

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604□0□A - Landmine Warfare/Barrier - Eng Dev

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	113663	57116	80560	80750	102447	100156	75009	41106	0	754976
016 CLOSE COMBAT CAPABILITIES ENG DEV	9144	36049	41246	53238	56001	35652	19580	20302	0	308089
415 MINE NEUTRAL/DETECTION	32508	14123	34327	27512	46446	64504	55429	20804	0	348181
434 ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)	41961	6944	4987	0	0	0	0	0	0	60479
443 APL-A (MIXED SYSTEMS)	30050	0	0	0	0	0	0	0	0	38227

A. Mission Description and Budget Item Justification: This program element (PE) provides for System Development and Demonstration of mine, counter mine, demolition, non-lethal, and shoulder launched munitions/systems. The PE also provides for development of grenades, munition simulators, and pyrotechnic devices/systems. This PE implements the National Landmine Policy to develop alternative non-self-destructing anti-vehicle and anti-personnel landmine systems. The Close Combat Capabilities Engineering Development, provides for increased tactical effectiveness and responsiveness of landmines, with development of upgrades for the Volcano Dispenser, as well as the development of the Intelligent Munition System (IMS), an Future Combat System Core system. The program also provides for a variety of demolition efforts to include development of Flexible Linear Shaped Charge, Remote Shock Tube Initiator, Magnetic Inductive Urban OPS Structure Remote Initiator, Insensitive Initiator, and Advanced Cratering. Project Mine Neutralization/Detection Engineering Development provides for development of the Airborne Standoff Minefield Detection System (ASTAMIDS), Ground Standoff Mine Detection System (GSTAMIDS), Handheld Standoff Mine Detection System (HSTAMIDS), and Explosive Standoff Minefield Clearer (ESMC). Anti-Personnel Landmine Alternatives provides for development of the Spider alternative systems for Non Self-Destruct (NSD) Anti-Personnel Landmines (APLs).

IMS is a Future Combat System Core and a Landmine alternative program; ASTAMIDS and GSTAMIDS are Future Combat System Complementary Programs.

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<u>B. Program Change Summary</u>	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	51045	71230	82360
Current Budget (FY 2006/2007 PB)	57116	80560	80750
Total Adjustments	6071	9330	-1610
Net of Program/Database Changes			
Congressional Program Reductions	-857		
Congressional Rescissions			
Congressional Increases	8500		
Reprogrammings			
SBIR/STTR Transfer	-1572		
Adjustments to Budget Years		9330	-1610

FY 2005 Adjustment: Congressional increase for MI-RAMS (\$8.5M).

FY 2006 Adjustments:

+\$6.4M D415 - Additional funding provided for the ASTAMIDS Program to achieve critical requirements for an Airborne Stand Off Minefield Detection (ASTAMIDS) capability. ASTAMIDS will be deployed on a UAV for fieldings to support the Modular Brigade Combat Team (BCT) and Future Force UA's.

+\$5.0M D434 funding for APL-A (Spider) system and evaluation. Transfer from Production SSN (E91700).

-\$2.1M - Funds realigned to other higher priority requirements.

FY 2007 Adjustments:

-\$1.6M Realigned for higher priority requirements.

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PROJECT

016

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
016 CLOSE COMBAT CAPABILITIES ENG DEV	9144	36049	41246	53238	56001	35652	19580	20302	0	308089

A. Mission Description and Budget Item Justification: The Intelligent Munitions System is an integrated system of effects (lethal anti-vehicle, anti-personnel, non-lethal, demolitions), software, sensors/seekers and communications that may be emplaced by multiple means and is capable of unattended employment for the detection, classification, tracking and engagement of selected targets in accordance with the commander's intent. IMS is one of the 18 Core systems that make up the Future Combat Systems Family of Systems. It shall be fielded as part of the Future Combat System Spiral 1. With its self-destructing/self-deactivating capability it is the materiel solution that will comply with the National Landmine Policy to replace all non-self-destructing anti-vehicle mines from the U.S. inventory. IMS will enhance the effectiveness for both the current and future force in the areas of force protection and battlespace shaping.

This project also provides for Systems Development and Demonstration of mine, demolition, non-lethal, and shoulder launched munitions/systems. The PE also provides for development of grenades, munition simulators, and pyrotechnic devices/systems. It also, includes the upgrade to the Volcano Dispenser Control Unit (DCU) and the Volcano modularization in support of the Stryker Brigade Combat Team (SBCT) and a variety of demolition devices to include: Flexible Linear Shaped Charge, Remote Shock Tube Initiator, Magnetic Inductive Remote Activation Munition System (MI-RAMS), Special Forces Demolition Kit for Urban OPS, Structure Remote Initiator, Insensitive Initiator, and Advanced Cratering.

