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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2015 Army **Date:** March 2014

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / <i>Landmine Warfare/Barrier - Eng Dev</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	37.769	92.236	57.705	-	57.705	52.477	24.305	5.377	1.014	Continuing	Continuing
415: <i>Mine Neutral/Detection</i>	-	24.099	70.051	47.028	-	47.028	48.143	24.305	5.377	1.014	Continuing	Continuing
434: <i>Anti-Personnel Landmine Alternatives (NSD)</i>	-	13.670	22.185	10.677	-	10.677	4.334	-	-	-	-	50.866

# The FY 2015 OCO Request will be submitted at a later date.

**Note**

FY 2013: Budget decreases of \$60.500 million and \$0.904 million for Congressional and SBIR/STTR reductions.

FY 2015: Budget supports Project 415, Mine Neutral/Detection and Project 434, Anti-Personnel Landmine Alternatives (NSD).

**A. Mission Description and Budget Item Justification**

This program element (PE) provides for the technology development and demonstration of networked munitions, counter mine systems, and counter improvised explosive device capabilities. This PE also implements the National Landmine Policy to develop alternatives to the non-self-destructing counter mobility anti-personnel landmine systems. The PE contributes to Area Access and Area denial (A2/AD) to support unified land operations and improve soldier survivability.

Project 415, Mine Neutralization/Detection provides for development of next generation standoff, detection, and neutralization capability programs such as Husky Mounted Detection System (HMDS), Route Clearance & Interrogation System (RCIS), Vehicle Optics Sensor System (VOSS), Route Clearance Vehicles (RCV), Multi-Function Display (MFD), development of interface kits and the Autonomous Mine Detection System (AMDS). It also supports development of Explosive Hazard Pre-Detonation (EHP) capability to neutralize/detonate a broad spectrum of improvised explosive hazards while on the move, to support A2 route clearance missions.

Project 434, Spider Networked Munitions (NM) is an integrated system of effects (lethal and non-lethal Anti Personnel (AP), counter mobility and AD munition, software, and communications. The Spider system is a hand emplaced, networked remotely controlled (Man-In-The Loop) system that provides highly responsive terrain-shaping and force protection capabilities. Spider Inc 1 replaces persistent anti-personnel landmines, is compliant with US National Landmine policy, and is fielded and operational in Afghanistan. Spider Inc 1A will build upon the existing Spider system, develop additional capabilities to enhance the Spider Remote Control Station and demonstrate the ability to employ legacy Government-Off-The-Shelf (GOTS) lethal and non-lethal AP, counter mobility, and the new Spider Non-Lethal Launcher (NLL).a

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015 Base</b>	<b>FY 2015 OCO</b>	<b>FY 2015 Total</b>
Previous President's Budget	104.971	92.285	50.603	-	50.603
Current President's Budget	37.769	92.236	57.705	-	57.705
Total Adjustments	-67.202	-0.049	7.102	-	7.102
• Congressional General Reductions	-60.500	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.904	-			
• Adjustments to Budget Years	-5.798	-0.049	7.102	-	7.102

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2015 Army										<b>Date:</b> March 2014		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev				<b>Project (Number/Name)</b> 415 / Mine Neutral/Detection			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015 Base</b>	<b>FY 2015 OCO #</b>	<b>FY 2015 Total</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
415: Mine Neutral/Detection	-	24.099	70.051	47.028	-	47.028	48.143	24.305	5.377	1.014	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

# The FY 2015 OCO Request will be submitted at a later date.

**A. Mission Description and Budget Item Justification**

This Project provides for Engineering Manufacturing and Development (EMD) for the next generation of capabilities to detect, identify and neutralize hybrid threats and explosive hazards such as Improvised Explosive Devices (IEDs) and landmines. These capabilities are a Family of Systems (FOS) encompassing handheld, vehicle mounted, small robotic mounted, aerial platform mounted and Area Access (A2), and neutralization systems operating in manned, remotely controlled, semi-autonomous or fully autonomous modes. Continued development of this FOS is necessary to support Route Clearance Platoons located within both Engineer Companies, and Brigade Engineering Battalion Brigade Combat Teams.

HMDS is a Counter Explosive Device System that provides standoff detection and marking of metallic and low-metallic surface-laid and shallow-buried antitank landmines, unexploded ordinance, trigger mechanisms, and deep buried IEDs and metallic encased caches in support of route clearance operations. It provides Area Access and freedom of movement for the Commander. HMDS is a mission equipment package mounted on the Husky route clearance vehicle that consists of a ground penetrating radar (GPR), deep buried detection (DBD) capability and semi-autonomous operation. The Husky Mounted GPR detection capability will detect and accurately mark a broader spectrum of suspected explosive hazards and trigger mechanisms in a wider range of road surfaces and varying soil conditions. The DBD capability will detect and accurately mark suspected deep buried metallic improvised explosive devices (IEDs) and metallic encased caches. The Semi-Autonomous Control (SAC) capability will enable an operator to semi-autonomously control all functions of a Husky in an unmanned mode from inside the Mine Protected Clearance Vehicle at standoff and will remove the operator from the proximity of the effects of explosive hazards.

The Route Clearance & Interrogation System (RCIS) consists of two semi-autonomous vehicles and a designated control vehicle which provides a standoff capability to detect and neutralize the full spectrum of explosive hazards by integrating a semi-autonomous kit onto a High Mobility Engineering Excavator (HMEE) and the RG-31 and a teleoperate control device onto a designated RG31 or Buffalo. RCIS Type 1 semi-autonomous kit will be integrated onto the HMEE and be capable of interrogating and classifying explosive hazards. RCIS Type 2 semi-autonomous kit will be integrated onto an RG-31/Medium Mine Protected Vehicle (MMPV) and be able to detect, neutralize and proof explosive hazards. The teleoperational control device will be integrated into both a RG31/MMPV and Buffalo. RCIS capabilities will be fielded to Route Clearance Squads and Engineer Platoons. RCIS Type 1 and Type 2 are being procured as separate increments from the same acquisition in order to maintain commonality across the formation.

