Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Army										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	44.513	59.195	32.621	-	32.621	42.965	21.112	17.287	14.540	Continuing	Continuing
L67: *SOLDIER NIGHT VISION DEVICES*	15.021	23.946	-	-	-	14.775	15.011	12.603	12.889	Continuing	Continuing
L70: *NIGHT VISION DEV ED*	5.000	12.289	11.116	-	11.116	-	-	-	-	Continuing	Continuing
L75: *Profiler*	5.799	2.593	-	-	-	-	-	-	-	Continuing	Continuing
L76: *Dismounted Fire Support Laser Targeting Systems*	18.693	-	-	-	-	-	-	-	-	Continuing	Continuing
L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*	-	20.367	21.505	-	21.505	28.190	6.101	4.684	1.651	Continuing	Continuing

Note

Program Change Summary Explanation:

Fiscal Year 2011: Program Decrease - $6.197 million reprogrammed from project L67 to Program Element 633710, Project K70 Advanced Weapon Sight Technology (AWST) and Focal Plane Array (FPA) High Definition Long Wave Infrared (HDLWIR) technology efforts.

Fiscal Year 2013: Program Decrease - $18.979 million realigned from Project L67 to higher priority requirements.

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 L67 focuses on night vision electro-optical, laser, and other target identification and location equipment for a variety of Future Combat System of Systems (FCS) Units of Action/Employment and Future Force soldiers. This project includes the enhanced night vision goggle, modular Horizontal Technology Insertion (HTI) multi-function laser activities, and thermal upgrades to include an uncooled medium thermal weapon sight.

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: System Development and Demonstration of the Thermal Imaging Engine (transitioned from an Advanced Technology Objective); night vision sensor acquisition support of Unattended Ground Sensors and ASTAMIDS;

development of a Standard Ground Station for Persistent Surveillance Sensors (RAID and PTDS), development for the Next Generation FLIR (NGF) B-kit and improvements and enhancements to Persistent Surveillance System (PSS)and Pre Planned Product Improvements (P3I) software related to meeting network interoperability requirements and improving the soldier - machine interface of the POR.

Project L75 focuses on development of Profiler Block enhanced capabilities for meteorological 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 will provide 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. The Block III configuration consist of one computer with a common operating system co-located within the Tactical Operation Center (TOC) with a direct interface to the TOC Local Area Network (LAN). The system will be able to provide Gridded MET along with autonomously generate MET messages upon request from AFATDS eliminating the need for a dedicated MET section crew. The Army will realize a significant cost avoidance with the improved configuration.

Project L76 focuses on the engineering development of technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies developed under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), various Laser Target Locators, and future precision targeting programs based on emerging Army requirements. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as Joint Direct Attack Munition (JDAM) and Excalibur.

Project L79 focuses on development of the Joint Effects Targeting System (JETS). The goal is to develop a lightweight set of mission equipment for the dismounted forward observers and controller (including Joint Tactical Air Controllers - JTAC) that will provide means to call for fire and control delivery of air, ground and naval surface fire support using precision/near-precision/non-precision munitions and effects (lethal and non-lethal). JETS consist of two subsystems, the Target Location Designation System (TLDS) and the Target Effects Coordination System (TECS).

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	52.549	59.265	51.417	-	51.417
Current President's Budget	44.513	59.195	32.621	-	32.621
Total Adjustments	-8.036	-0.070	-18.796	-	-18.796
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-6.197	-			
• SBIR/STTR Transfer	-1.504	-			
• Adjustments to Budget Years	-0.335	-0.070	0.183	-	0.183
• Overseas Contingency Operations (OCO)	-	-	-18.979	-	-18.979