<u>Accomplishments/Planned Program</u>	FY 2004	FY 2005	FY 2006	FY 2007
FY05: Continue IMS concept development.	0	18584	0	0
FY05-FY07: Continue Integrate IMS into FCS	0	800	1400	1700
FY05-FY07: Continue to conduct IMS modeling and simulation	0	3000	4000	5500
FY05: Complete IMS concept Prototype Assessment Test	0	6725	0	0
FY06-FY07: Continue to Conduct IMS System Development	0	0	35846	35038
FY07: Continue to Conduct IMS contractor System Demonstration testing.	0	0	0	11000
FY04: Completed ocumentation design/development of Volcano DCU upgrades.	2344	0	0	0
FY05: Developed Magneto Inductive Remote Activation Munition System (MI-RAMS) Shock Tube Initiator.	6800	6940	0	0
Totals	9144	36049	41246	53238

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B. Other Program Funding Summary

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
643619 / D005 Close Combat Capabilities - Advanced Development (IMS)	26724	0	0	0	0	0	0	0	Continuing	Continuing
G39100, Dispenser, Mine M139	5192	0	0	0	0	0	0	0	Continuing	Continuing
E96901, Intelligent Munition System	0	0	0	26550	83610	101581	214850	249736	Continuing	Continuing

C. Acquisition Strategy:IMS - Competitively awarded two cost plus incentive fee, incrementally funded Technology Development (TD) phase contracts. Will downselect to one of the TD phase contractors for System Development and Demonstration (SDD) phase and award a cost plus incentive fee, incrementally funded contract for SDD and low rate initial production. The IMS is being developed as an evolutionary acquisition program that will field a capability that meets National Landmine Policy and will Spiral into meeting the FCS Full Operational Capability.

MI-RAMS - Awarded a sole source contract to Magneto Inductive Systems LTD for SDD.

MI - Shock Tube Initiator - Award a Sole Source contract to Raytheon Technical Systems of Indianapolis IN.

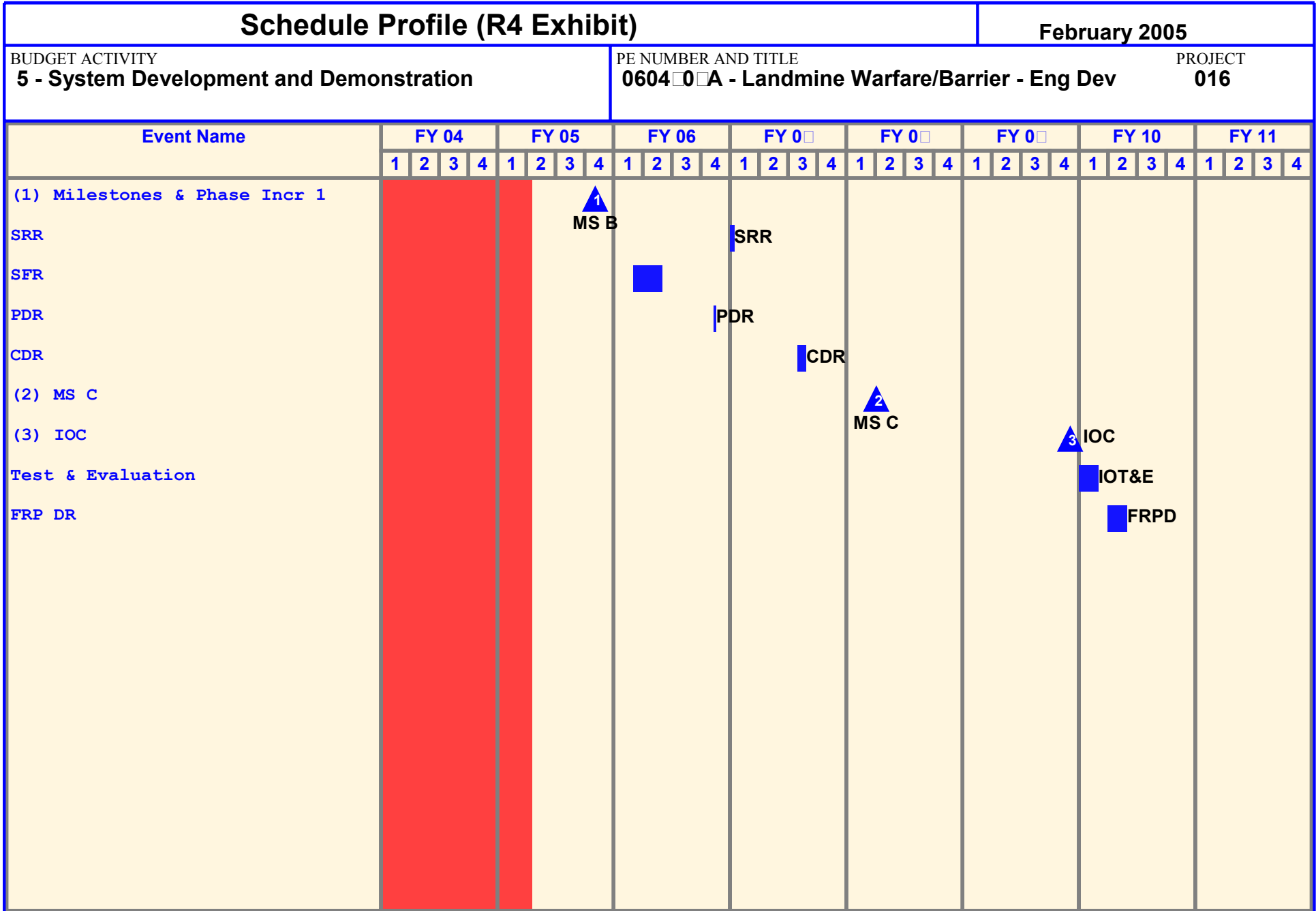
ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev					PROJECT 016		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Volcano DCU Upgrade- SDD Contract	C-CPFF	Alliant Tech Systems, Plymouth MN	7275	0		0		0		0	7275	6248
b . VolcanoI Light-SDD Contract	C-CPFF	Alliant Tech Systems, Plymouth MN	900	0		0		0		0	900	900
c . Magneto Inductive Shock Tube Initiator	SS - CPIF	Raytheon Technical Services, Indianapolis IN	0	0		0		0		Continue	0	800
d . Magneto Inductive - RAMS	C-CPIF	Coastal System Station, Panama City FL	7919	3647		0		0		Continue	11566	7783
e . Wall Breacher	C-CPIF	Ens Bickford, Simsbury CN	400	0		0		0		0	400	400
f . Urban OPS	FP	Amenn and Whitney (GSA)	404	0		0		0		0	404	404
g . IMS Technology development	C-CPIF	GDAIS, Bloomington, MN	9000	10500	1Q	0		0		Continue	19500	19500
h . IMS Technology development	C-CPIF	Textron System Corp., Wilmington, MA	9000	10500	1Q	0		0		Continue	19500	19500
i . IMS System Development and Demonstration (SDD)	C-CPIF	TBS	0	0		28942	1Q	38732	1Q	Continue	67674	69000

