UNCLASSIFIED

Supporting Data FY 2008/2009 Budget Estimate – February 2007

DESCRIPTIVE SUMMARIES OF THE

RESEARCH, DEVELOPMENT, TEST AND EVALUATION
Army Appropriation, Budget Activities 4 and 5

Department of the Army
Office of the Secretary of the Army (Financial Management and Comptroller)

Persuasive in Peace, Invincible in War

VOLUME II

UNCLASSIFIED

DESCRIPTIVE SUMMARIES FOR PROGRAM ELEMENTS
OF THE
RESEARCH, DEVELOPMENT, TEST AND
EVALUATION, ARMY
FY 2008/2009
BUDGET ESTIMATE
FEBRUARY 2007

VOLUME II
Budget Activities 4 and 5

Department of the Army
Office of the Assistant Secretary of the Army (Financial Management and Comptroller)

FY 2008/2009 RDT&E, ARMY
PROGRAM ELEMENT DESCRIPTIVE SUMMARIES

INTRODUCTION AND EXPLANATION OF CONTENTS

1. General. The purpose of this document is to provide summary information concerning the Research, Development, Test and Evaluation, Army program. The Descriptive Summaries are comprised of R-2 (Army RDT&E Budget Item Justification – program element level), R-2A (Army RDT&E Budget Item Justification – project level), R-3 (Army RDT&E Cost Analysis), R-4 (Schedule Profile), R-4A (Schedule Profile Detail) and R-5 (Termination Liability Funding for MDAPs) Exhibits, which provide narrative information on all RDT&E program elements and projects for FY 2006 through FY 2009.

2. Relationship of the FY 2008/2009 Budget Submission to the FY 2007 Budget Submitted to Congress. This paragraph provides a list of program elements restructured, transitioned, or established to provide specific program identification.

A. Program Element Restructures. Explanations for these changes can be found in the narrative sections of the Program Element R-2/R-3 Exhibits.

OLD PE/PROJECT	NEW PROJECT TITLE	NEW PE/PROJECT
0604645A/F52	FCS Reconnaissance Platforms	0604662A/FC3
0604645A/F53	FCS Unmanned Ground Vehicles	0604663A/FC4
0604645A/F54	FCS Unattended Ground Sensors	0604664A/FC5
0604645A/F55	FCS System of Systems Engineering & Program Management	0604661A/FC2
0604645A/F57	FCS Manned Ground Vehicles & Common Ground Vehicle	0604660A/FC1
0604645A/F61	FCS System of Systems Engineering & Program Management	0604661A/FC2
	FCS Network Hardware & Software	0604665A/FC6
	FCS – Spin Out Technology/Capability Integration	0604666A/FC7
0203802A/781	Joint Air-to-Ground Missile (JAGM)	0603460A/JA2

B. Developmental Transitions. Explanations for these changes can be found in the narrative sections of the Program Element R-2/R-3 Exhibits.

C. Establishment of New FY 2008/2009 Program Elements/Projects. There are no major system new starts. Minor new initiatives for FY 2008/2009 are shown below.

TITLE	PE/PROJECT
Vertical Lift Research Center of Excellence	0601104A/J17
Joint Air-to-Ground Missile (JAGM)	0603460A/JA2
FCS Reconnaissance Platforms	0604662A/FC3
FCS Unmanned Ground Vehicles	0604663A/FC4
FCS Unattended Ground Sensors	0604664A/FC5
FCS System of Systems Engineering & Program Management	0604661A/FC2
FCS Manned Ground Vehicles & Common Ground Vehicle	0604660A/FC1
FCS Network Hardware & Software	0604665A/FC6
FCS – Spin Out Technology/Capability Integration	0604666A/FC7
Counter-Rocket, Artillery & Mortar (C-RAM) Development	0604741A/149

D. FY 2008/2009 programs for which funding existed in the FY 2007 President's Budget Submit (February 2006), but which are no longer funded in FY 2008/2009.

PE/PROJECT	TITLE	BRIEF EXPLANATION
0603809A/1TR	Future Transport Rotorcraft (FTR)	Program Terminated
0604802A/705	Advanced Precision Kill Weapon System (APKWS)	Program Terminated
0604827A/S57	Land Warrior	Program Terminated

3. Classification. This document contains no classified data. Classified/Special Access Programs that are submitted offline are listed below.

0203808A	0603020A
0301359A	0603322A
0602122A	0603710A/C65
0603005A/C66	0604328A
0603009A	

4. Performance Metrics. Performance metrics used in the preparation of this justification book may be found in the FY 2009/2009 Army Performance Budget Justification Book, dated March 2007.

5. Program Assessment Rating Tool (PART). In accordance with the President's Management Agenda, Budget and Performance Integration initiative, this program has been assessed using PART. Remarks regarding program performance and plans for performance improvement can be located at the Expectmore.gov website.

Department of the Army
FY 2008 RDT&E Program
FY 2008/2009 Budget Estimate
Summary

Exhibit R-1

February 2007

Summary Recap of Budget Activities	Thousands of Dollars FY 2006	FY 2007	FY 2008	FY 2009
Basic Research	364,043	365,898	305,819	315,808
Applied Research	1,183,723	1,203,823	686,237	670,883
Advanced Technology Development	1,846,927	1,263,268	735,935	714,890
Advanced Component Development and Prototypes	509,014	537,361	871,342	758,936
System Development and Demonstration	5,146,327	5,039,846	5,222,457	4,772,821
Management Support	1,359,946	1,204,309	1,140,246	1,107,873
Operational System Development	1,263,097	1,345,228	1,623,297	1,449,381
Total RDT&E, Army	11,673,077	10,959,733	10,585,333	9,790,592

			Summary Recap of Budget Activities	Thousands of Dollars FY 2006	FY 2007	FY 2008	FY 2009
			Basic Research				
1	0601101A	01	IN-HOUSE LABORATORY INDEPENDENT RESEARCH	21,651	19,187	19,266	19,790
2	0601102A	01	DEFENSE RESEARCH SCIENCES	172,510	170,122	137,676	141,423
3	0601103A	01	UNIVERSITY RESEARCH SCIENCES (H)	73,707	80,841	64,843	66,781
4	0601104A	01	UNIVERSITY AND INDUSTRY RESEARCH CENTERS	96,175	95,748	84,034	87,814
			Total: Basic Research	364,043	365,898	305,819	315,808
			Applied Research				
5	0602105A	02	MATERIALS TECHNOLOGY	34,423	60,102	18,614	19,029
6	0602120A	02	SENSORS AND ELECTRONIC SURVIVABILITY	49,951	48,575	39,826	41,017
7	0602122A	02	TRACTOR HIP	7,540	8,373	4,367	3,298
8	0602211A	02	AVIATION TECHNOLOGY	38,073	40,156	42,567	42,051
9	0602270A	02	EW TECHNOLOGY	28,746	30,972	16,411	16,605
10	0602303A	02	MISSILE TECHNOLOGY	75,149	77,276	53,038	48,324
11	0602307A	02	ADVANCED WEAPONS TECHNOLOGY	34,485	24,061	19,342	19,791
12	0602308A	02	ADVANCED CONCEPTS AND SIMULATION	25,848	25,001	16,654	17,131
13	0602601A	02	COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY	81,693	91,483	53,342	49,321
14	0602618A	02	BALLISTICS TECHNOLOGY	50,152	58,568	55,014	55,736
15	0602622A	02	CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY	9,856	12,762	2,235	2,301
16	0602623A	02	JOINT SERVICE SMALL ARMS PROGRAM	6,449	6,178	7,008	7,571
17	0602624A	02	WEAPONS AND MUNITIONS TECHNOLOGY	123,684	118,331	40,469	30,663
18	0602705A	02	ELECTRONICS AND ELECTRONIC DEVICES	92,221	81,773	43,391	45,365
19	0602709A	02	NIGHT VISION TECHNOLOGY	30,464	36,203	24,391	25,662
20	0602712A	02	COUNTERMINE SYSTEMS	26,698	27,135	21,795	21,922
21	0602716A	02	HUMAN FACTORS ENGINEERING TECHNOLOGY	27,549	40,902	17,426	17,169
22	0602720A	02	ENVIRONMENTAL QUALITY TECHNOLOGY	17,570	19,605	15,809	15,223
23	0602782A	02	COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY	45,044	48,412	22,215	24,046
24	0602783A	02	COMPUTER AND SOFTWARE TECHNOLOGY	4,447	6,719	5,368	5,510
25	0602784A	02	MILITARY ENGINEERING TECHNOLOGY	48,789	51,278	51,120	52,118
26	0602785A	02	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY	14,171	16,021	16,208	16,458
27	0602786A	02	LOGISTICS TECHNOLOGY	47,214	44,044	23,083	21,988
28	0602787A	02	MEDICAL TECHNOLOGY	263,507	229,893	76,544	72,584
			Total: Applied Research	1,183,723	1,203,823	686,237	670,883
			Advanced Technology Development				
29	0603001A	03	WARFIGHTER ADVANCED TECHNOLOGY	75,067	65,632	47,065	47,055
30	0603002A	03	MEDICAL ADVANCED TECHNOLOGY	293,791	299,017	53,274	54,863
31	0603003A	03	AVIATION ADVANCED TECHNOLOGY	100,095	96,575	53,890	57,615

Summary Recap of Budget Activities				Thousands of Dollars FY 2006	FY 2007	FY 2008	FY 2009
32	0603004A	03	WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY	106,558	92,054	59,389	74,072
33	0603005A	03	COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY	212,115	204,383	131,436	108,554
34	0603006A	03	COMMAND, CONTROL, COMMUNICATIONS ADVANCED TECHNOLO	11,964	11,997	12,255	9,235
35	0603007A	03	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLO	9,796	9,200	6,783	6,871
36	0603008A	03	ELECTRONIC WARFARE ADVANCED TECHNOLOGY	52,236	53,129	49,199	51,213
37	0603009A	03	TRACTOR HIKE	8,446	9,221	12,633	14,641
38	0603015A	03	NEXT GENERATION TRAINING & SIMULATION SYSTEMS	24,855	20,863	18,723	19,002
39	0603020A	03	TRACTOR ROSE	4,750	5,125	6,526	6,650
40	0603100A	03	IED DEFEAT TECHNOLOGY DEVELOPMENT	546,478			
41	0603103A	03	EXPLOSIVE DEMILITARIZATION TECHNOLOGY	20,459	25,640	10,349	10,632
42	0603105A	03	MILITARY HIV RESEARCH	12,839	12,897	6,998	7,162
43	0603125A	03	COMBATING TERRORISM, TECHNOLOGY DEVELOPMENT FOR	9,528	8,503	13,061	13,148
44	0603238A	03	GLOBAL SURVEILLANCE/AIR DEFENSE/PRECISION STRIKE T	5,722	12,852		
45	0603270A	03	EW TECHNOLOGY	21,564	25,280	17,419	18,864
46	0603313A	03	MISSILE AND ROCKET ADVANCED TECHNOLOGY	113,079	62,940	60,353	64,398
47	0603322A	03	TRACTOR CAGE	14,796	18,981	18,448	12,437
48	0603606A	03	LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY	26,915	30,218	25,315	30,935
49	0603607A	03	JOINT SERVICE SMALL ARMS PROGRAM	7,971	8,112	8,097	8,856
50	0603710A	03	NIGHT VISION ADVANCED TECHNOLOGY	91,213	75,615	35,892	40,114
51	0603728A	03	ENVIRONMENTAL QUALITY TECHNOLOGY DEMONSTRATIONS	15,306	17,098	14,982	16,449
52	0603734A	03	MILITARY ENGINEERING ADVANCED TECHNOLOGY	20,868	27,688	6,837	7,676
53	0603772A	03	ADVANCED TACTICAL COMPUTER SCIENCE AND SENSOR TECH	40,516	70,248	67,011	34,448
	Total: Advanced Technology Development			1,846,927	1,263,268	735,935	714,890
	Advanced Component Development and Prototypes						
54	0603024A	04	UNIQUE ITEM IDENTIFICATION (UID)	1,438	4,074	668	653
55	0603305A	04	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION	78,756	88,001	14,389	14,034
56	0603308A	04	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION (DEM/VAL)	32,188	38,740	17,421	20,065
57	0603327A	04	AIR AND MISSILE DEFENSE SYSTEMS ENGINEERING	96,877	136,890	176,142	135,260
58	0603460A	04	JOINT AIR-TO-GROUND MISSILE (JAGM)			53,500	
59	0603619A	04	LANDMINE WARFARE AND BARRIER - ADV DEV		8,346	24,737	29,423
60	0603627A	04	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-ADV DEV	4,381	5,426	19,449	3,865
61	0603639A	04	TANK AND MEDIUM CALIBER AMMUNITION	8,050	2,572	44,578	45,733
62	0603653A	04	ADVANCED TANK ARMAMENT SYSTEM (ATAS)	35,360	8,569	142,486	108,709
63	0603747A	04	SOLDIER SUPPORT AND SURVIVABILITY	33,232	4,330	4,787	4,912
64	0603766A	04	TACTICAL SUPPORT DEVELOPMENT - ADV DEV (TIARA)	18,027	19,855	14,423	9,879
65	0603774A	04	NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT	6,401	5,278	3,454	2,605

Summary Recap of Budget Activities				Thousands of Dollars FY 2006	FY 2007	FY 2008	FY 2009
66	0603779A	04	ENVIRONMENTAL QUALITY TECHNOLOGY DEM/VAL	34,252	24,194	6,149	5,389
67	0603782A	04	WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL	91,968	121,798	222,296	278,893
68	0603790A	04	NATO RESEARCH AND DEVELOPMENT	4,548	4,891	4,959	5,074
69	0603801A	04	AVIATION - ADV DEV	5,384	9,536	6,481	7,503
70	0603804A	04	LOGISTICS AND ENGINEER EQUIPMENT - ADV DEV	12,195	10,103	27,499	22,237
71	0603805A	04	COMBAT SERVICE SUPPORT CONTROL SYSTEM EVALUATION A	10,046	8,549	19,054	17,893
72	0603807A	04	MEDICAL SYSTEMS - ADV DEV	22,104	23,608	12,479	21,452
73	0603827A	04	SOLDIER SYSTEMS - ADVANCED DEVELOPMENT	11,084	11,478	18,178	14,119
74	0603850A	04	INTEGRATED BROADCAST SERVICE (JMIP/DISTP)	2,723	1,123	38,213	11,238
	Total: Advanced Component Development and Prototypes			509,014	537,361	871,342	758,936
	System Development and Demonstration						
75	0604201A	05	AIRCRAFT AVIONICS	9,898	48,554	57,786	71,880
76	0604220A	05	ARMED, DEPLOYABLE OH-58D	88,509	131,315	82,310	13,027
77	0604270A	05	EW DEVELOPMENT	33,158	45,053	55,716	39,974
78	0604280A	05	JOINT TACTICAL RADIO SYSTEM	131,681			270,560
79	0604321A	05	ALL SOURCE ANALYSIS SYSTEM	13,177	6,888	5,384	5,465
80	0604328A	05	TRACTOR CAGE	15,455	15,879	17,821	16,909
81	0604329A	05	COMMON MISSILE	24,920	24,724		
82	0604601A	05	INFANTRY SUPPORT WEAPONS	49,954	43,165	45,229	32,585
83	0604604A	05	MEDIUM TACTICAL VEHICLES	18,006	12,881	1,994	1,942
84	0604609A	05	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-ENG DEV		5,239	1,347	5,639
85	0604622A	05	FAMILY OF HEAVY TACTICAL VEHICLES	20,937	13,311	1,947	2,920
86	0604633A	05	AIR TRAFFIC CONTROL	6,307	4,477	8,956	14,268
87	0604642A	05	LIGHT TACTICAL WHEELED VEHICLES	9,192	4,450	82,300	22,220
88	0604645A	05	ARMORED SYSTEMS MODERNIZATION (ASM)-ENG. DEV.	2,870,086	2,956,921		
89	0604646A	05	NON LINE OF SIGHT LAUNCH SYSTEM	216,668	320,650	253,410	199,064
90	0604647A	05	NON LINE OF SIGHT CANNON	132,223	110,998	137,802	89,189
91	0604660A	05	FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE			696,333	772,458
92	0604661A	05	FCS SYSTEMS OF SYSTEMS ENGR & PROGRAM MGMT			1,589,466	1,407,410
93	0604662A	05	FCS RECONNAISSANCE (UAV) PLATFORMS			41,164	34,220
94	0604663A	05	FCS UNMANNED GROUND VEHICLES			90,667	96,666
95	0604664A	05	FCS UNATTENDED GROUND SENSORS			10,999	12,942
96	0604665A	05	FCS SUSTAINMENT & TRAINING R&D			678,781	536,387
97	0604666A	05	MODULAR BRIGADE ENHANCEMENT			64,796	32,442
98	0604710A	05	NIGHT VISION SYSTEMS - ENG DEV	27,753	41,161	44,619	28,795
99	0604713A	05	COMBAT FEEDING, CLOTHING, AND EQUIPMENT	3,224	2,984	2,501	2,515

Summary Recap of Budget Activities				Thousands of Dollars FY 2006	FY 2007	FY 2008	FY 2009
100	0604715A	05	NON-SYSTEM TRAINING DEVICES - ENG DEV	53,859	124,068	35,992	17,493
101	0604741A	05	AIR DEFENSE COMMAND, CONTROL AND INTEL - ENG	49,264	21,516	21,513	22,552
102	0604742A	05	CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT	38,576	39,563	31,962	26,379
103	0604746A	05	AUTOMATIC TEST EQUIPMENT DEVELOPMENT	2,160	8,046	18,025	23,728
104	0604760A	05	DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS) - ENGIN	28,192	20,418	16,594	16,181
105	0604780A	05	COMBINED ARMS TACTICAL TRAINER (CATT)	41,139	38,471	37,035	29,652
106	0604783A	05	JOINT NETWORK MANAGEMENT SYSTEM	4,695	5,129	2,786	679
107	0604802A	05	WEAPONS AND MUNITIONS - ENG DEV	110,817	121,427	55,368	32,344
108	0604804A	05	LOGISTICS AND ENGINEER EQUIPMENT - ENG DEV	14,790	42,330	45,009	35,971
109	0604805A	05	COMMAND, CONTROL, COMMUNICATIONS SYSTEMS - ENG DEV	309,036	13,037	10,047	9,858
110	0604807A	05	MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPM	15,890	24,536	15,823	35,190
111	0604808A	05	LANDMINE WARFARE/BARRIER - ENG DEV	103,399	92,237	142,315	89,105
112	0604814A	05	ARTILLERY MUNITIONS - EMD	101,957	101,422	63,039	78,532
113	0604817A	05	COMBAT IDENTIFICATION	2,193	39	11,362	3,404
114	0604818A	05	ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWAR	77,381	59,901	99,202	65,082
115	0604820A	05	RADAR DEVELOPMENT	4,775	2,499	7,067	
116	0604822A	05	GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)	68,372	21,751	53,559	50,237
117	0604823A	05	FIREFINDER	43,711	54,542	77,279	31,424
118	0604827A	05	SOLDIER SYSTEMS - WARRIOR DEM/VAL	63,251	28,826		
119	0604854A	05	ARTILLERY SYSTEMS - EMD	5,222	1,632	24,221	24,073
120	0604869A	05	PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	274,339	325,945	372,146	408,182
121	0604870A	05	NUCLEAR ARMS CONTROL MONITORING SENSOR NETWORK		7,346	7,300	7,300
122	0605013A	05	INFORMATION TECHNOLOGY DEVELOPMENT	62,161	96,515	103,485	55,978
	Total: System Development and Demonstration			5,146,327	5,039,846	5,222,457	4,772,821
	Management Support						
123	0604256A	06	THREAT SIMULATOR DEVELOPMENT	27,598	23,517	21,887	21,482
124	0604258A	06	TARGET SYSTEMS DEVELOPMENT	11,446	12,785	13,499	13,570
125	0604759A	06	MAJOR T&E INVESTMENT	61,626	65,325	66,921	65,004
126	0605103A	06	RAND ARROYO CENTER	20,382	21,234	16,342	16,444
127	0605301A	06	ARMY KWAJALEIN ATOLL	156,212	176,916	182,136	166,772
128	0605326A	06	CONCEPTS EXPERIMENTATION	37,283	25,293	34,004	28,440
129	0605502A	06	SMALL BUSINESS INNOVATIVE RESEARCH	273,546			
130	0605601A	06	ARMY TEST RANGES AND FACILITIES	349,783	385,498	357,964	343,030
131	0605602A	06	ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS	54,039	80,467	74,391	75,067
132	0605604A	06	SURVIVABILITY/LETHALITY ANALYSIS	39,518	43,544	40,343	41,111
133	0605605A	06	DOD HIGH ENERGY LASER TEST FACILITY	16,940	16,438	2,801	2,840

Summary Recap of Budget Activities				Thousands of Dollars FY 2006	FY 2007	FY 2008	FY 2009
134	0605606A	06	AIRCRAFT CERTIFICATION	2,694	4,530	4,688	5,024
135	0605702A	06	METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES	7,810	8,477	8,346	8,313
136	0605706A	06	MATERIEL SYSTEMS ANALYSIS	15,210	16,344	16,526	16,987
137	0605709A	06	EXPLOITATION OF FOREIGN ITEMS	4,487	4,938	3,291	3,530
138	0605712A	06	SUPPORT OF OPERATIONAL TESTING	74,044	80,163	75,293	72,974
139	0605716A	06	ARMY EVALUATION CENTER	49,882	59,465	61,694	63,400
140	0605718A	06	SIMULATION & MODELING FOR ACQ, RQTS, & TNG (SMART)	3,945	5,380	5,342	5,360
141	0605801A	06	PROGRAMWIDE ACTIVITIES	52,036	71,418	73,718	73,596
142	0605803A	06	TECHNICAL INFORMATION ACTIVITIES	48,552	47,356	41,607	43,140
143	0605805A	06	MUNITIONS STANDARDIZATION, EFFECTIVENESS & SAFETY	36,413	36,914	19,606	20,992
144	0605857A	06	ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT	3,838	4,370	4,958	5,158
145	0605898A	06	MANAGEMENT HEADQUARTERS (RESEARCH AND DEVELOPMENT)	12,647	13,937	14,889	15,639
146	0909999A	06	FINANCING FOR CANCELLED ACCOUNT ADJUSTMENTS	15			
	Total: Management Support			1,359,946	1,204,309	1,140,246	1,107,873
	Operational System Development						
147	0603778A	07	MLRS PRODUCT IMPROVEMENT PROGRAM	109,955	74,672	54,055	60,003
148	0603820A	07	WEAPONS CAPABILITY MODIFICATIONS UAV	2,876	1,582	3,900	
149	0102419A	07	JOINT LAND ATTACK CRUISE MISSILES DEFENSE (JLENS)	99,851	242,781	481,251	353,983
150	0203726A	07	ADV FIELD ARTILLERY TACTICAL DATA SYSTEM	16,150	18,191	16,837	15,912
151	0203735A	07	COMBAT VEHICLE IMPROVEMENT PROGRAMS	23,737	14,380	27,615	6,020
152	0203740A	07	MANEUVER CONTROL SYSTEM	36,602	34,590	43,961	28,166
153	0203744A	07	AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAM	304,408	303,491	325,643	417,911
154	0203752A	07	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	1,982	851	476	331
155	0203758A	07	DIGITIZATION	12,878	14,709	9,737	11,056
156	0203759A	07	FORCE XXI BATTLE COMMAND, BRIGADE AND BELOW (FBCB2	18,535	26,083	32,446	13,666
157	0203764A	07	TACTICAL WHEELED VEHICLE IMPROVEMENT PROGRAM	13,418			
158	0203801A	07	MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM	15,516	10,651	30,219	38,115
159	0203802A	07	OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS	25,105	22,554	1,897	1,537
160	0203808A	07	TRACTOR CARD	6,514	7,162	16,573	19,727
161	0208010A	07	JOINT TACTICAL COMMUNICATIONS PROGRAM (TRI-TAC)	22,909	5,740	1,536	926
162	0208053A	07	JOINT TACTICAL GROUND SYSTEM	12,358	14,878	23,462	7,954
163	0208058A	07	JOINT HIGH SPEED VESSEL (JHSV)	3,126	20,172	5,148	2,955
164	0301359A	07	SPECIAL ARMY PROGRAM				
165	0301555A	07	CLASSIFIED PROGRAMS				
166	0301556A	07	SPECIAL PROGRAM				
167	0303028A	07	SECURITY AND INTELLIGENCE ACTIVITIES	7,976	8,327		

Department of the Army
FY 2008 RDT&E Program
FY 2008/2009 Budget Estimate
Summary

Exhibit R-1

February 2007

Summary Recap of Budget Activities				Thousands of Dollars FY 2006	FY 2007	FY 2008	FY 2009
168	0303140A	07	INFORMATION SYSTEMS SECURITY PROGRAM	51,831	25,466	28,332	26,720
169	0303141A	07	GLOBAL COMBAT SUPPORT SYSTEM	65,960	47,986	129,689	105,567
170	0303142A	07	SATCOM GROUND ENVIRONMENT (SPACE)	48,015	32,420	107,849	106,999
171	0303150A	07	WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM	16,122	12,065	24,836	14,112
172	0303158A	07	JOINT COMMAND AND CONTROL - ARMY	1,626	4,013	10,415	10,386
173	0305204A	07	TACTICAL UNMANNED AERIAL VEHICLES	144,801	153,227	97,947	62,836
174	0305206A	07	AIRBORNE RECONNAISSANCE ADV DEVELOPMENT	5,321	1,001		
175	0305208A	07	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS (JMIP)	92,841	134,313	81,580	73,974
176	0702239A	07	AVIONICS COMPONENT IMPROVEMENT PROGRAM	953	1,020	1,024	1,030
177	0708045A	07	END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES	101,170	112,223	66,869	69,495
178	1001018A	07	NATO JOINT STARS	561	680		
	Total: Operational system development			1,263,097	1,345,228	1,623,297	1,449,381
				11,673,077	10,959,733	10,585,333	9,790,592

Total: RDT&E, Army

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**

	COST (In Thousands)	FY 2006 Actual	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	78756	88001	14389	14034	14569	13954	41588	166980		473495
TR3	MOBILE TACTICAL HIGH ENERGY LASER (MTHEL)	2396									43620
TR4	MISSILE DEFENSE INTEGRATION	63471	78571	1800	1369	1682					146893
TR5	MISSILE DEFENSE BATTLELAB	11930	9430	12589	12665	12887	13954	16588	16980		107023
TR6	ARMY AIR AND MISSILE DEFENSE	959									959
TR7	MOBILE DIRECTED ENERGY WEAPON SYSTEM (MDEWS)							25000	150000		175000

A. Mission Description and Budget Item Justification: This Program Element funds missile defense systems integration efforts for both the US Army Space and Missile Defense Command (USASMDC) and the Program Executive Office for Missiles and Space (PEO-MS).

Project TR4 funds the Future Warfare Center (FWC) Directorate of Combat Development, to execute SMDC's specified proponency role for maturing solutions to Doctrine, Organizations, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) issues related to Ground-Based Missile Defense.

Project TR5 funds FWC, Space and Missile Defense Battle Lab (SMDBL) to mature warfighting concepts, focus military science and technology research, and conduct warfighting experiments associated with SMDC's Army Service Component Command (ASCC) mission. Additionally, this project funds the delivery of innovations to the warfighter through prototyping, operational analysis, and experimentation in support of current and future Forces.