The Man-Transportable Robotic System (MTRS) Inc II is a modular System providing a multitude of standoff capabilities through different payloads for the Army. These capabilities include detect and confirm presence, identify disposition and counter hazards by providing a platform for payloads in support of current and future mission requirements. Additionally, MTRS Inc II will support current and future payload missions for the engineer's route clearance platoons, Special Operational Forces (SOF)

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<p>detachments, and CBRN units. An Analysis of Alternatives (AoA) will be completed in FY15 and may result in a common medium weight class robot across the Army, to include Explosive Ordnance Disposal (EOD) teams.</p> <p>The Interoperability effort includes development of RCIS and HMDS interface requirements in UGV Interoperability Profile (IOP) Version 2, development of RCIS and HMDS IOP Instantiation Document, and government lab interoperability risk reduction for RCIS and HMDS in support of Milestone B and EMD phase.</p> <p>The Vehicle Optics Sensor System (VOSS) provides a telescoping, gyro-stabilized, high-resolution, triple sensor (daylight, night-vision, and thermal-imaging) surveillance system to optically detect from standoff distances, explosive hazards (IEDs and landmines) and their trigger sources. VOSS is mounted on Medium Mine Protected Vehicles (MMPV) and the Joint EOD Rapid Response Vehicle (JERRV) located within Route Clearance Platoons and Explosive Ordnance Disposal (EOD) Companies.</p> <p>The Multifunction Video Display (MVD) provides view/control capability of the enablers (Interrogation Arms, VOSS, Man Transportable Robotic System, Drivers Vision Enhancement, Vehicle Situational Awareness Cameras) in the Medium Mine Protected Vehicle (MMPV) to all Operators. New capabilities will be added into that display to view and control future Unmanned Ground Vehicle Systems (UGVs) programs Route Clearance &amp; Integration System (RCIS) and Husky Mounted Detection System (HMDS) and view Unmanned Aerial Vehicles video feeds. Additional software will need to be developed to add these capabilities. In addition, a new capability to push the video feeds of all of the enablers (Interrogation Arms, VOSS, Man Transportable Robotic System, Drivers Vision Enhancement, Vehicle Situational Awareness Cameras) from various vehicles within a Route Clearance Patrol will be developed.</p> <p>The following Route Clearance Vehicles (RCV) enablers will require a full system integration design cycle to ensure suitability and compatibility with various RCVs:</p> <ul style="list-style-type: none"> <li>- Wire Neutralization System (WNS) on the Husky (VMMD)</li> <li>- Debris Blower on the Buffalo Mine Protected Clearance Vehicle (MPCV)</li> <li>- RCIS on the Husky (VMMD)</li> <li>- HMDS on the Husky and semi-autonomous control capability on the Husky (VMMD) and Buffalo</li> <li>- Mine ROLLER/WNS kits for MMPV Type II</li> </ul> <p>Force Protection Improvements/Add On Armor (AoA) to execute system level design cycle for RPG and EFP AoA kits for VMMD/Husky and MPCV/Buffalo. Explosive Hazard Pre-Detonation (EHP) capability to include a debris blower, Wire Neutralization System (WNS) and integrated Roller-WNS system to neutralize/detonate a broad spectrum of improvised explosive hazards while on the move, to support route clearance mission.</p> <p>Autonomous Mine Detection System (AMDS) provides increased survivability through mine and explosive hazards stand-off detection, marking and neutralization capability for the dismounted soldier. It provides Area Access and freedom of movement for the Commander. AMDS consists of payload modules to be mounted on man-portable unmanned ground vehicles. The payloads are for surface laid and buried threats to include mines and explosive hazards. AMDS will transition from Technical Development to Engineering and Manufacturing Development (EMD) in FY 2014. This capability allows a soldier to remain in a protective posture while detecting and neutralizing a wide variety of hybrid and conventional explosive threats.</p>		

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<p><b>Title:</b> AMDS</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> AMDS</p> <p><b>FY 2013 Accomplishments:</b> Program documentation preparation, and pre-Engineering and Manufacturing Development (EMD) In-Process Review (IPR)</p> <p><b>FY 2014 Plans:</b> Engineering and Manufacturing (EMD) Contract Award and Milestone (MS) B</p> <p><b>FY 2015 Plans:</b> Preliminary Design Review (PDR), Critical Design Review (CDR), Engineering and Manufacturing Development (EMD), and Risk Reduction Testing (RRT)</p>		9.629 -	21.324 -	7.549 -
<p><b>Title:</b> HMDS Program of Record (POR)</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> HMDS Program of Record (POR)</p> <p><b>FY 2013 Accomplishments:</b> HMDS Pre-Engineering and Manufacturing Development (EMD) In-Process Review (IPR) for Increments A1, A2, and B Acquisition Strategy and Milestone (MS) B Review</p> <p><b>FY 2014 Plans:</b> EMD Contract Award, Preliminary Design Review (PDR)</p>		0.505 -	8.250 -	- -
<p><b>Title:</b> HMDS Increment A, Configuration 1 (GPR) Ground Penetrating Radar (GPR)</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> HMDS Increment A, Configuration 1 (GPR) Ground Penetrating Radar (GPR)</p> <p><b>FY 2014 Plans:</b> HMDS Increment A1 baseline testing and reset planning</p> <p><b>FY 2015 Plans:</b> HMDS Increment A1 Limited User Test (LUT), type classification and material release (TC/MR) and MS C</p>		- -	9.350 -	4.025 -
<p><b>Title:</b> HMDS Increment A, Configuration 2</p> <p align="right"><b>Articles:</b></p>		- -	17.300 -	21.602 -