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *SOLDIER NIGHT VISION DEVICES*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L67: *SOLDIER NIGHT VISION DEVICES*	15.021	23.946	-	-	-	14.775	15.011	12.603	12.889	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. 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, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Enhanced Night Vision Goggle	3.186	1.817	-
Articles:	0	0	
Description: The AN/PSQ-20 ENVG is a helmet-mounted passive device for the individual Soldier that fuses image intensification and long wave infrared imagery into a single, integrated image.			
FY 2011 Accomplishments: Initiated Product Qualification Test (PQT) for multiple sources for the AN/PSQ-20 (Enhanced Night Vision Goggle).			
FY 2012 Plans: Complete PQT for multiple sources of AN/PSQ-20 (Enhanced Night Vision Goggle).			
Title: Green Laser Interdiction System (GLIS)	0.448	-	-
Articles:	0		
Description: The Green Laser Interdiction System (GLIS) is a rifle-mounted laser that allows the Soldier to interdict hostile actions through non-lethal effects.			
FY 2011 Accomplishments: Completed the development of lightweight multi-purpose lasers to be used as a nonlethal method of warning a vehicle operator or gaining their attention beyond 75 meters and to identify whether friend or foe.			
Title: Sense Through The Wall (STTW)	4.901	4.859	-
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *SOLDIER NIGHT VISION DEVICES*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: The STTW is a handheld sensor that provides dismounted Soldiers with the capability to detect and locate personnel targets through walls from a standoff distance. ***FY 2011 Accomplishments:*** Completed developmental and performed operational test activities for STTW representative test articles. ***FY 2012 Plans:*** Complete software modifications to enhance sensors performance and complete operational test activities.			
Title: Family of Weapons Sights (FWS) ***Articles:*** ***Description:*** FWS is a family of weapon sights that utilize advances in thermal and image intensified technologies to produce Individual, Crew-Served, and Sniper weapon sights operable in-line with a day optic or in a stand-alone mode. FWS includes fused multi-band imagery and rapid target acquisition with ballistic equations, providing the Soldier with improved capabilities during day and night operations. ***FY 2011 Accomplishments:*** Initiated the development of the Family Weapon Sight (FWS) program, that includes Individual, Crew-Served and Sniper variants. ***FY 2012 Plans:*** Continue the development of the Family of Weapon Sights (FWS) systems, which includes clip-on and fused weapon sights, with a focus on the Individual variant to provide a clip-on, rapid target acquisition capability, and continued development of decreased (12 micron) uncooled long-wave infrared focal plane arrays in multiple large format sizes. These arrays will improve sensitivity, clarity, and range, while simultaneously reducing the SWaP consumption when integrated into the Crew-Served and Sniper variants.	6.301 0	16.830 0	-
Title: Small Tactical Optical Rifle Mounted ***Articles:*** ***Description:*** The AN/PSQ-23 Small Tactical Optical Rifle Mounted (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. It also has an embedded training system, Multiple Integrated Laser Engagement System (MILES). ***FY 2011 Accomplishments:***	0.185 0	0.440 0	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *SOLDIER NIGHT VISION DEVICES*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Completed laser system testing. ***FY 2012 Plans:*** Complete production qualification testing.			
Accomplishments/Planned Programs Subtotals	15.021	23.946	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 603774A VT7: *603774A - Night Vision Systems Advanced Development (VT7)*			10.715		10.715		6.208	5.260	5.193	Continuing	Continuing
• Helmet Mounted Enhanced Vision Devi: *Helmet Mounted Enhanced Vision Devices (HMEVD) (SSN K36400)*	8.098	117.442	125.917		125.917		174.861	222.725	226.581	Continuing	Continuing
• Thermal Weapon Sight (TWS): *Thermal Weapon Sight (TWS) (SSN K22900)*	249.001	186.859	82.162		82.162		95.920	1,441.121	143.565	Continuing	Continuing
• Sniper Night Sight (SNS): *Sniper Night Sight (SNS) (SSN K41500)*	35.091	4.892	11.660		11.660			11.049	11.240	Continuing	Continuing
• Multi-Function Aiming Light (MFAL): *Multi-Function Aiming Light (MFAL) (SSN K35000)*	21.434									0.000	21.434
• Sense Through The Wall (STTW): *Sense Through The Wall (STTW) (SSN KA2300)*	24.799	57.498	6.212		6.212		15.015			0.000	103.666
• Small Tactical Optical Rifle Mounte: *Small Tactical Optical Rifle Mounted (STORM) (SSN K35110)*	8.472	10.227	20.717		20.717		20.319	20.305	15.025	Continuing	Continuing
• Green Laser Interdiction System (GL: *Green Laser Interdiction System (GLIS) (SSN AD5311)*		25.356	1.014		1.014					0.000	27.385

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *SOLDIER NIGHT VISION DEVICES*

D. Acquisition Strategy

The various developmental programs in this project continue to exercise competitively awarded contracts using best value source selection procedures.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *SOLDIER NIGHT VISION DEVICES*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Sense Through The Wall (STTW)	Various	TBD:TBD	1.963	-		-		-		-	Continuing	Continuing	Continuing
Sense Through The Wall (STTW)	SS/FP	L-3 CyTerra:ACC APG	0.522	-		-		-		-	0.000	0.522	0.000
Laser Detection/Laser Warning Device	Various	Fibertek:HERNDON, VA	2.428	-		-		-		-	Continuing	Continuing	Continuing
Sense Through The Wall (STTW)	SS/FP	Raytheon:ACC APG	-	3.209		-		-		-	0.000	3.209	0.000
Family of Weapon Sights (FWS)	Various	CECOM ACQ CENTER:ALEXANDRIA, VA	5.939	5.923		-		-		-	Continuing	Continuing	Continuing
Focal Plane Arrays (FPA)	Various	DOI:FT HUACHUCA, AZ	17.543	-		-		-		-	Continuing	Continuing	Continuing
Sniper Fire Detection and Location Technology	Various	Fibertek:HERNDON, VA	1.790	-		-		-		-	Continuing	Continuing	Continuing
Advanced Weapon Sight Technologies (AWST)	Various	TBD:TBD	-	10.297		-		-		-	0.000	10.297	0.000
		Subtotal	30.185	19.429		-		-		-			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	Various	NVESD:Ft Belvoir, VA	0.363	0.610		-		-		-	Continuing	Continuing	0.000
Matrix Support	Various	TACOM:Warren, MI	0.789	0.361		-		-		-	0.000	1.150	0.000
		Subtotal	1.152	0.971		-		-		-			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *SOLDIER NIGHT VISION DEVICES*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test Support Activity	Various	Various Activities:Various	39.782	3.546		-		-		-	Continuing	Continuing	Continuing
		Subtotal	39.782	3.546		-		-		-			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	71.119	23.946		-		-		-			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *SOLDIER NIGHT VISION DEVICES*

