

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							February 2003				
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev							
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		16546	50341	129409	133444	126186	52124	69961	33109	0	628818
134	OBJ IND CBT WPN ENG DE	0	0	0	35201	21373	0	0	0	0	56574
613	MORTAR SYSTEMS	9577	8188	34823	40801	64161	19377	37925	11369	0	237365
705	ADV PRECISION KILL WEAPON SYSTEM (APKWS) - SD&ED	0	23369	35112	11414	6667	9405	18252	16966	0	121185
AS1	SMALL ARMS IMPROVEMENT	5527	8564	8905	10463	4337	2374	13784	4774	0	65282
AS5	LOW COST COMPETENT MUNITIONS (LCCM)	1442	6203	12759	0	0	0	0	0	0	20404
AS6	COMMON REMOTELY OPERATED WEAPONS STATION (CROWS)	0	2582	0	0	0	0	0	0	0	2582
AS8	XM395 PRECISION GUIDED MORTAR MUNITION (PGMM)	0	1435	0	0	0	0	0	0	0	1435
S23	SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)	0	0	37810	35565	29648	20968	0	0	0	123991
<p><u>A. Mission Description and Budget Item Justification:</u>This program element funds multiple efforts for engineering development of weapons and munitions systems.</p> <p>The Objective Individual Combat Weapons Engineering Development (D134) funds the XM29, Integrated Air Burst Weapons System, which represents the next generation of the individual weapons system for U.S. Armed Services. This modular, dual-barrel weapon system includes revolutionary high-explosive air bursting munitions, standard NATO 5.56mm kinetic energy projectiles and an integrated, multifunctional, all environment, full-solution target acquisition/fire control system. This system supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).</p> <p>The Mortar Systems (D613) effort supports development of the Mortar Fire Control System (MFCS). The MFCS is a revolutionary improvement in mortar capability, seamlessly linking mortar fires in the future digital battlefield. Additionally, it funds development of the Precision Guided Mortar Munition.</p> <p>Project D705, the Advanced Precision Kill Weapon System (APKWS), is a highly accurate weapon that will complement the HELLFIRE missile in precision</p>											

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strikes against soft point targets and provide improved accuracy over the current 2.75-inch munition used on the AH-64 Apache, OH-58 Kiowa Warrior, and the future RAH-66 Comanche helicopters. The APKWS will provide at least ten times the number of kills, thereby substantially reducing collateral damage and reducing cost. The APKWS supports the Legacy to Objective Force transition path of the Transformation Campaign Plan.

The Small Arms Improvement program (AS1) develops technology to enhance lethality, target acquisition, fire control, training effectiveness, and/or reliability for small arms weapon systems . This program supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).

Project AS5 funds the design, development, assembly and test of a Low Cost Competent Munition (LCCM) fuze, now known as the Course Correcting Fuze (CCF). The final concept for the LCCM will probably encompass a standard fuze equipped with a Global Positioning System (GPS) receiver, an air-drag device compensating for gun and meteorological ballistics effects, a Fuze, Safe and Arm (FSA) mechanism, a U.S. required Selective Availability, Anti-Spoof GPS Module (SAASM), a smaller high power battery, an inductive fuze data link, and improved trajectory correcting software algorithms. The LCCM program supports the Legacy transition path of the Transformation Campaign Plan (TCP).

Project AS8 funds the M223E1 Pyrotechnic Self-Destruct Fuze (p-SDF). The p-SDF will be developed and optimized for potential application for the 155mm M864 Recapitalization Program. The effort addresses incorporating mechanical enhancements focused on improving the reliability of both the primary and secondary (pyrotechnic) fuze modes; as well as pyrotechnic enhancements to achieve the minimum desired burn rate during all operational scenarios. The FY03 program will demonstrate the final fuze design and prove out the entire p-SDF manufacturing process to support the M864 Recapitalization Qualification Phase in FY04 and production in early FY05.

Project S23, the Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM), is the initial kinetic energy component of the Enhanced Area Air Defense System (EAADS), an AMD Objective Force system. SLAMRAAM's force protection mission is to engage the low-altitude aerial threats out to 18km. This system supports the Objective transformation path of the Transformation Campaign Plan (TCP).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)**February 2003****BUDGET ACTIVITY****5 - System Development and Demonstration****PE NUMBER AND TITLE****0604802A - Weapons and Munitions - Eng Dev**

<u>B. Program Change Summary</u>	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	17146	41758	88837	61744
Current Budget (FY 2004/2005 PB)	16546	50341	129409	133444
Total Adjustments	-600	8583	40572	71700
Congressional program reductions				
Congressional rescissions		-578		
Congressional increases		10900		
Reprogrammings	-124	-289		
SBIR/STTR Transfer	-476	-1450		
Adjustments to Budget Years			40572	71700

FY 2003: Congressional increases provided for the following programs: Mortar Anti-Personnel Anti-Materiel (MAPAM) \$3.5M; 155mm M795E1 Extended Range Base Burner \$1.5M; Common Remotely Operated Weapon Station (CROWS) \$2.7M; Pyrotechnic Self-Destruct Fuze \$1.5M; Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) \$1.7M.

FY 2004: Increases due to funds being realigned to Mortar Systems (613), LCCM program (AS5), and continued development of SLAMRAAM (S23).

FY 2005: Increases due to funds being realigned to Mortar Systems (613), SLAMRAAM continued development (S23), and initiation of the System Development and Demonstration phase of the XM29 Integrated Air Burst Weapons System program (134).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003		
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT 134		
COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
134 OBJ IND CBT WPN ENG DE	0	0	0	35201	21373	0	0	0	0	56574
<p><u>A. Mission Description and Budget Item Justification:</u> The XM29, Integrated Air Burst Weapon represents the next generation of the individual weapon system for U.S. Armed Services and specifically Objective Force Soldier. This modular dual barrel weapon system includes revolutionary high explosive air bursting munitions, standard NATO 5.56mm kinetic energy projectiles and an integrated, multifunctional, all environment, full-solution target acquisition/fire control system. The XM29 will provide decisively violent and suppressive target effects to ~500 meters. The XM29 provides the soldier with a 300-500% increase in hit probability to defeat point, area and defilade targets out to ~500 meters. It will dramatically increase soldier survivability, standoff and versatility. The XM29 will replace selected M16 Rifles and M4 Carbines. This system supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).</p> <p>This project transitions from Budget Activity 4 (PE 0603802 DAS3) to Budget Activity 5 (0604802 D134) in FY05.</p>										
<u>Accomplishments/Planned Program</u>						<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
Program Development						0	0	0	7050	
SDD - Development and Analysis						0	0	0	24401	
Long Lead Items						0	0	0	3000	
Tropic Test						0	0	0	750	
Totals						0	0	0	35201	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT 134		
B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDT&E: PE 0603802.AS3 - Objective Individual Combat Weapon (OICW) PD/RR	29860	25523	31856	4868	0	0	0	0	0	92107
WTCV: SSN G16100 Objective Individual Combat Weapon	0	0	0	0	26881	27141	25748	29430	Continuing	Continuing
PAA: SSN E92500 Objective Individual Combat Weapon (OICW)	0	0	0	0	9800	12500	19628	15280	Continuing	Continuing
<p>C. Acquisition Strategy:The Program Definition & Risk Reduction (PDRR) phase (Project DAS3) is utilizing modeling and simulation to support the development, building and testing of the weapon systems. The System Development and Demonstration (SDD) phase will complete development of the weapon system and verify training solution for MS C approval. The acquisition strategy utilizes an evolutionary approach to accelerate fielding of new capabilities.</p>										