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<p><b>Description:</b> HMDS Increment A, Configuration 2</p> <p><b>FY 2014 Plans:</b> Increment A2 EMD IPR and contract award</p> <p><b>FY 2015 Plans:</b> Increment A2 Limited Critical Design Review (CDR) and Developmental Testing (DT)</p>				
<p><b>Title:</b> HMDS Increment A, Configuration 1 Trainer Development</p> <p><b>Description:</b> PEO STRI to develop trainer.</p> <p><b>FY 2014 Plans:</b> HMDS Increment A, Configuration 1 - Trainer</p>		<b>Articles:</b>	- 1.000	- -
<p><b>Title:</b> HMDS Increment B Integration of Semi-autonomous Control (SAC) Capability</p> <p><b>Description:</b> HMDS Increment B Integration of Semi-autonomous Control (SAC) Capability</p> <p><b>FY 2014 Plans:</b> Pre-contract award activities</p> <p><b>FY 2015 Plans:</b> Pre-Engineering and Manufacturing Development (EMD) In-Process Review (IPR)</p>		<b>Articles:</b>	- 1.982	- 2.640
<p><b>Title:</b> EHP</p> <p><b>Description:</b> EHP</p> <p><b>FY 2013 Accomplishments:</b> EHP Debris Blower, EHP Wire Neutralization System (WNS), and EHP Roller -WNS Technical Insertion Contract Awards</p>		<b>Articles:</b>	5.800 -	- -
<p><b>Title:</b> RCIS</p> <p><b>Description:</b> RCIS</p>		<b>Articles:</b>	2.480 -	7.098 -

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<p><b>FY 2013 Accomplishments:</b> RCIS MDD, Program Documentation Prep. MTRS Inc II MDD, MTRS Inc II AoA Study Guidance preparation</p> <p><b>FY 2014 Plans:</b> RCIS MS B Preparation and Contract Award and Interoperability, MTRS Inc II AoA, and MTRS Inc II Program Documentation Preparation</p> <p><b>FY 2015 Plans:</b> RCIS Engineering and Manufacturing Dev. contract award, Interoperability, MTRS Inc II PM Support, and complete MTRS Inc II AoA</p>				
<p><b>Title:</b> Multifunction Video Display (MVD).</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Multifunction Video Display (MVD). Digital display used to control and view RCV enablers</p> <p><b>FY 2014 Plans:</b> Development of MVD, procurement of Product Verification Test (PVT) assets and Test. Begin development of MVD System Integration Laboratory (SIL) at Night Vision &amp; Electronic Sensor Directorate (NVESD)</p> <p><b>FY 2015 Plans:</b> Continued MVD Prototype Development and follow-on Test. Continuing support for MVD SIL at NVESD; development of additional enablers (EHP, HMDS Inc B, &amp; control of robot) into MVD</p>		-	3.297	1.100
		-	-	-
<p><b>Title:</b> Interface Kits.</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Interface Kits. Develop the hardware used to connect and control enablers (rollers,WNS, &amp; Blowers) onto Program of Record RCV</p> <p><b>FY 2014 Plans:</b> Prototype Development</p> <p><b>FY 2015 Plans:</b> Test/Modify Prototype</p>		-	0.450	0.383
		-	-	-
<p><b>Title:</b> Add on Armor (AoA)</p>		-	-	0.483

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<b>Description:</b> Development efforts for Route Clearance Vehicles (RCV) to include Rocket Propelled Grenade (RPG) and Explosive Formed Projectiles (EFP) for Husky/VMMD and Buffalo/MPCV			
<b>FY 2015 Plans:</b> Development efforts for Route Clearance Vehicles (RCV) to include Rocket Propelled Grenade (RPG) and Explosive Formed Projectiles (EFP) for Husky/VMMD and Buffalo/MPCV			
<b>Title:</b> VOSS MDD & Milestone C Prep.	5.685	-	-
	<b>Articles:</b>	-	-
<b>Description:</b> VOSS MDD & Milestone C Prep.			
<b>FY 2013 Accomplishments:</b> Spec Development, plot build & test. and sustainment planning in preparation for Milestone C			
<b>Accomplishments/Planned Programs Subtotals</b>	24.099	70.051	47.028

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 606: <i>Countermine/Barrier Advanced Dev</i>	4.089	-	-	-	-	-	-	-	-	-	4.089
• R64002: <i>HMDS GPR</i>	-	-	18.545	-	18.545	11.597	16.427	57.121	98.291	Continuing	Continuing
• R68102: <i>GSTAMIDS</i>	-	-	37.649	-	37.649	33.783	21.181	31.158	34.910	Continuing	Continuing
• R68260: <i>AMDS</i>	-	-	-	-	-	6.957	5.619	15.577	25.366	Continuing	Continuing
• DA0924: <i>OPA1 Mods in Services</i>	2.217	45.297	83.867	-	83.867	134.004	65.589	101.418	84.776	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

AMDS, HMDS, RCIS, A-Kits, Debris Blower, Wire Neutralization System (WNS), and Roller-WNS will all be competitively solicited to the maximum extent possible for contract awards projected in FY 2013-2015. EHP Debris Blower will be procured as a COTS item from a commercial vendor. WNS and Roller-WNS are going thru a make or buy decision and will be procured thru Depot/Arsenal or commercial vendor. AMDS has transitioned to Engineering Manufacturing Development in FY 2014.

