

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE							
4 - Advanced Component Development and Prototypes		0603827A - Soldier Systems - Advanced Development							
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	10135	20090	36558	32798	32697	11902	12115	Continuing	Continuing
S49 GROUND SOLDIER SYSTEM (GSS)			25505	20514	20203				66222
S51 AIRCREW INTEGRATED SYS AD	2285	3159	1	2	2	2	2		5453
S52 SOLDIER SUPPORT EQUIPMENT - AD	198								386
S53 CLOTHING AND EQUIPMENT	6684	11814	9571	7145	7355	6834	6946	Continuing	Continuing
S54 SMALL ARMS IMPROVEMENT	968	5117	1481	5137	5137	5066	5167		28073

A. Mission Description and Budget Item Justification: This Program Element (PE) for Advanced Component Development and Prototypes manages the soldier as a system in order to increase combat effectiveness, test and deliver tangible products that save soldier's lives, and improve soldier's quality of life. It evaluates, develops, and tests emerging technologies and critical soldier support systems to reduce technology risk.

Project S49 funding (Ground Soldier System) integrates multiple components and leverages emerging technologies to provide overmatching operational capabilities to ground combat Soldiers.

Project S51 funding (Aircrew Integrated Systems) supports component development and prototyping of critical soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.

Project S52 funding (Soldier Support Equipment) supports component development and prototyping of critical soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.

Project S53 funding (Clothing and Equipment) supports development of state-of-the-art technology to improve tactical and non-tactical clothing and individual equipment to enhance the lethality, survivability, and mobility of the individual Soldier.

Project S54 funding (Small Arms Improvement) provides funds to develop, demonstrate and evaluate emerging technology for integration of systems, subcomponents and prototypes designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability for current and future small arms weapon systems and ammunition.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY

PE NUMBER AND TITLE

4 - Advanced Component Development and Prototypes

0603827A - Soldier Systems - Advanced Development

B. Program Change Summary

	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	11478	18178	14119
Current BES/President's Budget (FY 2009)	10135	20090	36558
Total Adjustments	-1343	1912	22439
Congressional Program Reductions		-1528	
Congressional Rescissions			
Congressional Increases		3440	
Reprogrammings	-1019		
SBIR/STTR Transfer	-324		
Adjustments to Budget Years			22439

Change Summary Explanation:

Funding

FY 2009 Adjustments- +22,439

+25,670 New Ground Soldier System Project S49

- 2,997 Reflects realignment of Project S51, Aircrew Integrated Sys funding to 0604601A S61, ACIS Engineering Dev

FY 2008 Adjustments-

Increases +3,440

+ 1,840 Congressional Add for Warrior SIGINT Capability

+ 1,600 Congressional Add for Protector Enhancements and Integration on New Vehicle Platforms Program

Decreases -1,582

- 1,400 Congressional Reduction in Project S54 for 40mm Reconnaissance Cartridge

- 128 General Congressional Reductions

FY 2007 Adjustments-

- 1,343 reprogramming from Project S51 to higher priority Army efforts

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development						PROJECT S49	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S49 GROUND SOLDIER SYSTEM (GSS)			25505	20514	20203				66222

A. Mission Description and Budget Item Justification: The Ground Soldier System (GSS) integrates multiple components and leverages emerging technologies to provide overmatching operational capabilities to ground combat Soldiers. The GSS provides Soldiers additional capability above the Core Soldier System by connecting the individual Soldier to the Network and by providing protection, mobility, sustainability, reliability and embedded training. GSS capabilities meet the needs of Soldiers who conduct ground combat, and provide interoperability with Future Combat System (FCS) and the current force. GSS provides individual Soldiers at echelons of battalion and below increased capabilities to conduct offensive and defensive operations by incorporating the following:

- Network-centric operations at the small unit level
- User defined operating picture (UDOP)
- Improved force protection against threats
- Access to weapons, sensors and external assets formerly available only to higher level units
- Enable the Soldier to maintain skills and proficiency levels

FY 2007 funding total includes no funding received in GWOT supplemental.

FY 2008 funding total includes no funding received in the Bridge Supplemental.

FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S49.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY09: Developmental engineering, prototyping, manufacturing, and systems engineering, assessment, limited test and evaluation, and program management support for Ground Soldier System (GSS)			25505
Total			25505

B. Other Program Funding Summary Not applicable for this item.

C. Acquisition Strategy The GSS acquisition roadmap approach builds upon the Land Warrior Program and the Lessons Learned. The GSS acquisition approach uses the Small Form Factor (SFF) radio communication development from the Joint Tactical Radio System (JTRS) and other hand held communications. The specific contracting strategy will be determined at Milestone B in FY08.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603827A - Soldier Systems - Advanced Development							S49		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Develop and Engineer GSS	CPFF	TBD						16905	1-4Q		16905	
Subtotal:								16905			16905	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Ground Soldier System support	OGA, MIPR	Various						2400	1-4Q		2400	
Subtotal:								2400			2400	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	OGA, MIPR	ATEC, TTC/YPG/DTC/EPT/ARL-SLAD, etc.						1900	1-4Q		1900	
Subtotal:								1900			1900	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Soldier Warrior oversight of GSS program	In-House/Task Order	PM Soldier Warrior, Ft. Belvoir, VA						4300	1-4Q		4300	
Subtotal:								4300			4300	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development						PROJECT S49						
Project Total Cost:									25505			25505	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE																PROJECT																																			
4 - Advanced Component Development and Prototypes	0603827A - Soldier Systems - Advanced Development																S49																																			
Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13																											
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																								
(1) Milestone B Decision Increment I																					Milestone B Increment I																															
Developmental Test (DT) Increment I																																																				
Limited User Test (LUT) Increment I																																																				
(2) Milestone C Decision Increment I																																																				
Low Rate Initial Production (LRIP) Increment I																																																				
Independent Operational Test and Evaluation (IOTE) Increment I																																																				
(3) Full Rate Production (FRP) Increment I																																																				
Production Increment I																																																				

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development					PROJECT S49	
<u>Schedule Detail</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	
Milestone B Decision Increment I		3Q						
Developmental Test (DT) Increment I				2Q - 4Q				
Limited User Test (LUT) Increment I				4Q				
Milestone C Decision Increment I					1Q			
Low Rate Initial Production (LRIP) Increment I					1Q - 4Q	1Q - 4Q	1Q	
Independent Operational Test and Evaluation (IOTE) Increment I					4Q	1Q - 2Q		
Full Rate Production (FRP) Increment I						4Q		
Production Increment I						4Q	1Q - 4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development						PROJECT S51	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S51 AIRCREW INTEGRATED SYS AD	2285	3159	1	2	2	2	2		5453

A. Mission Description and Budget Item Justification: This project supports advanced component development and prototyping of critical soldier support systems with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness, and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance helicopter. These programs include Air Soldier System and equipment which are unique and necessary for the sustainment, survivability, and performance of Army aircrews and troops on the future integrated battlefield. The Air Warrior program will provide the aircrew with a system approach to noise protection, three-dimensional audio and external audio capability, crash and post-crash survivability, concealment and environmental protection, ballistic protection, night vision and heads-up display, directed energy eye protection and flame/heat protection. Preplanned block improvements integrating new technologies into the Air Warrior system will continue to enhance and maximize aircrew mission performance, comfort, aircrew station interface, safety, and survivability. These funds also resource improved laser protection against emerging new threat systems and product improvement of existing helmets to improve performance and increased commonality. Maximum advantage will be taken of simulation to reduce program technical risk through early user evaluation and to reduce program design and test cost and schedules. Air Warrior and Air Soldier System Advanced Development are planned to be completed with FY 2008 RDTE Project S51 funding, except for a small amount of PM Administration costs resourced in RDTE Project S51 Advanced Development funding during FY 2009 through FY 2013 to enhance the transition of these programs from Advanced Development to Engineering Development.

FY 2007 funding total includes no funding received in GWOT supplemental.
 FY 2008 funding total includes no funding received in the Bridge Supplemental.
 FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S51.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Concept exploration of pilot situational awareness and cognitive decision aiding tools to be completed during FY 2008.	798	1084	1
Explore technology to upgrade environmental control and waste management systems to be completed during FY 2008.	302	494	
Concept exploration of helmet technologies and helmet mounted devices to be completed during FY 2008.	984	1293	
Continue advanced component development of Air Warrior preplanned technology improvements and complete advanced development effort during FY 2008.	201	203	
Small Business Innovative Reserach/Small Business Technology Transfer Programs		85	
Total	2285	3159	1

<u>B. Other Program Funding Summary</u>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes		0603827A - Soldier Systems - Advanced Development						S51	
RDTE, A PE 0604601A PROJ S61-EMD	11087	4115	12687	5847	5722	14400	14709	Continuing	Continuing
Aircraft Procurement, Army SSN AZ3110 - ACIS	61332	44822	40697	56921	42487	137424	124474	Continuing	Continuing

Comment:

C. Acquisition Strategy Technologies developed under the Air Soldier System program will integrate capabilities including a fully compliant Modular Integrated Helmet and Display System (MIHDS), Chemical, Biological (CB) waste disposal system and upgrades to AW block 2 components as emerging technologies become available. The MIHDS helmet will provide a day heads up display, nuclear flash protection, external audio, don in flight CB protection and Agile laser eye protection. This development effort will be accomplished through a combination of contractor and governmental agencies managed within the Air Warrior Product Manager's Office and this Advanced Development effort is planned to be completed during FY 2008. These programs are planned to transition into Engineering Development as the Advanced Development effort is completed.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603827A - Soldier Systems - Advanced Development							S51		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior Block Improvements Concept Development	C - CPFF	Various	639	523	1-2Q	1323	1-2Q				1846	
Subtotal:			639	523		1323					1846	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	Various Government	1409	1253	1-4Q	1364	1-4Q				4026	
Subtotal:			1409	1253		1364					4026	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allotment	Various Government	524	509	1-4Q	472	1-4Q	1			1506	
Subtotal:			524	509		472		1			1506	
Project Total Cost:			2572	2285		3159		1			7378	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE																PROJECT																			
4 - Advanced Component Development and Prototypes	0603827A - Soldier Systems - Advanced Development																S51																			
Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13											
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
Air Warrior and Air Soldier Sys Component Advanced Development and Demonstration	Air Warrior & Air Soldier Sys AD																																			

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development					PROJECT S51	
<u>Schedule Detail</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	
Air Warrior and Air Soldier Sys Component Advanced Development and Demonstration	1Q - 4Q	1Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development						PROJECT S53	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S53 CLOTHING AND EQUIPMENT	6684	11814	9571	7145	7355	6834	6946	Continuing	Continuing

A. Mission Description and Budget Item Justification: Funding supports the project development and state-of-the-art technology to improve tactical and non-tactical clothing and individual equipment to enhance the survivability, mobility, comfort, and sustainment of the individual Soldier.

FY 2007 funding total includes no funding received in GWOT supplemental.

FY 2008 funding total includes no funding received in the Bridge Supplemental.

FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S53.

Accomplishments/Planned Program:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Soldier Uniforms and Clothing: (FY07) Completed improved Combat Vehicle Crewman Coverall user assessment. Completed Phase II User Evaluation of Modular Boot System. (FY08-09) Conduct system integration and formal DT/OT of preproduction and production representative systems leveraging advancements in materials, nanotechnology, fabrication techniques, moisture management, flame resistance, antimicrobial treatments, insect protection, extreme environmental protection and advancements in chemical/biological protection to increase the capabilities and durability of tactical and non-tactical clothing such as the Fire Resistant Environmental Ensemble (FREE) and Army Combat Shirt (ACS). Prove out commonality across as broad a spectrum of users as possible to provide a modular integrated uniform/clothing system from skin out and head-to-toe.	2246	1160	2730
Individual Soldier Ballistic Protection: (FY07) Continued product improvement of Advanced Combat helmet in support of fielding and developmental efforts. Researched technologies to mitigate the effects of high speed ballistic blunt trauma and low rate impact (crash) protection. Initiated efforts to leverage and incorporate laser eye protection technology advancements into ballistic goggles and spectacles and assessed capability improvements. Continued product improvement of Interceptor Body Armor (IBA) in support of fielding and executed incremental capability improvements related to technology maturity and operational feedback. (FY08-09) Leverage advanced ballistic materials to increase Soldier survivability while decreasing weight, cube and cost. Integrate and enhance the capabilities of Soldier Body Armor, Combat Eyewear, Bomb Suit, Face Shield and Protective Helmet capabilities providing head-to-toe protection from current and emerging ballistic/blast threats. Conduct test and evaluation of prototype ballistic ensembles. Develop commonality at the component and subsystem levels to provide a modular layered/integrated ballistic protection system and conduct formal DT/OT of preproduction and production representative system.	3095	4400	2350
Individual Equipment: (FY07) Initiated effort to incorporate evolving filtration/purification technologies into On-the-Move Hydration systems and conducted user test. (FY08-09) Conduct system integration and formal DT/OT of preproduction and production representative systems utilizing advancements in technology for load bearing equipment, hydration technologies including water filtration and NBC hydration, and other mission essential and/or mission specific equipment for Soldiers. Prove out as much commonality as feasible across a broad spectrum of user and mission scenarios. Purchase equipment and conduct pilot testing for Radio Frequency	1343	3415	3591

