

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2013 Army	<b>DATE:</b> February 2012
---	----------------------------

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>							
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	37.707	76.248	104.983	-	104.983	67.977	26.641	14.180	12.155	Continuing	Continuing
016: <i>Close Combat Capabilities</i> <i>ENG DEV</i>	19.280	0.012	0.012	-	0.012	0.012	0.013	0.013	0.013	Continuing	Continuing
415: <i>MINE NEUTRAL/DETECTION</i>	18.427	67.282	90.861	-	90.861	53.214	19.812	14.167	12.142	Continuing	Continuing
434: <i>ANTI-PERSONNEL</i> <i>LANDMINE ALTERNATIVES</i> <i>(NSD)</i>	-	8.954	14.110	-	14.110	14.751	6.816	-	-	Continuing	Continuing

**Note**

FY 2011: \$46.0 million Congressional decrement. -\$24.2M for FY11 Rescission.

FY 2012: \$11.1 million Congressional decrement.

FY 2013: \$39.828 million increase to support additonal efforts in the following programs: Autonomous Mine Detection System, Explosive Hazard Pre-Detonation, Interrogation Arms, Vehicle Optical Sensor System and the Route Clearance Integration System.

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

This program element (PE) provides for System Development and Demonstration of networked munitions and countermine systems. This PE implements the National Landmine Policy to develop alternatives to the non-self-destructing anti-vehicle and anti-personnel landmine systems.

Project 016, Close Combat Capabilities Engineering Development, provided for the development of the anti-vehicle mine replacement, Scorpion (previously the Intelligent Munitions System (IMS)), which supported the current force in accordance with the landmine policy. In FY 2011, the Department directed the restructure of the Scorpion program in FY 2011 due to affordability. The Scorpion contract was closed out in September 2011. A more cost effective anti-vehicular capability will be developed under a Spider Increment II program starting in FY 2012.

Project 415, Mine Neutralization/Detection provides for development of next generation standoff detection capability programs such as Ground Vehicle Sub Surface Sensor System (GVS4), Multi-Function Display (MFD), development of interface kits and the Autonomous Mine Detection System (AMDS). It also supports development of training devices for Military Working Dogs involved in mine/Improvised Explosive Device (IED) detection and Explosive Hazard Pre-Detonation (EHP) capability to neutralize/detonate a broad spectrum of improvised explosive hazards while on the move, to support the route clearance mission.

Project 434, Anti-Personnel (AP) Landmine Alternatives - Spider Networked Munitions (NM) is an integrated system of effects (lethal anti-personnel (AP), anti-vehicle (AV), non-lethal), software, and communications. The Spider system is a hand emplaced, remotely controlled (Man-In-The Loop) system that provides highly

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2013 Army	<b>DATE:</b> February 2012
---	----------------------------

**APPROPRIATION/BUDGET ACTIVITY**

2040: *Research, Development, Test & Evaluation, Army*  
 BA 5: *Development & Demonstration (SDD)*

**R-1 ITEM NOMENCLATURE**

PE 0604808A: *Landmine Warfare/Barrier - Eng Dev*

responsive terrain-shaping and protection capabilities. Spider Inc 1 replaces persistent anti-personnel landmines, is compliant with US National Landmine policy, and has been fielded to Afghanistan. Spider Inc 2 will build on the existing Spider system, develop additional capabilities to enhance the Spider Remote Control Station and demonstrate the ability to employ legacy Government-Of-The-Shelf (GOTS) lethal anti-vehicle (AV) munitions. Spider Increment 2 is the recipient of the transferred AV landmine alternative mission from the Intelligent Munitions System program (Scorpion) that was closed out due to affordability. Follow-on Increments of the Spider program will leverage heavy AV/Anti-Tank (AT) munitions effects technology to close the capability gap left by the end use of persistent AP and AV/AT legacy landmines IAW National Landmine Policy.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013 Base</b>	<b>FY 2013 OCO</b>	<b>FY 2013 Total</b>
Previous President's Budget	95.577	87.426	65.155	-	65.155
Current President's Budget	37.707	76.248	104.983	-	104.983
Total Adjustments	-57.870	-11.178	39.828	-	39.828
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	14.030	-			
• SBIR/STTR Transfer	-1.258	-			
• Adjustments to Budget Years	-46.000	-11.178	39.828	-	39.828
• Other Adjustments 1	-0.442	-	-	-	-
• Other Adjustments 2	-24.200	-	-	-	-