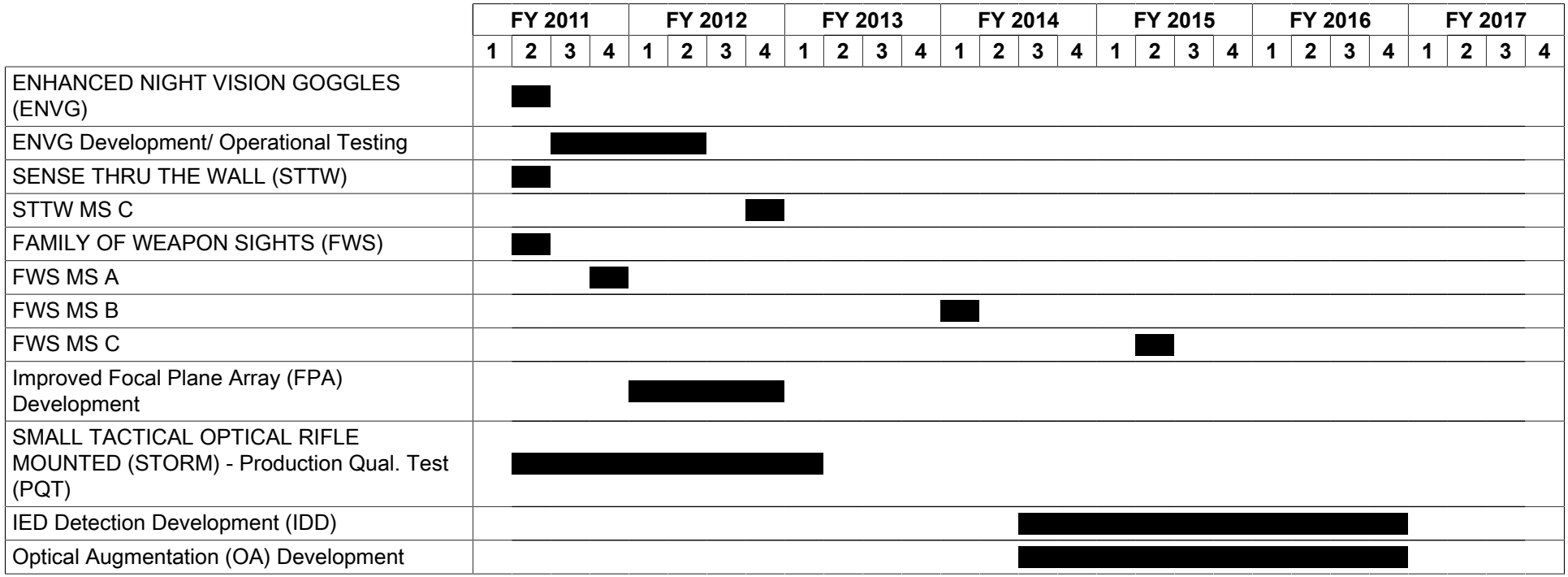

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604710A: *Night Vision Systems - Eng Dev*	**PROJECT** L67: *SOLDIER NIGHT VISION DEVICES*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ENHANCED NIGHT VISION GOGGLES (ENVG)	2	2011	2	2011
ENVG Development/ Operational Testing	3	2011	2	2012
SENSE THRU THE WALL (STTW)	2	2011	2	2011
STTW MS C	4	2012	4	2012
FAMILY OF WEAPON SIGHTS (FWS)	2	2011	2	2011
FWS MS A	4	2011	4	2011
FWS MS B	1	2014	1	2014
FWS MS C	2	2015	2	2015
Improved Focal Plane Array (FPA) Development	1	2012	4	2012
SMALL TACTICAL OPTICAL RIFLE MOUNTED (STORM) - Production Qual. Test (PQT)	2	2011	1	2013
IED Detection Development (IDD)	3	2014	4	2016
Optical Augmentation (OA) Development	3	2014	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *NIGHT VISION DEV ED*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L70: *NIGHT VISION DEV ED*	5.000	12.289	11.116	-	11.116	-	-	-	-	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. The focus is on meeting the requisite night vision and RSTA capabilities required for evolving Current Force, Modular Force, and Future Force systems.

The project transitions Advanced Thermal Imaging Technology from an Advanced Technology Objective to the development of a thermal engine intended to be common among all US Army FLIR sensor systems. This program will initiate and continue the development and qualification of the thermal Engine to meet requirements of Next Gen FLIR Army Combat and reconnaissance systems. The thermal imaging engine provides Mid Wave Infrared and Long Wave Infrared digital video. This 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 thermal imaging engine can also be used to enhance mobility by maintaining current range performance in significantly smaller and lighter sensor packages.

The funds allocated to Gunshot Detection supported a System Characterization study and Technology Readiness Level (TRL) determination for potential technical capabilities. The system characterization study will ascertain the performance of industry systems and will enhance Government knowledge of the benefits of various technology types and modalities in determining incoming gunshots. The study will aid the Government in writing the Performance Work Statement (PWS), Performance Specification and the Interface Control Document (ICD) and will enable schedule acceleration.

This project provided Program Office technical support of the FCS Unattended Ground Sensors (UGS) hardware and software development, demonstration and test for a family of UGS systems for Intelligence, Surveillance and Reconnaissance (ISR). This provided FCS and the Army a networked Unattended Ground Sensor capability for ISR and physical security.

This project develops the Standard Ground Station (SGS) for PM NV/RSTA sensor systems. Leveraging the success in theater of the Persistent Surveillance and Dissemination System of Systems (PSDS2) Quick Response Capability (QRC), this effort takes the 3D visualization capability from PSDS2 and applies it to the Operator's station for RAID tower systems, aerostats and other RSTA Sensor systems. This effort was prioritized and performed on an accelerated schedule to support fielding in October 2008 as part of the RAID tower systems in response to the Base Expeditionary Target and Surveillance Systems - Combined (BETSS-C) JUONS. This SGS improves the effectiveness of RSTA systems by combining sensor videos, sensor cues and Battle Command information into a geo-registered 3D visualization of the terrain. FY 2010 Congressional add is for development of SGS enhancements.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *NIGHT VISION DEV ED*

This project also supports development efforts for the Advanced Thermal Imaging Engine, to include development of the Ground Platform Thermal Imaging Engine leading to the fabrication of multiple prototypes with Block II Electro Oprical Counter-Counter Measures (EOCCM) improvements incorporated, and support future second source development activities. In addition, this project also supports the development of the Pre Planned Product Improvements (P3I) software, including meeting the network interoperability requirements and improving the soldier - machine interface for the Persistent Surveillance System (PSS) Program of Record (POR).