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	81494	11233	11272	13819
Current BES/President's Budget (FY 2008/2009)	78756	88001	14389	14034
Total Adjustments	-2738	76768	3117	215
Congressional Program Reductions		-336		
Congressional Rescissions				
Congressional Increases		77750		
Reprogrammings	-2738	-646		
SBIR/STTR Transfer				
Adjustments to Budget Years			3117	215

Project TR3 FY06 Congressional Add is in the amount of $2.5 million for Mobile Tactical High Energy Laser (MTHEL).

Project TR4 FY06 Congressional Adds in the amount of $62 million include the following projects: Advanced Battery Technology; Advanced Laser Electric Power; Advanced Strap Down Seeker (ASDS); Aero Acoustic Test Facility (Phase II); Advanced Electronics Rosebud Integration; Thermo-Acoustic Piezo Energy Conversion; Ballute Technology Development; Biological Air Filtering System Technology (BAFST); Carbon Foam Program; Component Integrated Modeling and Simulation Test Analysis Environment; Continuation of Microelectromechanical Systems and Nanotechnology; Credible Threat Prediction Capability Development; Dielectric Enhanced Sensor Systems (DESS); Global Infrasound Monitoring; Integrated Composite Missile Structures; Joint Wavelet Transform of Hyperspectral Data (JWaTH); Low Cost Avionics; Low Cost Surveillance System (LCSS); Mobile Optical Sensor Suite (MOSS); Multiple Component Army Flight Test; Next Generation Interceptors Materials Research; Next Generation Passive Sensors; Radar Power Technology (RPT); Radar-on-a-Chip (RAD-CHIP) Research Program; Standoff Hazardous Agent Detection and Evaluation System (SHADES) Research Program; Standoff Sensor for Radionuclide Identification (SSRID); Thermal and Electronic Nanoscale Transport (TENT); Transfer Missile Power System Onboard Vehicle Power; UAV Platform for Sensor Package and Mission Profile Development; Ultra Light UAV Sensor Platform; and Vertical Integration for Missile Defense Surveillance Data.

Project TR6 FY06 Congressional Add is for Medical Imaging.

Includes FY07 Congressional Adds ($77.8M) for Advanced Battery Technology; Advanced Cavitation Power Technology; Advanced Electronics Integration Center; Advanced Fuel Cell Research Program; Advanced Hypersonic Weapon BMC2 HWIL Technology; Aero Acoustic Test Facility (Phase II); Army Missile Defense Systems Integration; Carbon Foam Program; Combustion Driven Compaction; Dielectric Enhanced Sensor Systems (DESS); Extended Range Attach Missile; Future Tactical Operations Center Hardware/Software Integration; Geospatial Airship Research Platform; Global Infrasound Monitoring; Hypersonic Thermal Protection Materials Development; Integrated Air and Missile Defense BMC4I HWIL Test Bed; Joint Wavelet Transform of Hyperspectral Data (JWaTH); Low Cost Uncooled Infrared Camera for Missile Defense; Low Cost Avionics; Low-Earth Orbit Nanosatellite Integrated Defense Autonomy; Micro Seeker System for Small Steerable Projectiles; Missile and Space Modeling and Simulation Technology; Modeling Environment for Target Scenario Testing; Multiple Component Army Flight Tests; Next Generation Advanced Materials Research; Next Generation Passive Sensors; Orion High Altitude Long Loiter UAV; P3 Micro-Power Devices; Radiation Hardening Technology; Reagan Test Site Distributed Operations Control Center;

Standoff Hazardous Agent Detection and Evaluation System (SHADES) Research Program; Standoff Sensor for Radionuclide Identification (SSRID); Technology Transfer from Missile Defense for Improved Medical Imaging; Thermal and Electrical Nanoscale Transport (TENT); Transfer Missile Power System; Ultra Light UAV Sensor Platform.

FY08 increase sustains the FWC SMDBL (TR5) at required funding level.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR4**

COST (In Thousands)	FY 2006 Actual	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
TR4 MISSILE DEFENSE INTEGRATION	63471	78571	1800	1369	1682					146893

A. Mission Description and Budget Item Justification: Headquarters Department of the Army (HQDA) General Order No. 5, 1 March 1998, designated the US Army Space and Missile Defense Command (USASMDC) the Army specified proponent for National Missile Defense (NMD) and the Army operational integrator for Theater Missile Defense (TMD), and AR 5-22 designates USASMDC as the specified proponent for Ballistic Missile Defense (BMD). As such, USASMDC is responsible to develop warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize those missile defense capabilities.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue efforts to integrate concepts and DOTMLPF solutions for ground-based missile defense capabilities, across the four domains of missile defense (passive defense, active defense, attack operations and battle management).	1501	1645	1800	1369
Includes FY06 Congressional Adds for Advanced Battery Technology; Advanced Laser Electric Power; Advanced Strap Down Seeker (ASDS); Aero Acoustic Test Facility (Phase II); Army Missile Defense; Advanced Electronics Rosebud Integration; Army Missile Defense Integration of Thermo-Acoustic Piezo Energy Conversion; Ballute Technology Development; Biological Air Filtering System Technology (BAFST); Carbon Foam Program Missile Defense; Component Integrated Modeling and Simulation Test Analysis Environment; Continuation of Microelectromechanical Systems and Nanotechnology; Credible Threat Prediction Capability Development; Dielectric Enhanced Sensor Systems (DESS); Global Infrasound Monitoring; Integrated Composite Missile Structures; Joint Wavelet Transform of Hyperspectral Data (JWaTH); Low Coast Avionics; Low Cost Surveillance System (LCSS); Mobile Optical Sensor Suite (MOSS); Multiple Component Army Flight Test; Next Generation Interceptors Materials Research; Next Generation Passive Sensors; Radar Power Technology (RPT); Radar-on-a-Chip (RAD-CHIP) Research Program; Standoff Hazardous Agent Detection and Evaluation System (SHADES) Research Program; Standoff Sensor for Radionuclide Identification (SSRID); Thermal and Electronic Nanoscale Transport (TENT); Transfer Missile Power System; Onboard Vehicle Power; UAV Platform for Sensor Package and Mission Profile Development; Ultra Light UAV Sensor Platform; Vertical Integration for Missile Defense Surveillance Data.	61970			
Includes FY07 Congressional Adds for Advanced Battery Technology; Advanced Cavitation Power Technology; Advanced Electronics Integration Center; Advanced Fuel Cell Research Program; Advanced Hypersonic Weapon BMC2 HWIL Technology; Aero Acoustic Test Facility (Phase II); Army Missile Defense Systems Integrationl; Carbon Foam Program; Combustion Driven Compaction; Dielectric Enhanced Sensor Systems (DESS); Extended Range Attach Missile; Future Tactical Operations Center Hardware/Software Integration; Geospatial Airship Research Platform; Global Infrasound Monitoring; Hypersonic Thermal Protection Materials Development; Integrated Air and Missile Defense BMC4I HWIL Test Bed; Joint Wavelet Transform of Hyperspectral Data (JWaTH); Low Cost Uncooled Infrared Camera for Missile Defense; Low Cost Avionics; Low-Earth Orbit Nanosatellite Integrated Defense Autonomy; Micro Seeker System for Small Steerable Projectiles; Missile and Space Modeling and Simulation Technology; Modeling Environment for Target Scenario Testing; Multiple Component Army Flight Tests; Next Generation Advanced Materials Research; Next Generation Passive Sensors; Orion High Altitude Long Loiter UAV; P3 Micro-Power Devices; Radiation Hardening Technology; Reagan Test Site Distributed Operations Control		74766		

Center; Standoff Hazardous Agent Detection and Evaluation System (SHADES) Research Program; Standoff Sensor for Radionuclide Identification (SSRID); Technology Transfer from Missile Defense for Improved Medical Imaging; Thermal and Electrical Nanoscale Transport (TENT); Transfer Missile Power System; Ultra Light UAV Sensor Platform.				
Small Business Innovative Research/Small Business Technology Transfer Programs		2160		
Total	63471	78571	1800	1369

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

C. Acquisition Strategy Program supports the continuous integration of Army ground-based missile defense capabilities and Doctrine, Organization, Training, Material, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions. Various performers will conduct planned accomplishments.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR4**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Execute Congressional Adds	Various	101487	61970	2-4Q	74766	1-4Q						238223	
Subtotal:			101487	61970		74766							238223	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Govt support & support contracts	Various	Various in Colorado Springs CO and Huntsville AL	6915	1501	1-4Q	1645	1-4Q	1800		1369			13230	
SBIR/STTR						2160							2160	
Subtotal:			6915	1501		3805		1800		1369			15390	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR4**

Project Total Cost:	**108402**	**63471**		**78571**		**1800**		**1369**			**253613**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR4**

Event Name	FY 06				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	2	3	4
Continue integration of Army missile defense capabilities & DOTMLPF solutions																																
Execute FY06 Congressional Adds																																
Execute FY07 Congressional Adds																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR4**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Continue integration of Army missile defense capabilities & DOTMLPF solutions	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Execute FY06 Congressional Adds	1Q - 4Q							
Execute FY07 Congressional Adds		1Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR5**

COST (In Thousands)		FY 2006 Actual	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
TR5	MISSILE DEFENSE BATTLELAB	11930	9430	12589	12665	12887	13954	16588	16980		107023

A. Mission Description and Budget Item Justification: This project funds the delivery of innovations to the warfighter in the US Army Space and Missile Defense Command mission areas of Missile Defense, Space, Information Operations (IO), Global Strike (GS), Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR). The innovations are provided through prototyping, operational analysis and experimentation to support the future force. The project supports the Army Service Component Command (ASCC) responsibilities for integration of Army capabilities into U.S. Strategic Command.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Experiments/Advanced Prototype components into Command and Control (C2) Systems - Experiments assessed/exploited Doctrine, Organization, Training, Material, Leadership and Education, Personnel and Facilities (DOTMLPF) issues. Participated in major Army and Joint Experiments integrating space, missile defense, IO, GS and C4ISR organizational/operational concepts into the Army Campaign Plan (ACP). Assessed space, missile defense, IO, GS and C4ISR impacts on doctrine and materiel. Ten experiments were completed in FY06. These include Joint Expeditionary Force 2006, Urban Resolve 2015, Joint Forces Command Experiment 06, other micro experiments hosted by other Training and Doctrine Command (TRADOC) Battle Labs (focusing on NET Operations, Intelligence Surveillance and Reconnaissance (ISR), and Battlefield Surveillance Brigade. Eight experiments are scheduled with TRADOC in FY07: Future Combat System Brigade Combat Team Counterinsergency; Digital Warfighter Experiment; Joint Forces Command Urban Resolve (three limited objective experiments); and Intelligence, Surveillance, Reconnaissance Experiment with Battle Command Battle Lab-Huachuca) (BCBL-H) at Fort Huachuca. The Future Operation Capability (FOC) test bed has integrated commercial state-of-the-art technologies into C4ISR experiments, supported National Capital Region operational missions, integrated emerging commercial technologies into the Future Operation Capability (FOC), develop the Theater High Altitude Air Defense (THAAD) command post. Prototype derivatives of the FOC are supporting Operation Iraqi Freedom and various Homeland Defense missions.	6888	5733	7549	7625
Operational Analysis/Tools, Modeling and Simulation (M&S) - Studies and Analysis included operational assessments of concepts, doctrine, organizations, technologies and tactics. Also examined Future Combat system/Transformation issues for space and missile defense including new national policy for Space Control, Counter-SATCOM, and Operational Analysis of High Altitude Long Endurance capabilites at the Tactical Level, and Space Radar. Tools and M&S accomplishments included M&S for experimentation and operational assessments, and the maintenance of M&S tools. Evolving concepts will require analysis that addresses emerging needs in FY06-07. Space control will require analysis to support the military utility analysis and requirements definition in FY07. Additionally, M&S integration will be required to support the fielding of Army simulations and experiments for Information Operations and Global Strike. Plans include continued maintenance of M&S tools and support for experimentation and analysis.	5042	3575	5040	5040
Small Business Innovative Research/Small Business Technology Transfer Programs		122		
Total	11930	9430	12589	12665

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

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603305A - Army Missile Defense Systems Integration

PROJECT
TR5

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Experiments & technology enhancements of prototypes/tools and analysis.	CPAFF/CPFF	Various Colorado Springs CO and Huntsville AL	16668	5042	1-4Q	3575	1-4Q	5040	1-4Q	5040	1-4Q	Cont.	Cont.	
Govt Support and Support Contracts	MIPR/Allot	Various Colorado Springs CO and Huntsville AL	20328	6888	1-4Q	5778	1-4Q	7549	1-4Q	7625	1-4Q	Cont.	Cont.	
SBIR/STTR						77							77	
Subtotal:			36996	11930		9430		12589		12665		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR5**

Project Total Cost:	**36996**	**11930**		**9430**		**12589**		**12665**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR5**

Event Name	FY 06				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	2	3	4
Experiments & technology enhancements of prototypes/tools and analysis.																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missile Defense Systems Integration**	**TR5**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Experiments & technology enhancements of prototypes/tools and analysis.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**

COST (In Thousands)		FY 2006 Actual	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		32188	38740	17421	20065	27347	28694	34700	32300		231455
978	SPACE CONTROL	917	2746	6243	7040	12970	12817	18000	15000		75733
990	Space and Missile Defense Integration	30308	19676	11178	13025	14377	15877	16700	17300		138441
997	Space and Missile Defense BattleLab	963	16318								17281

A. Mission Description and Budget Item Justification: This program element funds space systems integration efforts performed by the US Army Space and Missile Defense Command (USASMDC).

USASMDC: Headquarters, Department of the Army General Order Number 5, dated 1 March 1998, designated SMDC as the Army specified proponent for space and National Missile Defense (NMD), and the operational integrator for Theater Missile Defense (TMD). As such, SMDC is responsible to develop warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize those space related capabilities.

Project #990 funds the Future Warfare Center (FWC) Directorate of Combat Development to mature warfighting concepts, and validate concepts, identify capabilities needed to implement the validated concepts, and develop DOTMLPF solutions to realize those space related capabilities.

Project #978 funds the Army Core Space Control System (ACSCS) development that provides space control capabilities to meet current Army Requirements Review Committee guidance, Deputy Secretary of Defense (DEPSECDEF) directives, Army Requirements Oversight Council (AROC)-approved counter-surveillance and reconnaissance system Joint Initial Requirements Document (JIRD), and validated Training and Doctrine Command (TRADOC) capability gaps. Space Control has gained importance with proliferation of satellite technology and the commercial availability of these technologies to potential adversaries. Adversaries will have the capability to capitalize on these assets to identify friendly activities and operations, increase their lethality and intelligence gathering efforts, and thus, reduce our survivability, agility, versatility, and information superiority. The Army Core Space Control System is a System of Systems concept consisting of sensors (to see the satellites), shooters (to deny the satellites), and an integrating battle command capability. Space Control is critical to the Future Force for survivability in that it denies adversary imaging for precision targeting, thus reducing lethality, and limiting intelligence gathering. Space Control also supports the Future Force characteristics of agility and versatility by denying adversary space-based communications and information as our forces respond to varying shifts in intensity and mission requirements. ACSCS was formally transitioned back to the U.S. Army Space and Missile Defense Command (USASMDC) from the Program Executive Office, Missiles and Space (PEO MS) in 2005.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	48186	11771	13191	15809
Current BES/President's Budget (FY 2008/2009)	32188	38740	17421	20065
Total Adjustments	-15998	26969	4230	4256
Congressional Program Reductions		-147		
Congressional Rescissions				
Congressional Increases		27400		
Reprogrammings	-15998	-284		
SBIR/STTR Transfer				
Adjustments to Budget Years			4230	4256

FY06 includes a reprogramming of a Congressional add for Allen Army Airfield Upgrades ($15,100) to the Operations and Maintenance, Army appropriation for execution.

FY07 includes Congressional adds ($27,400) for: Advanced Hypersonic Weapon Kill Vehicle Integration ($4,000), Divert Barriers at Allen Army Airfield ($3,000), Low Cost Inteceptor ($3,900), and Allen Army Airfield Upgrades ($16,500).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**978**

COST (In Thousands)	FY 2006 Actual	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
978 SPACE CONTROL	917	2746	6243	7040	12970	12817	18000	15000		75733

A. Mission Description and Budget Item Justification: The mission of Space Control is to provide freedom of action in space for friendly forces and to deny the same freedom to the enemy when directed. This includes offensive and defensive operations by the Army to gain and maintain space superiority in the space region and also involves maintaining situational awareness of events in space. The Army Core Space Control System (ACSCS) is a ground-based space capability that provides Counter Satellite Communications (C-SATCOM), space surveillance system (i.e., Space and Threat Surveillance (SaTS) System), a Counter Imagery System, and an integrated Battle Management, Command, Control, Communications, Computers, and Intelligence (BMC4I) System. The Army Requirements Oversight Council approved the Initial Capability Document (ICD) for C-SATCOM in 2005, allowing this initial capability to advance toward the Technology Development Phase. ACSCS was formally transitioned back to the U.S. Army Space and Missile Defense Command (USASMDC) from the Program Executive Office, Missiles and Space (PEO MS) in 2005.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Develop and maintain Space Control program plans and strategies.	236	250	400	300
Define Space Control System Architectural requirements.	257	250	250	250
Develop system designs and perform systems engineering.	424	2169	1750	2000
Develop System Prototype			2843	2990
Test and Evaluation of Prototype			1000	1500
Small Business Innovative Research/Small Business Technology Transfer Program		77		
Total	917	2746	6243	7040

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

C. Acquisition Strategy Acquisition plans for C-SATCOM, SaTS, and Counter Electro Optical (EO) will be developed in accordance with National Security Space (NSS) Acquisition Policy 03-01 and will utilize evolutionary acquisition approaches with spiral developments. These system designs will leverage any Science and Technology Objectives (STO) or Advanced Concept Technology Demonstrations (ACTDs) from various technology developers that are ready to transition into an acquisition program. Once systems are fielded, they will be retrofitted with upgraded hardware and software.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603308A - Army Missile Defense Systems Integration (Dem/Val)

PROJECT
978

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 plans and strategies	Various	Various	650	286	1-4Q	300	1-4Q	400	1-4Q	400	1-4Q		2036	
Systems and technical architectures	Various	Various	576	150	1-4Q	150	1-4Q	150	1-4Q	150	1-4Q		1176	
Systems engineering and prototypes	Various	Various	474	281	1-4Q	1971	1-4Q	4543	1-4Q	4890	1-4Q		12159	
Subtotal:			1700	717		2421		5093		5440			15371	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government support and support contracts	Various	Various	100	50	1-4Q	125	1-4Q	200	1-4Q	200	1-4Q		675	
Subtotal:			100	50		125		200		200			675	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
T&E Support	Various	Various		100	1-4Q	150	1-4Q	850	1-4Q	1300	1-4Q		2400	
Subtotal:				100		150		850		1300			2400	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Administration processes	Various	Various	50	50	1-4Q	50	1-4Q	100	1-4Q	100	1-4Q		350	
Subtotal:			50	50		50		100		100			350	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

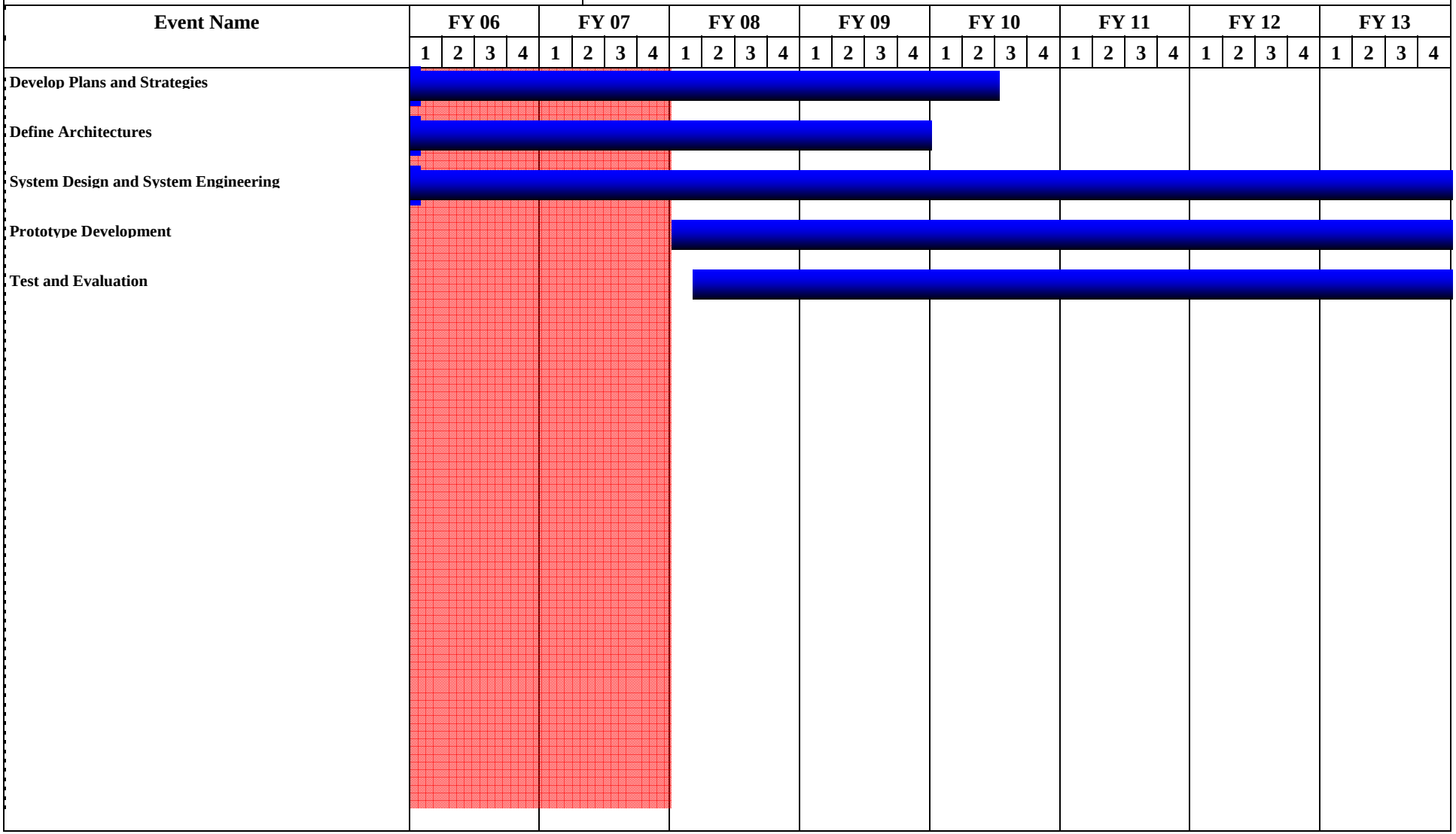
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**978**

Project Total Cost:	**1850**	**917**		**2746**		**6243**		**7040**			**18796**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**978**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**978**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Develop Plans and Strategies	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			
Define Architectures	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
System Design and System Engineering	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Prototype Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test and Evaluation			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**990**

COST (In Thousands)	FY 2006 Actual	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
990 Space and Missile Defense Integration	30308	19676	11178	13025	14377	15877	16700	17300		138441

A. Mission Description and Budget Item Justification: Headquarters Department of the Army (HQDA) General Order Number 5, dated 1 March 1998, designated US Army Space and Missile Defense Command (USASMDC) as the Army specified proponent for space. As such, USASMDC is responsible to develop warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize those space related capabilities.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Plan, develop, and execute concepts and DOTMLPF solutions for Army exploitation of space systems, including Space-Based Infrared System (SBIRS), Multi-Mission Mobile Processor (M3P), Space-Based Radar, Space Support Element Toolsets, and various space control capabilities. Represent Army positions and defend Army equities relative in Joint/DoD and inter-Service activities; e.g., National Security Space Architect (NSSA) Program Assessments, etc. Lead Army's efforts in developing and executing the Space Domain of the Army Knowledge Enterprise Architecture. Develop space modernization strategies and sponsor exploration of future space, near space, and missile defense warfighting concepts in support of Army Transformation. Sustain Joint Blue Force Situational Awareness (JBFSA) Mission Management Center and its associated testbed for both operations and spiral development for 24/7 Blue Force Tracking integration into a realtime common operating picture for Combatant Commanders, Joint Task Force Commanders and Coalition partners.	7698	8771	11178	13025
Includes FY06 Congressional adds for: Low Cost Interceptor, and Near Space Long Loiter Sensor Communications Platform. Includes FY07 Congressional adds for: Advanced Hypersonic Weapon Kill Vehicle Integration ($4,000), Divert Barriers at Allen Army Airfield ($3,000), and Low Cost Inteceptor ($3,900).	22610	10483		
Small Business Innovative Research/Small Technology Transfer Programs		422		
Total	30308	19676	11178	13025

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

C. Acquisition Strategy Program is continuous. Various performers will conduct planned accomplishments.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603308A - Army Missile Defense Systems Integration (Dem/Val)

PROJECT
990

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Various	Various	104521										104521	
Execute Congressional adds	Various	Various		22610	2-4Q	10483	2-4Q						33093	
SBIR/STTR						422	2Q						422	
Subtotal:			104521	22610		10905							138036	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GOVT SUPPORT & SUPPORT CONTRACTS	Various	Various in Colorado Springs CO and Huntsville AL	29629	7698	1-4Q	8771	1-4Q	11178	1-4Q	13025		Cont.	Cont.	
Subtotal:			29629	7698		8771		11178		13025		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: Not Applicable

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: Not Applicable

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**990**

Project Total Cost:	**134150**	**30308**		**19676**		**11178**		**13025**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**990**

Event Name	FY 06				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	2	3	4
Development/synchronization of Army space and BMD DOTMLPF solutions.																																
Execute FY06 Congressional Adds																																
Execute FY07 Congressional Adds																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Missile Defense Systems Integration (Dem/Val)**	**990**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development/synchronization of Army space and BMD DOTMLPF solutions.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Execute FY06 Congressional Adds	2Q - 4Q							
Execute FY07 Congressional Adds		2Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**

	COST (In Thousands)	FY 2006 Actual	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	96877	136890	176142	135260	81636	37876	5238			716980
E88	INTEGRATED FIRE CONTROL AIR MISSILE DEFENSE	23662	41249								84895
S24	ARMY SIAP SYSTEMS ENGINEERING	9663	10214								28894
S25	ARMY SIAP OPERATIONAL INTEGRATION	18030	8164	2523	2536						31253
S26	ARMY SIAP IMPLEMENTATION	11380	41111								67388
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	3230	1298								7691
S32	JOINT SIAP SYSTEM ENGINEERING	28228	34854	35220	18137						116439
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	2684		138399	114587	81636	37876	5238			380420

A. Mission Description and Budget Item Justification: This program element provides funding for the integration of Army and Joint Integrated Air and Missile Defense (IAMD). On 9 February 2006 the Army Systems Acquisition Review Council (ASARC) designated the IAMD program a Pre-Major Defense Acquisition Program (MDAP) and approved the stand-up of the IAMD Project Office (PO). Program Executive Office Missiles and Space (PEO MS) formally stood up the IAMD PO on 9 May 2006.