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev				PROJECT 016: Close Combat Capabilities 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
016: Close Combat Capabilities ENG DEV	19.280	0.012	0.012	-	0.012	0.012	0.013	0.013	0.013	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
Close Combat Capabilities Engineering Development, provided for the development of the anti-vehicle mine replacement, Scorpion (previously the Intelligent Munitions System (IMS)), which supported the current force in accordance with the landmine policy. In FY 2011, the Department directed the restructure of the Scorpion program in FY 2011 due to affordability. The Scorpion contract was closed out in September 2011. A more cost effective anti-vehicular capability will be developed under a Spider Increment II program starting in FY 2012											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2011	FY 2012	FY 2013	
Title: Complete IMS/Scorpion Increment-I System Development.  Description: This is the main effort to develop the IMS/Scorpion  FY 2011 Accomplishments: Complete hardware and software integration.								3.800	-	-	
								0			
Title: Hardware fabrication to support Government Qualification Testing  Description: FY 2010-FY 2011 Hardware Fabrication to Support Government Qualification Testing.  FY 2011 Accomplishments: Refine MPO/TPO, and fabricate system hardware for FY 2011 Government Qualification tests.								6.477	-	-	
								0			
Title: IMS/Scorpion Increment-I modeling and simulation.  Description: Continue to conduct IMS/Scorpion Increment-I modeling and simulation.  FY 2011 Accomplishments: Completed Verification and Validation (V&V) of Scorpion models.								0.141	-	-	
								0			
Title: Conduct IMS/Scorpion Increment-I Government Development and Operational Testing.								1.007	-	-	
								0			

## UNCLASSIFIED

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 0604808A: Landmine Warfare/Barrier - Eng Dev	PROJECT 016: Close Combat Capabilities ENG DEV		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Description: Conduct IMS/Scorpion Inc-I Government Development and Operational Testing.				
FY 2011 Accomplishments: Conduct operational testing: Limited User Test.				
Title: Work with PEO-STRI to develop an IMS Training Device	Articles:	0.050 0	-	-
Description: Develop IMS training device with PEO-STRI.				
FY 2011 Accomplishments: Conduct Logistics Demonstration and User Jury.				
Title: Scorpion Engineering Support	Articles:	2.805 0	-	-
Description: Scorpion Engineering Support				
FY 2011 Accomplishments: Provide engineering and modeling support for the Scorpion System				
Title: Scorpion Program Restructure	Articles:	5.000 0	0.012 0	0.012
Description: The Department directed the restructure of the Scorpion program in FY 2011 due to affordability. A more cost effective anti-vehicular capability will be developed under a Spider Increment II program starting in FY 2012.				
FY 2011 Accomplishments: Funding returned from original closeout effort of \$19,280K for the Scorpion program. Returned \$5000K which was reported as program efficiencies.				
FY 2012 Plans: No funding required for the Scorpion Program.				
FY 2013 Plans: No funding required for the Scorpion Program.				
Accomplishments/Planned Programs Subtotals		19.280	0.012	0.012

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Army		<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>PROJECT</b> 016: <i>Close Combat Capabilities ENG DEV</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>D. Acquisition Strategy</b> The Intelligent Munitions System (IMS) Scorpion was being developed as an evolutionary acquisition program utilizing an incremental approach. This strategy addressed all IMS Scorpion capabilities in the requirements document. The first increment would have supported National Landmine Policy and provided full spectrum weapons system effectiveness in offensive, defensive, and stability operations. In June 2006, a competitive Engineering and Manufacturing Development (EMD) Contract was awarded to Textron Defense Systems of Wilmington, MA. This contract was closed out September 2011.		
<b>E. Performance Metrics</b> 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.		

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev				PROJECT 016: Close Combat Capabilities ENG DEV					
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IMS	MIPR	PM CCS:Picatinny Arsenal, NJ	11.555	-		-		-		-	Continuing	Continuing	Continuing
IMS	SS/FP	BRTRC:Alexandria, VA	3.440	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			14.995	-		-		-		-			
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Scorpion System Development & Demonstration	SS/CPIF	Textron Defense Systems,:Wilmington, MA	302.932	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			302.932	-		-		-		-			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IMS Engineering Support	MIPR	ARDEC:Picatinny Arsenal, NJ	39.807	-		-		-		-	Continuing	Continuing	Continuing
Modeling and Simulation	MIPR	NVESD:Ft Belvoir, VA	2.091	-		-		-		-	Continuing	Continuing	Continuing
C4ISR and IA	MIPR	CECOM:Ft Monmouth, NJ	1.426	-		-		-		-	Continuing	Continuing	Continuing
IMS Engineering Support	MIPR	CERDEC:Ft Monmouth, NJ	8.853	-		-		-		-	Continuing	Continuing	Continuing
PEO STRI	MIPR	PEO STRI:Orlando, VL	0.470	-		-		-		-	Continuing	Continuing	Continuing
IMS - PM HMS	MIPR	PM HMS:Ft Monmouth, NJ	4.144	-		-		-		-	Continuing	Continuing	Continuing
ARL	MIPR	ARL HRED:Aberdeen, MD	0.660	-		-		-		-	Continuing	Continuing	0.000
Miscellaneous	TBD	Various:Various	5.000	0.012		0.012		-		0.012	Continuing	Continuing	Continuing