FY 2013 funding supports initiation of development efforts for the Next Generation FLIR (NGF) B-kit to include the Next Generation FLIR (NGF) B-Kit specification development and NGF B-Kit MSB preparation activities. This effort leverages activities associated with the Advanced Thermal Imaging Engine. Additionally, FY 2013 funding supports continued activities associated with the Persistent Surveillance System (PSS) Pre Planned Product Improvements (P3I) software related to meeting network interoperability requirements and improving the soldier - machine interface of the POR.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Thermal Imaging Engine	2.789	6.976	-
Articles:	0	0	
Description: Engineering and Manufacturing Development (EMD) of Thermal Imaging Engine. MS B approval in FY08 initiated EMD effort. EMD program develops the Thermal Imaging Engine for the Next Gen FLIR Army Combat and reconnaissance systems to include fabrication and qualification of 15 prototypes. ***FY 2011 Accomplishments:*** Funding supported Qualification Testing, system-level test activities, completion of production preparation activities, and competition stimulation. ***FY 2012 Plans:*** Begin development of the Ground Platforms Thermal Imaging Engine leading to the fabrication of multiple prototypes that will incorporate Block II EOCCM improvements to realize a common protected FLIR. To promote competitive pricing and strengthen the industrial base, the ground platforms development effort will be competed; with award of up to two vendors.			
Title: Next Generation FLIR B-Kit	-	-	6.909
Description: Development of the Next Generation FLIR B-Kit. NGF B-Kit will represent the B-Kit materiel solution in accordance with the I-FLIR CDD, resulting in a common sensor component for both Ground and Airborne host platforms. ***FY 2013 Plans:*** Following FY 2012 approval of the I-FLIR CDD and Platform ECP/Sensor Upgrade programs, funding supports Next Generation FLIR (NGF) B-Kit specification development and NGF B-Kit MS B preparation activities.			
Title: Gunshot Detection Systems (GDS)	2.211	-	-
Articles:	0		

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *NIGHT VISION DEV ED*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: The system uses passive acoustic detection, computer-based signal processing, and both aural and visual indications to help troops locate a hostile shooter by reporting relative shooter azimuth, range, and elevation from incoming small arms fire. ***FY 2011 Accomplishments:*** FY 2011 funds supported a system characterization study and Technology Readiness Level (TRL) determination for potential capabilities.			
Title: Pre Planned Product Improvements (P3I) software for the Persistent Surveillance System (PSS) Program of Record (POR) ***Articles:*** ***Description:*** Funding is provided for the following efforts. ***FY 2012 Plans:*** Develop Pre Planned Product Improvements (P3I) software for the Persistent Surveillance System (PSS) Program of Record (POR) to include meeting the network interoperability requirement and improving the soldier - machine interface of the POR. Resultant improvements would be implemented through maintenance upgrades to fielded systems. ***FY 2013 Plans:*** Continued development of the Pre Planned Product Improvements (P3I) software for the Persistent Surveillance System (PSS) Program of Record (POR), to include meeting the network interoperability requirement and improving the soldier - machine interface of the POR. Resultant improvements would be implemented through maintenance upgrades to fielded systems. This effort establishes the Army Sensor Computing Environment (CE) effort in support of the Common Operating Environment (COE) vision.	-	5.313 0	4.207
Accomplishments/Planned Programs Subtotals	5.000	12.289	11.116

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• LRAS3 (K38300): *Long Range Advanced Scout Surveillance System (LRAS3) (K38300) OPA2*	255.641	102.334								0.000	357.975

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *NIGHT VISION DEV ED*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PM ABRAMS (PE 273735 D330): *Abrams Upgrade Program (PE 273735 D330)*							187.401	166.891	137.874	Continuing	Continuing
• GCV (PE 0605625A FC8): *Ground Combat Vehicle (PE 0605625A FC8)*	934.366	884.387	1,963.178		1,963.178		732.849	380.600		Continuing	Continuing

D. Acquisition Strategy

The development programs in this project are currently based on competitive awards and under cost reimbursement type contracts. FY 2013 funding supports NGF B-Kit Spec Development and MSB activities following FY 2012 approval of the I-FLIR CDD and Platform ECP/Sensor Upgrade programs. Additionally, FY 2013 funding supports continued development of the Persistent Surveillance System (PSS) Pre Planned Product Improvements (P3I) software.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *NIGHT VISION DEV ED*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	C/FP	PM, NV/RSTA:Ft. Belvoir, VA & Ft. Monmouth, NJ	8.239	0.599		0.616		-		0.616	0.000	9.454	9.454
		Subtotal	8.239	0.599		0.616		-		0.616	0.000	9.454	9.454

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SGS/RAID	C/CPIF	Sarnoff:Princeton, NJ	4.913	-		-		-		-	0.000	4.913	4.913
FY 2009 - FY 2011: Thermal Imaging - Design and Demonstration	C/FP	Various:Various	13.478	-		-		-		-	0.000	13.478	13.478
FY 2010-FY 2011: Thermal Imaging - Source Risk Reduction	C/CPAF	Various:Various	1.361	-		-		-		-	0.000	1.361	1.361
FY 2012-FY 2013: Develop, Fab, and Qual of a common Ground Platform Engine with Block II EOCCM	TBD	Various:Various	-	4.617		2.918		-		2.918	0.000	7.535	7.535
Gunshot Detection Systems	RO	ARDEC:Aberdeen Proving Grounds (APG)	2.211	-		-		-		-	0.000	2.211	2.211
PSS P3I	C/FP	TBD:TBD	-	5.313		3.591		-		3.591	0.000	8.904	8.904
Standoff Suicide Bomber Detection System (SSBDS)	C/CPFF	CACI:Lorton, VA	2.000	-		-		-		-	0.000	2.000	2.000
FOB S2S (Forward Operating Base Sensor to Shooter)	C/CPFF	CACI:Lorton, VA	0.500	-		-		-		-	0.000	0.500	0.500
Remotely Operated HMDS (Husky Mounted Detection System)	C/CPFF	EOIR:Fredricksburg VA	7.000	-		-		-		-	0.000	7.000	7.000
		Subtotal	31.463	9.930		6.509		-		6.509	0.000	47.902	47.902