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev					PROJECT 016		
I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			34898	24647		28942		38732		Continue	127219	124535
Subtotal:												
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering Support Volcano Light	MIPR	ARDEC, Picatinny Arsenal, NJ	267	0		0		0		0	267	0
b . Engineering Support Volcano DCU	MIPR	ARDEC, Picatinny Arsenal, NJ	1442	0		0		0		0	1442	0
c . Volcano DCU Task Order	MIPR	Various	277	0		0		0		0	277	0
d . Magneto Induction - RAMS	MIPR	Various	4115	2375	2Q	0		0		Continue	6490	0
e . Urban OPS	MIPR	ARDEC, Picatinny Arsenal, NJ	530	0		0		0		0	530	0
f . IMS Engineering Support	MIPR	ARDEC Picatinny Arsenal, NJ	2000	2334	1Q	3200	1Q	3400	1Q	Continue	10934	0
g . IMS Engineering Support	MIPR	CECOM CERDEC, Fort Monmouth, NJ	600	300	1Q	600	1Q	600	1Q	Continue	2100	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev					PROJECT 016		
II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
h . IMS Engineering Support	MIPR	CECOM NVESD, Fort Belvoir, NJ	0	400	1Q	400	1Q	400	1Q	Continue	1200	0
i . IMS Engineering Support	MIPR	Various	300	935	1Q	1430	1Q	1120	1Q	Continue	3785	0
Subtotal:			9531	6344		5630		5520		Continue	27025	0
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Volcano- DCU	MIPR	ATEC, APG, MD	674	0		0		0		0	674	0
b . Magneto Induction - RAMS	MIPR	DTC, Aberdeen, MD	30	0		0		0		Continue	30	0
c . Urban OPS	MIPR	ATEC, APG, MD	130	0		0		0		0	130	0
d . IMS	MIPR	AMSAA, APG, MD	310	225	1Q	225	1Q	225	1Q	Continue	985	0
e . IMS	MIPR	ATEC, APG, MD	0	200	1Q	400	1Q	540	1Q	Continue	1140	0
f . IMS	MIPR	DTC,APG,MD	0	1000	1Q	1700	1Q	3100	1Q	Continue	5800	0
g . IMS	MIPR	CECOM, Fort Belvoir, VA	0	400	1Q	400	1Q	400	1Q	Continue	1200	0