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2013 Army											<b>DATE:</b> February 2012		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: Landmine Warfare/Barrier - Eng Dev				<b>PROJECT</b> 016: Close Combat Capabilities ENG DEV					

  

<b>Support (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013 Base</b>		<b>FY 2013 OCO</b>		<b>FY 2013 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			62.451	0.012		0.012		-		0.012			

  

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013 Base</b>		<b>FY 2013 OCO</b>		<b>FY 2013 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
SLAD, AMSAA, AEC, DTC, ERDEC, CRTC, TRTC, NTS, FLW	MIPR	SLAD, AMSAA, AEC, DTC, ERDEC, CRTC, TRTC, NTS, FLW:Various	7.197	-		-		-		-	Continuing	Continuing	Continuing
DT-G & Live Fire	MIPR	Yuma Proving Grounds:Yuma, AZ	5.857	-		-		-		-	Continuing	Continuing	Continuing
Risk reduction, Environmental	MIPR	White Sands Missile Range:White Sands, NM	2.417	-		-		-		-	0.000	2.417	0.000
Operational Test	MIPR	OTC:Ft Hood, TX	0.942	-		-		-		-	0.000	0.942	0.000
<b>Subtotal</b>			16.413	-		-		-		-			

  

			<b>Total Prior Years Cost</b>	<b>FY 2012</b>		<b>FY 2013 Base</b>		<b>FY 2013 OCO</b>		<b>FY 2013 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			396.791	0.012		0.012		-		0.012			

  

**Remarks**

# UNCLASSIFIED

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 0604808A: Landmine Warfare/Barrier - Eng Dev				PROJECT 415: MINE NEUTRAL/DETECTION			
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
415: MINE NEUTRAL/DETECTION	18.427	67.282	90.861	-	90.861	53.214	19.812	14.167	12.142	Continuing	Continuing
Quantity of RDT&E Articles											

## 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 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 clearance 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 Combat Teams.

The Husky Mounted Detection System (HMDS) provides state of the art detection (ground penetrating radar) of surface laid and shallow buried explosive hazards (IEDs and landmines), deep buried cache detection, and semi-autonomous operation in support of route clearance missions. HMDS is a mission equipment package mounted on Husky route clearance vehicles and is located within Route Clearance Platoons.

The Route Clearance & Interrogation System (RCIS) is a two vehicle system which provides a standoff capability to detect and neutralize the full spectrum of explosive hazards using semi-autonomous, teleoperated controls. RCIS Type 1 will be based on the High Mobility Engineering Excavator (HMEE) and be capable of interrogating and classifying explosive hazards. RCIS Type 2 will be based on the RG-31 and be able to detect, neutralize and proof explosive hazards. RCIS capabilities will be employed on Route Clearance Squads and Engineer Platoons. Beginning in FY13, funding will also be used for interoperability.

The Vehicle Optical 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 EOD Companies.

The Ground Vehicle Sub Surface Sensor System (GVS4) is a payload with detection and neutralization equipment mounted and integrated on manned or unmanned platforms to support Army Heavy and Infantry BCTs. This package may include downward looking, forward looking and side-looking radars, articulating crane arms with digging attachments and standoff optical and thermal viewing capabilities.

The Multi-Function Display (MFD) 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 & 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.