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 134		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Primary System Contract	TBD	Contractor TBD	0	0		0		24401	3Q	11273	35674	0
b . Long Lead Items	TBD	Contractor TBD	0	0		0		3000	3Q	4300	7300	0
Subtotal:			0	0		0		27401		15573	42974	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development Support	MIPR	Multiple	0	0		0		5750	2-4Q	1875	7625	0
Subtotal:			0	0		0		5750		1875	7625	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 134		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Tropic Test	MIPR	Army Test & Evaluation Command, VA (ATEC)	0	0		0		750	4Q	0	750	0
b . PPT	MIPR	Army Test & Evaluation Command, VA (ATEC)	0	0		0		0		1500	1500	0
c . Arctic Test	MIPR	Army Test & Evaluation Command, VA (ATEC)	0	0		0		0		750	750	0
Subtotal:			0	0		0		750		2250	3000	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management	In-House	PM Soldier Weapons	0	0		0		725	2-4Q	900	1625	0
b . Travel	In-House	PM Soldier Weapons	0	0		0		75	2-4Q	125	200	0
c . Program Management Support	Time & Material	Contractor TBD	0	0		0		500	2Q	650	1150	0
Subtotal:			0	0		0		1300		1675	2975	0

ARMY RDT&E COST ANALYSIS(R-3)							February 2003					
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 134			
Project Total Cost:				0	0		0	35201		21373	56574	0

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT 134	
<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Interim Progress Review (IPR)				3Q				
Tropic Test				4Q				
Pre-Production Test (PPT)					1Q			
Arctic Test					2Q			
Milestone C					3Q			
Low Rate Initial Production (LRIP)					4Q			
Initial Operational Test and Evaluation (IOT&E)						2Q		
Full Rate Production Decision Review						4Q		
First Unit Equipped							4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT 613		
COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
613 MORTAR SYSTEMS	9577	8188	34823	40801	64161	19377	37925	11369	0	237365
<p><u>A. Mission Description and Budget Item Justification:</u> Mortar Fire Control System (MFCS) - This program provides funds to complete development and type classify items that will enhance the effectiveness, lethality, versatility, mobility, and accuracy of mortar systems. Current mortar systems include conventional ammunition with a variety of fuzing, weapons that range from man-portable 60mm to vehicle-mounted 120mm mortars, and related equipment such as fire control, mortar ballistic computers, training devices, and ammunition. Current funding for this project continues development of the digital Mortar Fire Control System (MFCS) in heavy and light variants. The MFCS is a revolutionary improvement in mortar capability, seamlessly linking mortar fires in the future digital battlefield. The MFCS (Heavy) provides an on-board fire control system that includes a fire control computer, position navigation system, and gun pointing system. The MFCS allows mortar crews to set-up in one minute, down from the current eight minutes and accuracy is increased by a factor of four. Shorter exposure times increase crew survivability. The MFCS is fully compatible with the Advanced Field Artillery Tactical Data System (AFATDS), increasing situational awareness and reducing the probability of fratricide. This project fully supports and is an integral component of the Army's Legacy-to-Objective path of the TCP.</p> <p>Precision Guided Mortar Munition (PGMM) - This program provides funds to perform system and technical development that will enhance the effectiveness, lethality, versatility, mobility, and accuracy of mortar systems. Current mortar systems include conventional ammunition with a variety of fuzing weapons that range from man-portable 60mm to vehicle-mounted 120mm mortars, and related equipment such as fire control, mortar ballistic computers, training devices, and ammunition. FY04-FY07 funds provide for start and completion of System Development & Demonstration (SDD) of a Block 1 Precision Guided Mortar Munition (PGMM). The PGMM will be a precision strike round using advanced sensors and guidance systems, extended range and enhanced lethal mechanism technology. It will be capable of a first round defeat of high-value, hard-point targets such as bunkers and command and control centers. The capability to hit point targets in built-up areas makes this especially valuable in Military Operations in Urban Terrain (MOUT) and Military Operations Other Than War/Stability and Support Operations (MOOTW/SASO) situations. First round hit capability reduces the overall logistical burden, a critical goal for early entry forces. This system supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).</p> <p>The Mortar Anti-Personnel - Anti-Materiel (MAPAM) round is a program to evaluate and type classify a foreign round. Rounds have been procured for comparative testing via sole source contract to SM Swiss Ammunition Enterprise Corp.</p>										

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BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev		PROJECT 613
<u>Accomplishments/Planned Program</u>	FY 2002	FY 2003	FY 2004	FY 2005
MFCS: Light Hardware Development	0	2037	2323	2690
MFCS: Software Development	1311	2379	2121	1115
MFCS: Light Test & Evaluation	0	100	0	950
MFCS: Heavy Development Test and Evaluation	2712	0	0	0
MFCS: Program Management	299	270	270	270
MFCS: Heavy Information Assurance	178	0	0	0
MFCS: Heavy Development Engineering	933	250	0	0
SMAW-CS: Procure hardware for system level qualification	2091	0	0	0
SMAW-CS: Complete engineering design of baseline system developed under FY00 and FY01 programs	1426	0	0	0
SMAW-CS: Continue to provide engineering support and analysis	477	0	0	0
SMAW-CS: Perform engineering design tests on components, integrated subsystems, and systems	150	0	0	0
PGMM: System Integration & Qualification	0	0	0	21741
PGMM: System Engineering	0	0	3500	4225
PGMM: Program Management	0	0	1015	1110
PGMM: Subsystem Test & System Integration	0	0	20494	0
PGMM: Development Test & Evaluation	0	0	5100	8700
MAPAM System Engineering	0	1182	0	0
MAPAM Test and Evaluation	0	910	0	0
MAPAM Vendor Hardware	0	255	0	0
MAPAM Contract Engineering Support	0	400	0	0
MAPAM Component Hardware and LAP	0	344	0	0
MAPAM Program Management	0	61	0	0
Totals	9577	8188	34823	40801