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *NIGHT VISION DEV ED*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support	Various	Various:Various	22.244	1.760		3.991		-		3.991	0.000	27.995	27.995
		Subtotal	22.244	1.760		3.991		-		3.991	0.000	27.995	27.995

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Test Support*	MIPR	Various:Various	15.850	-		-		-		-	0.000	15.850	15.850
		Subtotal	15.850	-		-		-		-	0.000	15.850	15.850

Remarks

* Includes PSDS2, UGS, STTW, 3GF, PSDS2, FCS UGS and other sensor test and evaluation activities.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	77.796	12.289		11.116		-		11.116	0.000	101.201	101.201

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *NIGHT VISION DEV ED*

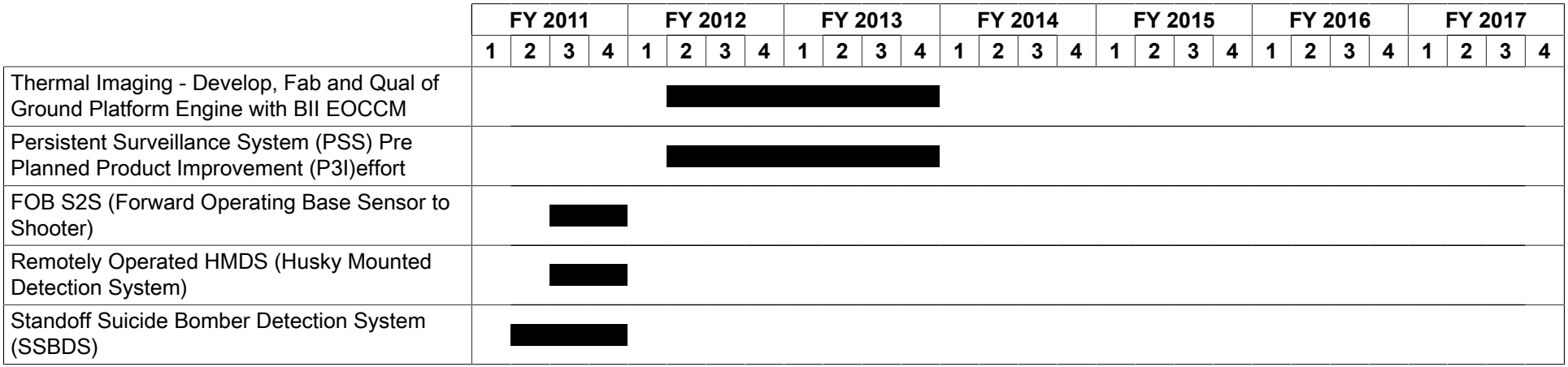

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604710A: *Night Vision Systems - Eng Dev*	**PROJECT** L70: *NIGHT VISION DEV ED*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Thermal Imaging - Develop, Fab and Qual of Ground Platform Engine with BII EOCCM	2	2012	4	2013
Persistent Surveillance System (PSS) Pre Planned Product Improvement (P3I)effort	2	2012	4	2013
FOB S2S (Forward Operating Base Sensor to Shooter)	3	2011	4	2011
Remotely Operated HMDS (Husky Mounted Detection System)	3	2011	4	2011
Standoff Suicide Bomber Detection System (SSBDS)	2	2011	4	2011

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L75: *Profiler*	5.799	2.593	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The AN/TMQ-52 Meteorological Measuring Set-Profiler (MMS-P) uses a ground tactical meteorological (TACMET) sensor and Meteorological (MET) data from communication satellites along with an advanced weather model to provide highly accurate MET data covering an operational area of 500 kilometers with a tested range of 60 kilometers. Profiler provides MET information such as wind speed, wind direction, temperature, pressure, humidity, rate of precipitation, visibility, cloud height and cloud ceiling. All of these are required for precise targeting and terminal guidance. Profiler uses this information to build a four-dimensional MET model (height, width, depth and time) that includes terrain effects. 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. The new capabilities will increase the lethality of field artillery systems such as Multiple Launch Rocket Systems (MLRS), Paladin, and self-propelled or towed howitzers. When analysis determined that Block I Profiler already satisfied the requirements of Block II, the decision was made to proceed directly to Block III as the next evolution of the Profiler capability. Block III will provide a networked laptop configuration that will enhance system efficiencies while further reducing the system's operational and logistical footprint with the elimination of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) mounted shelter and trailer. The Block III configuration consists of one computer with a common operating system co-located within the Tactical Operation Center (TOC) with a direct interface to the TOC Local Area Network (LAN). The system will be able to autonomously generate MET messages upon request from Advanced Field Artillery Tactical Data Systems (AFATDS) eliminating the need for a dedicated MET section crew. The Army will realize a significant Operations and Support cost avoidance with the improved configuration.

