JETS TLDS EMD prototype development, integration, and test - Contractor DRS	C/CPFF	DRS RSTA, Inc : Dallas TX 75243	7.500	11.940	Mar 2014	6.558	Feb 2015	3.960	Nov 2015	-		3.960	Continuing	Continuing	-
Laser Development	C/T&M	Various : Various	0.000	0.418	Mar 2014	-		-		-		-	Continuing	Continuing	-
Subtotal			23.845	25.008		15.939		9.335		-		9.335	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Matrix Support	MIPR	Night Vision Electronics Sensors Directorate : Ft. Belvoir	8.679	1.635	Jan 2014	1.419	Feb 2015	0.343	Jan 2016	-		0.343	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army													Date: February 2015		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)					
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Science and Engineering Support	SS/CPFF	Johns Hopkins University : Laurel, MD	0.914	1.035	Jan 2014	0.600	Feb 2015	0.500	Jan 2016	-		0.500	-	3.049	-
Subtotal			9.593	2.670		2.019		0.843		-		0.843	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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	MIPR	Various : Various	0.718	0.134	Feb 2014	1.129	Mar 2015	0.500	Mar 2016	-		0.500	Continuing	Continuing	-
Subtotal			0.718	0.134		1.129		0.500		-		0.500	-	-	-
			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			34.836	28.377	20.559		11.020		-		11.020	-	-	-	
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																					
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev										Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)																	
Event Name										FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
										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
Engineering & Manufacturing Development										<div></div>																											
(1) JETS TLDS MS C										<div></div>																											
Improve SWAP-C AVAM Development and Integration										<div></div>																											
(2) SWAP-C AVAM cut-in										<div></div>																								<div></div>			
LRIP										<div></div>																											
(3) FMR										<div></div>																				<div></div>							
FRP										<div></div>																				<div></div>							
(4) IOC										<div></div>																				<div></div>							

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	Project (Number/Name) L79 / <i>Joint Effects Targeting Systems (JETS)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Engineering & Manufacturing Development	2	2013	2	2016
JETS TLDS MS C	2	2016	2	2016
Improve SWAP-C AVAM Development and Integration	3	2016	4	2020
SWAP-C AVAM cut-in	2	2020	2	2020
LRIP	2	2016	2	2018
FMR	2	2018	2	2018
FRP	2	2018	1	2023
IOC	2	2018	2	2018