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604802A - Weapons and Munitions - Eng Dev

PROJECT

613

B. Other Program Funding Summary

	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
Other Procurement, Army -2-: K99300 (MFCS)	9650	28988	39517	14742	18900	37533	0	0	0	149330
0603802 AS4 Weapons and Munitions Advanced Development, Mortar Systems	2687	7738	0	0	0	0	0	0	0	10425
Procurement, Army Ammunition - E86200 (CTG, Mortar, 120mm, PGMM)	0	0	0	0	0	9882	22606	19567	181103	233158

C. Acquisition Strategy: Mortar Fire Control System (MFCS) - The prime contractor (L3 Communications-formerly Allied Signal Corp. of Teterboro, NJ) teamed with a number of subcontractors and the Government, started development of the MFCS. Because of impending cost growth on the contract with L3 Communications, the contract was not further funded. Development is being completed as a government in-house program. The Commander's Interface, a component of MFCS that performs the ballistic computer function is being procured and fielded due to an urgent need to replace the M23 Mortar Ballistic Computer. Initial production of the full system is scheduled for FY 2003 and is planned as a fixed price competitive system contract.

Precision Guided Mortar Munition (PGMM) - The Component Advanced Development (CAD) phase contract was awarded sole source to Lockheed Martin of Orlando, FL, in June 2002. Contract strategy for the System Development and Demonstration (SDD) phase will be determined prior to Milestone B.

The Mortar Anti-Personnel - Anti-Materiel (MAPAM) round is a program to evaluate and type classify a foreign round. Rounds have been procured for comparative testing via sole source contract to SM Swiss Ammunition Enterprise Corp.

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 613		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MFCS: System Development	Cost Share	L3 Com Teterboro, NJ/TACOM -ARDEC	20221	0		0		0		0	20221	0
b . MFCS: Heavy Software Development	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	3440	0		0		0		0	3440	0
c . MFCS: Hardware Integration	Project Order	TACOM- ARDEC Picatinny Arsenal NJ	396	0		0		0		0	396	0
d . MFCS: Hardware Integration	C/T&M Contract	Applied Ordnance Technology, Waldorf MD	521	0		0		0		0	521	0
e . MFCS: Heavy Integration	Project Order	TACOM-RI Rock Island III	451	0		0		0		0	451	0
f . MFCS: Software Development	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	1311	2379	2Q	2121	2Q	1115	2Q	0	6926	0
g . MFCS: Light Hardware Development	Contract	TBD	0	857	3Q	1143	2Q	910	2Q	0	2910	0
h . MAPAM: Vendor Hardware	SS/FP	SM Swiss AEC Zurich, Switzerland	6302	255	2Q	0		0		0	6557	0
i . 120mm SRTR: Development	SS/CR	Pocal Industries Scranton, PA	836	0		0		0		0	836	0

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BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev						PROJECT 613		
I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . SMAW-CS: Engineering Design of Baseline System	SS/CP	Talley Defense Systems Mesa, AZ	1426	0		0		0		0	1426	0
k . MFCS: Light Hardware Development	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	0	800	2Q	800	2Q	800	2Q	0	2400	0
l . PGMM: SD&D - Subsystem Test & System Integration	Competitive/ CPIF	TBD	0	0		20494	2-3Q	0		0	20494	0
m . PGMM: System Integration and Qualification	Competitive/ CPIF	TBD	0	0		0		21741	2-3Q	0	21741	0
n . MAPAM: Component Hardware and LAP	TBD	TBD	0	344	3Q	0		0		0	344	0
Subtotal:			34904	4635		24558		24566		0	88663	0

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BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 613		
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MFCS: Heavy Development Engineering	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	4895	250	2Q	0		0		0	5145	0
b . MFCS: Logistics Support	Project Order	TACOM-RI Rock Island III	396	80	2Q	80	2Q	80	2Q	0	636	0
c . MAPAM: System Engineering	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	3100	1182	2Q	0		0		0	4282	0
d . 120mm Short Range Training Rd: Dev Support	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	350	0		0		0		0	350	0
e . MFCS: Light Dev Support	T&M Contract	CSC	0	300	2Q	300	2Q	300	2Q	0	900	0
f . SMAW-CS: Engineering Support	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	477	0		0		0		0	477	0
g . PGMM: Systems Engineering	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	0	0		3500	2-3Q	4225	2-3Q	0	7725	0
h . MAPAM: Contract Engineering Support	SS/FP	SM Swiss AEC, Zurich, Switzerland	0	400	2Q	0		0		0	400	0
Subtotal:			9218	2212		3880		4605		0	19915	0

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BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 613		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MFCS: Heavy Component Testing	MIPR	ATEC, Alexandria, VA	1038	0		0		0		0	1038	0
b . MFCS: Heavy Development Test & Evaluation	MIPR	ATEC, Alexandria, VA	3635	0		0		0		0	3635	0
c . MFCS: Information Assurance	MIPR	CECOM Ft Monmouth NJ	178	0		0		600	2Q	0	778	0
d . MAPAM: Foreign Comparative Test	MIPR	TACOM-ARDEC Picatinny Arsenal, NJ	1119	0		0		0		0	1119	0
e . MAPAM: PCA/Production Qualification Test	MIPR	ATEC, Alexandria, VA	85	0		0		0		0	85	0
f . 120mm SRTR: Production Qualification Test	MIPR	ATEC, Alexandria, VA	182	0		0		0		0	182	0
g . SMAW-CS: Engineering Design Test	MIPR	ATEC, Alexandria, VA	150	0		0		0		0	150	0
h . SMAW-CS: System Test Hardware	SS/CP	Talley Defense Systems Mesa, AZ	2091	0		0		0		0	2091	0

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III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
i . MFCS: Light Development Test	Project Order	TACOM-ARDEC Picatinny Arsenal, NJ	0	100	2Q	0		350	2Q	0	450	0
j . MFCS: Light Development Test	MIPR	ATEC, Alexandria, VA	0	0		0		600	2Q	0	600	0
k . PGMM: Development Test and Evaluation	Project Order	ATEC, Alexandria, VA	0	0		5100	2-3Q	8700	2-3Q	0	13800	0
l . MAPAM: PQT	Project Order	Yuma Proving Ground, Yuma, AZ	0	910	3Q	0		0		0	910	0
Subtotal:			8478	1010		5100		10250		0	24838	0