The HMDS acquisition strategy is evolutionary with three capability increments – Increment A, Configuration1 (A1), Increment A, Configuration 2 (A2) and Increment B. Increment A provides detection and marking of explosive hazards (EH), unexploded ordnance (UXO), and weapons caches, while Increment B provides (semi-

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autonomous) remote control (SAC) of the HMDS platform vehicle (Husky) from another vehicle and Increment A capabilities. This further improves Solder survivability. In order to accelerate delivery of the Ground Penetrating Radar (GPR) capability and its corresponding full-scale training device, Increment A will be executed as two distinct capability increments. Increment A1 leverages the Quick Reaction Capability (QRC) GPR technology currently deployed in support of Operation Enduring Freedom (OEF) and the stand alone full-scale GPR trainer currently used for pre-deployment home station training. Increment A2 provides Deep Buried Detection (DBD) and marking capabilities, a full-scale DBD training device and integrates these capabilities with the GPR. Increment B integrates the Semi-autonomy (SAC) with GPR, DBD, and marking capabilities, training devices, and the host vehicles. The HMDS program entered EMD in 4th Quarter FY 2013 and awarded a contract for Configuration A1 in 4th Quarter FY 2013. An EMD contract for Configuration A2 is planned for award in 3rd Quarter FY 2014 and a solicitation for an EMD contract for Increment B is planned for 3rd Quarter FY 2016.

PM Ground Sensors is pursuing a two phase acquisition approach for Vehicle Optics Sensor System (VOSS) which harvests Quick Reaction Capability (QRC) procured systems for refresh and insertion into the Program of Record (POR), followed by a full and open procurement for the remaining systems.

MTRS Inc II will conduct an AoA in FY 2014 through FY 2015 to determine the best robotic platform solution. Acquisition strategy will be developed based on the outcome of the AoA.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army** **Date:** March 2014

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<b>Management Services (\$ in Millions)</b>				<b>FY 2013</b>		<b>FY 2014</b>		<b>FY 2015 Base</b>		<b>FY 2015 OCO</b>		<b>FY 2015 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Program Management - HMDS & AMDS	Allot	PM-CCS : Picatinny Arsenal, NJ	24.375	-		3.731		-		-		-	Continuing	Continuing	-
Program Management - AMDS	Allot	PM-CCS : Picatinny Arsenal, NJ	0.000	1.969		-		0.270		-		0.270	-	2.239	-
Program Management - HMDS	MIPR	PM CCS : Picatinny Arsenal, NJ	0.000	0.505		-		2.826	Dec 2014	-		2.826	-	3.331	-
Program Management - VOSS	MIPR	PM Ground Sensors : Ft. Belvoir, VA	0.000	0.200		-		-		-		-	-	0.200	-
<b>Subtotal</b>			24.375	2.674		3.731		3.096		-		3.096	-	-	-

<b>Product Development (\$ in Millions)</b>				<b>FY 2013</b>		<b>FY 2014</b>		<b>FY 2015 Base</b>		<b>FY 2015 OCO</b>		<b>FY 2015 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
AMDS	C/CPIF	TBD : TBD	0.000	5.329	Jul 2014	15.401	Jul 2014	6.700	Jun 2015	-		6.700	Continuing	Continuing	Continuing
HMDS Inc A2 - Integration with DBD and Training Devices	SS/IDIQ	NIITEK Dulles : VA	0.000	-		18.900	Apr 2014	13.300	Mar 2015	-		13.300	-	32.200	-
A1 Test Support	SS/FFP	Unversal Solutions International : Newport News, VA	0.000	-		0.392	Jul 2014	-		-		-	-	0.392	-
Power Steering Upgrade Kits	SS/FFP	Parker-Hannifin : Lakeville, MN	0.000	-		0.032	Feb 2014	-		-		-	-	0.032	-
EHP Debris Blower/WNS/ Roller	C/CPFF	Yuma Proving Ground : Yuma	0.000	1.711	Aug 2013	-		-		-		-	Continuing	Continuing	-
RCIS	C/CPFF	TBD : TBD	4.878	-		-		3.667	Jun 2015	-		3.667	Continuing	Continuing	Continuing
MTRS Inc II - EMD Systems	C/CPFF	RSJPO : Warren, MI	0.000	-		-		-		-		-	1.761	1.761	1.791
Interface Kits	C/CPFF	TARDEC : Warren, MI	0.000	-		0.450		0.283		-		0.283	1.830	2.563	1.830