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BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev					PROJECT 016		
III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			1144	1825		2725		4265		Continue	9959	0
Subtotal:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Volcano Light	In-House	PM CCS, Picatinny Arsenal, NJ	101	0		0		0		0	101	0
b . Volcano DCU	In-House	PM CCS, Picatinny Arsenal, NJ	461	0		0		0		0	461	0
c . Magneto Induction - RAMS	In-House	PM CCS, Picatinny Arsenal, NJ	356	918	1-4Q	0		0		Continue	1274	0
d . Wall Breacher	In-House	PM CCS, Picatinny Arsenal, NJ	30	0		0		0		0	30	0
e . IMS	In-House	PM CCS, Picatinny Arsenal, NJ	896	2095	1-4Q	3549	1Q	4321	1Q	Continue	10861	0
f . IMS	T.O. Contract	Robbins-Goia, Alexandria, VA	0	220	1Q	400	1Q	400	1Q	Continue	1020	1020

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IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			1844	3233		3949		4721		Continue	13747	1020
Subtotal:												
Project Total Cost:										Continue		
			47417	36049		41246		53238			177950	125555



Schedule Detail (R4a Exhibit)							February 2005	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev				PROJECT 016
<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Magneto Inductive Remote Activation Munition System (MI-RAMS) development	1-4Q							
MI-RAMS Milestone B								
MI-RAMS Preliminary Design Review	4Q							
Rapid Wall Breaching Kit - MS B								
SDK Urban OPS Suppliment - MS B	2Q							
IMS Prototype Assessment Test		3Q						
IMS Milestone B		4Q						
IMS SDD Contract Award			1Q					
IMS SDD System Requirements Review			1Q					
IMS System Functional Review			2Q					
IMS Preliminary Design Review			3Q					
IMS Design Readiness Review				2Q				
IMS Milestone C					3Q			
IMS Initial Operational Capability						4Q		
IOT&E							1Q	
Full Rate Production Decision							2Q	

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PROJECT

415

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
415 MINE NEUTRAL/DETECTION	32508	14123	34327	27512	46446	64504	55429	20804	0	348181

A. Mission Description and Budget Item Justification: This project provides System Development and Demonstration (SDD) for the Airborne Standoff Minefield Detection System (ASTAMIDS). The ASTAMIDS uses Multi-Spectral Electro-Optic/Infrared (EO/IR) and visible/Near IR sensor mounted on a Future Combat System Unit of Action Unmanned Aerial Vehicle to detect and locate minefields and obstacles that are impediments to maneuver forces. ASTAMIDS can be used in tactical operations day and night, to detect surface emplaced and recently buried minefields and obstacles. Handheld Stand-off Mine Detection System (HSTAMIDS) is a handheld multi-sensor detector that combines an advanced metal detector with a special purpose Ground Penetrating Radar (GPR) coupled to an advanced signal processor and software algorithms. It provides for enhanced detection capabilities against non-metallic mines and reduces incidences of false alarms in highly cluttered metal environments.

Ground Standoff Mine Detection System Future Combat Systems (GSTAMIDS FCS) The advent of the Army's Future Force Transformation, the GSTAMIDS Program has been restructured to meet the countermines requirements for FCS. The April 2003, Joint Requirements Oversight Council (JROC) approved the FCS Operational Requirements Document (ORD) which includes countermines requirements. The GSTAMIDS FCS will provide the Unit of Action (UA) a capability that can be used for mine detection, mine and temporary lane marking, precision mine neutralization and interfaces with FCS host platform(s) and Command, Control, Communications, and Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) reporting during on-route countermines operations.

Explosive Standoff Minefield Clearer (Mongoose) is a rocket deployed array of shaped charge munitions, launched across minefields and command detonated, to provide a high confidence cleared lane for the passage of mounted troops. Mongoose will defeat all defined threat mines from a stand-off position including mines with countermeasures to current countermines systems.

ASTAMIDS and GSTAMIDS have been identified in Spirals 2 & 3 respectively as part of the Army's initiative to spiral future capabilities to the current force.

Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
FY04: Conducted Source Selection and award GSTAMIDS FCS System Development and Demonstration Contract.	1188	0	0	0
FY05: Initiate GSTAMIDS FCS System Development and Demonstration (SDD) contract.	16886	0	0	0
FY05: Initiate GSTAMIDS FCS preliminary design.	0	12623	0	0

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Accomplishments/Planned Program (continued)