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BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 613		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Mortar Fire Control System	In-house	PM Mortars, Picatinny Arsenal NJ	1601	270	1Q	270		270		0	2411	0
b . Mortar Fire Control System	T&M Contract	Robbins-Gioia Inc Alexandria VA	637	0		0		0		0	637	0
c . MAPAM	In-house	PM Mortars, Picatinny Arsenal NJ	233	61	2Q	0		0		0	294	0
d . 120mm SRTR XM932	In-house	PM Mortars, Picatinny Arsenal NJ	78	0		0		0		0	78	0
e . SRTR Management Support	C/T&M Contract	Applied Ordnance Technology, Waldorf MD	54	0		0		0		0	54	0
f . Precision Guided Mortar Munition	In-House	PM Mortars, Picatinny Arsenal NJ	0	0		1015	2Q	1110	2Q	0	2125	0
Subtotal:			2603	331		1285		1380		0	5599	0
Project Total Cost:			55203	8188		34823		40801		0	139015	0

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT 613	
<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FUE of Commander's interface as Mortar Ballis tic Computer		2Q						
IOT&E of MFCS Heavy		1Q						
Type Classification (MFCS Heavy) (MS III)		2Q						
First Unit Equipped (MFCS Heavy)		3Q						
SD&D of MFCS Light Block 1		2Q		1Q				
IOT&E of MFCS Light			3Q					
Type Classification MFCS Light Block1				1Q				
First Unit Equipped - MFCS Light				4Q				
Prototype Qualification Tests (MAPAM)	3Q							
Prototype Tests (XM932)	3Q							
PGMM Start SD&D Block 1			2Q					
PGMM System Integration Testing (Block 1)				2-4Q				
PGMM Pre-Production Testing, MS C (Block 1)					2-4Q			
PGMM Start SD&D Block 2						2Q		
PGMM System Integration Testing - Block 2							3-4Q	
PGMM Pre-Production Testing, MS C Block 2								1-3Q
ER-DPICM SDD Start (MS B)						2Q		
MAPAM Production Qualification Test		3Q						
MAPAM Type Classification				2Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT 705			
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
705	ADV PRECISION KILL WEAPON SYSTEM (APKWS) - SD&ED	0	23369	35112	11414	6667	9405	18252	16966	0	121185
<p><u>A. Mission Description and Budget Item Justification:</u>The Advanced Precision Kill Weapon System (APKWS) is a family of precision-guided rockets that combines a newly designed guidance section with existing 2.75-inch munition components and launch equipment. The APKWS is a highly accurate weapon that will complement the HELLFIRE missile in a precision strike against soft point targets. The APKWS will provide improved accuracy over the current 2.75-inch munition used on the AH-64 Apache, OH-58 Kiowa Warrior and the future RAH-66 Comanche helicopters. The APKWS Block 1 program will develop, test and qualify a laser guided 2.75-inch munition. Future planned enhancements include development and qualification of an improved warhead and fuze in FY 2006 and FY 2007, followed by the development and qualification of a new motor. The funding supports system level qualification for APKWS. The APKWS is expected to provide a substantial increase in the number of kills over the unguided Hydra 70 rocket and a reduction in collateral damage to minimize fratricide. The Advanced Technology Demonstration (ATD), Low Cost Precision Kill, was funded in Program Element 0603313, project 567. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).</p>											
<u>Accomplishments/Planned Program</u>							<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
Define and develop system requirements and preliminary design for precision guided rocket including hardware and software.							0	20878	32248	6156	
Develop test plans and test support equipment.							0	1353	1571	3620	
Perform government engineering support.							0	1138	1293	1638	
Totals							0	23369	35112	11414	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003		
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT 705	
<u>B. Other Program Funding Summary</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Compl</u>	<u>Total Cost</u>
C70301 APKWS (Advanced Precision Kill Weapon System)	0	0	0	20566	50458	65320	125869	160451	1435900	1858564
PE 203802/786 APKWS Simulator Upgrade	0	0	0	4915	4903	4777	4907	4903	54800	79205
<p>* FY03 funding includes \$1.634 million resulting from a \$1.7 million Congressional increase for SLAMRAAM, which will be properly aligned from project 705 to project S23 for execution.</p> <p><u>C. Acquisition Strategy:</u> Development of the APKWS will be sole source. The APKWS Block 1 development program is a 30-month effort followed by enhancement efforts to the warhead, fuze and motor. The Low Rate Initial Production (LRIP) and Full Rate Production will be sole source. The U.S. Army Aviation and Missile Command (AMCOM) will provide assistance and technical expertise during the development effort.</p>										

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 705		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Prime Contract	CPIF/AF	TBD	0	17656	2Q	29410	2Q	4466	2Q	33877	85409	0
b . Support Costs	Various	Various	0	391	1-4Q	977	1-4Q	742	1-4Q	1657	3767	0
c . Development Engineering	Various	Various	0	1197	1-4Q	1861	1-4Q	948	1-4Q	5320	9326	0
d . SLAMRAAM FY03 Congressional increase			0	1634		0		0		0	1634	0
Subtotal:			0	20878		32248		6156		40854	100136	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT 705		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Test Support	Various	Various	0	1353	1Q	1571		3620		6266	12810	0
Subtotal:			0	1353		1571		3620		6266	12810	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . In-House Support	Various	Various	0	1138	1-4Q	1293	1-4Q	1638	1-4Q	4171	8240	0
Subtotal:			0	1138		1293		1638		4171	8240	0
Project Total Cost:			0	23369		35112		11414		51291	121186	0

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT 705	
<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Milestone B		1Q						
Award APKWS SDD Contract		2Q						
APKWS PDR		4Q						
APKWS CDR			2Q					
APKWS Testing			3Q					
Milestone C				2Q				
Warhead/Fuze Development					1Q			
Warhead/Fuze PDR					3Q			
Warhead/Fuze CDR						1Q		
Warhead/Fuze ECP						2Q		
Extended Range Rocket Motor Development						2Q		
Motor/Seeker PDR						4Q		
Motor/Seeker CDR							2Q	
Motor/Seeker Testing							4Q	
Motor/Seeker ECP								3Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT AS1		
COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
AS1 SMALL ARMS IMPROVEMENT	5527	8564	8905	10463	4337	2374	13784	4774	0	65282
<p><u>A. Mission Description and Budget Item Justification:</u> This program provides funds to demonstrate engineering development models or integrated commercial items designed to enhance lethality, target acquisition, fire control, training effectiveness, and reliability for small arms weapon systems and munitions. Current small arms include a variety of personal defense weapons (9mm), individual weapons (5.56mm), crew-served weapons (5.56mm-40mm) and related items such as fire control equipment, training devices, hand grenades, and ammunition. Current efforts focus on improvements to the M249 Squad Automatic Weapon, M16/M4 Rifle, M203 Grenade Launcher, MK19 Grenade Machine Gun, M240B Medium Machine Gun, ammunition, and hand grenades. These small arms weapon systems support the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).</p>										
<u>Accomplishments/Planned Program</u>							<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Light-Weight Ground Mount (XM192)							0	0	0	0
- Hardware Modification and Retesting							416	0	0	0
- Hardware Fabrication							175	0	0	0
- Technical Test Start							75	0	0	0
- OT Planning							80	0	0	0
- Technical Testing							0	170	0	0
- Operational Testing							0	714	0	0
- Independent Evaluation							0	25	0	0
- Type Classify/Milestone C							0	286	0	0
M249 RAM Improvement/Weight Reduction							0	0	0	0
- Execution, Design/Producibility							0	0	424	0
- Engineering Support							0	0	170	0
- Simulation & Modeling							0	0	95	0
- Prototype Fabrication							0	0	0	95
- Engineering Tests							0	0	0	110
- Finalize Design							0	0	0	470
- Hardware Fabrication							0	0	0	337
-							0	0	0	0