# UNCLASSIFIED

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 0604808A: Landmine Warfare/Barrier - Eng Dev	PROJECT 415: MINE NEUTRAL/DETECTION		
<p>The following RCV enablers will have interface kits (A-Kits) developed so that they will integrate onto the various Route Clearance Vehicles:</p> <ul style="list-style-type: none"><li>- Wire Neutralization System on the Medium Mine Protected Vehicle (MMPV) Type II</li><li>- Debris Blower on the Buffalo Mine Protected Clearance Vehicle (MPCV)</li><li>- RCIS on the MMPV Type I &amp; II and Buffalo MPCV</li><li>- HMDS on the Husky and MMPV Type I &amp; II</li><li>- An interface kit (A-Kit) for all RCVs for the next generation Add-on-Armor (AoA) kits.</li></ul> <p>An improvement to interior and exterior storage will be developed for the MMPV Type I &amp; Type II vehicles to account for additional responsibilities of the crew members and to better utilize the storage space available within the vehicles.</p> <p>The Military Working Dogs will fund development of training devices and a worldwide deployable kennel for transporting/housing of the animals involved in explosive hazard detection and qualification of new explosive scents as part of kits procured.</p> <p>The Area Mine Proofing System (AMPS) will provide improved capabilities for area clearance of explosive hazards including remote control kits (teleoperational capability) for the medium mine clearing flails that integrates a proofing mechanism with a prime mover.</p> <p>Explosive Hazard Pre-Detonation (EHP) capability to include a roller, debris blower, and Wire Neutralization System (WNS) 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 stand-off detection for the dismounted soldier. AMDS consist of three payloads for a robotic platform. The payloads are for surface laid and buried threat detection and marking, explosive hazards trace detection and marking, and neutralization. AMDS will transition from Technical Development to Engineering and Manufacturing Development (EMD) in FY2013. AMDS will integrate technologies into the best available solution during EMD.</p> <p>Interrogation Arms is a mechanical counter IED asset deployed to assist route clearance teams in interrogating/confirming IED targets. Provides interrogation of suspected explosive hazards and a camera to identify targets.</p>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Title: GVS4 Support	Articles:	4.572	-	-
Description: GVS4 Program Support		0		
FY 2011 Accomplishments: GVS4 Program Support				
Title: Military Working Dog Kit Development		1.300	1.260	-

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Army		<b>DATE:</b> February 2012		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>PROJECT</b> 415: <i>MINE NEUTRAL/DETECTION</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
<b>Articles:</b>  <b>Description:</b> FY 2011 Military Working Dog Kit Development  <b>FY 2011 Accomplishments:</b> FY 2011 Military Working Dog Kit Development  <b>FY 2012 Plans:</b> FY 2012 Military Working Dog Kit Development		0	0	
<b>Title:</b> Military Working Dog Support Equipment Program Management  <b>Description:</b> Military Working Dog Support Equipment Program Management  <b>FY 2011 Accomplishments:</b> Military Working Dog Support Equipment Program Management  <b>FY 2012 Plans:</b> Military Working Dog Support Equipment Program Management		0.250 0	0.250 0	-
<b>Title:</b> Military Working Dog Contractor Support  <b>Description:</b> FY2011: Military Working Dog Contractor Support  <b>FY 2011 Accomplishments:</b> FY2011: Military Working Dog Contractor Support  <b>FY 2012 Plans:</b> FY2012: Military Working Dog Contractor Support		0.150 0	0.150 0	-
<b>Title:</b> HMDS  <b>Description:</b> HMDS  <b>FY 2012 Plans:</b> HMDS Document Prep and Testing of Individual Sensors  <b>FY 2013 Plans:</b>		-	38.223 0	40.522

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev	PROJECT 415: MINE NEUTRAL/DETECTION		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
HMDS Source Selection and EMD Contract Award				
<b>Title:</b> VOSS MDD & Milestone C Prep  <b>Description:</b> VOSS MDD & Milestone C Prep  <b>FY 2012 Plans:</b> VOSS MDD & Milestone C Prep  <b>FY 2013 Plans:</b> VOSS, Milestone C & SSEB		<b>Articles:</b>  -	4.360 0	5.862
<b>Title:</b> EHP  <b>Description:</b> FY 2012: EHP Contract Award  <b>FY 2012 Plans:</b> EHP Contract Award  <b>FY 2013 Plans:</b> FY2013: EHP Debris Blower and Wire Neutralization System (WNS) Technical Insertion Contract Awards		<b>Articles:</b>  -	9.956 0	21.300
<b>Title:</b> RCIS  <b>Description:</b> FY 2012: RCIS MDD, Program Documentation Prep  <b>FY 2012 Plans:</b> RCIS MDD, Program Documentation Prep  <b>FY 2013 Plans:</b> Contract Award		<b>Articles:</b>  -	5.364 0	7.960
<b>Title:</b> AMPS MDD and MS B Preparation  <b>Description:</b> AMPS MDD and MS B Preparation  <b>FY 2012 Plans:</b>		<b>Articles:</b>  -	7.719 0	-