The mission of the IAMD PO is to: Define, develop, acquire, field and sustain the Army's portion of the Joint IAMD system of systems capability to be deployed as integrated components in Army, Joint, interagency, and multi-national net-centric architectures. Develop, acquire, field and sustain the IAMD common battle command component of the architecture and integrate externally developed sensors and shooters to provide an effective IAMD capability. The IAMD mission is derived from analysis of the Joint Air and Missile Defense (AMD) imperatives and the four mission sets that Army AMD performs. These mission sets are: Provide Air and Missile Defense, Contribute to AMD Situational Awareness/Situational Understanding, Contribute to Airspace Management, and Integrate/contribute to operational protection. The IAMD PO is responsible for the development of an IAMD Architecture comprised of components developed within the Project Office as well as by other PEO MS Project Offices (Lower Tier Project Office (LTPO) and Cruise Missile Defense Systems (CMDS), PEO Command, Control and Communications - Tactical (C3T) Project Offices (Air and Missile Defense Command and Control Systems (AMDCCS), and Joint organizations (e.g. Single Integrated Air Picture (SIAP) Joint Program Office (JPO). As part of this responsibility, the IAMD PO has responsibility for performing the overarching IAMD System of Systems Architecture Systems Engineering. While the IAMD Architecture is complex, it is itself part of a larger Joint System of Systems architecture. The IAMD program provides the Army's part of this larger Joint IAMD Architecture. Beginning in FY 08, funding for Project Codes E88, S24, and S26 have been combined under Project Code S34 to establish the IAMD program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	100190	143417	101574	72178
Current BES/President's Budget (FY 2008/2009)	96877	136890	176142	135260
Total Adjustments	-3313	-6527	74568	63082
Congressional Program Reductions		-5274		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-3313	-1253		
SBIR/STTR Transfer				
Adjustments to Budget Years			74568	63082

FY 2008 (+$74568)- Realignment of funding to support the Common BMC4I mission delegated to the IAMD Project Office (+$63039); Realignment of funding to JSSEO to support IABM for Capability Drop 1 (+$11819); Reprogrammed to Department of the Army higher priority program (-$290).
FY 2009 (+$63082)- Realignment of funding to support the Common BMC4I mission delegated to the IAMD Project Office (+$63389); Reprogrammed to Department of the Army higher priority program (-$307)

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S25**

COST (In Thousands)		FY 2006 Actual	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
S25	ARMY SIAP OPERATIONAL INTEGRATION	18030	8164	2523	2536						31253

A. Mission Description and Budget Item Justification: This project funds the coordination of the Single Integrated Air Picture (SIAP) requirements with the operational community: verification that operational requirements exist to support technical specifications and any subsequent changes; integration and coordination of Army SIAP operational requirements with the user community and multi-service sponsor(s); provide support to development and revision of SIAP acquisition strategy with respect to Army operational requirements. These products/tasks are required to ensure a specific, focused effort that integrates SIAP with weapons, sensors, Battle Management/Command, Control, Communications, and Computers (BMC4) and concepts of operations.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue efforts to coordinate Integrated Air and Missile Defense (IAMD) analyses, planning, tools, and requirements for Single Integrated Air Picture (SIAP) development. Evaluate IAMD/SIAP-related acquisition strategy, operational requirements, engineering tools, and current and evolving doctrine. Assess airspace awareness, combat identification, integrated fire control technologies, and risk mitigation approaches.	2696	2911	2523	2536
Includes FY 2006 Congressional adds for Army Extended Range Attack Missile (AERAM), AERAM Turbine Engine Development, Geospatial Information Decision Support - SIAP, SituSpace Single Integrated Space Picture, and Command Responder. Includes FY 2007 Congressional Adds for Area Security and Defense Systems Research, Command Responder, Joint Awareness Warfighter - Space (JAWS), and Multi View Integrated Engineering Environment Pilot.	15334	5023		
Small Business Innovative Research/Small Business Technology Transfer Program		230		
Total	18030	8164	2523	2536

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 643327, Project S24, Army SIAP Systems Engineering	9663	10214							Continuing	Continuing
PE 643327, Project S26, Army SIAP Implementation	11380	41111							Continuing	Continuing
PE 643327, Project S32, Joint SIAP Systems Engineering	28228	34854	35220	18137					Continuing	Continuing

Comment:

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S25

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Execute Congressional adds	Various	Various		15334	2-4Q	5023	2-4Q						20357	
Subtotal:				15334		5023							20357	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government support & support contracts	MIPRs, 1095s, CPFF	OGAs, Inhouse, Contact spt.	5446	2696	1-4Q	2911	1-4Q	2523	1-4Q	2536	1-4Q	Cont.	Cont.	
SIBR/STTR Costs						230	2-4Q						230	
Subtotal:			5446	2696		3141		2523		2536		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:			**5446**	**18030**		**8164**		**2523**		**2536**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S25**

Event Name	FY 06				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	2	3	4
Coordinate & integrate SIAP rqmts into doctrine, demos, experiments, & exercise.																																
Execute FY 2006 Congressional Adds																																
Execute FY 2007 Congressional Adds																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S25**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Coordinate & integrate SIAP rqmts into doctrine, demos, experiments, & exercise.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Execute FY 2006 Congressional Adds	2Q - 4Q							
Execute FY 2007 Congressional Adds		2Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S32**

COST (In Thousands)		FY 2006 Actual	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
S32	JOINT SIAP SYSTEM ENGINEERING	28228	34854	35220	18137						116439

A. Mission Description and Budget Item Justification: The Single Integrated Air Picture (SIAP) is the product of fused data from multiple geographically dispersed sensors to allow development of common, continuous, and unambiguous actionable tracks of all airborne objects in a surveillance area. All airborne objects must be detected, tracked, and reported. Each object must have one and only one track identifier and associated characteristics to be incorporated into SIAP. Current systems and networks do not provide this capability.

The spiral acquisition and development of SIAP was designated as a Special Interest Program by OUSD (AT&L) in FY 05. A successful Defense Acquisition Board (DAB) review in March 2006 approved the continuation of the SIAP program. A Milestone B DAB is scheduled for 3rd Qtr FY 07. During 2nd Qtr FY 07, the Joint SIAP System Engineering Organization (JSSEO) formally transitioned to a SIAP Joint Program Office (SIAP JPO) under the SIAP Joint Program Executive Officer (JPEO) and the SIAP Acquisition Executive (AE).

The SIAP JPO develops the tools and processes and performs the system engineering to net warfighting systems and tactical data link systems for theater air and missile defense. The SIAP JPO focuses on specific problem areas and translates the solutions into an integrated, executable architecture, known as the Integrated Architecture Behavior Model (IABM), to meet DoD Net-Ready Key Performance Parameter (KPP) requirements as well as Joint Requirements Oversight Council (JROC) validated Theater Air & Missile Defense, Combat Identification and Global Information Grid (GIG) mission area requirements. This model describes the functional behavior and expected performance of joint warfighting units and becomes a reference specification. The integrated architecture captured in the IABM provides engineers a tool, with operational context and supporting engineering detail, to make decisions about what design functions produce the most cost effective solution in meeting joint battle management command and control requirements. By using modern development techniques, we can specify the performance within nodes and between nodes of a tactical network in a way that will increase machine-to-machine precision and avoid integration costs in current and future combat systems. The Services and industry use this model to develop and integrate these specified functions into their systems. In addition, the Joint Interoperability Test Command (JITC) uses this model to evaluate system conformance and to validate combat systems performance against the behavior described in the integrated air and missile defense architecture.

The SIAP JPO delivered the initial version of this reference specification in Sep 05. This initial release focused on the technical foundations for geodetic registration and time alignment, and addressed further reduction of dual tracks, improved combat ID capability, improved data sharing (network capacity), and improved air picture for integrated theater air and missile defense performance.

IABM version 1.0 builds upon the initial delivery to support Capability Drop 1 (CD-1), and focuses on improving efficiency and throughput, improving beyond line-of-sight capability, and providing track management and combat identification performance enhancements. The engineering issues being addressed to provide these capabilities are host computer implementation consistency, distributed database consistency improvement, network latency reduction, and interface with ground systems.

The Capability Drop 2 (CD-2) IABM will build on the CD-1 baseline and will focus on incorporating advances in distributed sensor and resource management to further automate critical warfighting functions. The CD-2 IABM will be developed during FY 09.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Architecture_ (FY06-07) Deliver SIAP Integrated Architecture updates. Expand engineering detail to capture additional tactical functionality and updated Joint Theater Air and Missile Defense (TAMD) requirements. Conduct technical design reviews with affected combat, weapon, sensor, and tactical command and control systems. Conduct analysis focused on network latency reduction, ground system interfaces leading to improved warfighting capability. Integrate support for IPv6 routing into the IABM to enable combat, weapon, sensor, and tactical command and control systems to take advantage of programmed communication capability improvements, and posture combat, weapon, sensor, and tactical command and control systems to integrate with the Global Information Grid (GIG) and Net-centric Enterprise Services (NCES). Budget actions have pushed the next major release of the Capability Drop 1 IABM to 3rd Qtr FY 08. (FY 08-09) Capability Drop 1 will deliver in 3rd qtr FY 08. Begin engineering work to define Capability Drop 2; targeted capabilities include better identification of blue forces, reduced fratricide, and improved ability to engage time critical targets. Develop IABM improvements incorporate advances in distributed sensor and resource management to further automate critical warfighting functions. Capability Drop 2 will be developed during FY 09.	15300	17700	17700	5500
System Engineering Tools and Analysis _ Continue to evaluate the technical and warfighting benefits of the SIAP improvements. Update analysis tools to support modeling and simulation capabilities, _hardware in the loop_ laboratories, and planning/data reduction of open-air live exercises. Coordinate with Joint Interoperability Test Command (JITC) for verification and validation of the IABM. Analyze installed system performance in joint exercises and initial weapon system integration results. Products include updates to technical reports on Common Reference Scenarios (CRS), SIAP Attributes, and SIAP Measures of Performance (MOPs), environmental and comm model simulations, and improved data parsing and analysis tools that provide greater fidelity in testing the IABM. The purpose of developmental testing (DT) is to verify the status of IABM developmental progress and Service Platform Specific Implementation (PSI) progress, and document achievement of functional and performance requirements. In addition, PSI development testing will be used to certify readiness for operational testing. The SIAP JPO will conduct Developmental Test & Evaluation (DT&E) on the IABM prior to releasing Capability Drop 1 for implementation. After JITC performs IV&V on the IABM, the SIAP Pathfinder Programs will begin formal DT&E. The primary purpose of SIAP OT&E is to assess the effectiveness and suitability at the System of System level. The IABM requires adaptation and integration into the computer programs of host weapon systems. As such, OT&E must use PSIs in host weapon systems. Therefore, the Services have the primary responsibility to plan, budget for, and execute Service OT&E.	5700	7500	7500	7000
Customer Support (Requirements and Technical Analyses) - Assist Services with integration tasks. Resolve technical discrepancies and provide track management and combat identification performance enhancements. Monitor and assist the Services with implementation into their combat, weapon, sensor, and tactical command and control systems. Assist with risk reduction and demonstration planning for the IABM. Provide help desk website and phone support to answer technical questions and provide the Services 24 hour access to technical documentation and products. Provide the Services with enhanced COTS tools for integrating CD-1.	800	600	600	600
Program Management - Support infrastructure requirements such as rent, LAN (local area network), telephone, computers, VTC (video teleconferences) rooms, office equipment, facilities management and administrative support. With the designation of SIAP as Joint Program Office (SIAP JPO) this line also includes funding for Acquisition management planning and documentation to support Integrated Process Team (IPT) and Defense Acquisition Board (DAB) activities.	6428	8073	9420	5037
Small Business Innovative Research/Small Business Technology Transfer Programs		981		
Total	28228	34854	35220	18137

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

C. Acquisition Strategy Draft document submitted for review and approval to support Milestone "B-Like" Defense Acquisition Board (DAB) review in 3rd Qtr FY 07.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Block 1	MIPR	NAVSEA-JHU-APL. Laurel, MD	800									Cont.	800	
Block 1	MIPR	GSA-Sparta, Centerville, VA	222									Cont.	222	
Block 1	MIPR	Various	2652									Cont.	2652	
Block 2	MIPR	NAVSEA - JHU/APL Laurel, MD	2800									Cont.	2800	
Block 2	MIPR	GSA-BAH, McLean VA	375									Cont.	375	
Block 2	MIPR	GSA - Northrop Grumman, McLean, VA	513									Cont.	513	
Block 2	MIPR	Various	3625									Cont.	3625	
Customer Support	Various	Various	7738	800	1-4Q	600	1-4Q	600	1-4Q	600	1-4Q	Cont.	Cont.	
Architecture	MIPR	NAVSEA - JHU/APL, Laurel, MD	6816	2066	1-4Q	3657	1-4Q	2438	1-4Q	993	1-4Q	Cont.	Cont.	
Architecture	MIPR	GSA - BAH, McLean, VA	4559	1882	1-4Q	3189	1-4Q	2126	1-4Q	850	1-4Q	Cont.	Cont.	
Architecture	MIPR	GSA, Northrup Grumman	2625	681	1-4Q	1008	1-4Q	672	1-4Q	322	1-4Q	Cont.	Cont.	
Architecture	MIPR	GSA, Sparta, McLean, VA	1888	800	1-4Q	937	1-4Q	624	1-4Q	285	1-4Q	Cont.	Cont.	
Architecture	Various	Various	21903	9871	1-4Q	8909	1-4Q	11840	1-4Q	3050	1-4Q	Cont.	Cont.	
System Eng Tools and Development	MIPR	NAVSEA - JHU/APL, Laurel, MD	795	170	1-4Q	49	1-4Q	32	1-4Q	25	1-4Q	Cont.	Cont.	
System Eng Tools and Development	MIPR	GSA, Northrop Grumman, McLean, VA	2749	308	2-3Q	595	1-4Q	396	1-4Q	308	1-4Q	Cont.	Cont.	
System Eng Tools and Development	MIPR	GSA - Sparta, Centreville, VA	338	170	1-4Q	90	1-4Q	60	1-4Q	47	1-4Q	Cont.	Cont.	
System Eng Tools and Development	MIPR	Various	13731	5052	1-4Q	5641	1-4Q	6262	1-4Q	6038	1-4Q		36724	
Subtotal:			74129	21800		24675		25050		12518		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test & Evaluation Support	Various					1125	1-4Q	750	1-4Q	582	1-4Q		2457	
Subtotal:						1125		750		582			2457	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	Various		7747	6428	1-4Q	9054	1-4Q	9420	1-4Q	5037		Cont.	Cont.	
Subtotal:			7747	6428		9054		9420		5037		Cont.	Cont.	

Project Total Cost:			**81876**	**28228**		**34854**		**35220**		**18137**		**Cont.**	**Cont.**	

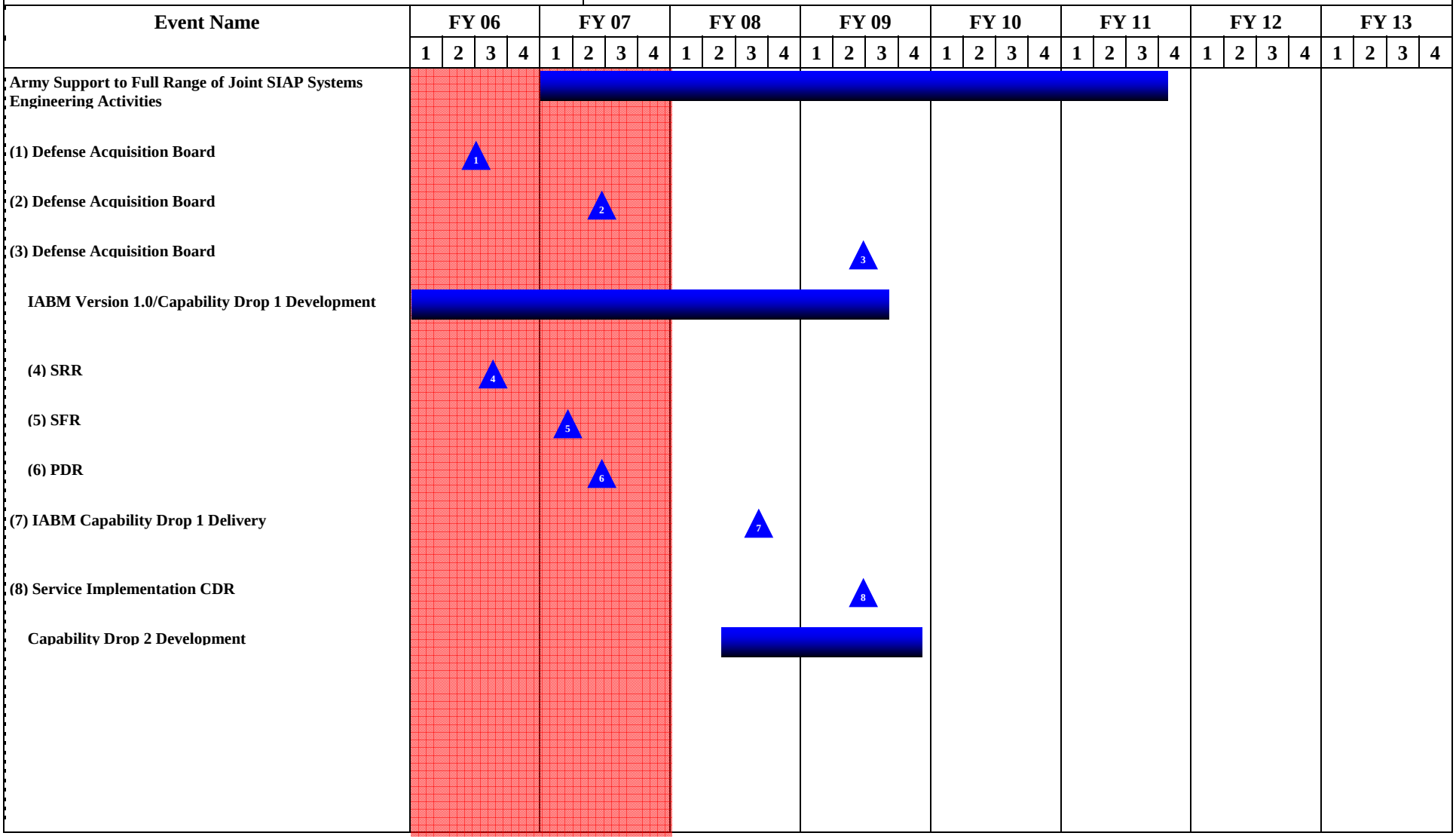
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S32**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Army Support to Full Range of Joint SIAP Systems Engineering Activities	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Defense Acquisition Board	2Q							
Defense Acquisition Board		2Q						
Defense Acquisition Board				2Q				
IABM Version 1.0/Capability Drop 1 Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q				
SRR	3Q							
SFR		1Q						
PDR		2Q						
IABM Capability Drop 1 Delivery			3Q					
Service Implementation CDR				2Q				
Capability Drop 2 Development			2Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S34**

COST (In Thousands)		FY 2006 Actual	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
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	2684		138399	114587	81636	37876	5238			380420

A. Mission Description and Budget Item Justification: Funding in this project provides the overarching Integrated Air and Missile Defense (IAMD) Architecture and IAMD Battle Command System (IBCS) components necessary to produce an IAMD capability. The IAMD Program represents a shift from a traditional system-centric weapon systems acquisition to a component-based acquisition. This component-based acquisition will provide the most efficient way to acquire and integrate the components of the incremental IAMD architectures. Unlike traditional acquisition programs that focus primarily on the development of a single system or platform, the IAMD Program is structured to enable the development of an overarching system-of-systems capability with all participating Air and Missile Defense (AMD) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The IAMD Program achieves this objective by establishing the incremental IAMD architecture and developing the following products: the IBCS, the Integrated Fire Control (IFC) Network, and the Common Plug & Fight (P&F) Interface. The IBCS provides the common IAMD Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) capability. The IFC Network provides fire control connectivity and enabling distributed operations. The Common P&F Interface integrates the multiple sensor and weapon components. Development of the component-unique part of the P&F Interface remains within the purview of the affected components project/product office.

FY 08 and out funding represents the establishment of the Integrated Air & Missile Defense capability.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Product Development	2684		123195	94424
Support Cost			10707	11396
Test and Evaluation			4497	8767
Total	2684		138399	114587

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0604869A, Project M06, PATRIOT/MEADS Combined Aggregate Program (CAP)	274339	325945	372146	408182	589779	427981	436415	77399	Continuing	Continuing
SSN C50001, PATRIOT/MEADS CAP					403735	674386	1042010	1317190	Continuing	Continuing
PE 0102419A, Proj E55, JLENS	99851	242781	481251	353983	337464	320787	182528		Continuing	Continuing
SSN BZ0525, JLENS Production						445850	223550	395200	Continuing	Continuing
PE 0604802A, Project S23, SLAMRAAM	34034	26663	34762	11979					Continuing	Continuing

SSN C81001, SLAMRAAM Production	18825			65506	118124	76747	61850	61850	Continuing	Continuing
PE 0604820A, Proj E10, Sentinel	4775	2499	7067						Continuing	Continuing
PE 0603327A, E88, Integrated Fire Control AMD	23662	41249							Continuing	Continuing

Comment: This project and program is an integral part of the PEO, Missiles and Space Integrated Air and Missile Defense (IAMD) Program including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy The IAMD Program will employ an evolutionary acquisition strategy consisting of multiple capability increments leading to an objective capability in FY17. Each IAMD capability increment follows the IAMD Capability Development Document (CDD) and is defined as:

- Increment 1 is a User-executed capability increment focused on realignment of current force systems into an AMD Composite Battalion (BN) organizational construct. (not part of the materiel development program)
- Increment 2 provides the first increment of an integrated materiel solution, and is the initial acquisition program to develop the objective IAMD capability.
- Increment 3 provides the objective IAMD capability.

The IAMD incremental development approach provides the opportunity for technology insertions into the program throughout each increment as high-payoff technologies mature and are ready for integration. This enables an orderly and cost-effective migration from the current system-centric architecture to the IAMD architecture.

Key principles of the IAMD acquisition approach are the following:

- Migrate from system-based acquisition to component-based acquisition
- Use system-of-systems acquisition approach with collaboration among IAMD, PEO MS and PEO C3T Component Project Offices, and other Service Project Offices to network enable weapons and sensor components
- Develop and procure common IBCS Command Post (CP) that replaces multiple weapon system unique BMC4I components
- Establish product lines used to evaluate and select, modify and integrate modular open systems Hardware (HW) and Software (SW) common configuration items
- Conduct architecture-based System Engineering, Integration and Test (SEI&T) activities for an incremental fielded configuration of the IAMD IFC Network-compatible IBCS CP, weapons and sensor system components

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S34

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ASMD SOS Hardware-in-the- Loop Testbed	CPFF	Multiple OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	2674	2684	1-4Q							Cont.	Cont.	Cont.
IBCS System Development and Demonstration	CPIF/CPFF	Contractor, Huntsville, AL/other locations						88295	1Q	62868	1Q	Cont.	Cont.	Cont.
System Integration	CPFF	Contractor, Huntsville, AL						30689	1-4Q	27501	1-4Q	Cont.	Cont.	Cont.
GFE	N/A	Multiple						2246	1-4Q	2156	1-4Q	Cont.	Cont.	Cont.
RDEC	N/A	MRDEC, AL						1965	1-4Q	1899	1-4Q	Cont.	Cont.	Cont.
Subtotal:			2674	2684				123195		94424		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

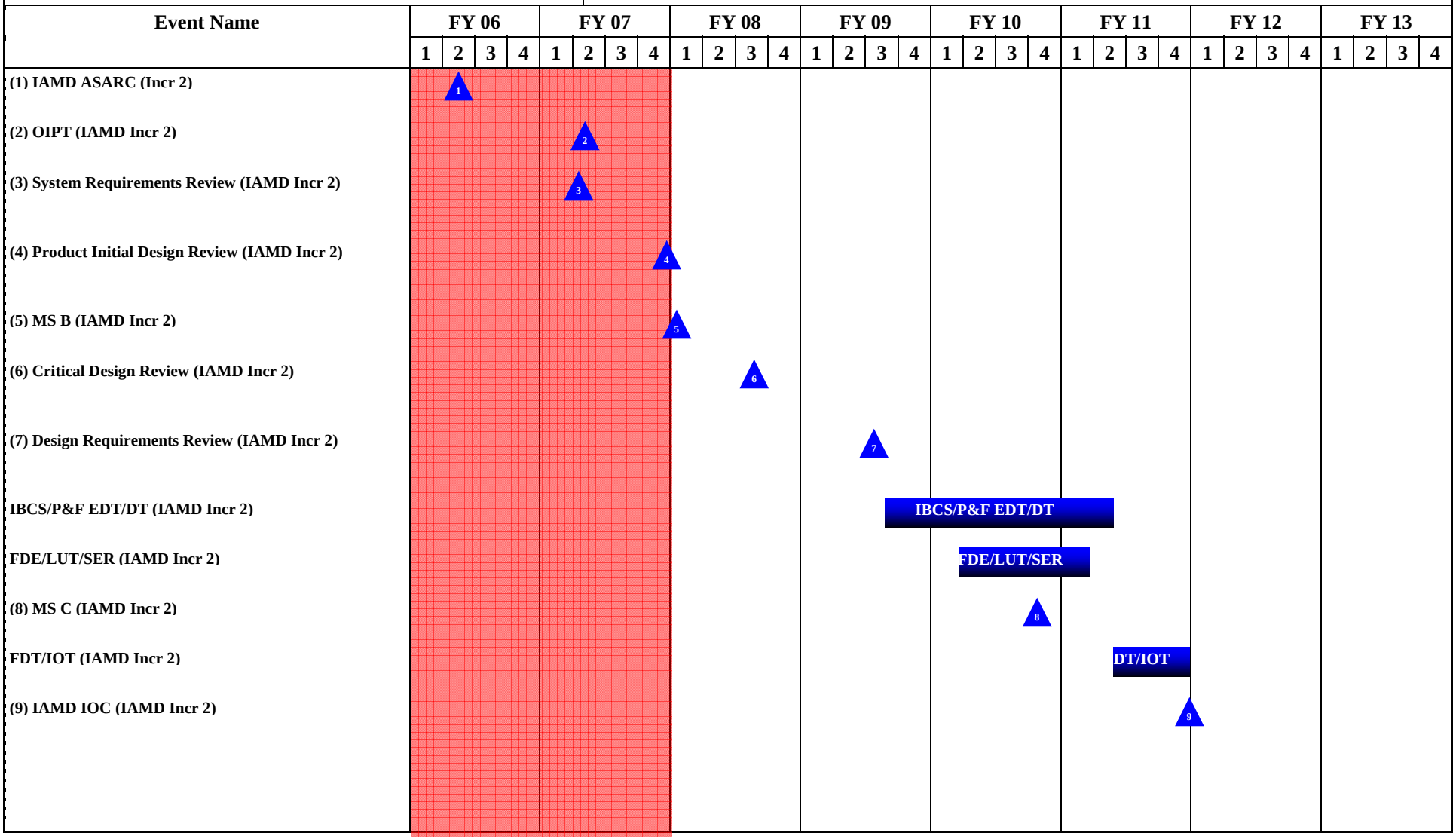
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
White Sands Missile Range	MIPR	WSMR, NM								3025	3-4Q	Cont.	Cont.	Cont.
Utah Test and Training Range	MIPR	Utah, NV								1362	3-4Q	Cont.	Cont.	Cont.
Government Modeling & Simulation	MIPR	Huntsville, AL						4497	1-4Q	3291	1-4Q	Cont.	Cont.	Cont.
ATEC	MIPR									1089	1-4Q	Cont.	Cont.	Cont.
Subtotal:								4497		8767		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government SEPM	N/A	Multiple OGAs, Inhouse and Contractor, Huntsville, AL						10707	1-4Q	11396	1-4Q	Cont.	Cont.	Cont.
Subtotal:								10707		11396		Cont.	Cont.	Cont.
Project Total Cost:			**2674**	**2684**				**138399**		**114587**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S34**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S34**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
IAMD ASARC (Incr 2)	2Q							
OIPT (IAMD Incr 2)		2Q						
System Requirements Review (IAMD Incr 2)		2Q						
Product Initial Design Review (IAMD Incr 2)		4Q						
MS B (IAMD Incr 2)			1Q					
Critical Design Review (IAMD Incr 2)			3Q					
Design Requirements Review (IAMD Incr 2)				3Q				
IBCS/P&F EDT/DT (IAMD Incr 2)				3Q - 4Q	1Q - 4Q	1Q - 2Q		
FDE/LUT/SER (IAMD Incr 2)					1Q - 4Q	1Q		
MS C (IAMD Incr 2)					4Q			
FDT/IOT (IAMD Incr 2)						2Q - 4Q		
IAMD IOC (IAMD Incr 2)						4Q		
System Requirements Review (IAMD Incr 3)						2Q		
MS B (IAMD Incr 3)							3Q	
PDR (IAMD Incr 3)							3Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603460A - Joint Air-to-Ground Missile (JAGM)**	**JA2**

COST (In Thousands)	FY 2006 Actual	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
JA2 JOINT AIR-TO-GROUND MISSILE (JAGM)			53500							53500

A. Mission Description and Budget Item Justification: The Joint Air-to-Ground Missile (JAGM) is a fixed wing, rotary wing, and Unmanned Aerial Vehicle (UAV) launched missile system that provides advanced line-of-sight (LOS) and beyond-line-of-sight (BLOS) capabilities, including precision point targeting (both active and passive) and fire-and-forget seeker technologies; increased range; and increased lethality against soft and hardened moving and stationary targets. Since termination of the JAGM program's predecessor, Joint Common Missile (JCM), the Department of the Army and the Department of the Navy have continued maturation of key missile technologies. Maturation and preservation of these technologies will continue through FY07 using FY05 carryover funding and the FY06/07 Congressional funding. Prototype hardware of key critical technologies will be flight tested in both guided and unguided missile launches. Flight testing of an integrated all-up round will demonstrate an insensitive munitions (IM) rocket motor, increased range, fixed wing (FW) environment compatibility, tri-mode seeker and guidance control group, and composite structure technology in an operationally representative environment, and transitioning the system Technology Readiness Level (TRL) to seven. These technologies have broad applications to other weapon systems and services. The program will additionally demonstrate a multipurpose warhead with increased lethality across both the conventional and other-than-armor target set, while minimizing collateral damage.