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)			February 2003			
BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
5 - System Development and Demonstration		0604802A - Weapons and Munitions - Eng Dev			AS1	
<u>Accomplishments/Planned Program (continued)</u>		<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
M249 MG Barrel Life Extension Program		0	0	0	0	
- Final Design, Tooling and Fabrication		75	0	0	0	
- Technical Testing		124	0	0	0	
- Technical Eval/Reports		89	0	0	0	
- Fabricate Pre-Production Hardware		0	100	0	0	
- Test Pre-Production Hardware		0	110	0	0	
- Tech Data Support/ECP Approval		0	150	0	0	
M249 Short Range Training Ammunition		0	0	0	0	
- Program Documentation/MS B		0	50	0	0	
- Engineering Development		0	185	0	0	
- Technical Assessment		0	20	0	0	
- Manufacture Prototypes		0	50	0	0	
- Conduct Developmental Tests		0	200	0	0	
- Environmental Analysis		0	5	0	0	
- Draft Perf Spec		0	20	0	0	
- Manprint Assessment		0	0	5	0	
- Finalize Perf Spec		0	0	75	0	
- Safety Confirmation		0	0	15	0	
- Limited User Test		0	0	15	0	
- System Evaluation Report		0	0	76	0	
- Prepare Packages		0	0	120	0	
- Staff Packages		0	0	10	0	
- Milestone C IPR/TC		0	0	10	0	
MK19 Remote Platform		0	0	0	0	
- Test Planning		150	0	0	0	
- Engineering Assessment Test		500	0	0	0	
- Award Contract - Primary Hardware		1200	0	0	0	
- M1117 Integration		400	0	0	0	
- HMMWV Integration		450	0	0	0	
- Developmental Testing		579	0	0	0	
XM116 Sight, Computerized, SAFC		0	0	0	0	
- Contract Modification Primary Hardware		700	0	0	0	
- Program Documentation/Execution		200	0	0	0	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604802A - Weapons and Munitions - Eng Dev

PROJECT

AS1

Accomplishments/Planned Program (continued)

	FY 2002	FY 2003	FY 2004	FY 2005
- Tradeoff Studies	64	0	0	0
MK19 Self-Destruct Cartridge	0	0	0	0
- Program Documentation/MS B	0	100	0	0
- Solicitation	0	100	0	0
- Bid Sample Test and Evaluation	0	315	0	0
- Contract Award	0	800	0	0
- Build/Test Validation Samples	0	305	0	0
- Manufacture Test Quantity	0	0	835	0
- DT	0	0	687	0
- OT/LFT	0	0	100	0
- Systems Evaluation Report (SER)	0	0	0	15
- Analysis Assessment/Program Documentation/MS C	0	0	0	335
- MS C IPR/TC-STD	0	0	0	25
M240 Weight Reduction	0	0	0	0
- Engineering Tests	0	80	0	0
- Program Documentation/MS B	0	153	0	0
- Award Contract	0	100	0	0
- Final Design/Fabricate Test Hardware	0	422	595	0
- Manufacturing Process Finalized	0	0	153	0
- Tech Test	0	0	520	0
- User Assessment	0	0	100	0
- Independent Assessment/Test Reports	0	0	0	155
- Analysis Assessment/Program Documentation/MS C	0	0	0	260
M240 Improved MG Barrel	0	0	0	0
- Define Requirements	0	0	65	0
- Award Contract	0	0	90	0
- Develop Test Plan	0	0	105	0
- Preliminary Design/Fabrication	0	0	290	0
- Fabricate Prototype Hardware	0	0	0	490
- Test and Evaluate	0	0	0	555
- ECP/Report	0	0	0	305
Non-Toxic Ammunition	0	0	0	0
- Market Survey/Program Documentation	0	0	0	220

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604802A - Weapons and Munitions - Eng Dev

PROJECT

AS1

<u>Accomplishments/Planned Program (continued)</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
- MS B	0	0	0	30
- Prepare RFP	0	0	0	420
- Bid Sample Testing for 9mm	0	0	0	50
- Source Selection	0	0	0	190
- Contract Award - Toxic Free Primer Development	0	0	0	410
Aviation Variant (M240)	0	0	0	0
- Test Planning	25	0	0	0
- Mount Concept Exploration	225	0	0	0
- Fabricate Prototype Weapons	0	535	0	0
- Design/Qualify Pintle Mods	0	515	0	0
- Program Documentation/MS B	0	200	0	0
- Fabricate Pintles/Test Hardware	0	450	0	0
- Engineering Tests	0	650	0	0
- Technical Testing	0	0	150	0
- Limited User Test	0	0	1637	0
- Evaluation Reports	0	0	250	0
- Program Documentation/MS C	0	0	275	0
- Production Planning	0	0	75	0
M16/M4 Improvement Block 1	0	0	0	0
- Finalize Requirements	0	14	0	0
- Prepare/Staff Procurement Package	0	44	0	0
- Competitive Contractor Selection/Award	0	329	0	0
- Technical Test	0	451	0	0
- DT/OT/User Assessment	0	0	208	225
- Develop/Produce Test Hardware	0	0	121	0
- Prepare/Staff Procurement Decision	0	0	0	36
M16/M4 Improvements Block II	0	0	0	0
- Finalize Requirements	0	23	0	0
- Prepare/Staff Procurement Package	0	61	0	0
- Competitive Contractor Selection/Award	0	117	200	0
- Test & Evaluation	0	233	0	0
- Develop/Produce Test Hardware	0	0	142	0
- DT/OT/User Assessment	0	0	1262	0