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev			PROJECT 415: MINE NEUTRAL/DETECTION					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2011	FY 2012	FY 2013	
AMPS MDD and MS B Preparation											
Title: AMDS								-	-	14.445	
Description: AMDS											
FY 2013 Plans: FY13 Description: Design Develop Mission AMDS Integrate and Test AMDS Package											
Title: Interrogation Arms								-	-	0.772	
Description: Interrogation Arms											
FY 2013 Plans: Integration & Testing Verification											
Title: Homemade Explosive Standoff Detection								12.155	-	-	
Description: Homemade Explosive Standoff Detection								0			
FY 2011 Accomplishments: Homemade Explosive Standoff Detection											
Articles:											
Accomplishments/Planned Programs Subtotals								18.427	67.282	90.861	
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
• 606: Countermine/Barrier Advanced Dev	14.686	19.596	5.054		5.054		5.362	5.054	5.051	Continuing	Continuing
• R68102: GSTAMIDS	220.620	20.678					98.765	75.867	99.957	Continuing	Continuing
• MA7700: <\$5M, Countermine Equipment	3.635	7.352	3.698		3.698		4.581	3.760	3.826	Continuing	Continuing
D. Acquisition Strategy											
AMDS, HMDS, VOSS, RCIS, A-Kits, AMPS and MWD will all be competitively solicited and contract awards projected in FY 2012-2014. EHP Roller, Debris Blower and Wire Neutralization System technology insertion effort is intended to meet the Explosive Hazards Pre-detonation KSA and KPP requirements. AMDS is currently in technology development effort and will be completed in FY 2013. Engineering Manufacturing Development will commence in FY 2013.											

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Army		<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>PROJECT</b> 415: <i>MINE NEUTRAL/DETECTION</i>

**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.

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army											DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604808A: Landmine Warfare/Barrier - Eng Dev				415: MINE NEUTRAL/DETECTION					
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PM-CCS:Picatinny Arsenal, NJ	11.154	3.002		4.618		-		4.618	Continuing	Continuing	0.000
Program Management Contractor Support	PO	USFALCON:Fairfax, VA	10.670	0.953		0.709		-		0.709	Continuing	Continuing	0.000
Program Management Contractor Support	PO	TBD:TBD	-	1.106		-		-		-	Continuing	Continuing	0.000
MFD	TBD	Various:TDB	-	-		-		-		-	0.930	0.930	0.930
Interface Kits	TBD	Various:TBD	-	-		-		-		-	0.100	0.100	0.100
Subtotal			21.824	5.061		5.327		-		5.327			1.030
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GSTAMIDS (GSV4)	Various	BAE Systems:Austin, TX	101.380	-		-		-		-	Continuing	Continuing	Continuing
ACERTS	Various	Northrop Grumman:Northrop Grumman	91.997	-		-		-		-	Continuing	Continuing	Continuing
MWD	TBD	TBD:TBD	1.300	0.571		-		-		-	Continuing	Continuing	Continuing
HMDS	TBD	TBD:TBD	-	31.123		18.380		-		18.380	0.000	49.503	0.000
EHP Roller	TBD	TBD:TBD	-	6.096		-		-		-	Continuing	Continuing	Continuing
EHP Debris Blower/WNS	TBD	TBD:TBD	-	-		16.300		-		16.300	Continuing	Continuing	0.000
RCIS	TBD	TBD:TBD	-	4.675		8.936		-		8.936	Continuing	Continuing	Continuing
AMDS	TBD	TBD:TBD	-	-		8.886		-		8.886	Continuing	Continuing	Continuing
AMPS	TBD	TBD:TBD	-	6.017		-		-		-	Continuing	Continuing	Continuing
VOSS	TBD	TBD:TBD	-	-		0.600		-		0.600	Continuing	Continuing	Continuing
Multi Functional Display	TBD	TBD:TBD	-	-		-		-		-	3.045	3.045	3.045
Interface Kits	TBD	TBD:TBD	-	-		-		-		-	1.830	1.830	1.830