	FY 2004	FY 2005	FY 2006	FY 2007
FY06: Initiate GSTAMIDS FCS Final Design and Systems Engineering	0	0	14751	0
FY07: Initiate GSTAMIDS FCS Prototype development Integrated Qualification Testing & Neutralization development.	0	0	0	13075
FY06: ASTAMIDS - Complete Spiral 1 Prototype Integration	0	0	4016	0
FY06: Initiate ASTAMIDS - Contractor Qual, Functional & Air Testing	0	0	8000	5000
FY06: Initiate ASTAMIDS - Spiral 2 prototype fabrication	0	0	7560	3437
FY07: ASTAMIDS – Initiate Spiral 3 prototype fabrication	0	0	0	6000
FY04: Validated ESMC BCT design and validate insensitive munition and rocket	4000	0	0	0
FY04: Completed ESMC (Mongoose) BCT preliminary design.	1000	0	0	0
FY04-FY05: Continue to Fabricate ESMC prototypes for productions qualification testing.	6000	1500	0	0
FY04: Completed contractor testing of ESMC.	2000	0	0	0
FY04: Developed ESMC Manufacturing Processes.	1434	0	0	0
Totals	32508	14123	34327	27512

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B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PE 0603619A, Project 606, Countermine/Barrier Advanced Dev	9341	15843	0	8311	39325	43773	18699	4142	Continuing	Continuing
R68200, HSTAMIDS	2669	6879	7084	7253	8368	7639	6802	6535	Continuing	Continuing
OPA 3, R68102, GSTAMIDS FCS	0	0	0	7551	22041	21386	20662	274446	Continuing	Continuing
OPA 3, R68105 ESMC	0	1993	2962	607	0	0	0	0	0	5562
Ammo, E81400 ESMC	0	0	0	5000	20500	28700	0	0	0	54200
OPA 3, S11500 ASTAMIDS	0	0	0	0	11658	12519	12310	12563	Continuing	Continuing

C. Acquisition Strategy: The Explosive Standoff Minefield Detection Clearer (ESMC) competitively-selected CTD contractor, was awarded a sole source System Development & Demonstration (SDD) contract upon completion of CTD phase and MDA approval.

The ASTAMIDS competitively selected Prime System contractor was awarded Cost Plus Incentive Fee (CPIF) System Development and Demonstration (SDD) after MDA Milestone B approval. A Sole source production contract with multiple options is anticipated.

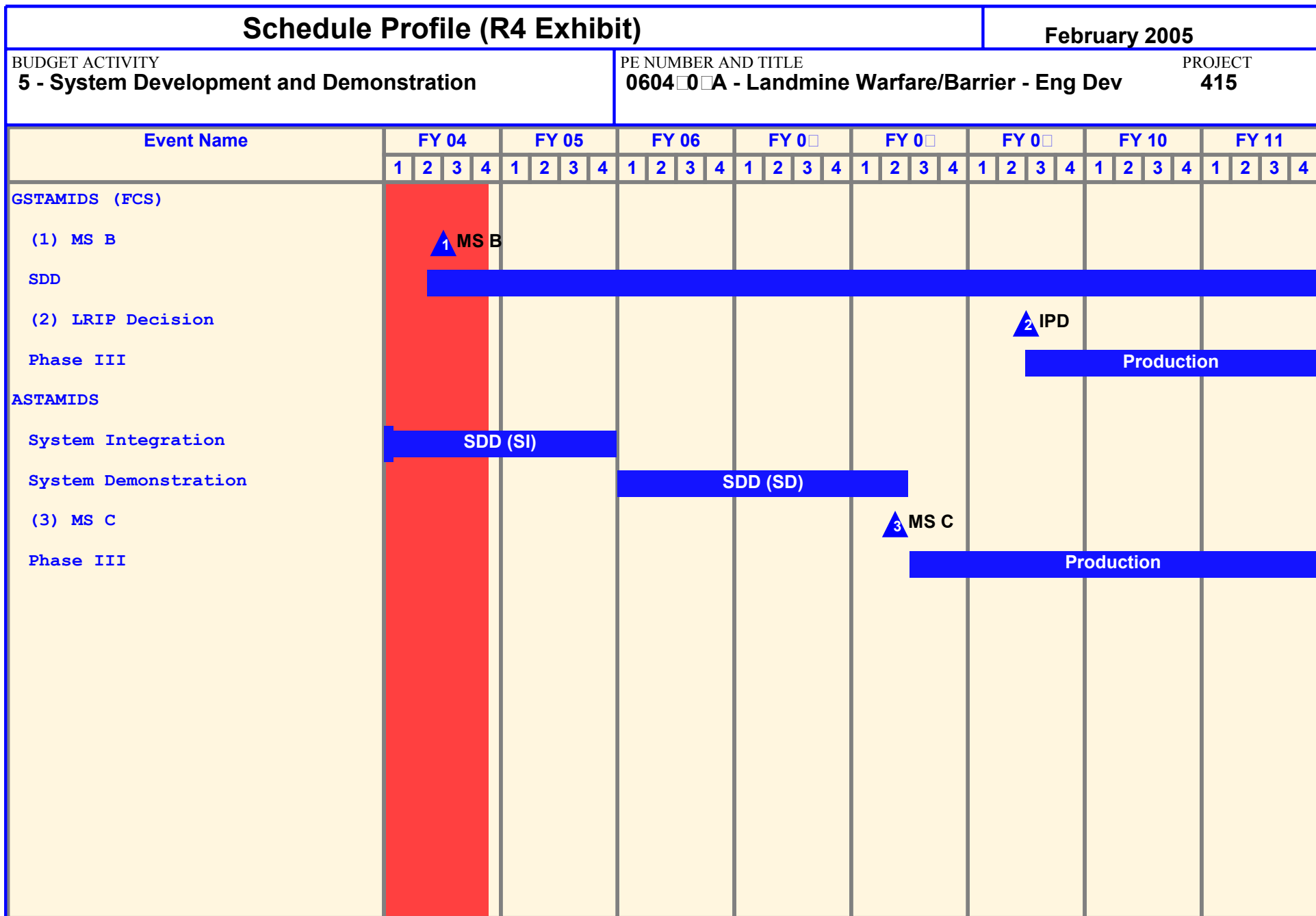
GSTAMIDS FCS entered the SDD Phase in 3QFY04 with MDA approval and competitively selected SDD Cost Plus Fixed Fee (CPFF) contract.