There is no FY13 funding.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Block III backup sensor effort. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2011 Accomplishments:*** Continue Block III backup sensor effort	0.245 0	-	-
Title: software porting to laptop. ***Articles:***	4.986 0	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Funding is provided for the following effort ***FY 2011 Accomplishments:*** Complete effort for software porting to laptop			
Title: Production Representative Prototype Systems (PRPS). ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2011 Accomplishments:*** Continue reduction of physical configuration, build and test eight Production Representative Prototype Systems (PRPS).	0.568 0	-	-
Title: Block III Limited User Testing and Austere Testing. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Plans:*** Conduct Block III Limited User Testing and Austere Testing.	-	2.593 0	-
Accomplishments/Planned Programs Subtotals	5.799	2.593	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• Profiler OPA SSN K27900: *Profiler*	4.384	5.312	12.482		12.482		4.203	5.039		0.000	35.248

D. Acquisition Strategy

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 eight (8) Profiler Block III Production Representative Prototype Systems (PRPS). The Block III program is on schedule to enter production beginning in FY13.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	SS/FP	PM Nav Sys/JTCI-G:Various	2.150	0.473		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.150	0.473		-		-		-			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Award efforts for s/w porting to laptop	C/FP	Mantech:Red Bank, NJ	5.495	-		-		-		-	Continuing	Continuing	Continuing
Initiate backup sensor effort	Various	Army Research Lab:various	1.191	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	6.686	-		-		-		-			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	CECOM:Aberdeen, MD	2.516	0.499		-		-		-	Continuing	Continuing	Continuing
Sys Engr/Technical Assistance	SS/FP	Various:Various	1.246	0.752		-		-		-	Continuing	Continuing	Continuing
OGA	MIPR	ARL, Various:WSMR, NM	1.089	0.178		-		-		-	Continuing	Continuing	Continuing
		Subtotal	4.851	1.429		-		-		-			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Planning and Preparation	Various	ATEC, Various, CECOM, PRD Dir,:Ft. Monmouth, NJ	1.557	-		-		-		-	Continuing	Continuing	Continuing
Limited User Test	MIPR	ATEC,:Various	1.200	0.352		-		-		-	Continuing	Continuing	Continuing
Conduct Block III Austere Testing	MIPR	ARL, ATEC,:Aberdeen Proving Ground, MD	-	0.339		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.757	0.691		-		-		-			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	16.444	2.593		-		-		-			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*

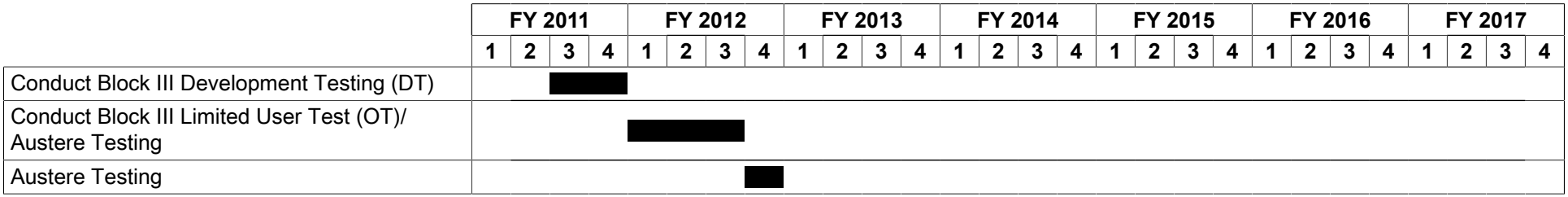

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604710A: *Night Vision Systems - Eng Dev*	**PROJECT** L75: *Profiler*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Conduct Block III Development Testing (DT)	3	2011	4	2011
Conduct Block III Limited User Test (OT)/Austere Testing	1	2012	3	2012
Austere Testing	4	2012	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting Systems*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L76: *Dismounted Fire Support Laser Targeting Systems*	18.693	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Continuing efforts to support Joint Effects Targeting System (JETS) have been transitioned to Program Element 0604710A project L79 beginning in FY 2012.

This project matures technologies and capabilities which benefit, and may be inserted into, the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1) and the Joint Effects Targeting System (JETS). The LLDR and JETS are targeting devices used by dismounted Soldiers to locate, identify, and target enemy assets. This project focuses on reducing weight, improving imaging performance, and increasing targeting accuracy. Development also focuses on affordable, non-magnetic, high accuracy, Azimuth and Vertical Angle Measurement (AVAM) devices with reduced size, weight and power characteristics.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Azimuth and Vertical Angle Measurement (AVAM) devices ***Articles:*** ***Description:*** AVAM is a non-magnetic based inertial navigation materiel solution for targeting devices. The AVAM effort improves azimuth accuracy leading to reduced collateral damage and improved engagement efficiency. ***FY 2011 Accomplishments:*** Continued development and evaluation of AVAM devices.	4.240 0	-	-
Title: Joint Effects Targeting System (JETS) Target Location Designation System (TLDS) ***Articles:*** ***Description:*** JETS TLDS is a lightweight mission equipment set for the dismounted forward observers and Joint Tactical Air Controllers (JTAC). JETS provides observers and controllers the means to call for fire and control delivery of air, ground and naval surface fire support, using precision munitions and effects (both lethal and non-lethal). ***FY 2011 Accomplishments:*** Continued Target Locator improvements to support use of Precision Guided Weapons by dismounted Soldiers and reduce Soldier load. Developed and built Technology Development (TD) prototypes to support JETS TLDS Milestone B decision.	14.453 0	-	-
Accomplishments/Planned Programs Subtotals	18.693	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting Systems*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• LLDR (SSN K31100): *Lightweight Laser Designator Rangefinder (LLDR) (SSN K31100)*	87.971	58.042								0.000	146.013
• LLDR Mod-of-In-Service (SSN KA3100): *Lightweight Laser Designator Rangefinder (LLDR) MOD-of-In-Service (SSN KA3100)*			22.403		22.403		48.163			0.000	96.603
• JETS (SSN K32101): *Joint Effects Targeting System (JETS) (SSN K32101)*							115.894	91.695	67.443	827.812	1,102.844
• PE 654710/DL79: *Joint Effects Targeting System (JETS) (PE 654710 Project DL79)*		20.367	21.505		21.505		6.101	4.684	1.651	0.000	82.498