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003					
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT					
5 - System Development and Demonstration				0604802A - Weapons and Munitions - Eng Dev				AS1					
<u>Accomplishments/Planned Program (continued)</u>								FY 2002	FY 2003	FY 2004	FY 2005		
- Independent Evaluation								0	0	30	0		
- Prepare/Staff IPR Package								0	0	0	78		
M16/M4 Improvements Block III								0	0	0	0		
- Finalize Requirements								0	70	0	0		
- Prepare/Staff MS Package								0	74	0	0		
- Develop/Produce Test Hardware								0	241	0	5622		
- Test & Evaluation								0	97	0	0		
- DT/OT/User Assessment								0	0	0	25		
- Independent Evaluation								0	0	0	5		
Totals								5527	8564	8905	10463		
<u>B. Other Program Funding Summary</u>				FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
WTCV, GZ1290, Squad Auto Wpn (MODS)				4372	4049	5096	805	566	372	19726	4063	0	39049
WTCV, GZ2800, M16 Rifle MODS				2085	0	2369	2351	2050	0	3901	0	0	12756
WTCV, GB3000, MK19 MODS				1034	2697	3845	4047	4555	280	14416	8726	0	39600
WTCV, GZ1300, Med MG (MODS)				736	0	2970	3009	3102	1581	16595	0	0	27993
WTCV, GB3007, M4 Carbine MODS				0	9111	6660	7399	5933	6137	4932	23	0	40195
<p><u>C. Acquisition Strategy:</u> Primary strategy is to mature and finalize design, award RDT&E hardware contracts, test and evaluate system to result in type classification and production award.</p>													

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT AS1		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Hardware Development	TBD	Various	11535	2747	1-4Q	1588	1-3Q	6033	1-3Q	Continue	21903	0
Subtotal:			11535	2747		1588		6033		Continue	21903	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development	MIPR	ARDEC, Picatinny, NJ	6438	1810	1-4Q	1514	1-3Q	2400	1-3Q	0	12162	0
b . Logistics	MIPR	TACOM, Rock Island, IL	523	220	1-4Q	350	1-3Q	210	1-3Q	0	1303	0
c . Human Research and Eng Directorate	MIPR	APG, MD	885	225	1-4Q	235	1-3Q	260	1-3Q	0	1605	0
Subtotal:			7846	2255		2099		2870		0	15070	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT AS1		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . DT	MIPR	Developmental Test Command (DTC), Aberdeen Proving Ground (APG), MD	3891	1423	1-4Q	1130	1-3Q	345	1-3Q	Continue	6789	0
b . OT	MIPR	AEC, Alexandria, VA	190	894	1-4Q	2765	1-3Q	50	1-3Q	0	3899	0
c . Validation testing	MIPR	DTC, APG, MD	233	485	1-4Q	380	1-3Q	215	1-3Q	0	1313	0
Subtotal:			4314	2802		4275		610		Continue	12001	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management	In House	PM Soldier Weapons, Ft. Belvoir, VA	1812	710	1-4Q	883	1-4Q	915	1-4Q	0	4320	0
b . Travel	In House	PM Soldier Weapons, Ft. Belvoir, VA	142	50	1-4Q	60	1-4Q	35	1-4Q	0	287	0
Subtotal:			1954	760		943		950		0	4607	0
Project Total Cost:			25649	8564		8905		10463		Continue	53581	0

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT AS1	
<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Lightweight Ground Mount (XM192)								
- Prototype Modification & Redesign	1-2Q							
- Hardware Modification & Retesting	1-2Q							
- Hardware Fabrication	3-4Q							
- Technical Test Start	3-4Q							
- OT Planning	4Q							
- Technical Testing		1-2Q						
- Operational Testing		3Q						
- Independent Evaluation		4Q						
- Type Classify/MS C (FY03 Carryover)			1Q					
M249 RAM Improvement/Weight Reduction								
- Execution, Design/Producibility			2Q					
- Engineering Support			3Q					
- Simulation & Modelling			3-4Q					
- Prototype Fabrication				1-2Q				
- Engineering Tests				2-3Q				
- Final Design				4Q				
- Hardware Fabrication				4Q	1Q			
- TT/OT					1-3Q			
- Independent Assessment					3-4Q			
- ECP					4Q			
M249 Machine Gun Barrel Life Ext Pgm								
- Final Design, Tooling & Fabrication	1-4Q							
- Technical Testing (FY02 Carryover)	4Q	1-2Q						
- Technical Eval/Reports (FY02 Carryover)		1-2Q						
- Fabricate Pre-Production Hardware		2-3Q						
- Test Pre-Production Hardware		3-4Q						
- Tech Data Support		1-3Q						
- ECP Approval		4Q						

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT AS1
<u>Schedule Detail (continued)</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
M249 Short Range Training Ammunition								
- Program Documentation/MS B		1Q						
- Engineering Development		1Q						
- Technical Assessment		1Q						
- Manufacture Prototypes		2-3Q						
- Conduct Development Tests		3-4Q						
- Environmental Analysis		4Q						
- Draft Perf Spec		4Q						
- Manprint Assessment			1Q					
- Finalize Perf Spec			1Q					
- Safety Conformation			1Q					
- Limited User Test			2Q					
- System Evaluation Report			3Q					
- Prepare Packages			1-3Q					
- Staff Packages			3Q					
- Milestone C IPR/TC			4Q					
MK19 Remote Platform								
- Test Planning	1Q							
- Engineering Assessment Test	2-4Q							
- Award Contract - Primary Hardware (FY02 Carryover)		1Q						
- M1117 Integration	3Q							
- HMMWV Integration	4Q							
- Developmental Testing (FY02 Carryover)	4Q	1Q						
XM116 Sight, Computerized, SAFC								
- Contr. Award Primary Hardware (FY01 Carryover)	1-4Q							
- Two Yr Design/Fabricate Hardware (FY01 Carryover)	1-4Q							
- Program Documentation/Execution (FY01 Carryover)	1-4Q							

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT AS1	
Schedule Detail (continued)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
- Technical Test Plan (FY01 Carryover)	1-4Q							
- Operational Test Plan (FY01 Carryover)	1-4Q							
- ILS Documentation (FY01 Carryover)	1-4Q							
- Tradeoff Studies	4Q							
MK19 Self-Destruct Cartridge								
- Program Documentation/MS B		2Q						
- Solicitation		2Q						
- Bid Sample Test and Evaluation		2-3Q						
- Contract Award		3Q						
- Build/Test Validation Samples		3-4Q						
- Manufacture Test Quantity			1-2Q					
- DT			3-4Q					
- OT/LFT			3-4Q					
- System Evaluation Report				1Q				
- Prepare MS C IPR Package				1-2Q				
- MS C IPR/TC-STD				3Q				
M240 Weight Reduction								
- Engineering Tests		1-3Q						
- Program Documentation/MS B		1-2Q						
- Contract Award		3Q						
- Final Design/Fabricate Test Hardware		3-4Q	1Q					
- Manufacturing Process Finalized			1Q					
- Technical Test			2-4Q					
- User Assessment			2-4Q					
- Independent Assessment/Test Reports				1Q				
- Analysis Assessment/Program Documentation/MS C				1-3Q				
M240 Improved Machine Gun Barrel								
- Define Requirements			1Q					
- Develop Test Plan			2Q					