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604808A / Landmine Warfare/Barrier - Eng Dev				415 / Mine Neutral/Detection							
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Multi-Function Video Display	C/CPFF	Night Vision Electronic Sensor Directorate : APG, Md	0.000	-		2.297		1.000		-		1.000	3.045	6.342	3.045
Add on Armor (AoA)	SS/BA	TARDEC : Warren, MI	0.000	-		-		0.283		-		0.283	-	0.283	-
VOSS	C/CPFF	Various : Ft. Belvoir, VA	0.670	0.723		-		-		-		-	Continuing	Continuing	Continuing
<b>Subtotal</b>			5.548	7.763		37.472		25.233		-		25.233	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AMDS	MIPR	Various : Various	0.000	2.331		2.950		0.579		-		0.579	Continuing	Continuing	Continuing
HMDS	MIPR	NVESD/CERDEC : Fort Belvoir, VA	5.452	-		2.766	Feb 2014	2.500	Dec 2014	-		2.500	Continuing	Continuing	-
HMDS	MIPR	Joint Products Office (JPO) Robotics Systems : Warren, MI	1.994	-		1.275	Mar 2014	0.960	Dec 2014	-		0.960	-	4.229	-
HMDS	MIPR	Product Realization Directorate (PRD)/ CERDEC : APG, MD	0.000	-		0.462	Feb 2014	-		-		-	-	0.462	-
HMDS	MIPR	TARDEC : Warren, MI	0.545	-		0.400	Jun 2014	0.400		-		0.400	-	1.345	-
HMDS	MIPR	ECBC : Edgewater, MD	0.000	-		0.750	Apr 2014	-		-		-	-	0.750	-
HMDS	MIPR	AMRDEC : Redstone Arsenal, AL	0.000	-		0.338	Mar 2014	-		-		-	-	0.338	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604808A / Landmine Warfare/Barrier - Eng Dev				415 / Mine Neutral/Detection							
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
HMDS	MIPR	Tobyhanna Army Depot : Tobyhanna, PA	0.000	-		0.241	Mar 2014	-		-		-	-	0.241	-
HMDS	MIPR	Various : Various locations	2.290	-		0.844	Feb 2014	0.611	Dec 2014	-		0.611	-	3.745	-
HMDS	MIPR	ARDEC : Picatinny Arsenal, NJ	0.861	-		0.492	Mar 2014	0.780	Dec 2014	-		0.780	-	2.133	-
HMDS	MIPR	CECOM : Aberdeen Proving Grounds	0.000	-		0.780	Mar 2014	1.260	Dec 2014	-		1.260	-	2.040	-
HMDS	MIPR	MSCoE : Ft. Leonard Wood, MO	0.000	-		-		0.143	Dec 2014	-		0.143	-	0.143	-
HMDS	MIPR	PEO STRI : Orlando, FL	0.000	-		1.575	Mar 2014	0.597	Dec 2014	-		0.597	-	2.172	-
EHP	MIPR	PM AMS : Warren, MI	1.145	2.100	Oct 2013	-		-		-		-	Continuing	Continuing	-
RCIS	MIPR	RSJPO : Warren, MI	0.350	1.480		1.300		2.246	Jan 2015	-		2.246	Continuing	Continuing	-
RCIS Interoperability	MIPR	RSJPO : Warren, MI	0.000	1.000		1.000		1.000	Jan 2015	-		1.000	-	3.000	-
VOSS	MIPR	Various : Various	0.768	1.608		-		-		-		-	Continuing	Continuing	Continuing
MTRS Inc II Support	MIPR	RSJPO : Warren, MI	0.000	-		3.600	Jun 2014	2.333	Jun 2015	-		2.333	-	5.933	-
<b>Subtotal</b>			13.405	8.519		18.773		13.409		-		13.409	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AMDS	MIPR	ATEC : Aberdeen Proving Ground, MD	0.000	-		1.239		-		-		-	-	1.239	-
HMDS	MIPR	ATEC : Alexandria, VA	0.362	-		6.638	Mar 2014	4.890	Jan 2015	-		4.890	Continuing	Continuing	Continuing
EHP	MIPR	ATEC : APG, MD	0.750	1.989	Oct 2013	-		-		-		-	Continuing	Continuing	Continuing



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2015 Army		<b>Date:</b> March 2014
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>Project (Number/Name)</b> 415 / <i>Mine Neutral/Detection</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
HMDS Increment A1 and A2 - MS B Review				■																								
HMDS Increment A1 - Contract Award				■																								
HMDS Increment A2 - Contract Award							■																					
HMDS Increment A2 - Critical Design Review (CDR)										■																		
HMDS Increment A1 - MS C Review											■																	
HMDS Increment B - MS B Review													■															
HMDS Increment B - Contract Award														■														
HMDS Increment A2 - IOT&E														■														
HMDS Increment A2 - MS C Review														■														
HMDS Increment A2 - Full Rate Production (FRP) Decision																			■									
HMDS Increment A1 - IOC															■													
HMDS Increment B - MS C Review																										■		
HMDS Increment B - FRP																											■	
HMDS Increment A2 - IOC																										■		
HMDS Increment A - First Unit Equipped (FUE)																										■		
EHP Blower Material Development Decision (MDD)		■																										
EHP Blower MS C								■																				
EHP Blower Low Rate Initial Production (LRIP)										■																		
EHP Blower full Rate Initial Production (FRP)															■													
EHP WNS Material Development Decision (MDD)		■																										
EHP WNS MS C									■																			

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**Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army** **Date:** March 2014

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 415 / Mine Neutral/Detection
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	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
EHP WNS Low Rate Initial Production (LRIP)																												
EHP WNS Full Rate Initial Production (FRP)																												
EHP Roller WNS Material Development Decision (MDD)																												
EHP Roller WNS MS C																												
EHP Roller WNS Low Rate Initial Production (LRIP)																												
EHP Roller WNS Full Rate Initial Production (FRP)																												
VOSS Material Development Decision (MDD)																												
VOSS MS C																												
RCIS Material Development Decision (MDD)																												
RCIS MS B																												
RCIS Type 1 Engin and Mftg. Devel.Contract Award																												
RCIS Type 2 Development Decision Point																												
RCIS Type 2 EMD Kit Option																												
RCIS Type 1 MS C																												
RCIS Type 2 MS C																												
RCIS Type 1 Low Rate Initial Production (LRIP)																												
RCIS Type 1 Full Rate Production (FRP) Decision																												
RCIS Type 1 FUE																												
MVD Prototype Development																												
MVD Low Rate Initial Production (LRIP)																												
MVD Testing																												
MVD Full Rate Production																												

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**Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army** **Date:** March 2014