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev				PROJECT 415: MINE NEUTRAL/DETECTION					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Homemade Explosive Standoff Detection	MIPR	SMDC, Huntsville AL:MIPR	12.155	-		-		-		-	0.000	12.155	0.000
Subtotal			206.832	48.482		53.102		-		53.102			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GSTAMIDS (GSV4)	MIPR	Various OGAs:Various OGAs	6.326	-		-		-		-	Continuing	Continuing	0.000
GSTAMIDS (GSV4) Engineering Support	MIPR	NVESD/CECOM:FT Belvoir, VA	11.220	-		-		-		-	Continuing	Continuing	0.000
GSTAMIDS (GSV4) Support	PO	Various Contractors:Various Contractors	2.113	-		-		-		-	Continuing	Continuing	0.000
ACERTS Engineering Support	MIPR	NVESD/CECOM:Fort Belvoir, VA	8.853	-		-		-		-	Continuing	Continuing	0.000
ACERTS (Change Detection)	MIPR	NVESD/CECOM:Fort Belvoir, VA	-	-		-		-		-	Continuing	Continuing	0.000
ACERTS Support	Various	Various Contractors:Various Contractors	1.790	-		-		-		-	Continuing	Continuing	0.000
Military Working Dogs	MIPR	Various:TBD	-	0.646		-		-		-	0.000	0.646	0.000
HMDS	MIPR	NVESD/CECOM:Fort Belvoir, VA	-	2.600		15.700		-		15.700	Continuing	Continuing	0.000
AMDS	C/TBD	TBD:TBD	-	-		3.270		-		3.270	Continuing	Continuing	Continuing
EHP	C/TBD	ARDEC:Picatinny Arsenal, NJ	-	2.500		3.000		-		3.000	Continuing	Continuing	0.000
VOSS	MIPR	NVESD/CECOM:Fort Belvoir, VA	-	3.690		-		-		-	Continuing	Continuing	0.000
RCIS	MIPR	Various OGAs:Various OGAs	-	0.350		-		-		-	Continuing	Continuing	0.000

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604808A: Landmine Warfare/Barrier - Eng Dev				415: MINE NEUTRAL/DETECTION					
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AMPS	MIPR	Various OGAs:Various OGAs	-	0.772		-		-		-	Continuing	Continuing	0.000
MFD	TBD	Various:TBD	-	-		-		-		-	0.705	0.705	0.705
Interface Kits	TBD	Various:TBD	-	-		-		-		-	0.380	0.380	0.380
VOSS	C/TBD	TBD:TBD	-	-		1.608		-		1.608	Continuing	Continuing	Continuing
IA	C/TBD	TBD:TBD	-	-		0.600		-		0.600	Continuing	Continuing	0.000
Subtotal			30.302	10.558		24.178		-		24.178			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GSV4 Test Support	MIPR	ATEC:Alexandria, VA	2.277	-		-		-		-	Continuing	Continuing	0.000
ACERTS	MIPR	ATEC:Alexandria, VA	5.224	-		-		-		-	0.500	5.724	0.000
MWD	MIPR	ATEC:Alexandria, VA	0.050	0.170		-		-		-	0.000	0.220	0.000
HMDS	MIPR	ATEC:Alexandria, VA	-	1.500		3.000		-		3.000	Continuing	Continuing	Continuing
EHP	MIPR	ATEC:Alexandria, VA	-	1.000		1.250		-		1.250	Continuing	Continuing	Continuing
RCIS	MIPR	ATEC:Alexandria, VA	-	0.136		-		-		-	0.000	0.136	0.000
AMDS	MIPR	ATEC:Alexandria, VA	-	-		0.850		-		0.850	Continuing	Continuing	Continuing
VOSS	C/TBD	ATEC:Alexandria, VA	-	-		3.154		-		3.154	Continuing	Continuing	Continuing
AMPS	MIPR	ATEC:Alexandria, VA	-	0.375		-		-		-	0.000	0.375	0.000
MFD	TBD	Various:TBD	-	-		-		-		-	1.620	1.620	1.620
Interface Kits	TBD	Various:TBD	-	-		-		-		-	1.675	1.675	1.675
Subtotal			7.551	3.181		8.254		-		8.254			
			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			266.509	67.282		90.861		-		90.861			



**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2013 Army						<b>DATE:</b> February 2012			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>			<b>PROJECT</b> 415: <i>MINE NEUTRAL/DETECTION</i>			
	<b>Total Prior Years Cost</b>	<b>FY 2012</b>	<b>FY 2013 Base</b>	<b>FY 2013 OCO</b>	<b>FY 2013 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Remarks</b>									

**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2013 Army							<b>DATE:</b> February 2012						
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>				<b>PROJECT</b> 415: <i>MINE NEUTRAL/DETECTION</i>					

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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 Material Development Decision (MDD)																												
HMDS Milestone B																												
HMDS Milestone C																												
HMDS Low Rate Initial Production (LRIP)																												
HMDS FUE																												
HMDS Full Rate Production (FRP) Decision																												
EHP Roller Material Development Decision (MDD)																												
EHP Roller Milestone C																												
EHP Roller Low Rate Initial Production (LRIP)																												
EHP Roller Full Rate Production (FRP) Decision																												
VOSS Material Development Decision (MDD)																												
VOSS Milestone C																												
VOSS Low Rate Initial Production (LRIP)																												
VOSS Full Rate Production (FRP) Decision																												
RCIS Material Development Decision (MDD)																												
RCIS Milestone C																												
RCIS Low Rate Initial Production (LRIP)																												
RCIS Full Rate Production (FRP) Decision																												
RCIS FUE																												
AMPS Milestone C																												
AMPS Low Rate Initial Production (LRIP)																												
AMPS Full Rate Production (FRP) Decision																												
MFD Prototype Development																												