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . GSTAMIDS Block 1	C-CPFF	Quantum Magnetics San Diego, CA	1725	0		0		0		0	1725	1725
b . GSTAMIDS FCS	C-CPFF	BAE Systems, Austin,TX	8972	0		0		0		0	8972	75
c . GSTAMIDS FCS	C-CPFF	BAE Systems, Austin,TX	0	8524	2Q	11732	1Q	10056	1Q	Continue	30312	62496
d . GSTAMIDS Block 0	C-CPFF	EG&G Systems Inc., Albuquerque, NM	16406	0		0		0		0	16406	16406
e . HSTAMIDS	C-CPIF	CY Terra Corporation, Orlando, FL	15776	0		0		0		0	15776	15776
f . ESMC	SS-CPIF	BAE Systems, Austin,TX	58057	756		0		0		Continue	58813	47983
g . AROC II	Various		1850	0		0		0		0	1850	1850
h . ASTAMIDS	C-CPIF	Northrup Grumman	6000	0		14601	1Q	9702	1Q	Continue	30303	24303
Subtotal:			108786	9280		26333		19758		Continue	164157	170614

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BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev					PROJECT 415		
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Eng. support GSTAMIDS Blk 0	MIPR	NVESD/ CECOM, Ft Belvoir, VA	6828	0		0		0		0	6828	0
b . Eng support GSTAMIDS Blk 0	MIPR	Various OGAs	6247	0		0		0		0	6247	0
c . Eng Support GSTAMIDS Block 0	Various	Various Contractors	7853	0		0		0		0	7853	0
d . GSTAMIDS Blk I/FCS	MIPR	Various OGAs	812	625	1Q	700	1Q	700	1Q	Continue	2837	0
e . GSTAMIDS Support Blk I/FCS	MIPR	NVESD/CECOM, Ft Belvoir, VA	2716	1533	1Q	800	1Q	800		Continue	5849	0
f . Support GSTAMIDS Blk 1/FCS	Various	Various Contractors	1179	375	1Q	400	1Q	400	1Q	Continue	2354	0
g . Eng Support HSTAMIDS	MIPR	NVESD/CECOM, Ft Belvoir, VA	4533	0		0		0		0	4533	0
h . Support HSTAMIDS	Various	Various	4367	0		0		0		0	4367	0
i . ESMC (Mongoose)	MIPR	NVESD/CECOM, Ft Belvoir, VA	2304	100	1Q	0		0		Continue	2404	0
j . ESMC (Mongoose)	Various	Various	7153	225	1Q	0		0		Continue	7378	0

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II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
k . ASTAMIDS	MIPR	NVESD/CECOM, Ft Belvoir, VA	0	0		1850	1Q	1850	1Q	Continue	3700	0
l . ASTAMIDS	Various	Various	0	0		1400	1Q	1400	1Q	Continue	2800	0
Subtotal:			43992	2858		5150		5150		Continue	57150	0
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Test support GSTAMIDS Blk 0	MIPR	ATEC, Alexandria, VA	4369	0		0		0		0	4369	0
b . Test support HSTAMIDS	MIPR	ATEC, Alexandria, VA	2859	0		0		0		0	2859	0
c . Test Support ESMC	MIPR	ATEC, Alexandria, VA	2371	122		0		0		Continue	2493	0
d . Test support GSTAMIDS Blk 1/FCS	MIPR	ATEC, Alexandria, VA	40	0	2Q	350	2Q	350	2Q	Continue	740	0
e . ASTAMIDS	MIPR	ATEC, Alexandria, VA	0	0		515	2Q	515	2Q	Continue	1030	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev					PROJECT 415		
III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			9639	122		865		865		Continue	11491	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program management	In-House	PM-CCS, Picatinny Arsenal, NJ	5043	1073	1-4Q	819	1-4Q	719		Continue	7654	0
b . Program management Contractor support	Various	Various	6115	790	1-4Q	1160	1-4Q	1020	1-4Q	Continue	9085	0
Subtotal:			11158	1863		1979		1739		Continue	16739	0
Project Total Cost:			173575	14123		34327		27512		Continue	249537	170614