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 415 / Mine Neutral/Detection
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	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Prototype Development																												
Low Rate Initial Production																												
LRIP Testing																												
Full Rate Production																												
Add on Armor (AoA)																												
AoA Prototype Development																												
Add on Armor LRIP																												
Add on Armor LRIP Testing																												
AMDS																												
AMDS Milestone (MS) B																												
AMDS Preliminary Design Review (PDR)																												
AMDS Critical Design Review (CDR)																												
AMDS Milestone C Low Rate Initial Production (LRIP)																												
AMDS Full Rate Production (FRP)																												
MTRS Inc II Shaping Brief for Material Development Decision (MDD)																												
MTRS Inc II AoA starts																												
MTRS Inc II AoA Completed																												
MTRS Inc II Acquisition Decision Memorandum (ADM)																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2015 Army		<b>Date:</b> March 2014
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>Project (Number/Name)</b> 415 / <i>Mine Neutral/Detection</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
HMDS Increment A1 and A2 - MS B Review	4	2013	4	2013
HMDS Increment A1 - Contract Award	4	2013	4	2013
HMDS Increment A2 - Contract Award	3	2014	3	2014
HMDS Increment A2 - Critical Design Review (CDR)	1	2015	1	2015
HMDS Increment A1 - MS C Review	3	2015	3	2015
HMDS Increment B - MS B Review	2	2016	2	2016
HMDS Increment B - Contract Award	3	2016	3	2016
HMDS Increment A2 - IOT&E	2	2016	2	2016
HMDS Increment A2 - MS C Review	2	2016	2	2016
HMDS Increment A2 - Full Rate Production (FRP) Decision	3	2017	3	2017
HMDS Increment A1 - IOC	4	2016	4	2016
HMDS Increment B - MS C Review	4	2018	4	2018
HMDS Increment B - FRP	3	2019	3	2019
HMDS Increment A2 - IOC	3	2018	3	2018
HMDS Increment A - First Unit Equipped (FUE)	1	2018	1	2018
EHP Blower Material Development Decision (MDD)	2	2013	2	2013
EHP Blower MS C	3	2014	3	2014
EHP Blower Low Rate Initial Production (LRIP)	4	2014	4	2014
EHP Blower full Rate Initial Production (FRP)	3	2016	1	2017
EHP WNS Material Development Decision (MDD)	2	2013	2	2013
EHP WNS MS C	4	2014	4	2014
EHP WNS Low Rate Initial Production (LRIP)	1	2015	1	2015

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2015 Army **Date:** March 2014

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>Project (Number/Name)</b> 415 / <i>Mine Neutral/Detection</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
EHP WNS Full Rate Initial Production (FRP)	4	2016	4	2016
EHP Roller WNS Material Development Decision (MDD)	2	2013	2	2013
EHP Roller WNS MS C	4	2014	4	2014
EHP Roller WNS Low Rate Initial Production (LRIP)	1	2015	1	2015
EHP Roller WNS Full Rate Initial Production (FRP)	4	2016	4	2016
VOSS Material Development Decision (MDD)	2	2013	2	2013
VOSS MS C	1	2015	1	2015
RCIS Material Development Decision (MDD)	4	2013	4	2013
RCIS MS B	2	2015	2	2015
RCIS Type 1 Engin and Mftg. Devel.Contract Award	3	2015	3	2015
RCIS Type 2 Development Decision Point	3	2016	3	2016
RCIS Type 2 EMD Kit Option	1	2017	1	2017
RCIS Type 1 MS C	4	2017	4	2017
RCIS Type 2 MS C	1	2019	1	2019
RCIS Type 1 Low Rate Initial Production (LRIP)	3	2017	3	2017
RCIS Type 1 Full Rate Production (FRP) Decision	4	2019	4	2019
RCIS Type 1 FUE	4	2019	1	2020
MVD Prototype Development	1	2014	4	2014
MVD Low Rate Initial Production (LRIP)	3	2014	3	2014
MVD Testing	1	2015	4	2015
MVD Full Rate Production	3	2016	3	2016
Prototype Development	2	2014	3	2015
Low Rate Initial Production	3	2014	3	2015
LRIP Testing	2	2015	4	2015
Full Rate Production	2	2015	2	2016

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2015 Army **Date:** March 2014

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>Project (Number/Name)</b> 415 / <i>Mine Neutral/Detection</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Add on Armor (AoA)	2	2015	1	2016
AoA Prototype Development	1	2015	3	2015
Add on Armor LRIP	3	2015	3	2015
Add on Armor LRIP Testing	4	2015	4	2015
AMDS	4	2013	1	2014
AMDS Milestone (MS) B	2	2014	2	2014
AMDS Preliminary Design Review (PDR)	1	2015	1	2015
AMDS Critical Design Review (CDR)	3	2015	3	2015
AMDS Milestone C Low Rate Initial Production (LRIP)	1	2017	1	2017
AMDS Full Rate Production (FRP)	2	2018	2	2018
MTRS Inc II Shaping Brief for Material Development Decision (MDD)	4	2013	4	2013
MTRS Inc II AoA starts	4	2014	4	2014
MTRS Inc II AoA Completed	3	2015	3	2015
MTRS Inc II Acquisition Decision Memorandum (ADM)	3	2015	3	2015

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2015 Army										<b>Date:</b> March 2014		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev				<b>Project (Number/Name)</b> 434 / Anti-Personnel Landmine Alternatives (NSD)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015 Base</b>	<b>FY 2015 OCO #</b>	<b>FY 2015 Total</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
434: Anti-Personnel Landmine Alternatives (NSD)	-	13.670	22.185	10.677	-	10.677	4.334	-	-	-	-	50.866
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