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT AS1
<u>Schedule Detail (continued)</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
- Award Contract			3Q					
- Preliminary Design/Fabrication			4Q	1Q				
- Fabricate Prototype Hardware				1-2Q				
- Test & Evaluate				3Q				
- ECP/Reports				4Q				
Non-Toxic Ammunition								
- Market Survey/Program Documentation				1Q				
- MS B				1Q				
- Prepare RFP				1-2Q				
- Bid Sample Testing for 9mm				3Q				
- Source Selection				3-4Q				
- Contract Award - Toxic Free Primer Development				3-4Q				
- Awd Contr. for all Projectiles/Ctrdgs Development					2Q			
- Toxic Free Primer Development					1-4Q			
- Projectiles/Cartridges Development					1-4Q			
- Final Development Test for Toxic Free Primer						1Q		
- Final Development Test for Projectiles/Cartridges						1-2Q		
- Mod. Contracts for Integrtn of Toxic Free Primer						2Q		
- Integration of Toxic Free Primer						3-4Q		
- Critical design review (CDR)						4Q		
- Award Qual Lot Fabrication Option for 9mm						4Q		
- Awd Qual Lt Fabrication Opt.(5.56/7.62/ Cal .50)							1Q	
- Manufacture Qualification Hardware							1-3Q	
- Initiate DT/OT/LFT							3-4Q	
- Complete DT/OT/LFT								1-2Q

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT AS1
<u>Schedule Detail (continued)</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
- Prepare MSC IPR Package								2-3Q
- MS C IPR/TC-STD								4Q
Aviation Variant (M240)								
- Test Planning	4Q							
- Mount Concept Exploration (FY02 Carryover)		1Q						
- Fabricate Prototype Weapons		1-2Q						
- Design/Qualify Pintle Mods		2Q						
- Program Documentation/MS B		1-2Q						
- Fabricate Pintles/Test Hardware		2-3Q						
- Engineering Tests		3-4Q						
- Technical Testing			1Q					
- Limited User Test			1-2Q					
- Evaluation Reports			3Q					
- Program Documentation/MS C			3-4Q					
- Production Planning			4Q					
M16/M4 Improvements Block I								
- Finalize Requirements		1Q						
- Prepare/Staff Procurement Package		1-2Q						
- Competitive Contractor Selection/Award		2-4Q						
- Develop/Produce Test Hardware			1-3Q					
- Technical Test/User Assessment		2-3Q	4Q	1-2Q				
- Prepare/Staff Procurement Decision				2Q				
M16/M4 Improvements Block II								
- Finalize Requirements		1Q						
- Prepare/Staff Procurement Package		1-3Q						
- Competitive Contractor Selection/Award		3-4Q	1Q					
- Develop/Produce Test Hardware			1-2Q					
- DT/OT/User Assessment		1-4Q	2-4Q					
- Independent Evaluation			4Q					
- Prepare/Staff IPR Package				1-2Q				

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT AS1	
<u>Schedule Detail (continued)</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
M16/M4 Improvements Block III								
- Finalize Requirements		1-2Q						
- Prepare/Staff MS Package		2-3Q						
- Develop/Produce Test Hardware		4Q		1-4Q	1-2Q			
- DT/OT/User Assessment/Evaluations		1-2Q		1-4Q	2-4Q	1-2Q		
- Independent Evaluations				1-4Q	4Q	1-2Q		
- Prepare/Staff IPR Package					4Q	1-3Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT AS5			
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
AS5	LOW COST COMPETENT MUNITIONS (LCCM)	1442	6203	12759	0	0	0	0	0	0	20404
<p><u>A. Mission Description and Budget Item Justification:</u> Low Cost Competent Munitions (LCCM) now titled Course Correcting Fuze (CCF) is a low cost, fuze-sized module that is intended to replace a "NATO standard" fuze on existing stockpile and future conventional cannon artillery projectiles. The CCF corrects the ballistic trajectory of the projectile to reduce delivery errors and thus improves projectile accuracy. While the final concept for the LCCM has not been selected, common technologies will be matured for application across all concepts. These will include control devices that compensate for gun and meteorological ballistics effects; a Fuze, Safe and Arm (FSA) mechanism; a U.S. required Selective Availability, Anti-Spoof GPS Module (SAASM); a smaller, high-power battery; an inductive fuze data link; and improved trajectory correcting software algorithms. Integration of these items to yield a low cost fuze module will effectively reduce target delivery error of conventional artillery munitions and reduce the number of projectiles required to execute a fire mission. The CCF will benefit 155mm projectiles as well as the family of 105mm projectiles. The increase in effectiveness offered by the CCF gives commanders the operational capability to defeat more targets with the same basic load, while reducing the logistical burden associated with the current mission requirements. The M795E1 baseburner program maximizes range optimization. These systems support the Legacy transition path of the Transformation Campaign Plan (TCP).</p>											
<u>Accomplishments/Planned Program</u>							<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
Purchase of 220 M795E1 projectiles							1212	0	0	0	
M795E1 maximum range optimization							230	1441	0	0	
LCCM Concept Trade Studies							0	4062	0	0	
LCCM Operational Analysis							0	700	0	0	
LCCM Design and develop inductive data link							0	0	500	0	
LCCM Design, develop, and integrate gun-hardened system and components							0	0	12259	0	
Totals							1442	6203	12759	0	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2003
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev	PROJECT AS5
<p><u>B. Other Program Funding Summary:</u> Not applicable for this item.</p> <p><u>C. Acquisition Strategy:</u> This program will be structured for possible multiple awards for the FY03 Concept Engineering Studies. One contractor will be selected in FY04 for the initiation of prototype demonstration.</p> <p>M795E1 enters Safety Assessment in FY03, Gun Qualification in FY04 and type classification in FY05. The program has been merged with other similar base-burner high explosive projectile program to conserve resources and leverage technology advances for increased performance and lethality.</p>		