The JAGM will replace aviation-launched TOW, the HELLFIRE family of missiles, and the Navy's Maverick family of missiles. JAGM will be a joint program with the Army, Navy and USMC, and a cooperative developmental effort with the UK that addresses rotary/fixed wing and UAV requirements. Threshold platforms include the Apache (AH-64D), the Super Hornet (F/A-18E/F), the Seahawk (MH-60R), and Super Cobra (AH-1Z). Two Army objective platforms, the Armed Reconnaissance Helicopter (ARH) and the Warrior Unmanned Aircraft System (UAS) will be integrated as part of the System Development and Demonstration (SDD) effort. The JAGM will increase the warfighters' operational flexibility by effectively engaging a variety of stationary and mobile targets on the battlefield, including advanced heavy/light armored vehicles, bunkers, buildings, patrol craft, command and control vehicles, transporter/erector (e.g., SCUD) launchers, artillery systems, and radar/air defense systems. Its multi-mode seeker will provide robust capability in adverse weather, day or night, and in an obscured/countermeasure environment, against both stationary and moving targets. JAGM supports more efficient logistics for expeditionary force tailoring by replacing several missile variants with a single, interoperable weapon. The warhead is designed for high performance against both armored and non-armored targets. It also allows flexibility in the location of resupply on the battlefield, thereby minimizing the logistic burden of the combat force. The technologies that enable these dramatic increases in warfighter capability are being maintained and matured in the FY 07 program.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Software Simulation Algorithm Maturity			30082	
Design Verification Test (DVT) - Warhead & Fuze, Sensor, Guidance Electronic Unit (GEU), Propulsion			10339	
Subsystem Component Design Reviews			13079	
Total			53500	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603460A - Joint Air-to-Ground Missile (JAGM)**	**JA2**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			53500	
Total Adjustments			53500	
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			53500	

The JAGM is initiated in this Program Element with the intent of re-baselining the original JCM SDD phase II to completion, carrying the work forward from the technology maturation phase of JCM.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Joint Common Missile (JCM)	24920	24724								49644

Comment: The JAGM program will continue the existing technology maturation effort developed by its predecessor JCM.

D. Acquisition Strategy The JAGM will be an MDAP ACAT 1D (Army Lead) joint program between the Army, Navy, USMC, and a co-operational development program with the UK. The JAGM program will continue the existing technology maturation effort culminating with a Defense Acquisition Board review in Aug 07. Following the DAB, the program will transition to SDD in 4QFY07. The program will restructure the existing JCM contract currently in place with Lockheed Martin, to complete the second phase of the original program's SDD effort in 48 months culminating with a Milestone C in 4QFY11. Following a Milestone C decision, the program will exercise two Fixed Price Incentive - Successive Targets (FPIS) LRIP options in FY12 and FY13 respectively.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603460A - Joint Air-to-Ground Missile (JAGM)

PROJECT
JA2

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Prime Contract	Lockheed Martin	Orlando, FL						35500	1-4Q				35500	
Support Contracts	Various	Various						5024	1-4Q				5024	
Development Engineering	Various	Various						3459	1-4Q				3459	
Subtotal:								43983					43983	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SETA Support	Various	Various						1600	1-4Q				1600	
Subtotal:								1600					1600	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Other Gov Agencies/ Government In-House Test Support	Various	Various						3985	2-4Q				3985	
Subtotal:								3985					3985	

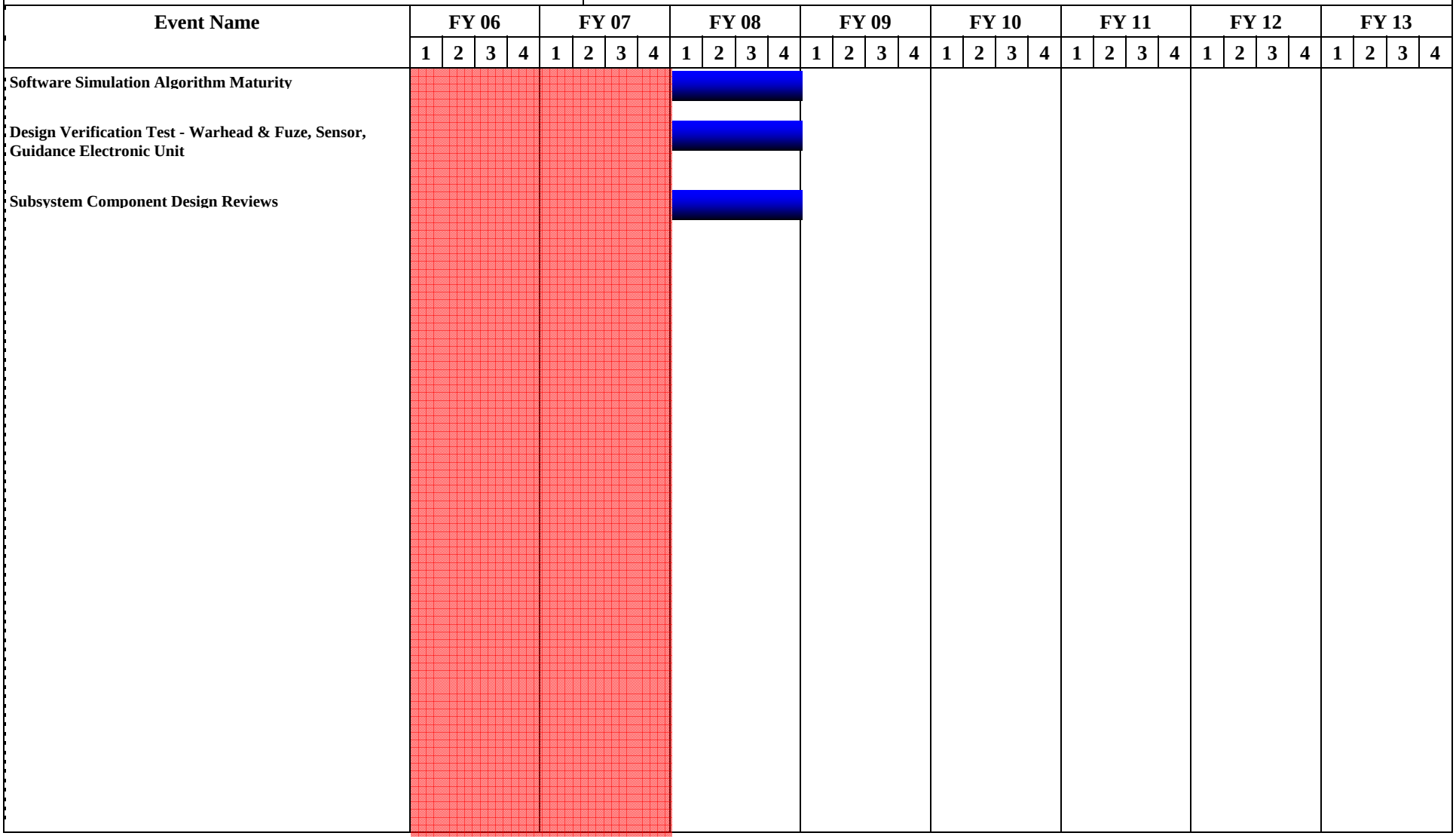
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Eng/ Project Management	Various	Various						3932	1-4Q				3932	
Subtotal:								3932					3932	

Project Total Cost:						**53500**					**53500**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603460A - Joint Air-to-Ground Missile (JAGM)**	**JA2**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603460A - Joint Air-to-Ground Missile (JAGM)**	**JA2**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Software Simulation Algorithm Maturity			1Q - 4Q					
Design Verification Test - Warhead & Fuze, Sensor, Guidance Electronic Unit			1Q - 4Q					
Subsystem Component Design Reviews			1Q - 4Q					

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**			PE NUMBER AND TITLE **0603460A - Joint Air-to-Ground Missile (JAGM)**					PROJECT **JA2**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Joint Air-To-Ground Missile (JAGM)			53500					
Total Termination Liability Funding:			53500					

Remarks:
The funding for the contract will be incrementally funded and will contain FAR Clause 52.232-22. This clause limits termination liability to the amount placed on contract.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**

COST (In Thousands)	FY 2006 Actual	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
606 CNTRMN/BARRIER ADV DEV		8346	24737	29423	19008	19213	19800	20300	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides for component development of new countermine systems for neutralizing, clearing, breaching and detection concepts that will enhance the effectiveness of the Future Force to maintain freedom of maneuver. The program includes the Ground Standoff Mine Detection System (GSTAMIDS) and the Autonomous Mine Detector (AMD). The GSTAMIDS forward looking effort will transition advanced technologies from the Army's S&T program into development to further enhance vehicle mounted mine detection capabilities for FCS. Autonomous Mine Detection System (AMDS) consist of three payloads for a robotic platform. The payloads are for mine detection and marking, Unexploded Ordanance (UXO) detection and marking, and neutralization. AMDS provides stand off detection for the dismounted soldier. Next Generation Mine Detection and Neutralization (FY11-13) will lever technologies currently in the Tech Base. The Next Generation Standoff Detection Systems (NGSOS) is a suite of advanced forward looking sensors designed to detect and confirm mines and Improvised Explosive Devices (IED) at far greater stand off distances than are achieved today. NGSOS will be designed as a payload on several vehicle platforms and robotic systems.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Initiate GSTAMIDS GPR sensor block upgrade to Husky mine detection vehicle		7154		
Complete prototype and test of new GPR for route clearance vehicles		957		
Initiate Autonomous Mine Detection Sensors (AMDS) program			24737	
Build and test AMDS Brassboards (2)				29423
Small Business Innovative Research/Small Business Technology Transfer Program		235		
Total		8346	24737	29423

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)		8439	39929	44475
Current BES/President's Budget (FY 2008/2009)		8346	24737	29423
Total Adjustments		-93	-15192	-15052
Congressional Program Reductions		-32		
Congressional Recissions				
Congressional Increases				
Reprogrammings		-61		
SBIR/STTR Transfer				
Adjustments to Budget Years			-15192	-15052

Change Summary Explanation: Funding:

FY 2008: Funds realigned (-$15.2M) to higher priority requirements.

FY 2009: Funds realigned (-$15.1M) to higher priority requirements.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604808A D415 - Landmine Warfare and Barrier - Engineering Development		35780	47112	52784	43696	21516	20223	18608	Continuing	Continuing

Comment:

D. Acquisition Strategy Autonomous Mine Detection Sensors(AMDS) - The acquisition strategy for Component Advanced Developmemt supports a competitive effort with one or more contractors/technology approaches. MS B is scheduled for 1st QTR FY08. Two Concept Development contract awards are scheduled for 2nd QTR FY08. AMDS will downselect to one contractor when it transitions from Concept Development (6.4) to System Development (6.5) in FY 2011.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603619A - Landmine Warfare and Barrier - Adv Dev

PROJECT
606

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Ground Penetrating Radar Sensor blk upgrade	C-CPFF	BAE Systems - Austin TX				7154	2Q						7154	
Adv Mine Detection Sensors	C/CPFF	To Be Selected (1)						7094	2Q	7500	2Q	4000	18594	
Adv Mine Detection Sensors	C/CPFF	To Be Selected (2)						7093	2Q	7500	2Q	4000	18593	
Other Component Development	C/FP, T&M	Various						6000	2Q	7500	2Q	4000	17500	
Subtotal:						7154		20187		22500		12000	61841	

Remarks: Acquisition Strategy is to award two Concept Development contracts and to downselct to one System Development contract in FY2011.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Adv Mine Detection Sensors	MIPR	Various OGAs						1580	1Q	2020		1400	5000	
Subtotal:								1580		2020		1400	5000	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Ground Penetrating Radar for route Clr Veh	MIPR	Various OGA				957	2Q						957	
AMDS	MIPR	Various OGA						770	2Q	2500	2Q	3000	6270	
Subtotal:						957		770		2500		3000	7227	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

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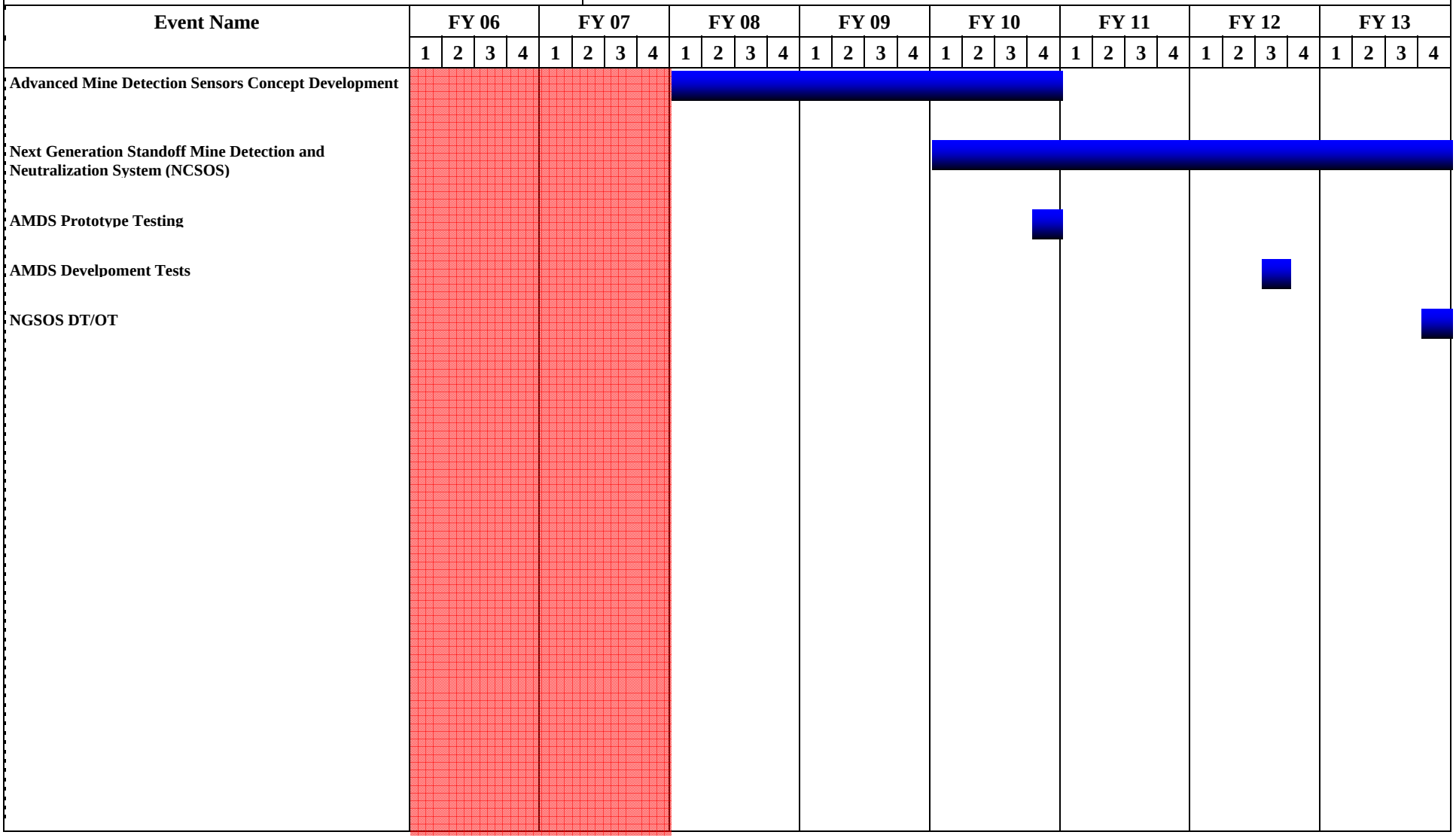
Program Management	IN-House	PM Close Combat Systems Picatinny NJ/ Ft Belvoir VA						1000	1Q	1100		1400	3500	
Program Management Contractor Support	C/FP	BRTRC Fairfax VA						1200	2Q	1303		1208	3711	
SBIR/STTR						235							235	
Subtotal:						235		2200		2403		2608	7446	
Project Total Cost:						**8346**		**24737**		**29423**		**19008**	**81514**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Advanced Mine Detection Sensors Concept Development			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Next Generation Standoff Mine Detection and Neutralization System (NCSOS)					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AMDS Milestone B			1Q					
AMDS System Requirements Review			2Q					
AMDS Preliminary Design Review				2Q				
AMDS Prototype Testing					4Q			
AMDS Critical Design Review						4Q		
AMDS Develpoment Tests							3Q	
AMDS Milestone C								3Q
NGSOS Milestone B					4Q			
NGSOS Concept Development Contract						2Q		
NGSOS Critical Design Review								4Q
NGSOS DT/OT								4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**	**E79**

COST (In Thousands)	FY 2006 Actual	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
E79 SMOKE/OBSCURANT SYSTEM	4381	5426	19449	3865	18676	6503	6646	6792		71738

A. Mission Description and Budget Item Justification: Project supports the Component Advanced Development and System Integration developmental phases of high performance obscuration materials and systems to increase the survivability of the combined armed forces and to complement weapon systems. U.S. Forces must be able to defeat target acquisition, weapon guidance systems, and surveillance sensors across the electro-optical spectrum. These programs develop systems to provide large area and projected obscuration across the spectrum from visual through infrared and millimeter wavelength radar. The technologies supported by this program enhance obscuration systems as combat multipliers.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Conducted and completed FOTOD Milestone A.	150			
Initiated and completed design testing of SOD alternatives.	100			
Conduct test and evaluation of SOD alternatives.		2230	1540	
Initiated and continue environmental studies.	300	200	200	500
Initiate and continue SOD and SOM visible items development.	3831	2696	17324	905
Conduct and complete SOD Milestone B.		300		
Initiate test and evaluation of SOM alternatives.			285	2010
Initiate and complete SOD visible Milestone C.			100	300
Initiate SOD infrared alternatives Milestone B.				150
Total	4381	5426	19449	3865

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**	**E79**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	5651	10714	6100	3872
Current BES/President's Budget (FY 2008/2009)	4381	5426	19449	3865
Total Adjustments	-1270	-5288	13349	-7
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings	-1270	112		
SBIR/STTR Transfer				
Adjustments to Budget Years		-5400	13349	-7

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
New OFS item										

Comment:

D. Acquisition Strategy Acquisition Strategy: The Advanced Component Development effort acquisition strategy uses full and open competition and cost plus fixed fee (CPFF) contracting to test and build multispectral grenades and pots.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

PROJECT
E79

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		JPM NBCCA, APG, MD		3831	2Q	2696	1Q	11424	1Q				17951	
Hardware Development	C/CPFF TBD							5900	3Q	905	1Q		6805	
Support Costs		RDECOM, ECBC, APG, MD			1Q								1133	
Subtotal:				3831		2696		17324		905			25889	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Environmental Tox Studies				300	2Q	200	2Q	200	2Q	500	2Q		1200	
Subtotal:				300		200		200		500			1200	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SOD Eng Design Test		OGA Various		100	2Q								100	
SOD Test & Evaluation		OGA Various				2230	2Q	1540	2Q				3770	
SOM Test & Evaluation		OGA Various						285	2Q	2010	2Q		2295	
Subtotal:				100		2230		1825		2010			6165	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

PROJECT
E79

Conduct/complete FOTOD Milestone A		JPMNBCCA, APG, MD		150	1Q								150	
Conduct/complete SOD, V1,2 Milestone B		JPMNBCCA, APG, MD				300	3Q						300	
Initiate/complete Milestone C, SOD Incr 1/2		JPMNBCCA, APG, MD						100	1Q	300	1Q		400	
Inititate Milestone B/ SOD/SOM IR		JPMNBCCA, APG, MD								150	1Q		150	
Subtotal:				150		300		100		450			1000	
Project Total Cost:				**4381**		**5426**		**19449**		**3865**			**34254**	

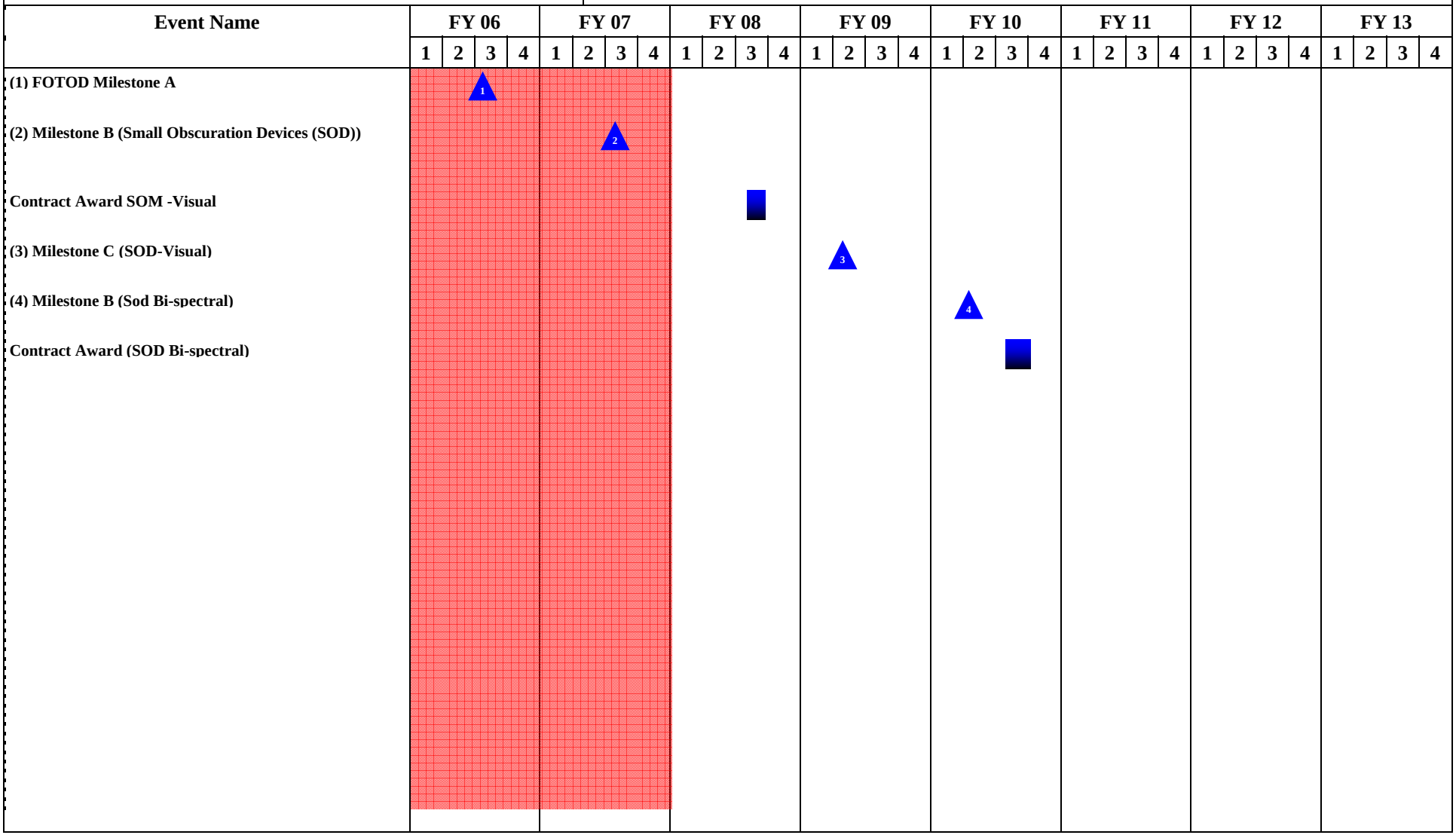
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

PROJECT
E79



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**	**E79**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FOTOD Milestone A	3Q							
Milestone B (Small Obscuration Devices (SOD))		3Q						
Contract Award SOM -Visual			3Q					
Milestone C (SOD-Visual)				2Q				
Milestone B (Sod Bi-spectral)					2Q			
Contract Award (SOD Bi-spectral)					3Q			

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**							PROJECT **E79**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Total Termination Liability Funding:								

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**

	COST (In Thousands)	FY 2006 Actual	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	8050	2572	44578	45733	71961	56698	107077	51079		387848
656	Mounted Combat System (MCS) Ammunition	8050	1286	44578	45733	71961	56698	107077	51079		386462
694	MEDIUM CALIBER AMMUNITION		1286								1386

A. Mission Description and Budget Item Justification: The Tank and Medium-caliber Ammunition (TMA) Program Element (PE) encompasses a comprehensive program to develop, rapidly transition to production, and field advanced tank, medium caliber, and other munitions. These programs will ensure continued battlefield overmatch and lethality of U.S. maneuver forces despite worldwide development and proliferation of enhanced armored vehicle protection technologies. To achieve this, TMA will identify and develop promising technologies through competitive development and streamlined acquisition procedures. All ammunition development funds within this PE are managed to facilitate transitions between phases, avoid administrative delays, and focus resources on the most promising areas.

FY 2008 supports the initiation of System Development and Demonstration (SDD) for the Mid Range Munition (MRM) for the FCS MCS. The MRM program has matured its technology and capability during Science and Technology phase, and has successfully completed the autonomous (April 2004) and designate (August 2006) guide-to-hit demonstrations in preparation for SDD. MRM is a significant contributor to the lethality and survivability of the MCS and Future Force. MRM will provide lethality capability at Beyond Line of Sight (BLOS) ranges (2-12km), which will expand the Maneuver Task Force Commander's battle space. MRM is the only Gun-Launched, Beyond Line of Sight (BLOS) solution that supports the FCS Brigade Combat Team (BCT). Initiation of MRM SDD in FY 2008 is critical to force effectiveness reinforcing the BLOS capability by increasing FCS Lethality and Survivability. MRM supports and allows the FCS to meet KPP#3, Networked Lethality.