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development	PROJECT S53
Identification (RFID).		
Soldier Cooling: (FY08-09) Develop, test and evaluate advanced lightweight, low power cooling systems for use with NBC and ballistic protection ensembles. Conduct trade-off analyses and system integration providing Soldiers enhanced ability to conduct missions for longer periods of time in extreme environments.	675	900
Misaligned Congressional Add for Warrior SIGINT Capability	1840	
Small Business Innovative Research/Small Business Technology Transfer Programs	324	
Total	6684	11814

<u>B. Other Program Funding Summary</u>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603747.669, Clothing and Equipment	8							Continuing	Continuing
RDTE, 0604601A.S60, Clothing and Equipment	10964	12817	9615	9973	10011	10727	10036	Continuing	Continuing
OMA, 121017, Central Funding and Fielding	137028	101284	92606	89100	39137	79642	113198	Continuing	Continuing

Comment:

C. Acquisition Strategy Programs will pursue normal transition to System Development and Demonstration (SDD) and production. This Project will continue to exercise competitively awarded contracts using best value source selection procedures.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603827A - Soldier Systems - Advanced Development							S53		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPRS	Natick Soldier Center, Natick, MA	2000	1173	1-2Q	2703	1-2Q	2330	1-2Q	Cont.	Cont.	
Various	Contracts	Various	2491	2460	1-2Q	4840	1-3Q	3041	1-3Q	Cont.	Cont.	
Subtotal:			4491	3633		7543		5371		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various	1000	957	1-2Q	1341	1-2Q	1450	1-2Q	Cont.	Cont.	
Subtotal:			1000	957		1341		1450		Cont.	Cont.	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPRS	Various	400	1290	1-4Q	1750	1-4Q	1550	1-4Q	Cont.	Cont.	
Subtotal:			400	1290		1750		1550		Cont.	Cont.	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
In-House Support		PM CIE Ft Belvoir, VA	803	804	1-4Q	1180		1200		Cont.	Cont.	
Subtotal:			803	804		1180		1200		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes	0603827A - Soldier Systems - Advanced Development						S53	
Project Total Cost:	6694	6684		11814		9571	Cont.	Cont.

Schedule Profile (R4 Exhibit)

February 2008

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	<p>(1) BALLISTIC</p> <p>Soft Body Armor trans to System Development & Demonstration (SDD)</p> <p>Advanced Explosive Ordnance Device (EOD) Protective Ensemble trans to SDD</p> <p>Spiral in advanced materials and components to SDD</p> <p>Evaluate 7.62 Protection Helmet</p> <p>IBA Hard Armor</p> <p>IBA Soft Armor</p> <p>NDTF Evaluation</p> <p>(2) UNIFORM CLOTHING</p> <p>Fire Resistant Environmental Ensemble (FREE) User Eval</p> <p>Fire Resistant Clothing Upgrades</p> <p>FREE Fabric Upgrade</p> <p>ICVC Fabric Upgrades</p> <p>Army Combat Pants (ACP) Prototype Evaluation</p>																											

Schedule Profile (R4 Exhibit)

February 2008

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development																PROJECT S53										
Advanced Army Combat Shirt (ACS) Prototype Eval																												
Winter ACS Prototvpe Eval																												
ICVC User Assessment																												
ACS User Evaluation																												
Army Mountaineering Boot User Evaluation																												
Modular Boot Phase II User Evaluation																												
(3) INDIVIDUAL EQUIPMENT																												
NBC Hydration trans to SDD																												
(4) SOLDIER COOLING																												
Soldier Cooling Evaluation																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE					PROJECT	
4 - Advanced Component Development and Prototypes		0603827A - Soldier Systems - Advanced Development					S53	
<u>Schedule Detail</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	
BALLISTIC								
Soft Body Armor trans to System Development & Demonstration (SDD)	1Q							
Advanced Explosive Ordnance Device (EOD) Protective Ensemble trans to SDD	1Q							
Spiral in advanced materials and components to SDD		1Q - 4Q	1Q - 2Q					
Evaluate 7.62 Protection Helmet		1Q - 4Q						
IBA Hard Armor		1Q - 4Q	1Q - 2Q					
IBA Soft Armor		1Q - 4Q	1Q - 2Q					
NDTF Evaluation		2Q - 4Q	1Q					
UNIFORM CLOTHING		1Q - 4Q	1Q - 4Q					
Fire Resistant Environmental Ensemble (FREE) User Eval		1Q - 2Q						
Fire Resistant Clothing Upgrades			1Q - 3Q	4Q				
FREE Fabric Upgrade		4Q	1Q - 3Q					
ICVC Fabric Upgrades			2Q - 4Q					
Army Combat Pants (ACP) Prototype Evaluation		2Q						
Advanced Army Combat Shirt (ACS) Prototype Eval		4Q						
Winter ACS Prototype Eval		4Q						
ICVC User Assessment	2Q							
ACS User Evaluation				1Q				
Army Mountaineering Boot User Evaluation		2Q - 3Q						
Modular Boot Phase II User Evaluation	2Q							
INDIVIDUAL EQUIPMENT								