Schedule Detail (R4a Exhibit)							February 2005	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev			PROJECT 415	
<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
GSTAMIDS Block 0 MS C	2Q							
GSTAMIDS FCS MS B	3Q							
GSTAMIDS FCS MS C						2Q		
HSTAMIDS MS C	1Q							
ESMC (BCT) MS C		2Q						
ASTAMIDS FCS C Complete SDD					2Q			
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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)							February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev				PROJECT 434		
COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
434 ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)	41961	6944	4987	0	0	0	0	0	0	60479
<p>A. Mission Description and Budget Item Justification: The Spider system's mission is to develop alternative systems for current Non Self-Destruct (NSD) Anti-Personnel Landmines (APL's). This mission was articulated in the Presidential Decision Directives (PDD's) 48, 54 and 64 and reiterated in the New Landmine Policy announced by the State Department on 27 Feb 04.</p> <p>The Spider is a hand emplaced, remotely controlled, anti-personnel munition system. The system is made up of 4 subsystems: Man-in-the-Loop (the human operator), Remote Control Station (the system command and control station), Repeater (a communication link to the munitions that provides extended range), Munition Control Units (delivers anti-personnel effects). Missions include force protection, shaping the battlefield, provide warning, delay enemy forces and attrit enemy forces. The Spider is designed to mitigate the indiscriminate engagement of the lethal mechanism. A Soldier/Marine makes a conscious decision to engage a target with the lethal mechanism. The envisioned obstacle can be either a permanent obstacle, such as the Korean Barrier System (KBS), or a temporary obstacle intended to be reused in other locations, such as forward airbases.</p>										
<u>Accomplishments/Planned Program</u>							FY 2004	FY 2005	FY 2006	FY 2007
Contractor team design/development for SD&D Phase.							32718	1356	1532	0
Provide general engineering support, program management and risk reduction efforts for SD&D.							7599	2949	1125	0
Perform modeling and simulation.							0	83	0	0
Government test and evaluation facility and facility support activities.							1644	2556	2330	0
Totals							41961	6944	4987	0