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev										PROJECT 415: MINE NEUTRAL/DETECTION								
	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
MFD Low Rate Intial Production (LRIP)																												
MFD Testing																												
A-Kits Prototype Development																												
A-Kits Low Rate Initial Production																												
A-Kits LRIP Testing																												
A-Kits Full Rate Production																												
AMDS Milestone B																												
AMDS Pre-EMD IPR																												
AMDS Pre-P&D IPR																												
AMDS Critical Design Review																												
AMDS Milestone C																												
MWD Milestone C																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Army			<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>PROJECT</b> 415: <i>MINE NEUTRAL/DETECTION</i>	

**Schedule Details**

Events	Start		End	
	Quarter	Year	Quarter	Year
HMDS Material Development Decision (MDD)	2	2012	2	2012
HMDS Milestone B	2	2013	2	2013
HMDS Milestone C	4	2014	4	2014
HMDS Low Rate Initial Production (LRIP)	4	2014	4	2014
HMDS FUE	4	2017	4	2017
HMDS Full Rate Production (FRP) Decision	3	2015	3	2015
EHP Roller Material Development Decision (MDD)	3	2012	3	2012
EHP Roller Milestone C	4	2013	4	2013
EHP Roller Low Rate Initial Production (LRIP)	4	2013	4	2014
EHP Roller Full Rate Production (FRP) Decision	3	2014	3	2014
VOSS Material Development Decision (MDD)	2	2012	2	2012
VOSS Milestone C	2	2013	2	2013
VOSS Low Rate Initial Production (LRIP)	2	2013	2	2013
VOSS Full Rate Production (FRP) Decision	3	2014	3	2014
RCIS Material Development Decision (MDD)	4	2012	4	2012
RCIS Milestone C	2	2013	2	2013
RCIS Low Rate Initial Production (LRIP)	4	2013	3	2014
RCIS Full Rate Production (FRP) Decision	1	2015	1	2015
RCIS FUE	4	2014	4	2014
AMPS Milestone C	4	2013	4	2013
AMPS Low Rate Initial Production (LRIP)	1	2014	2	2014
AMPS Full Rate Production (FRP) Decision	1	2015	1	2015

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev		PROJECT 415: MINE NEUTRAL/DETECTION	
	Start		End	
Events	Quarter	Year	Quarter	Year
MFD Prototype Development	1	2015	4	2015
MFD Low Rate Intial Production (LRIP)	4	2015	3	2016
MFD Testing	3	2016	3	2017
A-Kits Prototype Development	1	2014	3	2015
A-Kits Low Rate Initial Production	2	2014	3	2015
A-Kits LRIP Testing	4	2014	4	2015
A-Kits Full Rate Production	2	2015	2	2016
AMDS Milestone B	2	2013	2	2013
AMDS Pre-EMD IPR	4	2012	4	2012
AMDS Pre-P&D IPR	2	2015	2	2015
AMDS Critical Design Review	2	2014	2	2014
AMDS Milestone C	4	2015	4	2015
MWD Milestone C	4	2013	4	2013

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev				PROJECT 434: ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)			
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
434: ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)	-	8.954	14.110	-	14.110	14.751	6.816	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

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

Spider Networked Munitions (NM) is an integrated system of effects (lethal anti-personnel (AP), anti-vehicle (AV), non-lethal), software, and communications. The Spider system is a hand emplaced, remotely controlled (Man-In-The Loop) system that provides highly responsive terrain-shaping and protection capabilities. Spider Inc 1 replaces persistent anti-personnel landmines, is compliant with US National Landmine policy, and has been fielded to Afghanistan. Spider Inc 2 will build on the existing Spider system, develop additional capabilities to enhance the Spider Remote Control Station and demonstrate the ability to employ legacy Government-Of-The-Shelf (GOTS) lethal anti-vehicle (AV) munitions. Spider Increment 2 is the recipient of the transferred AV landmine alternative mission from the Intelligent Munitions System program (Scorpion) that was closed out due to affordability. Follow-on Increments of the Spider program will leverage heavy AV/Anti-Tank (AT) munitions effects technology to close the capability gap left by the end use of persistent AP and AV/AT legacy landmines IAW National Landmine Policy.