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT AS5		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . CCF Contract	CPAF	TBD	0	3573	3Q	10669	2Q	0		0	14242	0
b . M795E1 Metal Parts	Option	Chamberlain Mfg Co Scranton, PA	722	0		0		0		0	722	0
c . M795E1 Basebleed	SS/CPIF	Talley Industries, Mesa, AZ	490	700	3Q	0		0		0	1190	0
d . M795E1 System Integrator	SS/CPIF	GD-OTS, St Petersburg, FL	0	541	3Q	0		0		0	541	0
Subtotal:			1212	4814		10669		0		0	16695	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Product Manager's Office	In House	PM CAS, NJ	0	300	2Q	300	1Q	0		0	600	0
b . Government IPT Support	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	0	689	2Q	1240	1-3Q	0		0	1929	0
c . Product Managers Office - M79E1	In House	PM CAS, NJ	30	100	2Q	0		0		0	130	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT AS5		
II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
d . Government IPT Support - M795E1	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	50	100	2Q	0		0		0	150	0
e . Fort Sill	MIPR	Fort Sill, OK	0	100	3Q	250	1Q	0		0	350	0
Subtotal:			80	1289		1790		0		0	3159	0
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . M795E1 Testing	MIPR	Yuma Proving Grounds, Yuma AZ	150	0		0		0		0	150	0
b . LCCM Testing			0	100	4Q	300	4Q	0		0	400	0
Subtotal:			150	100		300		0		0	550	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT AS5		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			0	0		0		0		0	0	0
Subtotal:												
Project Total Cost:												
			1442	6203		12759		0		0	20404	0

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT AS5	
<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
M795E1 Contract Awards	4Q							
M795E1 Testing	4Q	2Q						
LCCM Contract Award		3Q						
LCCM Concept Trade Studies		3-4Q						
LCCM Operational Analysis		3-4Q						
LCCM Prototype Contract Award			2Q					
LCCM Prototype Testing			4Q					

February 2003

5 - System Development and Demonstration

0604802A - Weapons and Munitions - Eng Dev

AS8

<u>A. Mission Description and Budget Item Justification:</u> Not applicable for this item.										
<u>Accomplishments/Planned Program</u> Not applicable for this item.										
<u>B. Other Program Funding Summary:</u> Not applicable for this item.										
<u>C. Acquisition Strategy:</u> Not applicable for this item.										

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT S23		
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
S23	SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)	0	0	37810	35565	29648	20968	0	0	0	123991
<p><u>A. Mission Description and Budget Item Justification:</u>Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is the initial kinetic energy component of the Enhanced Area Air Defense System (EAADS), an Air and Missile Defense (AMD) Objective Force system. SLAMRAAM is a System of Systems, consisting of a launcher platform, AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAM), a common Army vehicle, launch rails, launcher electronics, on-board command, control, communications, computer (C4) components, Sentinel (ETRAC) Sensor, other external Sensors, and BMC4I. SLAMRAAM is a lightweight, day or night, adverse weather, non-line-of-sight (NLOS) fire unit for countering low altitude rotary wing (RW), fixed wing (FW), cruise missile (CM), unmanned aerial vehicle (UAV), and reconnaissance, surveillance, and target acquisition (RSTA) platforms. It supports clutter engagements in close combat areas where maneuvering forces and their supporting units operate. SLAMRAAM’s force protection mission is to engage the low-altitude aerial threats out to 18km. This system supports the Objective transformation path of the Transformation Campaign Plan (TCP).</p>											
<u>Accomplishments/Planned Program</u>							FY 2002	FY 2003	FY 2004	FY 2005	
Development Engineering							0	0	9155	6584	
Producibility Engineering and Planning							0	0	429	655	
Development Tooling							0	0	678	691	
Prototype Manufacturing							0	0	4389	3185	
Project Management							0	0	7153	6863	
System Test & Evaluation							0	0	11398	10130	
Training/Devices							0	0	2764	1842	
Data							0	0	1844	1510	
Support Equipment							0	0	0	2526	
Development Facilities							0	0	0	1579	
Totals							0	0	37810	35565	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT S23	
B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
Surface-Launched AMRAAM System Summary (C81001)	0	0	7452	22016	47088	24400	13650	4871	0	119477
*FY03 funding is currently \$1.634 resulting from a \$1.7 million Congressional increase in FY03 that will be properly realigned from Project 705 to Project S23 for execution.										
C. Acquisition Strategy: System Development and Demonstration (SDD) contract award is scheduled for 1st Quarter FY04. SDD will be a 24 month effort, culminated by Milestone C in 2nd Quarter FY06. A contingency capability (FUE Battery) will be fielded in FY06 with Initial Operational Capability (IOC) available in FY07.										

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT S23		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Contractor Development Engineering	TBD	TBD	0	0		4255		4334		2208	10797	0
b . Government Development Engineering	TBD	PM Missiles & Platforms/PEO AMD	0	0		4900		2250		10000	17150	0
c . Producibility Engineering and Planning	TBD	TBD	0	0		429		655		371	1455	0
d . Development Tooling	TBD	TBD	0	0		678		691		1408	2777	0
e . Prototype Manufacturing	TBD	TBD	0	0		4389		3185		0	7574	0
f . Support Equipment	TBD	TBD	0	0		0		2526		6635	9161	0
g . Development Facilities	TBD	TBD	0	0		0		1579		1626	3205	0
h . Contractor Engineering Sys/Eng Tech Asst	TBD	TBD	0	0		1496		2032		1563	5091	0
i . Program Management		PM Missiles and Platforms/PEO AMD	0	0		5657		4831		6036	16524	0
Subtotal:			0	0		21804		22083		29847	73734	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT S23		
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Data	TBD	TBD	0	0		1844		1510		866	4220	0
Subtotal:			0	0		1844		1510		866	4220	0
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Modeling and Simulation	TBD	TBD	0	0		3000		2000		5000	10000	0
b . Development Testing	TBD	TBD	0	0		7949		4927		1378	14254	0
c . Operational Testing	TBD	TBD	0	0		449		3203		8852	12504	0
d . Training/Devices	TBD	TBD	0	0		2764		1842		4673	9279	0
Subtotal:			0	0		14162		11972		19903	46037	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev					PROJECT S23		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			0	0		37810		35565		50616	123991	0

Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev			PROJECT S23	
<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Operational Requirements Document (ORD) Approved	3Q							
Analysis of Alternatives (AOA)		3Q						
Milestone B		4Q						
Development Engineering			2-4Q	1-4Q	1-4Q	1-4Q		
Producibility Engineering and Planning			2-4Q	1-4Q	1-4Q			
Development Tooling			2-4Q	1-4Q	1-4Q			
Prototype Manufacturing			2-4Q	1-4Q	1-4Q	1-4Q		
Project Management			1-4Q	1-4Q	1-4Q	1-4Q		
System Engineering and Integration			1-4Q	1-4Q	1-4Q	1-4Q		
System Test & Evaluation			1-4Q	1-4Q	1-4Q	1-4Q		
Training Devices			1-4Q	1-4Q	1-4Q	1-4Q		
Data			1-4Q	1-4Q	1-4Q	1-4Q		
Support Equipment				1-4Q	1-4Q	1-4Q		
Development Facilities				1-4Q	1-4Q	1-4Q		