# The FY 2015 OCO Request will be submitted at a later date.

**A. Mission Description and Budget Item Justification**

Spider Increment 1A will build upon the existing M7 Spider system. The M7 Spider system is a hand-emplaced, remotely controlled (Man-In-The-Loop) system that provides highly responsive terrain-shaping and protection capabilities. M7 Spider replaces persistent anti-personnel landmines, is compliant with US National Landmine policy, and has been fielded to US forces in support of Operation Enduring Freedom. Additional capabilities will be developed to enhance the Spider Remote Control Station and demonstrate the ability to employ legacy Government-Off-The-Shelf (GOTS) lethal and non-lethal anti-personnel (AP) munitions and counter mobility obstacles. Spider Increment 1A will utilize an open system architecture to facilitate future munition integration. Further, Spider Increment 1A will complete the development of the Non-Lethal Launcher (NLL) XM809 and XM810.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<p><b>Title:</b> Spider Increment 1A Contract and completion NLL</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Develop Spider Increment 1A Controller with the ability to employ/control and initiate AP &amp; counter mobility obstacle munitions. Continue with the development of the Spider NLL for use with the Spider Inc 1A system.</p> <p><b>FY 2013 Accomplishments:</b> FY13 Spider Increment 1A Engineering Manufacturing and Development (EMD) contract award and initiation of EMD development. Continue with the development of the Spider NLL for use with the Spider Inc 1A system.</p> <p><b>FY 2014 Plans:</b> Continue with Spider Increment 1A EMD development efforts and complete development of the Spider NLL.</p>	12.059	10.822	-
	-	-	-
<p><b>Title:</b> Engineering Support</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Perform engineering support.</p> <p><b>FY 2013 Accomplishments:</b></p>	1.429	8.426	5.814
	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2015 Army		<b>Date:</b> March 2014		
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 434 / Anti-Personnel Landmine Alternatives (NSD)		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<p>Support development of Capability Development Document, Pre-EMD and Milestone B documentation, development of procurement package (Statement of Work Performance Requirements Document, etc), and engineering support to award EMD/ Low rate Initial Production (LRIP) Option contract. Continue to support NLL development.</p> <p><b>FY 2014 Plans:</b> Continue EMD efforts of the Spider Inc 1A system. Provide engineering support, software development support, Shock Tube safety improvements, conduct Preliminary Design Review (PDR) and Post-PDR Assessment, provide MANPRINT and Human Factors Engineering (HFE) support to contractor Developmental Testing. Support the completion of the development effort for the NLL.</p> <p><b>FY 2015 Plans:</b> Continue development of the Spider Inc 1A system. Provide engineering support, software development support, conduct Critical Design Review (CDR) and Post-CDR Assessment, provide MANPRINT and HFE support to contractor Developmental Testing, and initiate efforts to support Milestone C.</p>				
<p><b>Title:</b> Test and Evaluation</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Provide support to Contractor/Government test activities (Contractor Developmental Testing (DT), Pre-Logistics Demonstration, Functional Development Test and Evaluation (FDTE), and Pre-Limited UserTest (LUT) activities).</p> <p><b>FY 2013 Accomplishments:</b> Planning conducted to support Contractor/Government test activities.</p> <p><b>FY 2014 Plans:</b> Support contractor development testing, software development, Hardware Environmental and Lab Integration and Technical Interchange Meetings.</p> <p><b>FY 2015 Plans:</b> Provide support to Contractor/Government test activities. Contractor will perform Software Functional Qualification Test (FQT) and end to end Contractor System Verification Test (C-SVT). The Government will perform User Jury, IETM Val/Log Demo, Information Assurance (IA), Force Development Test (FDT), and Army Interoperability Certification (AIC).</p>		0.006 -	0.523 -	2.820 -
<p><b>Title:</b> Program Management and Oversight</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Program Management and support Spider Increment 1A.</p> <p><b>FY 2013 Accomplishments:</b></p>		0.176 -	1.945 -	1.500 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2015 Army		<b>Date:</b> March 2014
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 434 / Anti-Personnel Landmine Alternatives (NSD)

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
Perform program management to support acquisition activities, program execution, Milestone B documentation, and program management support to award EMD/LRIP Option contract. Support and continue NLL development.  <b>FY 2014 Plans:</b> Perform overall program management support for the execution of the Spider Inc 1A development effort. Oversee all contractor activities. Conduct all major Program Reviews (System Requirements Review (SRR), System Functional Review (SFR), Preliminary Design Review (PDR) and Initial Baseline Review (IBR). Complete NLL development efforts.  <b>FY 2015 Plans:</b> Perform overall program management support for the execution of the Spider Inc 1A development effort. Prepare for Milestone C to include initiation of the development of the Capability Production Document (CPD).			
<b>Title:</b> FY 2013-2015 Reductions  <b>Description:</b> Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR) and Federally Funded Research & Development Centers (FFRDC) Reductions.  <b>FY 2014 Plans:</b> FY 2014 reductions are \$469K in SBIR / STTR, Sec 3001 ATB and Sec 3004 ATB adjustments.  <b>FY 2015 Plans:</b> Approximately \$543K projected adjustments in FY 2015.	-	0.469	0.543
<b>Articles:</b>	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>	13.670	22.185	10.677

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015 Base</b>	<b>FY 2015 OCO</b>	<b>FY 2015 Total</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• Spider Network Munitions: PAA Spider Increment 1 Program	17.385	-	-	-	-	-	-	-	-	-	17.385
• Spider - APLA Remote Control Unit: OPA2 Spider Increment 1 Program B55501	24.292	-	0.969	-	0.969	-	-	-	-	-	25.261
• Spider Family Of Networked Munition: OPA2 Spider Increment 1A Program B54020	-	-	-	-	-	9.276	10.325	10.388	9.179	-	39.168

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2015 Army		<b>Date:</b> March 2014
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 434 / Anti-Personnel Landmine Alternatives (NSD)

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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**Remarks**