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

	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
<b>Title:</b> Spider Increment 2 Development Contract  <b>Articles:</b>  <b>Description:</b> Develop NM Increment 2 Controller and ability to employ/control AP & AV.  <b>FY 2012 Plans:</b> Spider Inc. 2 EMD contract development  <b>FY 2013 Plans:</b> Spider Inc. 2 EMD contract development	-	4.336 0	10.511
<b>Title:</b> Engineering Support In House  <b>Articles:</b>  <b>Description:</b> Perform engineering support.  <b>FY 2012 Plans:</b> Provide Spider NM Increment 2 engineering support to support development of Milestone Documentation for MS B, development of procurement package, source selection, and pre and post contract award technical activities.  <b>FY 2013 Plans:</b>	-	4.033 0	3.050

**UNCLASSIFIED**

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 0604808A: Landmine Warfare/Barrier - Eng Dev			PROJECT 434: ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2011	FY 2012	FY 2013		
Spider NM Increment 2 engineering support to EMD contract.											
Title: PM Management and Oversight							Articles:	-	0.5850	0.549	
Description: Perform program management to support program executions, MS B & contract award.											
FY 2012 Plans: Program Management and support Spider NM Increment 2.											
FY 2013 Plans: Program Management and support Spider NM Increment 2.											
Accomplishments/Planned Programs Subtotals											
							-	8.954	14.110		
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
• Spider Network Munitions: PAA Spider Increment 1 Program	8.269	43.123	17.408		17.408					0.000	68.800
• Spider - APLA Remote Control Unit: OPA2 Spider Increments 1 & 2	6.720	36.224	34.365		34.365		14.620	6.744	6.861	0.000	117.595
D. Acquisition Strategy											
The Spider program is being developed as an evolutionary acquisition, using an incremental approach. The incremental strategy will address all Spider requirements in the Requirements Document. The first increment meets US National Landmine Policy for Anti Personnel (AP) and is currently fielded in Theatre in Afghanistan. Increment 1 serves as the baseline design for the follow-on increments enabling technology development to ensure the follow-on increments requirement can be rapidly achieved at the best value to the Government. A competitive Engineering Manufacturing Development (EMD) contract with Low Rate Initial Production (LRIP) options will be utilized.											
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.											

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army											DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604808A: Landmine Warfare/Barrier - Eng Dev				434: ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)					
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Spider - Program Mgmt	Various	PM-CCS:Picatinny Arsenal, NJ	-	0.585		0.549		-		0.549	Continuing	Continuing	0.000
Subtotal			-	0.585		0.549		-		0.549			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Spider EMD	C/CPIF	TBD:TBD	-	4.336		10.511		-		10.511	0.000	14.847	0.000
Subtotal			-	4.336		10.511		-		10.511	0.000	14.847	0.000
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Spider - Eng support	MIPR	TACOM/ARDEC:Warren, MI/ Picatinny Arsenal, NJ	-	2.641		2.000		-		2.000	Continuing	Continuing	0.000
Spider - Eng support	MIPR	Various:Various	-	0.220		0.200		-		0.200	Continuing	Continuing	0.000
Mitre provide C4 Support	MIPR	Mitre McLean,:VA	-	0.700		0.650		-		0.650	0.000	1.350	0.000
Spider - Eng support	Various	BRTRC,:Fairfax, VA	-	0.472		0.200		-		0.200	Continuing	Continuing	0.000
Subtotal			-	4.033		3.050		-		3.050			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			-	8.954		14.110		-		14.110			0.000
Remarks													



**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2013 Army			<b>DATE:</b> February 2012		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>		<b>PROJECT</b> 434: <i>ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)</i>	

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
Industry Day																												
Pre-EMD Review																												
RFP																												
Source Selection																												
MS B																												
Contract Award																												
Spider Increment 2 Development																												
Contractor / Government DT																												
LUT																												
MS C / LRIP Decision																												
PVT																												
Initial Operational Test																												
Full Rate Production Decision																												
Initial Operational Capability																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Army			<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	<b>PROJECT</b> 434: <i>ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Industry Day	3	2012	3	2012
Pre-EMD Review	3	2012	3	2012
RFP	4	2012	4	2012
Source Selection	4	2012	1	2013
MS B	1	2013	1	2013
Contract Award	2	2013	2	2013
Spider Increment 2 Development	2	2013	3	2015
Contractor / Government DT	3	2014	2	2015
LUT	1	2015	1	2015
MS C / LRIP Decision	3	2015	3	2015
PVT	1	2016	1	2016
Initial Operational Test	2	2016	2	2016
Full Rate Production Decision	4	2016	4	2016
Initial Operational Capability	1	2017	1	2017