D. Acquisition Strategy

N/A

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting Systems*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JETS TLDS Technology Development prototype	MIPR	Northrop-Gruman Laser Systems:Apopka, FL	5.208	-		-		-		-	0.000	5.208	0.000
JETS TLDS Technology Development prototype	MIPR	BAE Systems:Nashua, NH	4.099	-		-		-		-	0.000	4.099	0.000
Azimuth and Vertical Angle Measurement (AVAM)	MIPR	Johns Hopkins Applied Physics Lab:Laurel, MD	4.870	-		-		-		-	0.000	4.870	0.000
Handheld Precision Targeting Demo	MIPR	Battelle Memorial Institute:Columbus, Ohio	0.025	-		-		-		-	0.000	0.025	0.000
Multi Function/Laser Development	MIPR	All Native Services:Winnebago, NE	0.772	-		-		-		-	0.000	0.772	0.000
TLDS ATO	SS/CPFF	Vectronix, Inc:Leesburg, VA	0.700	-		-		-		-	0.000	0.700	0.000
TLDS ATO	SS/CPFF	TOYON Research Corp:Goleta, CA	0.800	-		-		-		-	0.000	0.800	0.000
TLDS ATO	SS/CPFF	A-Tech Corporation:Albuquerque, NM	0.750	-		-		-		-	0.000	0.750	0.000
TLM Phase 1 upgrade	MIPR	NVESD:Ft. Belvoir, VA	0.711	-		-		-		-	0.000	0.711	0.000
Precision Azimuth Verticle Angle (PAVAM) Module Technical Development	SS/CPFF	CACI Technologies, Inc:Chantilly, VA	2.490	-		-		-		-	0.000	2.490	0.000
		Subtotal	20.425	-		-		-		-	0.000	20.425	0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Functional Support Agreement (FSA)	MIPR	NVESD:Ft. Belvoir, VA	2.022	-		-		-		-	0.000	2.022	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting Systems*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Functional Support Agreement (FSA)	MIPR	Army Research Lab (ARL):APG, MD	0.022	-		-		-		-	0.000	0.022	0.000
Functional Support Agreement (FSA)	MIPR	TACOM:Rock Island, IL	0.043	-		-		-		-	0.000	0.043	0.000
Travel in support of program	MIPR	Various locations:Various locations	0.058	-		-		-		-	0.000	0.058	0.000
JHU/APL Support Costs	SS/CPFF	Johns Hopkins University Applied Physics Laboratory:Laurel, MD	1.100	-		-		-		-	0.000	1.100	0.000
		Subtotal	3.245	-		-		-		-	0.000	3.245	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing for LLDR 2H	MIPR	White Sands Missile Range (WSMR):White Sands, New Mexico	0.332	-		-		-		-	0.000	0.332	0.000
Travel in support of testing	MIPR	Various locations:Various	0.022	-		-		-		-	0.000	0.022	0.000
TLDS Sustainment/Reliability Testing	MIPR	AMSAA:APG, MD	0.017	-		-		-		-	0.000	0.017	0.000
		Subtotal	0.371	-		-		-		-	0.000	0.371	0.000

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.041	-		-		-		-	0.000	24.041	0.000

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*	-	20.367	21.505	-	21.505	28.190	6.101	4.684	1.651	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 provides dismounted forward observers and Joint Terminal Attack Controllers (JTAC) the means to call for fire and control delivery of air, ground and naval surface fire support using precision munitions and effects (both lethal and non-lethal). The primary component of JETS is the Target Location Designation System (TLDS). The TLDS provides the observers and controllers the ability to conduct surveillance, acquire and accurately locate targets, designate targets for attack by laser seeking munitions, mark targets for aviation and ground-based targeting systems, and transmit targeting data to existing Forward Entry Systems for each service. The future Forward Entry System capability is achieved through product improvements to existing service Forward Entry Systems. These improvements are funded by the respective service Forward Entry System program management offices and will not be further discussed in this document.

JETS TLDS achieved MS-A (4Q FY 2010). An Army Cost Position (ACP) was approved as part of MS A. Starting in FY 2012, the ACP aligns JETS TLDS funding under this project in lieu of 0604710A L76 (Dismounted Fire Support Targeting System).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Joint Effects Targeting System (JETS) TLDS	-	20.367	21.505
Articles:		0	
Description: JETS TLDS 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 2012 Plans: Test Prototype Systems and Azimuth and Vertical Angle Measurement (AVAM) devices, conduct developmental and early user testing, initiate source selection preparation / process for the Engineering and Manufacturing Development (EMD) phase.			
FY 2013 Plans: Complete EMD source selection, and begin design of EMD prototype systems from two vendors. The prototypes will be integrated with qualified AVAM solution.			
Accomplishments/Planned Programs Subtotals	-	20.367	21.505

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• Fire Support Laser Targeting Sys: *Dismounted Fire Support Laser Targeting Systems (PE 654710 / DL76)*	18.693									0.000	18.693
• Joint Effects Targeting System: *Joint Effects Targeting System (SSN K32101)*							115.894	91.695	67.443	827.812	1,102.844