**D. Acquisition Strategy**

The Engineering Manufacturing Development (EMD) contract was a competitively awarded 26 month, Cost Plus Incentive Fee EMD contract with a one year Firm-Fixed Price (FFP) Low Rate Initial Production (LRIP) option. A Government Level 3 Technical Data Package (TDP) will be delivered as part of the EMD contract. The modified TDP at the end of LRIP will facilitate full and open competition of a FFP Full Rate Production contract.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army** **Date:** March 2014

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 434 / Anti-Personnel Landmine Alternatives (NSD)
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<b>Management Services (\$ in Millions)</b>				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Spider - Program Mgmt	Various	PM-CCS, : Picatinny Arsenal, NJ	0.593	0.176		1.945		1.500		-		1.500	Continuing	Continuing	-
SBIR/STTR, FFRDC and Section 3001/3004 ATB Adjustments	Various	PM CCS, : Picatinny Arsenal, NJ	2.352	-		0.469		0.543		-		0.543	-	3.364	-
<b>Subtotal</b>			2.945	0.176		2.414		2.043		-		2.043	-	-	-

<b>Product Development (\$ in Millions)</b>				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Spider Non-Lethal Launcher (FY12)	C/CPIF	Alliant Techsystems Operations, LLC : Plymouth, MN	0.667	-		-		-		-		-	-	0.667	-
Spider Inc 1A (FY13-15)	C/CPIF	Northrop Grumman Systems Corporation : Carson, CA	0.000	12.002	Aug 2013	10.822	Mar 2014	-		-		-	Continuing	Continuing	-
Rifleman Radio Systems	Reqn	General Dynamics, C4 Systems : Scottsdale, AZ	0.000	0.057	Sep 2013	-		-		-		-	-	0.057	-
<b>Subtotal</b>			0.667	12.059		10.822		-		-		-	-	-	-

<b>Support (\$ in Millions)</b>				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Spider - Eng support	MIPR	ARDEC, : Picatinny Arsenal, NJ	3.063	0.500		3.931		4.089		-		4.089	Continuing	Continuing	-
Spider - Non-Lethal Launcher Eng Spt	MIPR	ARDEC, : Picatinny Arsenal, NJ	0.650	-		1.400	Mar 2014	-		-		-	-	2.050	-
Spider - Eng support	MIPR	Various, : Various	0.000	-		0.098		0.120		-		0.120	Continuing	Continuing	-

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army** **Date:** March 2014

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 434 / Anti-Personnel Landmine Alternatives (NSD)
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<b>Support (\$ in Millions)</b>				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mitre provide C4 Support	MIPR	Mitre, : McLean, VA	0.830	0.670		0.816		0.780		-		0.780	Continuing	Continuing	-
Spider - Contractor Engineering Support	C/FFP	Millennium : Arlington, VA	0.463	0.159		0.734	Feb 2014	0.450		-		0.450	Continuing	Continuing	-
Spider - Contractor Engineering Support	C/CPFF	URS Federal Support Service : Lakehurst, NJ	0.000	-		0.172	Feb 2014	-		-		-	-	0.172	-
Spider - Contract Engineering Support	C/CPFF	CACI Technologies, INC : Chantilly, VA	0.000	-		0.100	Dec 2013	0.100		-		0.100	-	0.200	-
Spider Increment 1A Training Support	MIPR	PEO STRI : Orlando, FL	0.050	-		0.100		0.100		-		0.100	-	0.250	-
MANPRINT/HFE Support	MIPR	ARL HRED : Adelphi, MD	0.009	0.100		0.100		0.175		-		0.175	-	0.384	-
Spider Shock Tube Safety Improvement	MIPR	ARDEC, : Picatinny Arsenal, NJ	0.000	-		0.975		-		-		-	-	0.975	-
<b>Subtotal</b>			5.065	1.429		8.426		5.814		-		5.814	-	-	-

<b>Test and Evaluation (\$ in Millions)</b>				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contractor/ Government Test Activities	MIPR	OTC, AMSAA, AEC, ATEC : Various	0.050	0.006		0.523		2.820		-		2.820	Continuing	Continuing	-
<b>Subtotal</b>			0.050	0.006		0.523		2.820		-		2.820	-	-	-

**Remarks**  
Not Applicable

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	8.727	13.670	22.185	10.677	-	10.677	-	-	-

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2015 Army</b>		<b>Date:</b> March 2014
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / Landmine Warfare/Barrier - Eng Dev	<b>Project (Number/Name)</b> 434 / Anti-Personnel Landmine Alternatives (NSD)

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Request For Proposal (RFP)	■																												
Source Selection		■	■	■																									
MS B			■																										
Contract Award				■																									
Spider Increment 1A Development				■	■	■	■	■	■	■	■	■	■	■	■	■													
Contractor DT						■	■	■	■	■	■	■																	
Government DT											■	■	■	■	■	■													
Limited User Test (LUT)												■	■																
MS C													■	■	■	■													
Initial Operational Test																■	■												
Full Rate Production Decision																	■	■	■	■									
Initial Operational Capability																				■	■								

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2015 Army		<b>Date:</b> March 2014
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604808A / <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>Project (Number/Name)</b> 434 / <i>Anti-Personnel Landmine Alternatives (NSD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Request For Proposal (RFP)	1	2013	1	2013
Source Selection	2	2013	4	2013
MS B	3	2013	3	2013
Contract Award	4	2013	4	2013
Spider Increment 1A Development	4	2013	2	2016
Contractor DT	3	2014	3	2015
Government DT	3	2015	1	2016
Limited User Test (LUT)	4	2015	1	2016
MS C	2	2016	2	2016
Initial Operational Test	2	2017	2	2017
Full Rate Production Decision	3	2017	3	2017
Initial Operational Capability	4	2017	4	2017