NBC Hydration trans to SDD		2Q					
SOLDIER COOLING							
Soldier Cooling Evaluation		1Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development					PROJECT S54		
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S54 SMALL ARMS IMPROVEMENT	968	5117	1481	5137	5137	5066	5167		28073

A. Mission Description and Budget Item Justification: The Small Arms Improvement program provides funds to study, develop, demonstrate and evaluate emerging technology for integration of systems, subcomponents and prototypes with weapons/ammunition. Small arms include weapons/ammunition ranging up to .40 millimeter. Current and future efforts focus on improvements designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability of weapons/ammunition. Focus areas include studying, developing, demonstrating and evaluating light weight materials, obscurants, reconnaissance, observation, lethal and non-lethal ammunition, and electronics. Benefits include improvements to fire control equipment, optics, training devices, component mounts, weapon mounts, and ammunition.

FY 2007 funding total includes no funding received in GWOT supplemental.
 FY 2008 funding total includes no funding received in the Bridge Supplemental.
 FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S54.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Small Arms Weapons Enhancements			
- Design, Development and Engineering	200		
- Prototype Fabrication	544		
- Testing and evaluation	196		
- Demonstration			
Ammunition			
- Design, Development and Engineering		737	527
- Prototype Fabrication		1271	
- Testing and Evaluation		570	530
- Demonstration			404
Combat Optics			
Fire Control			
Market Research			20
- Design, Development		260	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	0603827A - Soldier Systems - Advanced Development	S54
- Prototype Fabrication		210
- Testing and Evaluation		195
- Demonstration		175
Misalighed Cogressional Add, Protector Enhancements and Integration on New Vehicle Platforms Program		1600
Small Business Innovative Research/Small Business Technology Transfer Programs.	28	99
Total	968	5117

<u>B. Other Program Funding Summary</u>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE S63, Program Element 0604601A - Infantry Support Weapons	1185	14710	4843	14872	15998	14894	14900	Continuing	Continuing

Comment: FY 2007 Congressional increase of \$1.0M for Nickel Boron Coating Technology.

C. Acquisition Strategy Primary strategy is to study, develop, demonstrate and evaluate emerging technologies that will ultimately lead to enhancing/improving the small arms inventory.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603827A - Soldier Systems - Advanced Development							S54		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development			900	579		1650		220			3349	
Subtotal:			900	579		1650		220			3349	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development			150	125		1715		661			2651	
Subtotal:			150	125		1715		661			2651	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT			455	189		1327		500			2471	
Subtotal:			455	189		1327		500			2471	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management			125	75		425		100			725	
Subtotal:			125	75		425		100			725	
Project Total Cost:			1630	968		5117		1481			9196	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE																PROJECT											
4 - Advanced Component Development and Prototypes	0603827A - Soldier Systems - Advanced Development																S54											
Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SMALL ARMS WEAPONS ENHANCEMENTS																												
Nickel Boron Coating Technology for Weapons																												
Weapons Upgrades	SDD																											
AMMUNITION																												
Micro Mechanical Safe & Arm																												
Close In Improved Lethality Cartridge	SDD																											
Ammo Upgrades	SDD																											
COMBAT OPTICS																												
Optics Upgrades																												
FIRE CONTROL																												
Improved GLM Fire Control																												
Fire Control Upgrades	SDD																											

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603827A - Soldier Systems - Advanced Development					PROJECT S54	
<u>Schedule Detail</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	
SMALL ARMS WEAPONS ENHANCEMENTS								
Nickel Boron Coating Technology for Weapons	1Q - 4Q							
Weapons Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
AMMUNITION								
Micro Mechanical Safe & Arm		1Q - 4Q	1Q - 4Q					
Close In Improved Lethality Cartridge		1Q - 4Q	1Q - 4Q	1Q - 4Q				
Ammo Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
COMBAT OPTICS								
Optics Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
FIRE CONTROL								
Improved GLM Fire Control		1Q - 4Q						
Fire Control Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	