Starting in FY 2012, funding supports MRM and SDD initiation of the Advanced Kinetic Energy (AKE) cartridge. The AKE will provide the MCS with a unguided direct fire Line of Sight (LOS), fast response lethality to rapidly destroy threat targets in the close in fight from 0km to 2km. AKE will allow the MCS to defeat current and future threat Main Battle Tanks (MBT) with Explosive Reactive Armor (ERA) and meet the FCS LOS requirement as specified in the FCS ORD.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	8281			
Current BES/President's Budget (FY 2008/2009)	8050	2572	44578	45733
Total Adjustments	-231	2572	44578	45733
Congressional Program Reductions		-10		
Congressional Rescissions				
Congressional Increases		2600		
Reprogrammings	-231	-18		
SBIR/STTR Transfer				
Adjustments to Budget Years			44578	45733

Change Summary Explanation: Funding:

FY 2007: Congressional increases for Mid-Range Munition - CE - +$1.3M (Project 656) and High Burst Air Munition - +$1.3M (Project 694).

FY 2008: Funds increased (+$44.6M) for Mid-Range Munition.

FY 2009: Funds increased (+$45.7M) for Mid-Range Munition.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**	**656**

COST (In Thousands)		FY 2006 Actual	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
656	Mounted Combat System (MCS) Ammunition	8050	1286	44578	45733	71961	56698	107077	51079		386462

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project supports the development of ammunition for the Future Combat System (FCS) Mounted Combat System (MCS). The Mid Range Munition (MRM) is critical to FCS force effectiveness, reinforcing the Beyond Line of Sight (BLOS) capability, and allows FCS to meet Key Performance Parameter #3, Networked Lethality.

The MRM round is a precision-guided munition that provides the capability for the FCS BCT commander to both shape and set conditions in his battlespace to conduct decisive operations and destroy enemy forces by engaging moving and stationary targets throughout his area of operations. The MRM round will incorporate a seeker(s) that enables the munition to attack targets designated by the MCS or another remote (manned/unmanned) sensor, or autonomously attack targets if designation is lost or not available.

MRM is a first generation fire and forget gun-launched munition that is being developed to provide the Future Combat System (FCS) Mounted Combat System (MCS) with a BLOS capability. MRM is a precision-guided munition that provides a moving or stationary MCS the capability to engage and destroy moving and stationary enemy targets throughout his area of operations (2-12km (T) or 2-16km (O)) in a BLOS mode. MRM will have a seeker to enable it to engage designated targets or autonomously guide itself to and attack targets if designation is lost or not present.

There are three modes of operation when employing the MRM round: autonomous, designate, and designate only. The sensor/observer must decide which mode to use based on the factors of mission, enemy, troops, terrain, time, and civil considerations (METT-TC) and the commander's intent, in the Attack Guidance (AG) matrix. Autonomous shall be utilized when a sensor/observer does not want to give away his position, if a designator is not available or inoperative, or if intervisibility terrain lines prevent illumination of the target.

Prior to firing, integration of battlefield command and control information (range to target, laser designation code, etc) will be transmitted to the munition through a data link connecting the MRM to the MCS fire control system. Once fired, no further command and control from the MCS is required. The round will guide itself to the target using on board sensors or possibly a laser reflection with a properly encoded pulse rate. The munition will employ state-of-the-art kill mechanisms to achieve the highest probability of kill possible against a variety of armored targets. The technologies that provide both guidance and lethality shall be all weather and countermeasure resistant. Sensors for the Autonomous mode will also be enabled at a range that will reduce the probability of collateral damage.

FY 2008 supports the initiation of SDD for the MRM. The MRM will provide FCS MCS with a precision munition capable of hitting and killing all battlefield targets at BLOS ranges between 2-12km, increasing platform survivability and lethality, and expanding the Maneuver Task Force Commander's battle space. MRM supports FCS objectives of expanded battle space and multi-mission direct and indirect fire capability. MRM leverages state of the art sensor technologies to provide immediate, responsive fires to support Family of Vehicles or other scouts. MRM is the only demonstrated Gun-Launched precision, smart munition capable of meeting the BLOS requirements specified in the FCS Operational Requirements Document. MRM will allow the MCS to fire and kill with precision on the move, at high value moving or stationary armor targets.

Starting in FY 2012, funding supports MRM and SDD initiation of the Advanced Kinetic Energy (AKE) cartridge. The AKE will provide the MCS with a unguided direct fire Line of Sight (LOS), fast response lethality to rapidly destroy threat targets in the close in fight from 0km to 2km. AKE will allow the MCS to defeat current and future threat Main Battle Tanks (MBT) with Explosive Reactive Armor (ERA) and meet the FCS LOS requirement as specified in the FCS ORD.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
GPS and Anti-Jam Development	2033			
SAL Testing MRM Chemical Energy(CE)	1000			
Captive Flight Test MRM Chemical Energy	100			
Dual mode seeker integration (ARDEC, PM, Test Sites Contractor) MRM Chemical Energy	4917	1250		
MRM SDD Engineering Activities. Down-select to 1 Contractor scheduled for 4QTR-FY07. SDD startup in October 2007 (FY2008).			17841	17022
Software-Seeker Integration			9347	10091
Prototype Manufacture (various components, subsystems, systems and assemblies, inspections			7559	7597
Producibility			2019	3099
Initial Cartridge Integration Test			7812	
Follow-on Cartridge Integration Test				7924
Small Business Innovative Research/Small Business Technology Transfer Programs		36		
Total	8050	1286	44578	45733

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SSN: E88103 - Cartridge, MCS, Mid Range Munition (MRM)						24634	47624	61762	2013223	2147243
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing

Management										
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	98189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

C. Acquisition Strategy The Mid Range Munition (MRM) Program is currently in the Technology Development phase. MRM has achieved Technology Readiness Level 6 in both autonomous and designated firing modes, and will transition (Milestone B) to Systems Development and Demonstration (SDD) at the end of FY 2007. There are currently two competing technical concepts by Raytheon Inc. and Alliant Tech Systems. The down select from 2 competing companies to 1, is scheduled to occur by the end of the 4th QTR FY07. The SDD contract will contain priced production options. The MRM schedule coincides with the Mounted Combat System's (MCS) development schedule, supporting the Future Combat System (FCS) Initial Operational Capability (IOC) milestone. The SDD effort will integrate MRM into both the MCS and Evaluation Brigade Team. The recommended two phase acquisition strategy builds on the functionality of the previous phase. This two phase approach will reduce program risk for both the MCS and MRM by addressing integration issues and optimizing testing during the programs' SDD efforts. Phase I develops a Dual Mode capability cartridge that will be utilized to support MCS System level qualification testing for a Beyond Line of Sight mission with Spin Out enablers, and allows for Tactics, Techniques and Procedures (TTP) development and testing in support of FCS fielding. Phase I will be completed by FY 2011 (MS-C) and the exercising of the LRIP option will support MCS qualification, Limited

User Test and Live Fire Requirements. Phase II will leverage lessons learned during Phase I testing and continue to mature the Dual mode design by addressing integration, operational, and performance issues. Phase II will be completed by FY 2012 to allow production of a second generation MRM to support the fielding of the FCS.

This strategy will deliver a proven, fully capable multi-mode munition with validated TTPs that will fully meet the FCS MCS requirements and support the FCS IOC milestone.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603639A - Tank and Medium Caliber Ammunition

PROJECT
656

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MRM System Contractor	CPIF/AF	TBS						36350	2Q	37350	2Q	171830	245530	245530
Raytheon	SS-CPFF	Tucson, AZ	3709	5000	3Q	700	2Q						9409	9409
Electro-Radiation, Inc	SS-CPFF	Fairfield, NJ	2800	2033	3Q								4833	4833
PM-MAS	MIPR	Picatinny Arsenal, NJ				200	2-4Q	1266	1-4Q	1293	1Q	2929	5688	5688
Miscellaneous	MIPR	Multiple	1100	20	3Q			138	1Q	123	3Q		1381	1381
Alliant Tech Systems	SSCPFF	Clearwater, FL	3708										3708	3708
Subtotal:			11317	7053		900		37754		38766		174759	270549	270549

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
TACOM-ARDEC/Benet Labs	MIPR	Picatinny Arsenal, NJ	3100	695	2Q			4402	1Q	4495	1Q	10068	22760	22760
Subtotal:			3100	695				4402		4495		10068	22760	22760

Remarks: Not Applicable

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
YPG, ATC	MIPR	Yuma AZ/APG, MD	1430		1Q			1101	1Q	1124	1Q	9226	12881	12881
Army Research Lab	MIPR	Aberdeen PG, MD	1750	30	1Q	59	1Q	821	1Q	848	1Q	2400	5908	5908
Army Research Lab	MIPR	White Sands, NM						250	1Q	250	1Q	750	1250	1250
Redstone Arsenal	MIPR	Huntsville, AL	3400					250	1Q	250	1Q	750	4650	4650
Miscellaneous	MIPR	Multiple	1000	42	1-4Q								1042	1042
Subtotal:			7580	72		59		2422		2472		13126	25731	25731

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603639A - Tank and Medium Caliber Ammunition

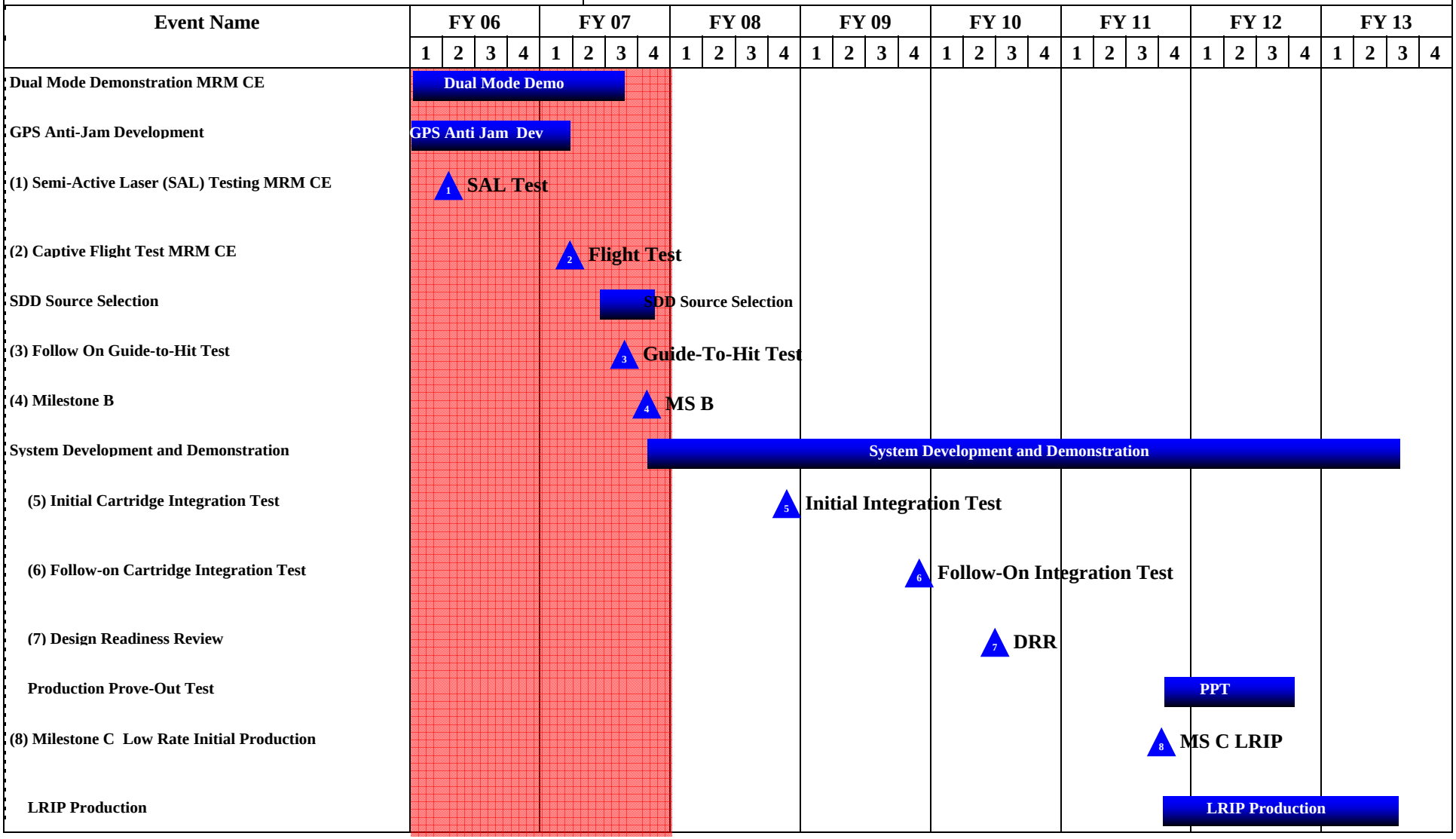
PROJECT
656

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MISCELLANEOUS	MIPR	Multiple	435	230	1Q	291	3Q						956	956
SBIR/STTR						36							36	36
Subtotal:			435	230		327							992	992
Project Total Cost:			**22432**	**8050**		**1286**		**44578**		**45733**		**197953**	**320032**	**320032**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**	**656**



Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603639A - Tank and Medium Caliber Ammunition

PROJECT
656

Event Name	FY 06				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	2	3	4
Limited User Test																										Limited User Test						

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**	**656**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Dual Mode Demonstration MRM CE	1Q - 4Q	1Q - 3Q						
GPS Anti-Jam Development	1Q - 4Q	1Q						
Semi-Active Laser (SAL) Testing MRM CE	2Q							
Captive Flight Test MRM CE		1Q						
SDD Source Selection		2Q - 4Q						
Release Request for Proposal		2Q						
Follow On Guide-to-Hit Test		3Q						
Milestone B		4Q						
System Development and Demonstration		4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
Initial Cartridge Integration Test			4Q					
Follow-on Cartridge Integration Test				4Q				
Design Readiness Review					2Q			
Production Prove-Out Test						4Q	1Q - 4Q	
Milestone C Low Rate Initial Production						3Q		
LRIP Production						4Q	1Q - 4Q	1Q - 3Q
Limited User Test							1Q - 2Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**

COST (In Thousands)		FY 2006 Actual	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
C03	INTERIM ARMORED VEHICLE (IAV) FAMILY	35360	8569	142486	108709						295124

A. Mission Description and Budget Item Justification: This project supports the development of the Family of Stryker vehicles. A critical need exists to improve the deployability and operational effectiveness of rapid response/early entry forces. The Stryker equipped Brigade Combat Team (BCT) will be capable of deployment to anywhere on the globe in a combat ready configuration. Immediate response by a lethal, versatile, tactically agile joint force capable of operational maneuver once in the Area of Operations is essential to fulfilling the warfighting needs of the U. S. Army. The Stryker family includes: Infantry Carrier Vehicle (ICV), Reconnaissance Vehicle (RV), Mobile Gun System (MGS), Mortar Carrier (MC), Commander's Vehicle (CV), Fire Support Vehicle (FSV), Engineer Squad Vehicle (ESV), Medical Evacuation Vehicle (MEV), Anti-Tank Guided Missile Vehicle (ATGM), and Nuclear/Biological/Chemical Reconnaissance (NBC RV). The use of a common platform/common chassis design reduces requirements for repair parts and logistics support in the area of operations. RDTE funding is for integration of the mission equipment packages that make each platform unique and effective, and for vehicle testing to include developmental, production qualification, live fire and initial operational test and evaluation.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue redesign efforts on the MGS, i.e., fire control target accuracy, brushless motors and reliability and maintainability (RAM) improvement. Sustain contractor support efforts to government testing for the MGS and NBCRV. Began development and engineering efforts of Block modifications: Survivability Enhancements to include SLAT/Stryker Reactive Armor Tiles(SRAT) armor for the MGS and NBCRV vehicles, Remote Weapon System (RWS) Block II efforts, Power Management initiatives - 500 Amp Alternator, and MGS Environmental Control. Undergo initial developmental and engineering efforts on Stryker's future enhancement programs in the area of Lethality i.e, Masted Sensor for the RV and FSV vehicles, Active Protection System (APS).	1769	1800	137686	75909
Government Testing of Vehicles: Completed all Production Qualification Testing (PQT) efforts. Began Live Fire Test and Evaluation (LFT&E) for both the MGS and NBCRV to include Coupon Testing, Ballistic Armor Characterization Testing (BAC), Control Damage Experiments (CDE), Automatic Fire Extinguishing System (AFES) testing and Full Up System Level (FUSL) testing. Initial Operational Testing and Evaluation (IOT&E) for the NBCRV is complete and a 2QFY07 date is scheduled for the MGS IOTE. All efforts are in preparation of a summer MS III decision.	32155	3028		27600
Government Systems Engineering and Program Management	708	250	4800	5200
Integration of M151E2 Protector on a Light Tactical Vehicle.		1450		
New technologies to include Open Architecture Electronic Enhancements to increase the Strykers' capabilities on the battlefield.		1800		
Small Business Innovative Research (SBIR)/Small Business Technology Transfer Program (STTR)	728	241		
Total	35360	8569	142486	108709

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	26332	5415	64372	88
Current BES/President's Budget (FY 2008/2009)	35360	8569	142486	108709
Total Adjustments	9028	3154	78114	108621
Congressional program reductions	-115	-96		
Congressional rescissions	-265			
Congressional increases		3250		
Reprogrammings	9408			
SBIR/STTR Transfer				
Adjustments to Budget Years			78114	108621

FY08/FY09: Funding increased to support development and engineering efforts for lethality and survivablity enhancements to the Stryker vehicle on the battlefield, to include the Mast Mounted Sensor Suite; APS (Active Protection System) which is an externally mounted vehicle protection system that identifies, discriminates and intercepts RPG threats. APS will increases Soldier survivability, protect the system & prevent IED hits along with improving mobility with weight reduction; and Power Management which address all current and future power needs including primary power generation, engine off/silent watch power and electrical storage to include Soldier Battery recharge and distribution.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PA, WTCV, G85100 Stryker	1318612	902500	1038984	447062	666078	663196	319474	59806	Continuing	Continuing

Comment: Expecting MS III decision in 4QFY07 for the remaining two Styker variants. Contract award for Full-Rate Production of those vehicle systems will follow immediately.

D. Acquisition Strategy FY06 and FY07 funding supports Live Fire and Initial Operational Test and Evaluation prior to MS III/full-rate production decisions for the NBCRV & MGS in 4QFY07. The NBCRV vehicle will continue Live Fire Testing through 3QFY07 and has completed IOTE testing. The MGS variant is scheduled to complete Live Fire Testing and IOTE in 2QFY07. FY08 and FY09 funding begins future enhancements to the various configurations within the Stryker Family of vehicles in the area of engineering and development efforts as the vehicles continue to be deployed.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)

PROJECT
C03

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Stryker Development/Engineering	CPAF	GDLS Sterling Heights, MI	333298	1248	2-4Q	3250	2-3Q	137686	1-3Q	75909	1-3Q		551391	551391
GFE	Requisitions	Various	851										851	851
Prototype Development (8)	Firm Fixed Price	GM GDLS DG L.L.C. Shelby, MI	29215										29215	29215
Training Devices	MIPR	PEO-STRI, Orlando, FL	11420										11420	11420
Miscellaneous Contractor Support			1246										1246	1246
SBIR/STTR			8959	728		241							9928	9928
Subtotal:			384989	1976		3491		137686		75909			604051	604051

Remarks: Stryker development/engineering supports the Stryker Family of Vehicles future enhancements efforts.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Other Gov't Agencies	MIPR	TACOM, Warren, MI / Various	17401	945	2-3Q			4800	1-3Q	4700	1-3Q		27846	27846
Source Selection Board		MIPR	2300										2300	2300
Subtotal:			19701	945				4800		4700			30146	30146

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Developmental System Testing	MIPR	ATEC, APG, MD/Various	102962	1697	1-2Q					10800	1-3Q		115459	115459
Fort Lewis Concept Prove Out	MIPR	BCT Materiel Dev Cell, Ft Lewis, WA	1118										1118	1118

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**

Procure Test/Evaluation Vehicles	Competitive / CPAF	General Motors/General Dynamics Land Systems Defense Group L.L.C. Shelby, MI	3735										3735	3735
Live Fire Test & Evaluation	MIPR	Army Test Center, Army Research Lab, Army Evaluation Center	18153	8553	2-4Q					3900	1-3Q		30606	30606
Initial Operational Test & Evaluation	MIPR	OTC, Ft. Knox, KY	62356	21481	2-4Q	3028	2-3Q			3700	1-3Q		90565	90565
Contractor Support to Test	CPFF	GM GDLS DG L.L.C. Shelby, MI	20998			1800	2Q			9200	2-3Q		31998	31998
Subtotal:			209322	31731		4828				27600			273481	273481

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
PMO	N/A	TACOM, Warren, MI	9087	708	1Q	250	1-2Q			500	1-2Q		10545	10545
PM Support (Contractor)	Competitive / Various	Warren, MI	2147										2147	2147
Subtotal:			11234	708		250				500			12692	12692
Project Total Cost:			**625246**	**35360**		**8569**		**142486**		**108709**			**920370**	**920370**

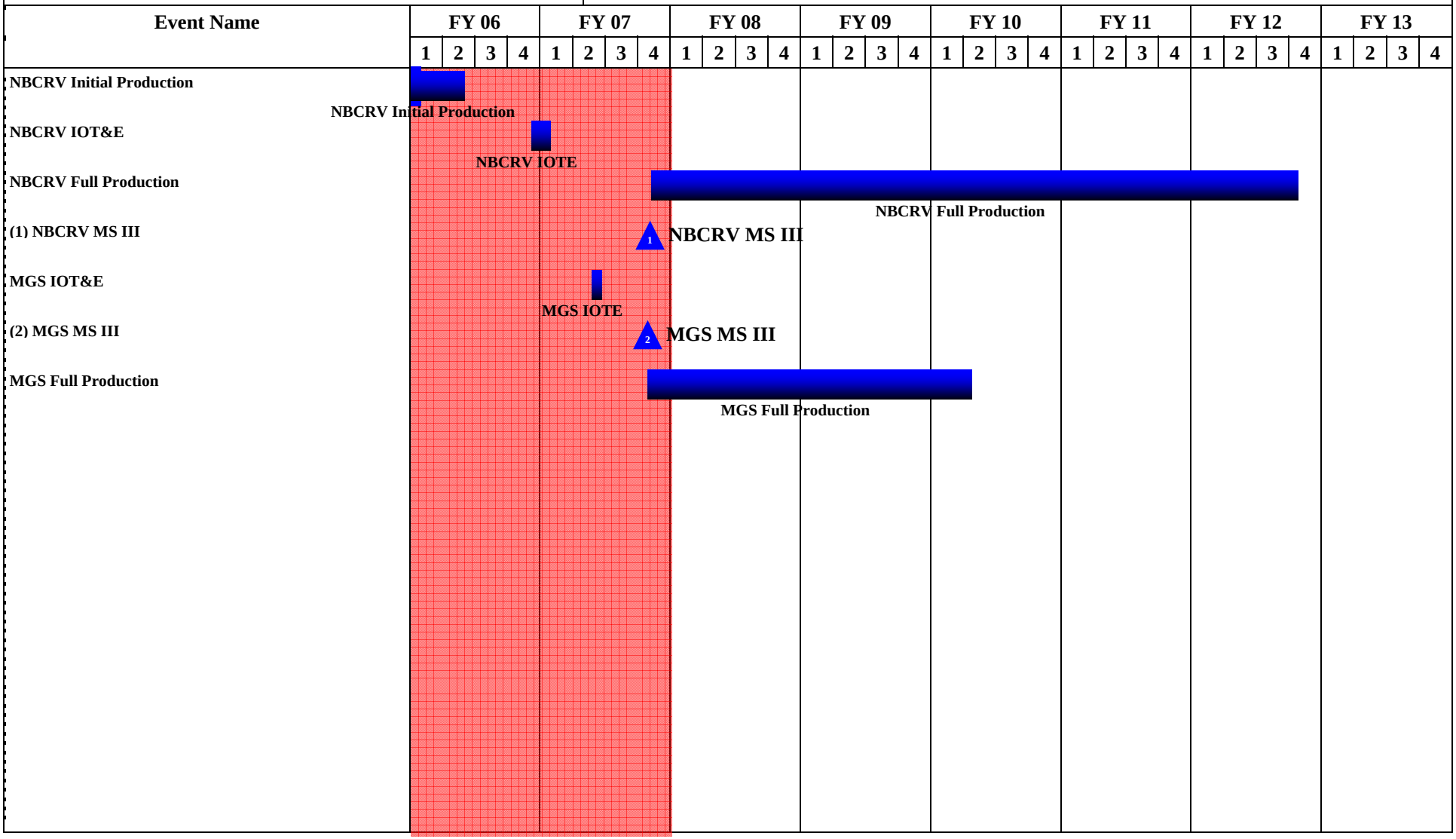
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)

PROJECT
C03



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)

PROJECT
C03

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MS II								
Stryker Initial Production								
IOC								
IOT&E								
MS III								
Full Production	1Q - 4Q	1Q - 4Q	1Q - 3Q					
NBCRV								
NBCRV IPR								
NBCRV Initial Production	1Q - 2Q							
NBCRV IOT&E	4Q	1Q						
NBCRV Full Production		4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
NBCRV MS III		4Q						
MGS Development								
MGS IPR (14)								
MGS Initial Production								
MGS IPR (58)								
MGS IOT&E		2Q						
MGS MS III		4Q						
MGS Full Production		4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q			
NBCRV IPR								
Planned NBCRV Milestone III	4Q							
MGS IPR (Lot 1 - 14 Vehicles)								
MGS IPR (Lot 2 - 58 Vehicles)								
Planned MGS Milestone III	4Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**

	COST (In Thousands)	FY 2006 Actual	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	33232	4330	4787	4912	5315	5405	4359	4462	Continuing	Continuing
610	FOOD ADV DEVELOPMENT	3233	2740	3795	3914	4315	4405	4359	4462	Continuing	Continuing
669	CLOTHING AND EQUIPMENT		8								7954
C08	RAPID EQUIPPING FORCE	29999	1582	992	998	1000	1000				43071

A. Mission Description and Budget Item Justification: This program element supports component development and prototyping for organizational equipment, improved individual clothing and equipment that enhance Soldier battlefield effectiveness, survivability, and sustainment. This program element also supports the component development and prototyping of joint service food and combat feeding equipment designed to reduce logistics burden. In FY06, Projects 669 and C09 transition to a new Program Element, 0603827A, Soldier Systems - Advanced Development.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	3344	2778	3833	3929
Current BES/President's Budget (FY 2008/2009)	33232	4330	4787	4912
Total Adjustments	29888	1552	954	983
Congressional Program Reductions	-15	-17		
Congressional Rescissions	-34			
Congressional Increases		1600		
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years	29937	-31	954	983

Change Summary Explanation:

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**

COST (In Thousands)	FY 2006 Actual	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
610 FOOD ADV DEVELOPMENT	3233	2740	3795	3914	4315	4405	4359	4462	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides for the advanced component development and prototyping of joint service food and combat feeding equipment designed to reduce the logistics burden and Operation and Support (O&S) costs of subsistence support to service personnel. Project supports development of rations and rapidly deployable field food service equipment. Project conducts demonstration and validation of improved subsistence and subsistence support items used to enhance soldier effectiveness and quality of life in all four Services, as part of an integrated Department of Defense (DoD) Food Research, Development, Test, Evaluation and Engineering Program. The Program is reviewed and validated twice annually by the DoD Combat Feeding Research and Engineering Board (CFREB) as part of the Joint Service Food Program. This project develops critical enablers that support the Joint Future Force Capabilities and the Joint expeditionary mindset by maintaining readiness through fielding and integrating new equipment. This equipment enhances the field soldier's well-being and provides the soldier with usable equipment, in addition to reducing sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, combat zone footprint, and costs for logistical support.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Based on warfighter recommendations; obtained COTS, NDI, and completed development of Unitized Group Ration (UGR) Heat and Serve (H&S) and A components (for UGR 2008 date of pack (DOP)) to improve the acceptability of the family of UGR. Down selected components via in-house technical panels and completed development of prototype UGR H&S and A menus. Completed draft procurement documents. Secured test site and transitioned to 6.5 for field testing in 1Q07. Completed accelerated development of the Unitized Group Ration-Express (UGR-E), a self-contained non powered hot group meal for remote units (i.e. warfighters). Successfully completed UGR-E producibility test and operational testing (OT). Completed procurement documents, initiated transition to DSCP. Completed development of Enhanced Box (E-Box) to augment UGR-E based on warfighter feedback from OIF/OEF and initiated transition to DSCP. FY07: Complete transition of all UGR-E procurement documents to DSCP. Complete UGR (H&S, A) component menu development to improve family of UGRs for FY09 date of pack. Based on warfighter recommendations, incorporate COTS, NDI, and developmental components into prototype menus. Complete draft procurement documents. Secure test site and transition to 6.5 for field testing. Complete development of dehydrated BIB (Boil-in-Bag) menu components for UGR H&S to enhance variety/acceptability incorporate into and transition to 6.5 for field testing. Complete development of Bakery Kit to augment UGR H&S with high quality, easy to prepare baked goods. Complete draft procurement documents and transition to 6.5 for field testing.	1098	1250		
FY08-09: Improve family of UGRs (H&S, A, B and E) to increase overall warfighter acceptability, and consumption for FY10-11 DOPs). Based on warfighter recommendations incorporate COTS, NDI, and developmental components into prototype menus. Select field test site, complete draft procurement documents and transition to 6.5 for field testing. Integrate state of the art packaging, chemical heating and combat ration processing technologies for improved operational and functional performance.			1119	1164
FY06: Completed development of the First Strike Ration (FSR) design for first on the ground first to fight. FSR reduces weight and cube by 50% ICW Meal, ready to Eat and provides eat o the move capability. Successfully completed producibility and assembly tests with industry. Completed procurement documents and operational testing. Developed/finalized FSR procurement management plan with DA G-4, USMC and DLA. Obtained OTSG approval for FSR as a restricted ration. FY07: Complete transition of all FSR procurement	715	321	317	163

documents to DSCP. Based on Marine Corps request select new components to expand FSR menu availability to improve overall acceptability and consumption. Evaluate new components for product improvement of Long Range Patrol (LRP) and Meal, Cold Weather (MCW). Develop prototype menus for FSR (2)/LRP/MCW. Select test site and complete draft procurement documents.FY 08: Complete initial development/integration of the Supplemental Improvement Pack (SIP) to augment Assault/Special Purpose Rations. SIP will contain components to increase caloric availability and improve warfighter cognitive/physical performance. Complete FSR/MSC/LRP component down select (COTS, NDI, developmental items and S&T transitions) and prototype menu development to improve quality, acceptability, eat on the move capability and consumption rate. Secure test site, complete draft procurement documents and transition to 6.5 for field testing. FY 09: Optimize developmental S&T components from NOFSR ATO projects. Design expanded FSR menus with developmental and non-developmental performance enhancing components. Evaluate developmental, non-developmental, and COTS components for modification and expansion of FSR menus based on Warfighter feedback. Complete prototype development and prepare for field testing of SIP. Secure test site, prepare draft procurement documents and transition to 6.5 for field testing.				
FY 06: Based on warfighter recommendations, obtained COTS, NDI and completed development of MRE components (for 2009 DOP) to improve acceptability, expand variety and improve consumption. Down selected components via in house technical panels, and completed development of prototype menus; completed draft procurement documents, secured test site and transitioned to 6.5 for field testing in FY07. Completed in house evaluation of improved cheese spread formulations which resists degradation effects of heat and transitioned to 6.5 for field testing. Completed operational testing of two alternative non-flammable gas producing flameless ration heaters and completed data analysis for Joint Service Operational Ration Forum decision 2Q07. FY 07: Validate new directional tear primary packaging film for MRE components to facilitate increased consumption by warfighters. Based on warfighter preferences incorporate COTS, NDI and developmental components (COTS, NDI, developmental), down select (for 2010 DOP), into prototype menu development. Complete draft procurement documents, secure test site and transition to 6.5 or 4Q07 field testing. FY 08: Complete validation of MRE directional tear primary packaging material, complete modification of draft procurement document and transition to 6.5 for 4Q08 field testing. Develop nanocomposite MRE packaging material (menu bag, primary ration component) to eliminate foil laminate, reduce weight and volume of packaging waste on the battlefield while maintaining barrier properties. Transition to 6.5 for field testing. Based on warfighter preferences incorporate COTS, NDI and developmental components (for 2011 DOP) into prototype MRE menus. Select field test site (4Q08) and complete draft procurements documents and transition to 6.5 for field testing. Integrate packaging/food processing S&T transitions to improve operational and functional performance.	388	928	834	
FY 09: Complete initial demonstration of multi-functional secondary packaging. Fabricate and evaluate prototype shipping containers. Begin producibility studies of optimized fiberboard. Evaluate components for improving the nutrition and variety of MARC and Kosher for Passover menus. Based on Warfighter preferences incorporate COTS, NDI and developmental components (for 2012 DOP) into prototype MRE menus. Select field test site (4Q09) and complete draft procurements documents and transition to 6.5 for field testing.				442
FY06: Developed, optimized and ruggedized Surface scanning Biosensor design with USDA. Completed case hardening for the rapid screening and detection of chemical agents and microbial contaminants/pathogens from whole foods. Awarded BAA contract to BioMachines to develop bioconjugated fluorescent dyes for increase signal generation. Completed field tests, prepared Technical Data Package and transitioned to Veterinary Command to support system procurement. Biosensor system will provide rapid detection, enhanced military field diagnostics capability, improved food safety, savings in labor, and reductions in ration discard losses.	363			
FY08: Conduct Producibility testing of MRE non-retort pouches fabricated from polymer nanocomposites. Complete package performance testing of non-retort nanocomposite pouches to include rough handling, permeability and storage stability. Incorporate novel state-of-the-art packaging materials into future combat ration packaging systems that offer low cost, enhanced performance capability, durability, reliability and barrier properties for product shelf life and survivability while achieving strategic military requirements.			235	

Optimize multi-layer nanocomposite structures/films and novel polymer matrices to provide improvement in key properties of morphological, mechanical, barrier, and thermal stability critical to combat rations and increased packaging performance capability. Quantify cost advantage over current from package down-gauging and elimination of specific materials. Complete performance based requirements document and transition to DSCP.				
FY08: Review and validate ice usage/consumption and scrub requirements for Battlefield Ice Supply System (BISS) with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI Bulk Ice Making and bagging Systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s). FY09: Award contract to design and fabricate prototype(s) and conduct contractor testing to validate stated performance requirements. Execute independent test and evaluation program plan. Prepare milestone documentation. Transition to 6.5			132	256
FY06: Completed provisions storage configuration study for the Littoral Class Ship U.S.S. Freedom (LCS-1). Made recommendations for chill/freeze provision storage optimization to meet the ships operational goals and objectives. Utilized a total systems approach in completing a modeling and simulation analysis of the galley, scullery, and storage space parameters for DD(X)/DDG-1000. Efforts support the Navy Standard Core Menu, production/work flow, manpower usage, equipment requirements and maintenance reductions. The new design was adopted by PEO Ships as a food service space consolidation effort to accommodate planned optimized crew sizes of the future. FY07: Recommend foodservice space consolidation and galley designs to support the Navy_s initiative of reduced crew size for future platforms, such as DD (X)/DDG-1000, LCS, and CG (X) and the CVN-78. Prototype models utilizing modular concepts based on service feeding requirements, equipment configurations, manpower usage, production flow, and maintenance requirements to ensure future galley designs meet future Navy transformation to the future. Optimize system design configuration for specific Naval system platform and transition to 6.5.	358	164		
FY06: Explored and applied cost effective technologies to extend the shelf life of highly perishable Fresh Fruits and Vegetables (FF&V) for military feeding systems. Conducted additional prototype testing in-house of polymer membranes to control atmosphere of FF&V commodity and down selected system to be used aboard Navy submarine fleet. Awarded 2nd Phase contract to Apio Inc. to develop membrane technology for the top 12 FF&V identified by Naval Supply Systems Command (NAVSUP). Conducted multiple field tests and user evaluations for to refine system. Demonstrated 400% shelf-life extension of single and case sized banana configurations and conducted extensive afloat field testing and user evaluations of selected items, broccoli, iceberg lettuce and bananas aboard the USS Reagan with positive results. Transitioned via performance specification to Navy for implementation.	111			
FY06: Provided technical support for the development, modernization and implementation of the Air Force Basic Expeditionary Airfield Resources (BEAR) field kitchen concept which consolidates existing Air Force Harvest Falcon, Harvest Eagle, 9-1 and 9-2 tent field kitchens. Kitchens reorganized and consolidated into the BEAR-(i) (Initial), which provides all food service requirements to support 550 airmen, and BEAR-(f) (Follow-on) platforms, which incrementally support food service requirements for 550 to 1100 personnel. Program provides cost savings and enhanced system capability through application/ integration of new, efficient, state-of-the-art electric food service equipment and food preparation technology to support Air Force requirements. Reviewed current assets, identified issues, use concepts, and selected equipment from the Navy_s Afloat 21 Program and commercial sources. Conducted extensive in-house testing and initial user testing of equipment at Air Force test sites and provided technical recommendations to Air Force on technical performance and integration. Evaluated equipment and provided commercial item descriptions for selected replacement systems based on Service operational requirements. Transitioned to 6.5 (AirForce, DLA, Natick).	200			
FY08: Complete upgrade to replace obsolete COMMZ kitchen and bakery with commercial food equipment to increase reliability,			157	

maintainability, and significantly enhance operational performance capability/ efficiency. Establish design system layout meeting established user requirements and install new COTS equipment. Simplify overall logistics footprint and reduce life cycle costs and training requirements by incorporating modular systems concept. Conduct test and evaluation; perform initial field testing to verify upgraded capabilities and transition to 6.5. Prepare performance specification and transition to the Navy.				
FY08: Integrate new technologies/automation concepts and food service equipment for galley serving lines. Designs must maintain high standards of food service and reduce labor/preparation time of food items for future Navy CVN-21 Platforms. Provide recommends to NAVSEA and NAVSUP for appropriate serving line automated systems to support galley feeding and self-service requirements, and transition to 6.5.			159	
FY08: Integrate technology advances for Smart Navy Galley in food service equipment automation by implementing Supervisory Control and Data Acquisition (SCADA) networking capabilities utilizing industry accepted North American Association of Food Equipment Manufacturers (NAFEM) protocols. Quantify functionality of Smart Process Control System as an enabler to minimize shipboard labor to prepare food products, perform management functions, improve meal scheduling/ production process, and minimize food service equipment maintenance requirements through an automatic internal diagnostics/ prognostics system. Food service equipment prototypes will be developed and operational testing will be conducted to validate the concept for shipboard transition into Smart Galley.			332	
FY08: Complete advanced development of an efficient Self-Powered Tray Ration Heater that produces its own electricity from the heat of combustion. A self-powered capability will improve overall operational flexibility and superior RAM characteristics as compared to battery/generator driven systems with added benefit of reduced weight, lower fuel consumption, and quiet operation while offering the same legacy performance characteristics including capacity, heat time, operational environment, size, weight, and cube. System will utilize standard commercial DC powered burner. Modify system prototype as required and verify capabilities of system to prepare Unitized Group Rations. Test and evaluate; and complete operational testing of system and refine as appropriate. Prepare joint service performance specification for transition to services for procurement.			377	
FY09: Review and validate DDG, CG, CVN, DDX, CGX, Littoral Class Ships (LCS) and Submarine refrigeration and ice consumption requirements with Navy. Perform market research and develop a Request for Proposal/Statement of Work (SOW). The SOW will provide detail requirements for the contractor to design and develop a prototype dual temperature modular system with ice making capabilities.				158
FY09: Conduct IPT meeting with NAVSEA and SUBLANT to determine galley requirements for Virginia Class submarines. Conduct market research with food service equipment manufacturers to identify hatchable/modular equipment suitable for submarines environment. Procure/evaluate any Commercial off the Shelf (COTS) equipment with potential for use on submarines.				236
FY09: Receive technology transition from S&T and SBIR based studies. Develop a Performance Specification to incorporate the technology to the preplanned product improvement for alternative power sources for the Multi Temperature Refrigeration Container System. Prepare contract for prototype.				206
FY09: Test and evaluate state of the art low solar absorbing coatings, super insulations, lightweight composite structural insulated panels, and alternative refrigeration cycle technologies that will lead to significant improvements in the fielded Advanced Design Refrigerator (ADR300). This program will reduce internal airlift footprint requirements by increasing the operational volume using the same air transportation footprint for the current design. Update the performance specification with the Air Force Basic Expeditionary Airfield Resources (BEAR) customers, and prepare the scope of work for an R&D contract. Evaluate state of the art insulation technology, which will provide significant improvements in refrigeration efficiency, thermal insulation performance, and reduction in overall logistics cube. Perform market research, and develop a statement of work (SOW) for a 2-year R&D contract award. The SOW will identify detail				301

requirements for the contractor to: complete design of the system, develop a system prototype, and verify capabilities of system.				
FY09: Scrub Mobile Refrigeration Trailer System (MRTS) requirements with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI trailer mounted refrigeration systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s). Transition to 6.5				263
FY08: Review and validate ice usage/consumption and scrub requirements for Battlefield Ice Supply System (BISS) with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI Bulk Ice Making and bagging Systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s). FY09: Award contract to design and fabricate prototype(s) and conduct contractor testing to validate stated performance requirements. Execute independent test and evaluation program plan. Prepare milestone documentation.			133	256
FY09: Receive technology transition from S&T and SBIR based studies. Develop a Performance Specification to incorporate the technology to the preplanned product improvement for alternative power sources for the Multi Temperature Refrigeration Container System. Prepare contract for prototype.				206
FY09: Scrub Mobile Refrigeration Trailer System (MRTS) requirements with CASCOM and the Joint Service Community. Perform market research to evaluate existing COTS/NDI trailer mounted refrigeration systems. Develop a Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate MRTS prototype(s).				263
SBIR/STTR reductions		77		
Total	3233	2740	3795	3914

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0604713.548, Military Subsistence System	3224	3006	2501	2515	2154	2199	2174	2220	Continuing	Continuing
OPA 3, M65801, Refrigerated Containers	3872	5513	4220	13024	14463	14617	7192	5890	Continuing	Continuing

Comment:

C. Acquisition Strategy Project development will transition to System Development & Demonstration and production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603747A - Soldier Support and Survivability

PROJECT
610

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Joint Service Food/Combat Feeding Equipment	In-House	RDECOM, Natick, MA	23355	1234	1-4Q	986	1-4Q	1442	1-4Q	1487	1-4Q	Cont.	Cont.	Cont.
Joint Service Food/Combat Feeding Equipment	Contracts	Various	11622	1248	1-4Q	973	1-4Q	1462	1-4Q	1507	1-4Q	Cont.	Cont.	Cont.
Subtotal:			34977	2482		1959		2904		2994		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Joint Service Food/Combat Feeding Equipment	MIPR	DTC, Maryland & AEC, Virginia	5111	452	1-4Q	413	1-4Q	531	1-4Q	548	1-4Q	Cont.	Cont.	Cont.
Subtotal:			5111	452		413		531		548		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Combat Feeding Program Management	In-House	RDECOM, Natick, MA	1896	299	1-4Q	291	1-4Q	360	1-4Q	372	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR Tax						77	1-4Q						77	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

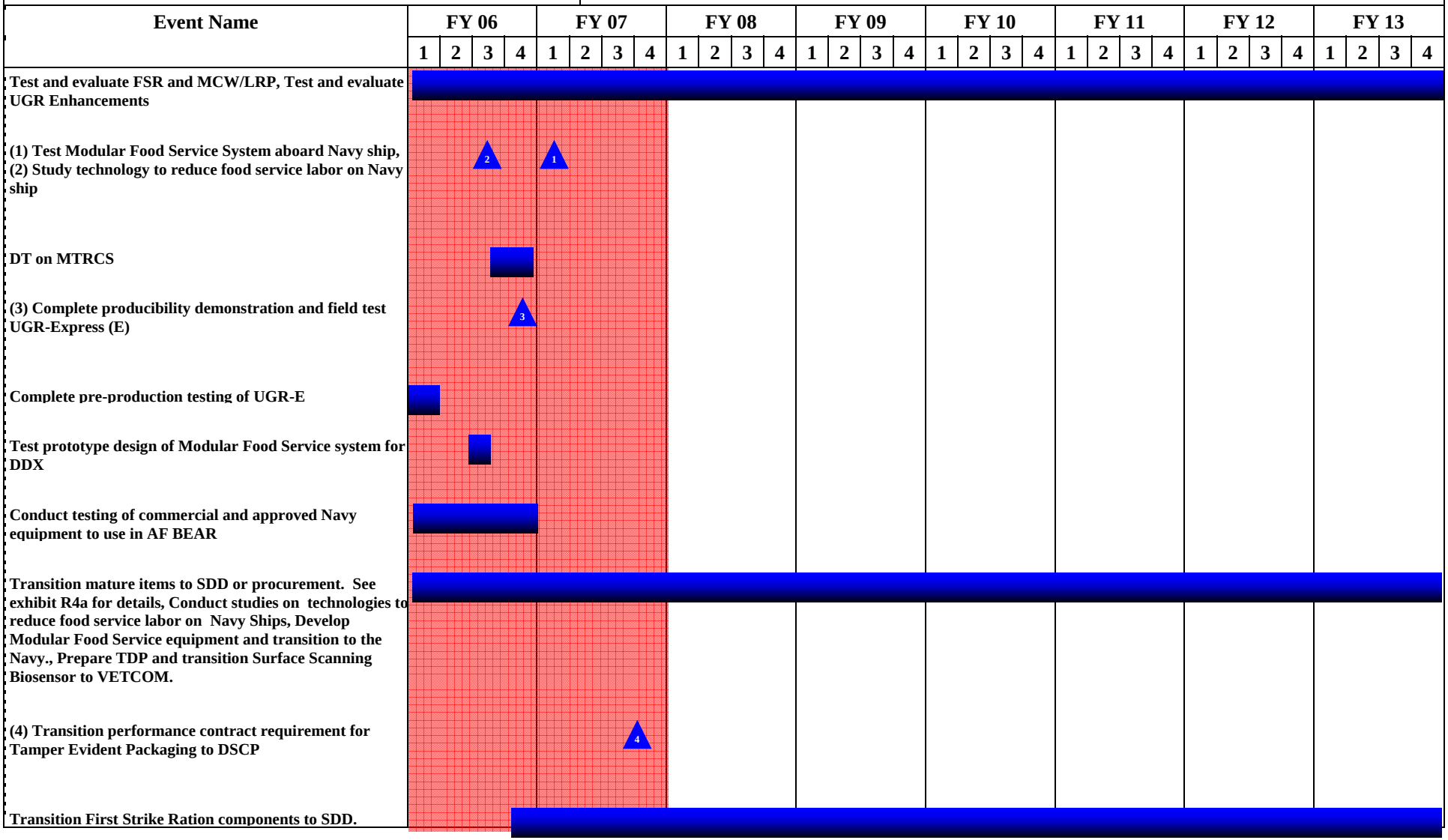
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**

Subtotal:	1896	299		368		360		372		Cont.	Cont.	Cont.
Project Total Cost:	**41984**	**3233**		**2740**		**3795**		**3914**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**



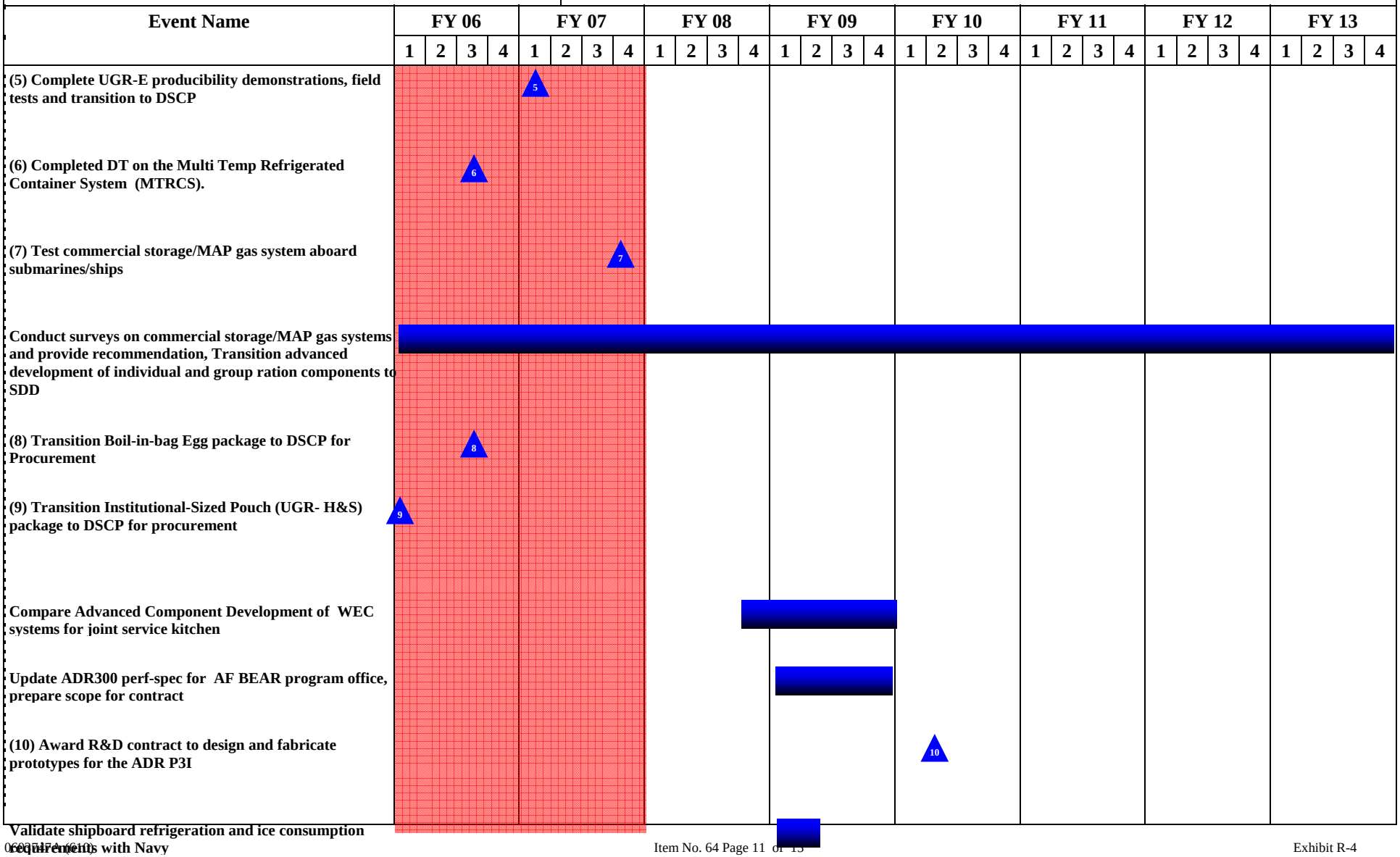
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603747A - Soldier Support and Survivability

PROJECT
610



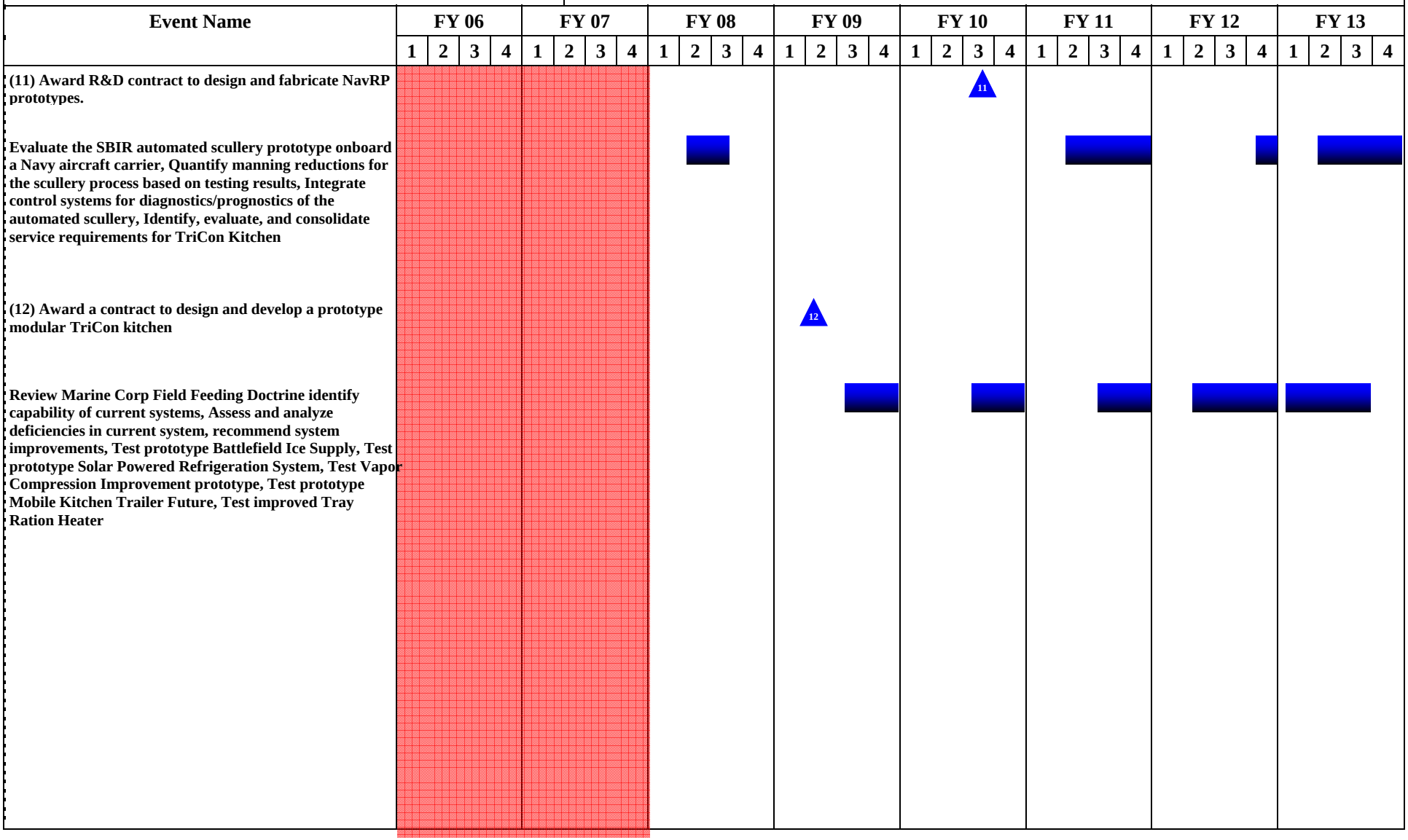
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603747A - Soldier Support and Survivability

PROJECT
610



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Test and evaluate FSR and MCW/LRP	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test and evaluate UGR Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test Modular Food Service System aboard Navy ship		1Q						
Study technology to reduce food service labor on Navy ship	3Q							
DT on MTRCS	3Q - 4Q							
Complete producibility demonstration and field test UGR-Express (E)	4Q							
Complete pre-production testing of UGR-E	1Q							
Test prototype design of Modular Food Service system for DDX	2Q - 3Q							
Conduct testing of commercial and approved Navy equipment to use in AF BEAR	1Q - 4Q							
Transition mature items to SDD or procurement. See exhibit R4a for details	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Conduct studies on technologies to reduce food service labor on Navy Ships		2Q - 4Q						
Develop Modular Food Service equipment and transition to the Navy.	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			
Prepare TDP and transition Surface Scanning Biosensor to VETCOM.		1Q - 3Q						
Transition performance contract requirement for Tamper Evident Packaging to DSCP		4Q						
Transition First Strike Ration components to SDD.	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Complete UGR-E producibility demonstrations, field tests and transition to DSCP		1Q						

Completed DT on the Multi Temp Refrigerated Container System (MTRCS).	3Q							
Test commercial storage/MAP gas system aboard submarines/ships		4Q						
Conduct surveys on commercial storage/MAP gas systems and provide recommendation	1Q - 4Q							
Transition advanced development of individual and group ration components to SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Transition Boil-in-bag Egg package to DSCP for Procurement	3Q							
Transition Institutional-Sized Pouch (UGR-H&S) package to DSCP for procurement	1Q							
Compare Advanced Component Development of WEC systems for joint service kitchen			4Q	1Q - 4Q				
Update ADR300 perf-spec for AF BEAR program office, prepare scope for contract				1Q - 4Q				
Award R&D contract to design and fabricate prototypes for the ADR P3I					2Q			
Validate shipboard refrigeration and ice consumption requirements with Navy				1Q - 2Q				
Award R&D contract to design and fabricate NavRP prototypes.					3Q			
Evaluate the SBIR automated scullery prototype onboard a Navy aircraft carrier						2Q - 4Q		
Quantify manning reductions for the scullery process based on testing results							4Q	
Integrate control systems for diagnostics/prognostics of the automated scullery								2Q - 4Q
Identify, evaluate, and consolidate service requirements for TriCon Kitchen			2Q - 3Q					
Award a contract to design and develop a prototype modular TriCon kitchen				2Q				
Review Marine Corp Field Feeding Doctrine identify capability of current systems							2Q - 4Q	
Assess and analyze deficiencies in current								1Q - 3Q

system, recommend system improvements								
Test prototype Battlefield Ice Supply				3Q - 4Q				
Test prototype Solar Powered Refrigeration System					3Q - 4Q			
Test Vapor Compression Improvement prototype						3Q - 4Q		
Test prototype Mobile Kitchen Trailer Future						3Q - 4Q		
Test improved Tray Ration Heater						3Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Support Development - Adv Dev (TIARA)**	**907**

COST (In Thousands)		FY 2006 Actual	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
907	Tactical Surveillance Systems - TIARA	18027	19855	14423	9879	4385	2324	14950	8561		92404

A. Mission Description and Budget Item Justification: Integrate National and Theater capabilities into the tactical army architecture and force structure to support intelligence targeting and situational awareness. The mission is to define requirements and to get them integrated into the national/theater architectures/requirements and CONOPS. This involves an extensive amount of studies, simulations and experiments in coordination with multiple programs and commands. In the short term, the mission is to evaluate current National developmental technology and potential CONOPS then integrate these items into TENCAP systems/architectures/CONOPS. In the long run, the mission is to influence the type/direction of National technological/CONOPS development to meet future force requirements.