D. Acquisition Strategy

This project continues to exercise competitively awarded contracts using best value source selection procedures.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JETS TLDS prototype development, integration, and test - Contractor 1 year 1	C/TBD	NGLS:Apopka, FL	-	1.495		-		-		-	0.000	1.495	0.000
JETS TLDS prototype development, integration, and test - Contractor 2 year 1	C/TBD	BAE Systems:Nashua, NH	-	1.495		-		-		-	0.000	1.495	0.000
AVAM Development	C/TBD	Various:TBD	-	2.584		-		-		-	0.000	2.584	0.000
JETS TLDS prototype development, integration, and test - Contractor 1 year 2	C/TBD	TBD:TBD	-	-		8.122		-		8.122	0.000	8.122	0.000
JETS TLDS prototype development, integration, and test - Contractor 2 year 2	C/TBD	TBD:TBD	-	-		8.122		-		8.122	0.000	8.122	0.000
		Subtotal	-	5.574		16.244		-		16.244	0.000	21.818	0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JETS TLDS prototype technical maturation	C/Various	TBD:TBD	-	2.476		-		-		-	0.000	2.476	0.000
Functional Support Cost	TBD	Night Vision Electronics Sensors Directorate:Ft. Belvoir	-	1.920		1.837		-		1.837	Continuing	Continuing	0.000
Science and Engineering Support	TBD	Johns Hopkins Applied Physics Lab:Laurel, MD	-	3.572		0.652		-		0.652	Continuing	Continuing	0.000
Program Management Support	C/Various	Various:Various	-	1.925		1.985		-		1.985	Continuing	Continuing	0.000
		Subtotal	-	9.893		4.474		-		4.474			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
All RDTE Testing and Support	C/TBD	Various:Various	-	4.900		0.787		-		0.787	Continuing	Continuing	0.000
		Subtotal	-	4.900		0.787		-		0.787			0.000

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	20.367		21.505		-		21.505			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*

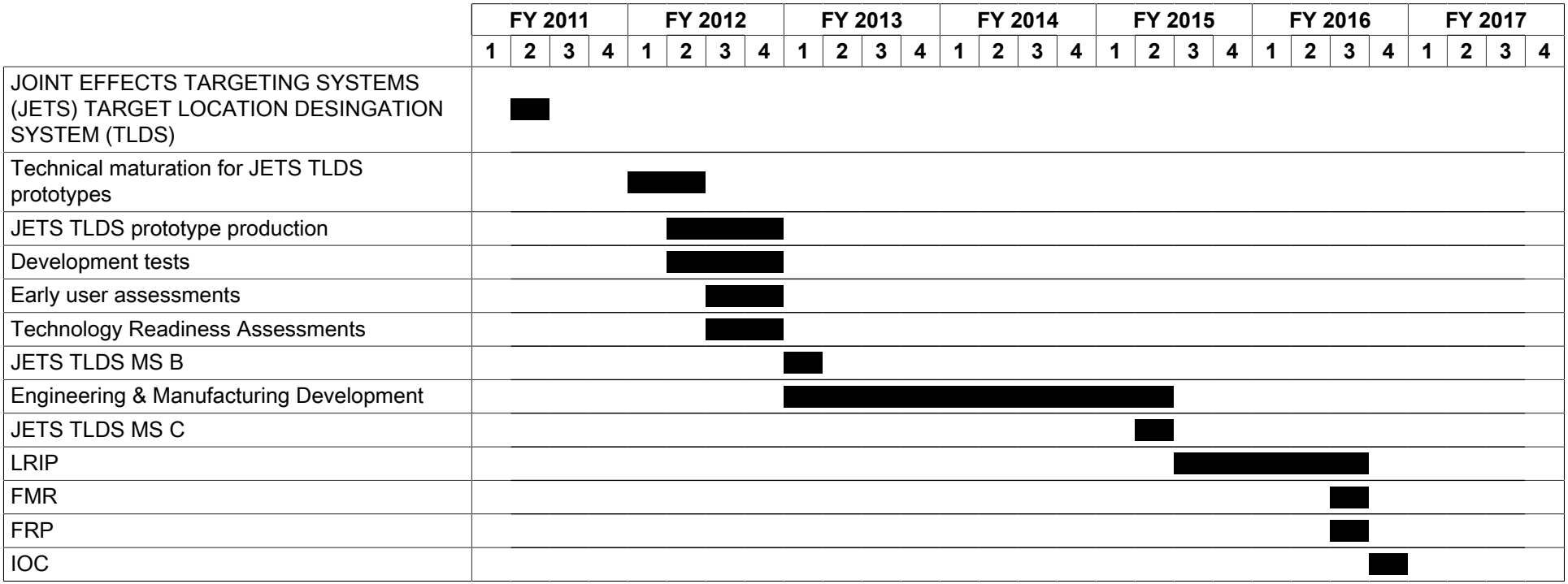

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604710A: *Night Vision Systems - Eng Dev*	**PROJECT** L79: *JOINT EFFECTS TARGETING SYSTEMS (JETS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JOINT EFFECTS TARGETING SYSTEMS (JETS) TARGET LOCATION DESINGATION SYSTEM (TLDS)	2	2011	2	2011
Technical maturation for JETS TLDS prototypes	1	2012	2	2012
JETS TLDS prototype production	2	2012	4	2012
Development tests	2	2012	4	2012
Early user assessments	3	2012	4	2012
Technology Readiness Assessments	3	2012	4	2012
JETS TLDS MS B	1	2013	1	2013
Engineering & Manufacturing Development	1	2013	2	2015
JETS TLDS MS C	2	2015	2	2015
LRIP	3	2015	3	2016
FMR	3	2016	3	2016
FRP	3	2016	3	2016
IOC	4	2016	4	2016