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)	February 2005
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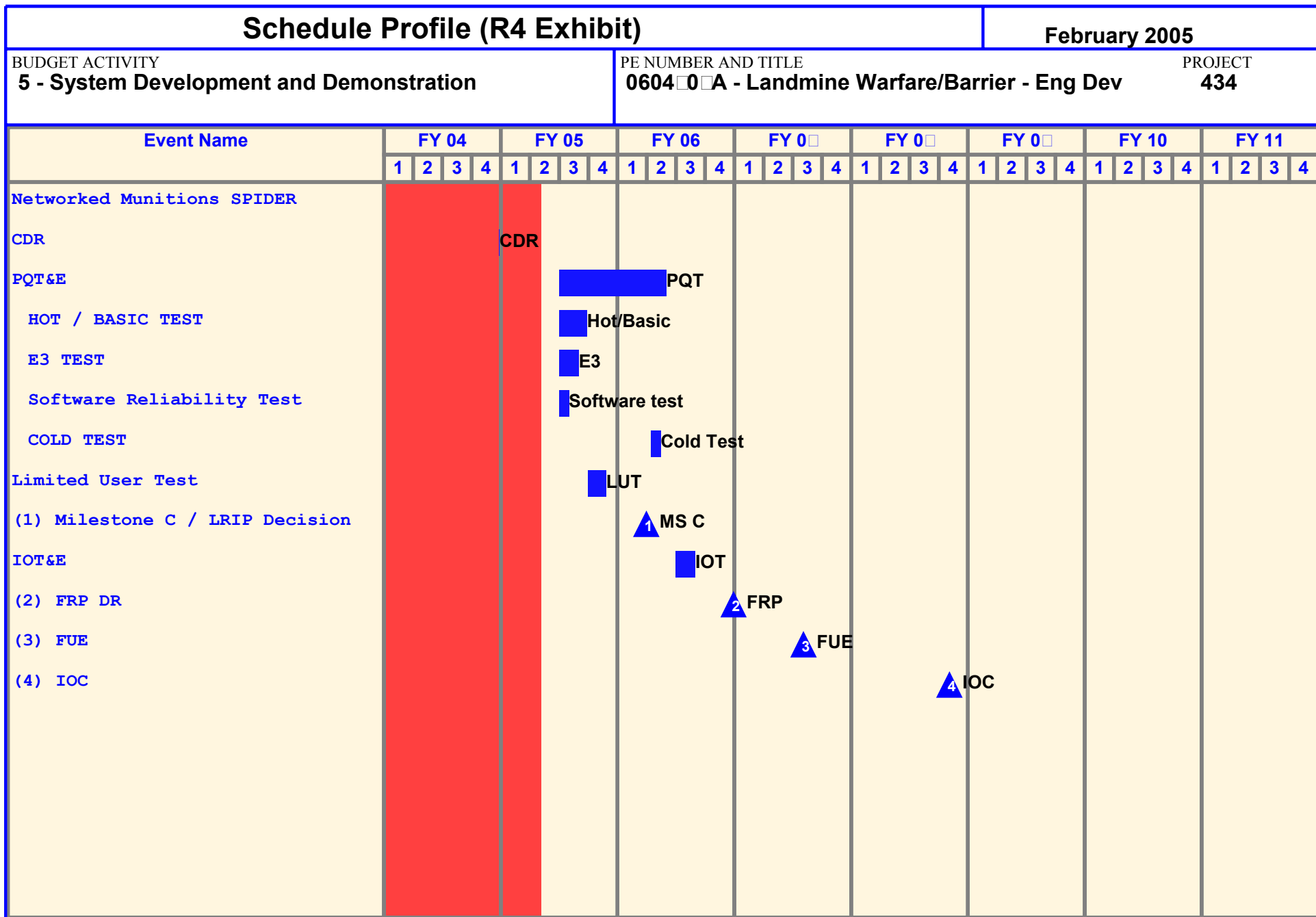
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev	PROJECT 434
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B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PAA E91700 - Anti-Personnel Landmine Alternatives	0	15163	27876	112259	113871	118522	0	0	Continuing	Continuing

C. Acquisition Strategy:USD(AT&L)) approved the NSD-A plan to have Alliant Tech Systems and Textron Systems Corporation form a joint venture for the System Development & Demonstration (SDD) efforts of this program. A competitive SDD contract was awarded in September 2002. The SDD phase is a 39-month development effort culminating with Milestone C scheduled for December 2005. The first production unit is scheduled for June 2007 with IOC in 2008. The Spider program is now in the 28th month of its SDD phase.

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□0□A - Landmine Warfare/Barrier - Eng Dev					PROJECT 434		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . NSD-A SDD	C-CPIF	Alliant Tech Systems, Plymouth, MN/TEXTRON, Wilmington, MA	70975	1356	1Q	1532	1Q	0		Continue	73863	53229
Subtotal:			70975	1356		1532		0		Continue	73863	53229
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Eng support NSD-A	MIPR	TACOM/ARDEC, Picatinny Arsenal, NJ	9785	1200	2Q	400	2Q	0		Continue	11385	0
b . Eng support NSD-A	MIPR	Various	4101	618	2Q	250	2Q	0		Continue	4969	0
c . Eng Support	Various	BRTRC, CORBETT, MITRE, Various	1426	882	2Q	250	2Q	0		Continue	2558	0
Subtotal:			15312	2700		900		0		Continue	18912	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604□0□A - Landmine Warfare/Barrier - Eng Dev					434			
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Test and Evaluation	MIPR	Army Evaluation Center, MD, FT Benning, GA, YUMA, AZ	4149	2556	2Q	2330	2Q	0		Continue	9035	0	
Subtotal:			4149	2556		2330		0		Continue	9035	0	
Remarks: Not Applicable													
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Program Mgmt NSD-A	In-House	PM-CCS, Picatinny Arsenal, NJ	2061	332	2Q	225	2Q	0		Continue	2618	0	
Subtotal:			2061	332		225		0		Continue	2618	0	
Project Total Cost:													
			92497	6944		4987		0		Continue	104428	53229	



Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604□0□A - Landmine Warfare/Barrier - Eng Dev

PROJECT

434

<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Critical Design Review	4Q	1Q						
Production Qualification Test (PQT) , (a) Hot/Basic		3Q						
Production Qualification Test (PQT) , (b) E3		3Q						
Production Qualification Test (PQT) , (c) S/W Rel		3Q						
Production Qualification Test (PQT) , (d) Cold			2Q					
Limited User Test		4Q						
MS C/LRIP Decision			1Q					
IOT			3Q					
FRP Decision			4Q					
FUE				3Q				
IOC					4Q			