Capabilities developed will be incorporated into the Tactical Exploitation System (TES), Division TES (DTES), TES Lite, Future Combat System, and Distributed Common Ground System - Army (DCGS-A). Common Software Baseline addresses common Tactical Exploitation of National Capabilities (TENCAP) subsystems, planned improvements, key activities and ongoing/planned initiatives determined to have potential application to future national, theater and tactical intelligence, surveillance and reconnaissance capabilities.

FY08 Funding provides continuing development of Common Software Baseline and engineering efforts to support TENCAP.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Pursue technology to refine the TENCAP common baseline, fully exploiting national and theater capabilities to meet emerging worldwide contingency scenarios. Effort includes experimentation, Signals Intelligence (SIGINT), Imagery Intelligence (IMINT), communications, and Measurement and Signature Intelligence (MASINT) processing initiatives.	13902	15340	9773	5229
Support ASPO program management for administrative activities.	4125	4515	4650	4650
Total	18027	19855	14423	9879

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Support Development - Adv Dev (TIARA)**	**907**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	18637	20077	20580	22948
Current BES/President's Budget (FY 2008/2009)	18027	19855	14423	9879
Total Adjustments	-610	-222	-6157	-13069
Congressional Program Reductions		-222		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-610			
SBIR/STTR Transfer				
Adjustments to Budget Years			-6157	-13069

FY08 -FY 09: FY 08 decrease of $6.157 million and FY 09 decrease of $13.069 million was due to Departmental realignment of funds.

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

D. Acquisition Strategy As pioneers in streamlined acquisition, ASPO's success in delivering systems to warfighters is directly attributed to an environment emphasizing stable funding, low density acquisition, minimal use of MILSPECS, and managed competition. By influencing new technology direction, tailoring existing technology, leveraging the best commercial practices, and using commercial and government-off the shelf software, ASPO minimizes risk while maximizing efficiency. Government and contract personnel and facilities accomplish dedicated Integrated Logistics Support (ILS) for all systems through a coordinated effort.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603766A - Tactical Support Development - Adv Dev (TIARA)

PROJECT
907

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Common Baseline	SS/CPAF	Multiple	50968	13902	1-3Q	15340	1-3Q	9773	1-3Q	5229	1-3Q	Cont.	Cont.	Cont.
Subtotal:			50968	13902		15340		9773		5229		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ASPO Program Management	In House	ASPO, Alexandria, VA	12604	4125	1-4Q	4515	1-4Q	4650	1-4Q	4650	1-4Q	Cont.	Cont.	Cont.
Subtotal:			12604	4125		4515		4650		4650		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:			**63572**	**18027**		**19855**		**14423**		**9879**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Support Development - Adv Dev (TIARA)**	**907**

Event Name	FY 06				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	2	3	4
(1) Common Baseline									1																							
(2) ASPO Program Management									2																							

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Support Development - Adv Dev (TIARA)**	**907**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Common Baseline			1Q - 3Q					
ASPO Program Management			1Q - 3Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**

COST (In Thousands)	FY 2006 Actual	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
131 NIGHT VISION SYS A/DEV	6401	5278	3454	2605	5684	5808	6000	6100	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program addresses initiatives to develop and transition technologies from the laboratories and industry in order to improve fielded equipment in the current force as well as initiation, development, and engineering/program management support of systems for fielding to the Current, Modular, and Future Forces (FF). 3rd Generation Forward Looking Infrared (3rd Gen FLIR) high performance thermal imaging technology will allow significantly improved ranges for acquisition of enemy forces. A major thrust will be to transition technologies to acquisition programs that meet required, advanced sensor capabilities of the Modular Force, FF, and FCS requirements documents. This will include the ability for sensors to accomplish Advanced Unmanned Aerial Vehicle (UAV) Payload missions, and Close Surveillance Support System (CS3) for 360 degree situational awareness for vehicles. CS3 will allow vehicle occupants to see outside the vehicle in day or night without the blind spots created by armor. This will allow much improved maneuvering in urban/complex terrain, tracking of friendly soldiers and vehicles, and detection and engagement of dismounted and vehicular threats. Overwatch and other technologies provide for detecting, classifying, and locating weapons based on firing signatures (snipers/hostile fires). Other emerging concepts resulting from ongoing operations will be supported by this program, to include route reconnaissance for road hazards, battle damage assessment including decoy and camouflage detection, detection of threat soldiers carrying Rocket Propelled Grenades (RPGs), and identification of Improvised Explosive Devices (IED) and suicide bombers.

FY 2008 funding supports continuing 3rd Gen FLIR, Overwatch, and UAV Advanced Payloads efforts as well as emerging concepts for laser imaging, route reconnaissance, battle damage assessment, information on the firing of weapons (counter sniper/fires location and targeting), and detection of personnel with RPGs, IEDs, and suicide bombers.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Uncooled B-Kit - Extend uncooled focal plane array technology capability across multiple platforms to allow interchangeable parts for lower cost, weight, power, and volume. FY06 completed the transition of the Uncooled B Kit (UBK) effort to PE 0604710A Project DL70.	56			
Emerging Concepts - Explore a range of potential technologies for FCS and the Future Force that will enable route reconnaissance, battle damage assessment, and detection of threats.	556	557	480	480
UAV Advanced Payloads - Technology to sense the presence of personnel and man-made objects to include under natural foliage. Determine feasibility of integrating current processing technology development into Persistent Surveillance capabilities in-theatre and the Extended Range/Multi-Purpose (ER/MP) Program. This includes hyperspectral and laser imaging (Buckeye) for three dimensional display.	794	1209	778	575
Aided Target Recognition (ATR) - Technology to allow Current and Future Force to more effectively detect and recognize targets, and cross cue other sensors in a tactical environment. This effort defined technology, developed alternatives, and refined Army requirements. FY06 completed super resolution, video-based target tracking effort.	313			
Close Surveillance Support System (CS3) - Perform concept development and demonstrations for an unimpeded 360 degree view of the immediate area around the vehicle from any crew position for situational awareness and threat detection. FY07 activities include system design and vehicle integration assessment, demonstration testing, and preparation for a Decision Milestone. Integrated prototype systems,	958	1242		

and conducted Industry Rodeo in FY06 for requirements validation.				
3rd Gen FLIR - Initiate Concept and Technology Development for 3rd Gen FLIR, the next generation of advanced primary reconnaissance imaging systems for the Modular and Future Force, to include Future Combat System (FCS). Demonstration is scheduled for 3QFY06. Developed, procured, integrated, demonstrated and evaluated four (4) B kits in LRAS3 for feasibility. FY07 develop and procure four (4) pre-production grade B kits for 2QFY07 demonstration; transition to System Development and Demonstration (SDD) in PE 0604710A Project DL70.	1590	1000		
Overwatch - Transition OVERWATCH Advanced Concepts Technology Demonstration (ACTD) technology into current and future systems applications. FY06 supported ACTD demonstrations and evaluations. Developed draft MS B supporting documents and conducted market survey and evaluation of current industry capability. FY07 evaluate ACTD completion for potential SDD.	425	443		
Unattended Ground Sensors (UGS) Camouflaged Long Endurance Nano Sensors (CLENS) capability for through foliage surveillance. Completed study to determine adaptability to cave environments in FY06.	297			
Mini Synthetic Aperture Radar (SAR) Demo. Conduct a solicitation and/or demonstration of Mini SAR technologies to characterize current industry capabilities. This effort will inform the TUAV objective requirement and has the potential to enhance current SHADOW capabilities in theater. FY06 conducted a flight demonstration and data collection on three (3) lightweight SAR/GMTI systems to assess the technology maturity for application on Shadow 200 and FCS Class III UAV. FY07 plan to perform analysis for integration and demonstration with actual Shadow 200 UAV.	896	678		
Data Comms Package on Rapid Aerostat Initial Deployment (RAID). FY06 effort integrated and demonstrated a data communications relay on the existing RAID towers and aerostats to improve communications.	516			
Advanced Sensor Fusion - develop and demonstrate a fused/blended sensor including but not limited to image intensification, day camera, infrared, and multi function laser. These applications are intended for Common Sensor Payload improvements for the ARH-70A, ER/MP, and FCS Class 4, among other platforms.			2196	1550
Small Business Innovative Research / Small Business Technology Transfer Program		149		
Total	6401	5278	3454	2605

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	6787	5337	3481	2610
Current BES/President's Budget (FY 2008/2009)	6401	5278	3454	2605
Total Adjustments	-386	-59	-27	-5
Congressional Program Reductions		-20		
Congressional Recissions				
Congressional Increases				
Reprogrammings	-386	-39		
SBIR/STTR Transfer				
Adjustments to Budget Years			-27	-5

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0602709A/Night Vision and Electro-Optical Technology	30464	36203	24391	25662	26355	26877	26890	26917	Continuing	Continuing
PE 0603710A/Night Vision Advanced Development	91213	75615	35892	40114	40800	44209	45872	46958	Continuing	Continuing
PE 0604710A/Night Vision Devices Engineering Development	27753	41161	45619	29795	38163	36954	34200	34700	Continuing	Continuing
K38300 LRAS3	122041	178873	129951	131200	105500	106500	65507		Continuing	Continuing
G86100 Future Combat System			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
BA0330 TUAV	305174	35985	39527	215736	245656	60039			Continuing	902117
B00302 Advanced TUAV Payloads		33328	57915	67535	68617	59632	46244	38585	Continuing	Continuing
W61900 IAV	283307	159689	175975	125687	121707	90730	90572	71921	Continuing	Continuing
PE 654645 FCS (UGS)	2870086	2956921							Continuing	5827007
K31300 DVE	27080	42868	3000						Continuing	72948
D15402 Truck Utility Heavy Variant 10000 LB	1281393	1659007	596627	668548	721542	645437	721915	291141	Continuing	Continuing
D15900 Truck, Tractor, Line Haul M915A2	8153	138672	80000	10000	33000	33500	11827	13179	Continuing	Continuing
G85100 Stryker Vehicle	1318612	901635	1038984	447062	666078	663196	319474	59806	Continuing	Continuing

GA0700 M1 Abrams Tank (MOD)	593852	762392	608779	423985	397698	273538	241557	85999	Continuing	Continuing
GA0730 System Enhancement Pgm Sep M1A2	300000	870410	52928	155236					Continuing	1378574
G80716 Bradley Base Sustainment (M2A2)		345797	92924	275058	245518	280896	70200		Continuing	1310393
G80717 Bradley Base Sustainment (M2A3)	267628	12692810	47390	411244	445990	445911	633892	354873	Continuing	Continuing

Comment:

D. Acquisition Strategy The advances and improvements for cooled and uncooled thermal imaging sensors, radars, and Unattended Ground Sensors utilize various cost reimbursement development type contracts that were, and will continue to be, competitively awarded using best value source selection procedures.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603774A - Night Vision Systems Advanced Development

PROJECT
131

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
UAV Advanced Payloads	T&M, MIPR	Various	130	610	3Q	848	2Q	641	2Q	475	2Q		2704	
3rd Gen FLIR	T&M, MIPR	NVESD, Various	696	1308	2-3Q	753	2Q						2757	
Close Surveillance Support System efforts	T&M	Various	2075	791	2Q	897	2Q						3763	
Emerging Concepts efforts	T&M	Various	1252	360	2Q	360	2Q	360	2Q	360	2Q	Cont.	Cont.	
ATR/ATC Activities	MIPR	Various	462	252	2Q								714	
Uncooled B-Kit Evolution/Development	C/CP, MIPR	ADC, Newington, VA; Various others	3989	56	3Q								4045	
UGS/CLENS	C/CP	TBD		183	3Q								183	
Mini SAR Demo	CPFF	Various		673	3Q	370	1Q						1043	
Data Comms Package on RAID	T&M	Raytheon		404	3Q								404	
Overwatch efforts	MIPR and C/CP	Various		342	2Q	328	2Q						670	
Prior dem val efforts	Various	Various	38265										38265	
Advanced Sensor Fusion efforts	Various	TBD						1894	2-3Q	1281	2-3Q		3175	
SBIR/STTR						110							110	
Subtotal:			46869	4979		3666		2895		2116		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	1690	329	2Q	327	2Q	357	2Q	307	2Q	Cont.	Cont.	
Engineering Support	T&M	Various		524	2-3Q	378	2Q						902	
Engineering Support	FFP, T&M	CSC, Falls Church, VA, CACI. MITRE	4093										4093	
Matrix Support	MIPR	CECOM, Fort	2000										2000	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY: **4 - Advanced Component Development and Prototypes**

PE NUMBER AND TITLE: **0603774A - Night Vision Systems Advanced Development**

PROJECT: **131**

		Monmouth												
Subtotal:			7783	853		705		357		307		Cont.	Cont.	

Remarks: Historical Engineering Support and Matrix Support at Fort Monmouth was for TSP program, executed by PM SW in this project.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Demos and evals, various programs	MIPR	Various	2676										2676	
TSP Flight demos and assessments	MIPR	APG, MD and EPG, Ft. Huachuca, AZ	1515										1515	
CS3 Demo	MIPR	Various		175	4Q	90	3Q						265	
ATR	MIPR	APG		10	4Q								10	
UGS/CLENS	MIPR	APG		30	4Q								30	
Data Comms Package on RAID Demo	MIPR	Huntsville, AL		65	4Q								65	
Uncooled B Kit Eval	MIPR	TBD				90	3Q						90	
3rd Gen FLIR	MIPR	APG		40	3Q								40	
UAV Advanced Payloads Eval	MIPR	TBD				180	3Q						180	
Mini SAR Demo	MIPR	TBD				285	3Q						285	
Transition Overwatch	MIPR	TBD				20	3Q						20	
Subtotal:			4191	320		665							5176	

Remarks: Prior demos and evals were for various programs, including systems transitioned to PEO Soldier management.

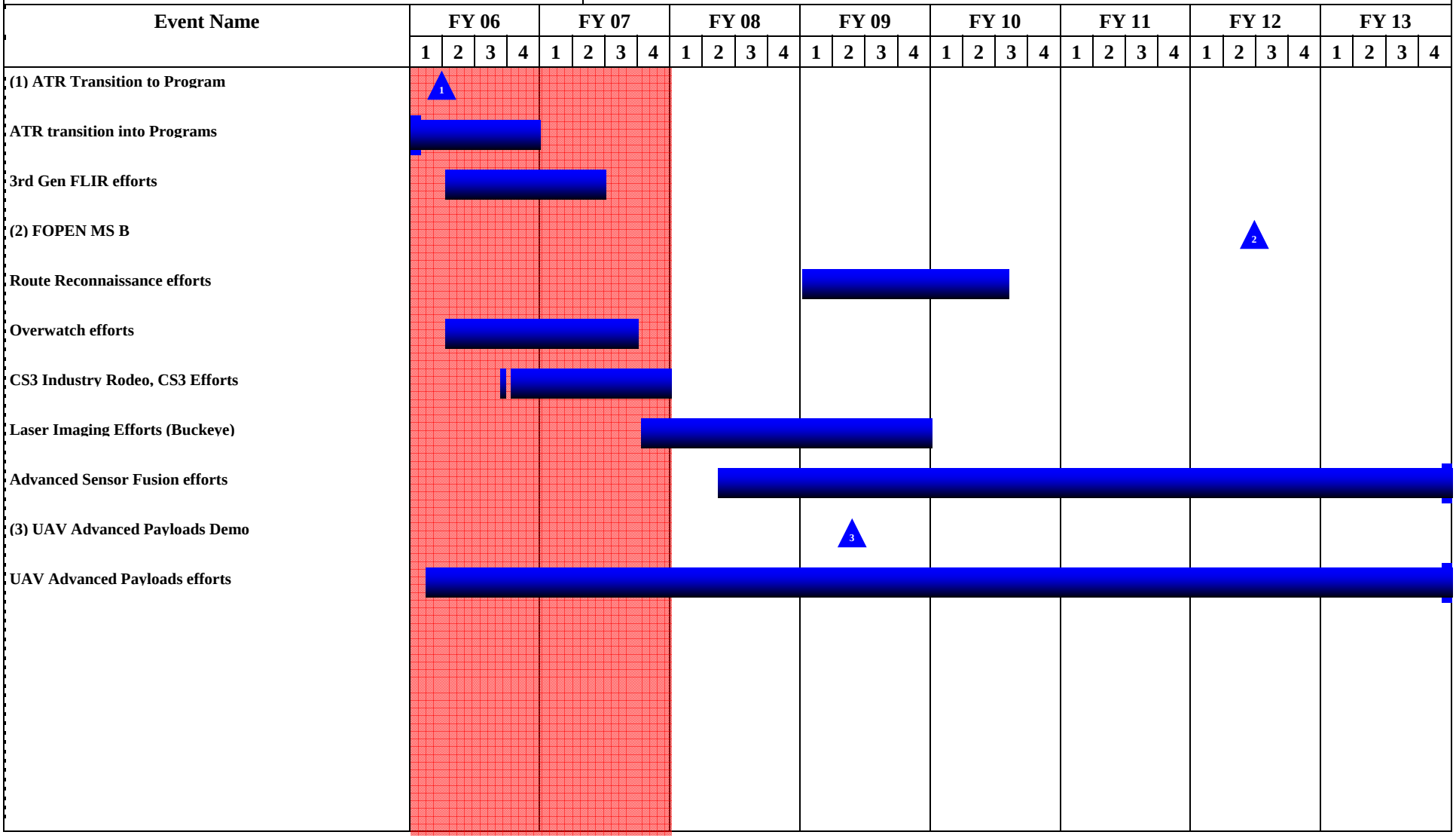
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management		PM-NV/RSTA, Ft. Belvoir, VA	850	249	1-4Q	242	1-4Q	202	1-4Q	182	1-4Q	Cont.	Cont.	
Subtotal:			850	249		242		202		182		Cont.	Cont.	

Project Total Cost:	**59693**	**6401**		**5278**		**3454**		**2605**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
ATR Transition to Program	1Q							
ATR transition into Programs	1Q - 4Q							
3rd Gen FLIR efforts	2Q - 4Q	1Q - 2Q						
FOPEN MS B							2Q	
Route Reconnaissance efforts				1Q - 4Q	1Q - 3Q			
Overwatch efforts	2Q - 4Q	1Q - 3Q						
CS3 Industry Rodeo	3Q							
CS3 Efforts	4Q	1Q - 4Q						
Laser Imaging Efforts (Buckeye)		4Q	1Q - 4Q	1Q - 4Q				
Advanced Sensor Fusion efforts			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
UAV Advanced Payloads Demo				2Q				
UAV Advanced Payloads efforts	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology Dem/Val**

	COST (In Thousands)	FY 2006 Actual	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	34252	24194	6149	5389	4848	4841	4947	5056	Continuing	Continuing
035	NATIONAL DEFENSE CNTR FOR ENVIRO EXCELLENCE-NDCEE	4752	5108	4860	4859	4848	4841	4947	5056	Continuing	Continuing
04I	TECHNOLOGIES TO REDUCE NON-HAZARDOUS WASTE	2492									4600
04J	ENVIRONMENTAL COMPLIANCE TECHNOLOGY VALIDATION	171									1433
E12	TRANSPORTABLE DETONATION CHAMBER VALIDATION	3834									7859
E14	ENVIRONMENTAL SECURITY INITIATIVE (CA)	959									959
E15	ARSENIC REMOVAL (CA)		1582								3498
E16	ABERDEEN PG ASBESTOS CONVERSION FACILITY (CA)	1342									2491
E17	ARMY ENVIRONMENTAL SOLUTIONS PROGRAM (CA)		989								3385
E19	SUSTAINABLE INSTALLATIONS INITIATIVE (CA)	2013	2126								5768
E21	POLLUTION PREVENTION TECHNOLOGY DEM/VAL			1289	530						1819
E23	ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) PILOT IN DOD	1916									3353
EN1	CASTING EMISSION REDUCTION PROGRAM (CERP)	4217									7571
EN4	PLASMA ENERGY PYROLYSIS SYSTEM (PEPS)	1342	989								2331
EN7	VANADIUM TECHNOLOGY PROGRAM	1438	1335								5648
EP1	ENVIRONMENTAL QUALITY TECH DEM/VAL (CA)	9776	12065								21841

A. Mission Description and Budget Item Justification: There is a broad application potential for environmental quality technology (EQT) to be applied to multiple Army weapon systems and installations. However, technology must be validated (total ownership cost and performance data identified) before potential users will consider exploiting it. Therefore, this program element includes projects focused on validating the general military utility or cost reduction potential of technology when applied to different types of infrastructure, military equipment or techniques. It may include validations and proof-of-principle demonstrations in field exercises to evaluate upgrades or provide new operational capabilities. The validation of technologies will be in as realistic an operating environment as possible to assess performance or cost reduction potential. EQT demonstration/validation is systemic; i.e., applies to a class of systems (e.g., tanks or aircraft) or to a Department of Army-wide, multiple site/installation problem (e.g., unexploded ordnance detection and discrimination). This program will address, and eventually resource, programs in each of the environmental quality technology pillars (restoration, conservation, compliance, and pollution prevention). Work must be endorsed by potential users and supported by a state-of-the-art assessment (i.e., technology is well-in-hand).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology Dem/Val**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	35255	5166	5171	5174
Current BES/President's Budget (FY 2008/2009)	34252	24194	6149	5389
Total Adjustments	-1003	19028	978	215
Congressional Program Reductions		-92		
Congressional Rescissions	-1003			
Congressional Increases		19300		
Reprogrammings		-180		
SBIR/STTR Transfer				
Adjustments to Budget Years			978	215

Change Summary Explanation:
FY 2007 - There were 11 congressional interest projects ($19,300,000) added (Vanadium Technology Program, Arsenic Removal, Plasma Energy Pyrolysis System, Regional Sustainability Solutions, Western Hemisphere Information Exchange Program, and Environmental Quality Technology Demonstration/Validation Adds (which includes the Strategic Biofuel Supply Program, Biowaste to Bioenergy, Mission Critical Environment, Safety and Occupational Health (ESOH) Technology Transition, Biodiesel Plastic Recycling for Reduction of Battlefield Clutter, No Rinse Decontamination of Battlefield Equipment, and HI Undersea Chemical Weapons Assessment Program).

FY 2008 - Adjustments are due to funds realigned to higher priority requirements, and to support the Sustainable Painting Operations for the Total Army (SPOTA) project, which addresses the Army Environmental Quality Technology highest priority requirement for Pollution Prevention.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology Dem/Val**	**035**

COST (In Thousands)		FY 2006 Actual	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
035	NATIONAL DEFENSE CNTR FOR ENVIRO EXCELLENCE-NDCEE	4752	5108	4860	4859	4848	4841	4947	5056	Continuing	Continuing

A. Mission Description and Budget Item Justification: The National Defense Center for Environmental Excellence (NDCEE) was established by Congress in 1990 with a directive to "serve as a national leadership organization to address high priority environmental problems for the Department of Defense (DoD), other government organizations, and the industrial community." The NDCEE Program is a national resource for developing and disseminating advanced environmental technologies. The NDCEE is used to demonstrate environmentally acceptable technology to industry; validate new technology prior to transferring that technology; and assist in the training of potential users as part of that technology transfer process. The NDCEE is a DoD resource for environmental quality management and technology validation. This program is managed by the Army on behalf of the Office of the Assistant Deputy Under Secretary of Defense for Environment (ADUSD-E).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Management and operations of the NDCEE by the prime contractor.	1800	2050	2112	2175
Industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis.	500	500	500	500
Conduct demonstration/validation of environmentally acceptable technologies that enhance military readiness and reduce production, operating, and/or disposal costs.	2244	2187	1998	1909
NDCEE Government program management during contract negotiations and execution and during project formulation, execution, and technology transfer.	208	228	250	275
Small Business Innovative Research/Small Business Technology Transfer Programs		143		
Total	4752	5108	4860	4859

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

C. Acquisition Strategy The NDCEE is a national asset focused on DoD applications that include technology transfer to appropriate DoD organizations. The NDCEE fosters an outreach program to describe its products and capabilities that include publication of results and participation in professional meetings, symposia, conferences, and appropriate coordination with industry. The management strategy for the NDCEE centers on a DoD Executive Advisory Board (EAB) chaired by the DoD NDCEE Executive Agent on behalf of the ADUSD (ESOH) and composed of senior DoD leadership to oversee NDCEE operations. The EAB is supported by an EAB Working Group (EABWG) that includes staff members from each of the offices represented on the EAB. The EABWG coordinates all NDCEE activities and reports back to the EAB Principals. The EABWG is, in turn, supported by a Technical Working Group (TWG) that addresses the details of NDCEE program execution. The contracting strategy of the NDCEE is based on using an NDCEE Contracting Officer's Representative to validate all the contractual portions of the NDCEE and by technical monitors (TM) to oversee the technical aspects of each

contracted task. A prime contractor operates NDCEE test facility(s) to validate environmentally compatible technologies on a representative "shop floor". The NDCEE accounts for and conducts work for: (1) direct funded Army tasks; (2) reimbursable tasks from within DoD and from other Government agencies; and (3) Congressionally directed and funded tasks.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603779A - Environmental Quality Technology Dem/Val

PROJECT
035

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Not applicable.														
Subtotal:														

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Technical Data	C; CPFF	Concurrent Technologies Corporation (CTC), Johnstown, PA	5100	2300	2Q	2550	2Q	2612	2Q	2675	2Q	Cont.	Cont.	Cont.
Subtotal:			5100	2300		2550		2612		2675		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Testing	C; CPFF	Concurrent Technologies Corp.	2466										2466	2466
Development Testing	C; CPFF	Concurrent Technologies Corp.	8227	2244	2Q	2330	2Q	1998	2Q	1909	2Q	Cont.	Cont.	Cont.
Subtotal:			10693	2244		2330		1998		1909		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology Dem/Val**	**035**

Program Management Support	Allotment	Office of the Assistant Sec Army (Installations and Environment)	2787	208	4Q	228	4Q	250	4Q	275	4Q	Cont.	Cont.	Cont.
Subtotal:			2787	208		228		250		275		Cont.	Cont.	Cont.
Project Total Cost:			**18580**	**4752**		**5108**		**4860**		**4859**		**Cont.**	**Cont.**	**Cont.**

Schedule Detail (R4a Exhibit)		February 2007
BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603779A - Environmental Quality Technology Dem/Val**	PROJECT **035**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology Dem/Val**	**E21**

COST (In Thousands)		FY 2006 Actual	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
E21	POLLUTION PREVENTION TECHNOLOGY DEM/VAL			1289	530						1819

A. Mission Description and Budget Item Justification: This project supports Advanced Component Development and Prototypes of reformulated surface coating materials for weapon systems production and maintenance operations. These materials will increase operational sustainment and warfighter training capabilities by reducing soldier health risks, environmental impacts and compliance enforcement actions against installations while increasing coatings performance and standardization across the Army. Together with project 0603804A, Logistics and Engineer Equipment _ Adv Dev (K42), this project transitions advanced technologies developed under 0603728A, Environmental Quality Technology Demonstrations (025). The project tests and evaluates Sustainable Painting Operations for the Total Army (SPOTA) at facilities that produce and maintain Combat Support/Combat Service Support systems, Ground Combat Vehicles and other Army equipment. The project expedites technology transition from the laboratory to operational use by demonstrating the capabilities of reformulated materials to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals and other technical data.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Qualify, validate and approve reformulated Chemical Agent Resistant Coating (CARC) systems and other non-CARC paints.			400	150
Qualify, validate and approve hazardous air pollutant (HAP) free solvents, thinners and cleaners.			350	150
Qualify, validate and approve chemical paint strippers containing no methylene chloride or other HAPs.			389	130
Qualify, validate and approve reformulated sealants and adhesives for high-use applications.			150	100
Total			1289	530

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0603728A, Environmental Quality Technology Demonstrations (025)	2979	3433	3532	3645	3725	3799	3883	3968	29023	57987
0603804A, Logistics and Engineer Equipment _ Adv Dev (K42)			6182	5241	3020	480			14980	29903
0605857A, Environmental Quality Technology Mgmt Support (06I)			351	275	280	68			977	1951

Comment:

C. Acquisition Strategy To be determined.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**

COST (In Thousands)	FY 2006 Actual	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
355 WIN-TACTICAL - DEM/VAL	91968	121798	222296	278893	303338	164319	67253	31287	Continuing	Continuing

A. Mission Description and Budget Item Justification: Warfighter Information Network - Tactical (WIN-T) is the Army's communications system for reliable, secure, and seamless video, data, imagery, and voice services that enables decisive combat actions. It will be focused on moving information in a manner that supports commanders, staffs, and tactical units - all highly mobile, agile, lethal, sustainable, and deployable. It will be optimized for offensive and Joint operations so that the theater combatant commander will have the capability to perform multiple missions simultaneously. WIN-T will provide the Commander/user within the tactical area of responsibility a mobile infrastructure that passes relevant information effectively and efficiently for combined arms capabilities in all required terrain and environmental conditions. WIN-T is implementing the GIG NetCentric Vision including Information Assurance and Network Centric Enterprise Services. In addition, WIN-T is a key component of the tactical GIG and enabler for Future Combat Systems (FCS). WIN-T provides for dynamic bandwidth and enabling formations On-The-Move (OTM). WIN-T replaces Mobile Subscriber Equipment (MSE), Tri-Services Tactical Communications (TRI-TAC) and Joint Network Node-Network (JNN-N).

FY2008 and FY2009 Funds Continue the System Development and Demonstration Phase

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Prepare technical assessment and research studies.	519	865	884	903
Prepare/coordinate contractual and milestone documentation, perform program support and management efforts, and conduct Preliminary Design Review (PDR) and Critical Design Review (CDR).	3579	5570	5753	5713
Continues System Development and Demonstration (SDD). The Prime Contractor and major subcontractors provide final architecture, Modeling and Simulation (M&S), preliminary design and critical design, and prototypes to support tests and milestone efforts.	73188	97461	199618	253000
Provide test support to include M&S and Engineering Development Test and Limited User Test.	6507	4046	4637	7825
Provide system engineering and technical support to the WIN-T program.	8175	10452	11404	11452
SBIR/STTR		3404		
Total	91968	121798	222296	278893

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	98057	158157	203075	248791
Current BES/President's Budget (FY 2008/2009)	91968	121798	222296	278893
Total Adjustments	-6089	-36359	19221	30102
Congressional Program Reductions		-35465		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-6089	-894		
SBIR/STTR Transfer				
Adjustments to Budget Years			19221	30102

Change Summary Explanation:
FY07 Congressional Program Reductions (-$35000); Economic Recission (-$465)
FY08 & FY09 Increase to fund program IAW the Army Cost Position

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
B79100 - WIN-Tactical Program (OPA)						225386	219314	446738	Continuing	Continuing

Comment: The WIN-T program is currently being rebaselined, the new strategy reflects the program entering the Production Phase in FY11.

D. Acquisition Strategy On 10 SEP 2004, the Defense Acquisition Executive (DAE) approved the combination of the two competing contractors teams. General Dynamics became the prime contractor with Lockheed Martin as a major subcontractor. Formal direction to start work on the combined approach was sent to both contractors on 15 SEP 2004. The Lockheed Martin contract was terminated for convenience on 26 SEP 2004.

The FY07 President's Budget resulted in near term Procurement funding being removed from FY06 through FY09, hence the Research Development Test & Evaluation (RDT&E) phase was extended resulting in funding that was increased to levels that exceeded the current Acquisition Program Baseline (APB) threshold. Concurrently, the Army Training and Doctrine Command (TRADOC) was directed to update the requirements document via a Capabilities Development Document (CDD). These combined events resulted in the submission of a Program Deviation Report (PDR) on 7 OCT 05. The Program Management Office (PMO) is currently undergoing a rebaseline and is assessing the impacts. A Defense Acquisition Board In Process Review (DAB IPR) was held on 21 SEP 06. A DAB IPR Follow-Up had been requested. In preparation for this follow-up meeting, a

second group of Army OIPT, ASARC and OSD OIPT meetings were held in OCT/NOV 06. These meetings were follow-up sessions to the DAB IPR held in SEP 06 and all discussed the issues raised at the DAB IPR.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL

PROJECT
355

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Phase 1 Pre Milestone B	CPFF/T&M	Lockheed Martin Integrated Systems & Solutions, Gaithersburg, MD	21185										21185	
Phase 1 Pre Milestone B	CPFF/T&M	General Dynamics C4 Systems, Taunton, MA	13306										13306	
Phase 2 SDD	CPFF/T&M	Lockheed Martin Integrated Systems & Solutions, Gaithersburg, MD	40770										40770	
Phase 2 SDD	CPFF/CPAF/T&M	General Dynamics C4 Systems, Taunton, MA	119425	73188	1-4Q	97461	1-4Q	199618		253000		Cont.	Cont.	
Subtotal:			194686	73188		97461		199618		253000		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
WIN-T Technical Assessment and Research Studies	Various	Various	1840	519	1-4Q	865	1-4Q	884		903		Cont.	Cont.	
Systems Engineering and Technical Support	Various	Various	22957	8176	1-4Q	10452	1-4Q	11404		11452		Cont.	Cont.	
Subtotal:			24797	8695		11317		12288		12355		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**

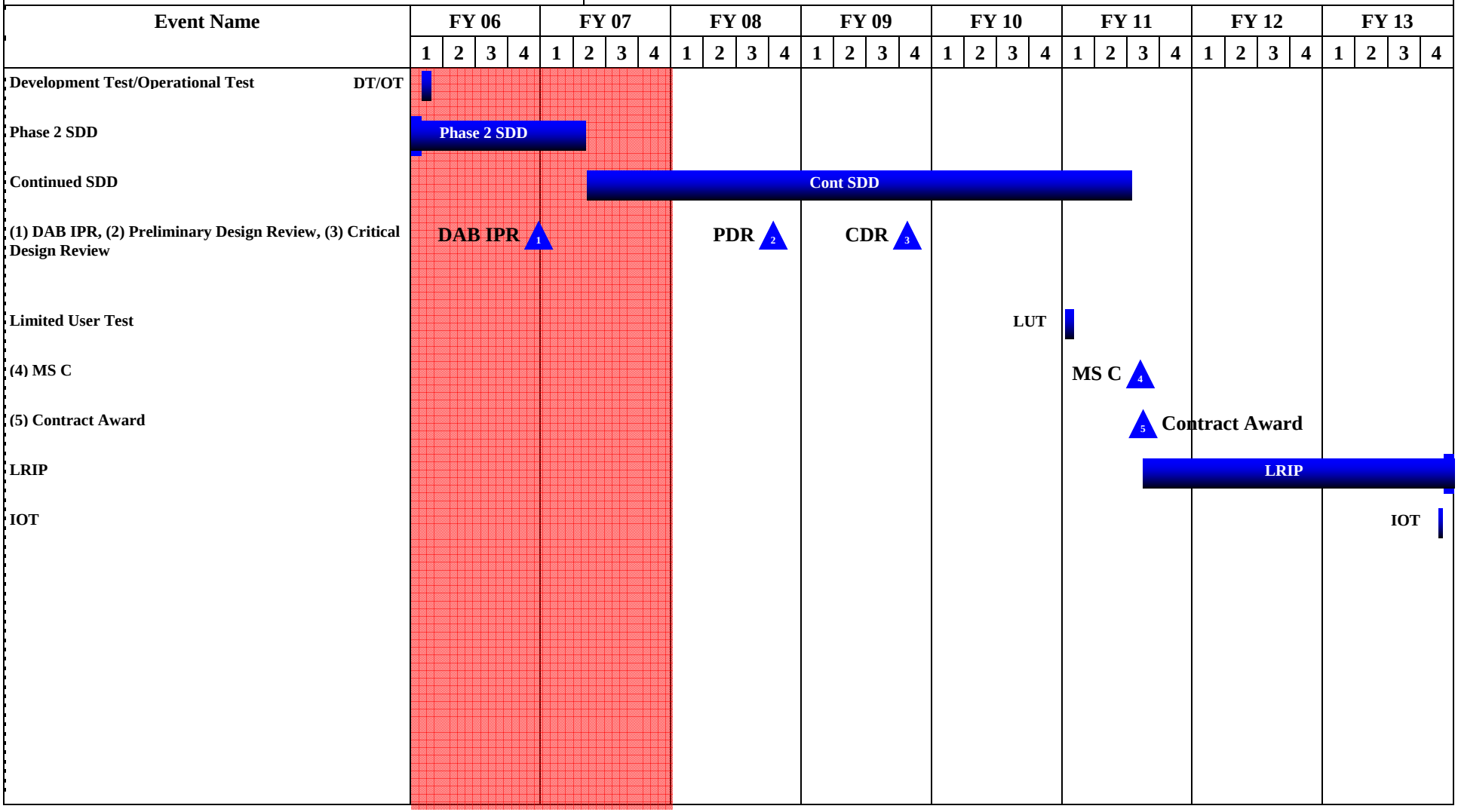
Modeling and Simulation and Testing	Various	Various	10622	6507	1-4Q	4046	1-4Q	4637		7825		Cont.	Cont.	
Subtotal:			10622	6507		4046		4637		7825		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Documentation Preparation & PM Support	Various	Various	7044	2195	1-4Q	3417	1-4Q	3555		3468		Cont.	Cont.	
Conducted Source Selection Evaluation Board and Conduct Should Cost Effort	Various	Various	326										326	
Travel, licenses, facilities, etc.	Various	Various	1731	329	1-4Q	1002	1-4Q	1023		1045		Cont.	Cont.	
MITRE Support	PWD	MITRE, Eatontown, NJ	4489	1054	1-4Q	1151	1-4Q	1175		1200		Cont.	Cont.	
SBIR/STTR						3404							3404	
Subtotal:			13590	3578		8974		5753		5713		Cont.	Cont.	
Project Total Cost:			**243695**	**91968**		**121798**		**222296**		**278893**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SDR								
Development Test/Operational Test	1Q							
Phase 2 SDD	1Q - 4Q	1Q - 2Q						
Continued SDD		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q		
DAB IPR	4Q							
Preliminary Design Review			4Q					
Critical Design Review				4Q				
Limited User Test						1Q		
MS C						3Q		
Contract Award						3Q		
LRIP						3Q - 4Q	1Q - 4Q	1Q - 4Q
IOT								4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

COST (In Thousands)	FY 2006 Actual	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
691 NATO RSCH & DEVEL	4548	4891	4959	5074	5168	5254	5355	5452		40701

A. Mission Description and Budget Item Justification: This program implements the provisions of Title 10 U.S. Code, Section 2350a, Cooperative Research and Development (R&D) Projects: Allied Countries. The objective is to improve, through the application of emerging technologies, the conventional defense capabilities of the United States and our cooperative partners, including the North Atlantic Treaty Organization (NATO), U.S. major non-NATO allies and Friendly Foreign countries. Through technology sharing and joint equipment development these projects help reduce U.S. acquisition costs and leverage important technologies for the Army Transformation and the development of the Future Combat system. Cooperative efforts also improve multinational force compatibility with potential coalition partners through the development and use of similar equipment and improved interfaces. The program focuses specifically on international cooperative technology demonstration, validation, and interoperability of Army weapon and command, control, communications and information (C3I) systems, including the NATO Defense Against Terrorism initiatives. Projects are implemented through international agreements with foreign partners that define scope, cost and work sharing arrangements, management, contracting, security, data protection and third party transfers. Funds are used to pay for only the U.S. work share that occurs in the United States at U.S. Government and U.S. contractors¿ facilities.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
International Agreement Tracking System (IATS)/International Online (IOL) Development and Implementation (including IOL conversion into STEM), NATO/International Cooperative R&D Policy Development, and Report to Congress Pursuant to 10 USC 2350a, prepare and provide to used(A&T) the Army section of the Report to Congress on the International Cooperative Research and Development Program.	802	805	810	815
Multilateral Interoperability Program (MIP) (Partners: Germany, France, United Kingdom, Canada, Italy): Continued integration work from the Command and Control Systems Interoperability Program (C2SIP) into an Advanced Concept Technology Demonstration (ACTD) to achieve NATO levels four (messaging) and five (database) interoperability and also extend the effort into a sustainable program to incorporate lessons learned into national systems.	500	640	650	665
Low Level Air Defense Interoperability (LLAPI) (Partners: Major NATO Allies): The objective of this program is to successfully demonstrate Command and Control (C2) interoperability among the participant nations' Short Range Air Defense (shared) assets for automated air picture exchange.	200	200	205	215
Network Enabled Shared Awareness (NESA) (Potential Partners: United Kingdom, France, Italy, Sweden, Spain and Germany) NESA would develop concepts, methods and standards that will make better use of existing information; share data in an interoperability environment; leverage national operational picture capabilities; and enable progressive development of interoperability of data, databases, applications and systems networks. NESA will show that information sharing can be accomplished through developing an architecture and interoperability framework (horizontal and vertical) needed to meet coalition operations and by rapid prototype and demonstrations of Net-Centric warfighter services. This project would produce a National Operational Concepts (OPCON) and CONOPS (BDE and below). The end result would be integration of national C2 and Net-Centric Systems of Record (SORs)into an NCES environment. Included would be a report on NESA military operational utility. This would provide architectures and seed funding to SORs to accelerate migration. Benefits would include lessons learned on NESA implications for coalition operations. Includes the studies and analysis Five-	500	502	512	520

Power SNR-A Network Centric interoperability project.				
Combat Identification (Partners: UK, Germany, France and Italy): Combat ID will pursue the extension of tasks required for implementing the associated NATO Standardization Agreement (STANAG 4579), allied participation in Coalition Combat ID Advanced Concept Technology Demonstrator (ACTD), will pursue the NATO Staff Requirement and a STANAG for the Dismounted Soldier ID.	100	100	100	100
Senior National Representatives (Army) (SNR-(A)) Projects (Partners: France, Germany, United Kingdom and Italy): Supports harmonization of programs at various levels: exchanging information, identifying knowledge gaps and conducting feasibility studies to further promote cooperative development; standardizing, fielding and roadmapping various processes; distributing the workload among the different nations. The Military Operation in Urban Terrain (mout) study will benefit the Five Power nations as they identify requirements and materiel solutions for Multinational forces in and around urban terrain. The Structured Technology Demo (STD) hosted by the U.S. reps to Land Group 6, NATO Army Armaments Group (NAAG), will provide and opportunity to observe and demonstrate the current and future capability of participating NATO nations with a view to assisting future operational and materiel interoperability. Army support of NAAG studies, analysis, and technology demonstrations including the Defense Against Terrorism (DAT) initiatives.	1100	1100	1120	1135
Technology Research and Development Projects (TRDP) (Partners: United Kingdom, Germany, France, Canada, Australia, Netherlands, Korea, Norway): The scope of this MOU encompasses R&D collaboration on basic, exploratory and advanced Land Warfare Concepts and Technologies that are focused on Future Combat System enabling technologies, the maturation of which may lead to the development of technologically superior conventional weapon systems.	926	940	945	950
Artillery Command and Control Interoperability (ASCA) (Partners: France, Germany, Italy, UK): The Participants in this program will develop an automated software interface between their national field artillery command and control systems. The nations will be able to receive and provide mutual fire support (i.e. cannon and rocket fire) in combined operations more rapidly and with minimal errors.	300	320	330	344
Joint Tactical Radio System (JTRS) (Partners: Japan, Sweden, UK): The participants in these programs will develop and implement Software-enabled radios as replacements to current radio systems. The projects shall be focused on maintaining interoperability as the countries pursue their own separate software radio programs. The project agreements (PAs) will include a joint development of software radio specifications, separate development and testing of software waveforms, and joint interoperability testing using the system assets developed as part of the agreements.	120	284	287	330
Total	4548	4891	4959	5074

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	4832	4946	5136	5235
Current BES/President's Budget (FY 2008/2009)	4548	4891	4959	5074
Total Adjustments	-284	-55	-177	-161
Congressional Program Reductions		-19		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-284	-36		
SBIR/STTR Transfer				
Adjustments to Budget Years			-177	-161

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

D. Acquisition Strategy All projects are test or technical demonstrations to feed into potential new requirements in support of Army Transformation to the Future Force or as product improvements to the Current Force.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603790A - NATO Research and Development

PROJECT
691

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Multilateral Interoperability Program (MIP)	CPFF	C3S, CSC Fort Washington, PA	961	150	1Q	150	2Q	155	1-2Q	160	1Q		1576	
International Agreement Tracking System (IATS) - Software Development	CPFF	JIL Information Systems Vienna, VA	1831	552	2Q	560	2Q	560	2Q	565	2Q		4068	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	552	115	1Q	115	1Q	120	2Q	125	2-3Q		1027	
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	415	346	2Q	342	2Q	345	2-3Q	350	2Q		1798	
Combat Identification	MIPR	CECOM, Ft. Monmouth, VA	812	25	1Q	25	1Q	25	2Q	25	2Q		912	
Simulation & C2 Information System Connectivity Experimentation (SINCE) - C2 Systems	MIPR	CECOM, Ft. Monmouth, VA	1557		1Q								1557	
Senior National Representatives (Army) (SNR[A])	TBD	TBD	3687	761	2Q	757	2Q	770	2Q	775	2-3Q		6750	
TRDP	TBD	TBD	312	300	2Q	300	2Q	310	1Q	315	1Q		1537	
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM, Ft. Monmouth, NJ	552	208	1Q	208	1Q	215	2Q	220	1Q		1403	
Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	150	120	1Q	114	1Q	121	1Q	153	1Q		658	
Subtotal:			10829	2577		2571		2621		2688			21286	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MIP	MIPR	CECOM Ft. Monmouth,	308	100	1Q	190	2Q	190	1Q	195	1Q		983	

		NJ												
IATS	MIPR	RDECOM, Ft. Belvoir, VA	416	126	1Q	125	2Q	125	1Q	125	2Q		917	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	285	41	1Q	41	2Q	45	1Q	50	1Q		462	
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	92	77	1Q	83	2-4Q	87	1Q	90	1Q		429	
Combat Identification	MIPR	CECOM Ft. Monmouth, NJ	464	25	1Q	25	2Q	25	1Q	25	1Q		564	
Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft. Monmouth, NJ	484		1Q								484	
SNR(A)	MIPR	TBD	796	169	1Q	169	2Q	175	1Q	180	1Q		1489	
TRDP	MIPR	TBD	313	300	1Q	300	2Q	310	1Q	315			1538	
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM Ft. Monmouth, NJ	119	46	1Q	66	2Q	70	1Q	75	1Q		376	
Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	75			95	2Q	100	1Q	112	1Q		382	
Subtotal:			3352	884		1094		1127		1167			7624	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MIP	MIPR	CECOM Ft Monmouth, NJ	247	150	1Q	150	2Q	150	1Q	155	1Q		852	
IATS	MIPR	RDECOM, Ft. Belvoir, VA	278	84	1Q	84	2-3Q	85	1Q	90	1Q		621	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	112	13	1Q	13	2Q	15	2Q	17	1Q		170	
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	AMSAA, Aberdeen Proving Ground, NJ	30	52	1Q	52	2Q	55	2Q	58	1Q		247	

Combat Identification	MIPR	CECOM Ft Monmouth, NJ	444	25	1Q	25	2Q	25	2Q		1Q		519	
Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft Monmouth, NJ	391										391	
SNR(A)	MIPR	TBD	508	113	1Q	113	1-2Q	115	1-2Q	122	1Q		971	
TRDP	MIPR	TBD												
ASCA	MIPR	CECOM Ft Monmouth, NJ	81	31	1Q	31	1Q	35	2Q	40	1Q		218	
Joint Tactical Radio System (JTRS)	MIPR	CECOM Ft Monmouth, NJ	22			38	2Q	33	2Q	40	1Q		133	
Subtotal:			2113	468		506		513		522			4122	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MIP	MIPR	PEO C3S, Ft. Monmouth, NJ	186	100	1Q	150	2Q	145	1Q	150	1Q		731	
IATS	MIPR	RDECOM, Ft. Belvoir, VA	135	41	1Q	41	2Q	50	1Q	55	1Q		322	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone, Ars, AL	174	31	1Q	31	2Q	25	1Q	30	1Q		291	
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	22	25	1Q	25	2Q	25	1Q	30	1Q		127	
Combat Identification	MIPR	CECOM, Ft. Monmouth, NJ	382	25	1Q	25	2Q	25	1Q	25	1Q		482	
Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM, Ft. Monmouth, NJ	292		1Q		1Q						292	
SNR(A)	MIPR	TBD	263	56	1Q	56	2Q	60	1Q	65	1Q		500	
TRDP	MIPR	TBD	155	326	1Q	339	2Q	325	1Q	330	1Q		1475	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

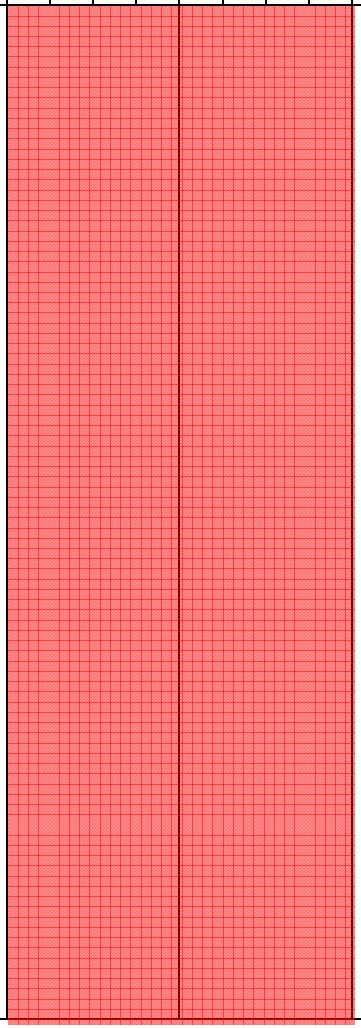
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM, Ft. Monmouth, NJ	39	15	1Q	15	2Q	10	1Q	12	1Q		91	
JTRS	MIPR	PM JTRS, Rosslyn, VA	27			38	2Q	33	1Q				98	
Subtotal:			1675	619		720		698		697			4409	
Project Total Cost:			**17969**	**4548**		**4891**		**4959**		**5074**			**37441**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

Event Name	FY 06				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	2	3	4



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603790A - NATO Research and Development

PROJECT
691

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Multilateral Interoperability Program (MIP)								
- Complete C2SIP ATCD								
- Complete Integration into MCS								
- Complete System Test and Report								
SINCE - C2 Systems								
- Interface/Network Definition								
- Complete Modeling and Simulation								
- Complete Demonstration								
- Final Report								
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)								
- Conclude International Agreement								
- Complete Requirements Definition								
- Develop Architecture								
- Complete Final Report	4Q							
Senior National Representatives (Army)								
- Mine Protection For Armored Vehicles (MPAV) Feasibility Study								
- Identify International Cooperative Opportunities								
International Agreement Tracking System (IATS) / International On Line (IOL)								
- Initial Operational Capability of IOL								
- Incorporate Tier II and Tier III IOL Requirements								
Engineer and Scientist Exchange Program (ESEP)								

- Identify and Complete ESEP Assignments								
Technology Research and Development Projects (TRDP)								
- Identify and Conclude TRDP Project Agreements								
Low Level Air Defense Interoperability (LLAPI)								
- Develop LLAPI								
Combat Identification								
- ACTD Demonstrator								
- Dismounted Soldier ID STANAG Development								
Artillery Command and Control Interoperability (ASCA)								
- Develop ASCA Interface								

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**

COST (In Thousands)		FY 2006 Actual	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		5384	9536	6481	7503	8738	8674	8044	9537	Continuing	Continuing
B32	ADV MAINT CONCEPTS/EQ	4422	9536	6481	7503	8738	8674	8044	9537	Continuing	Continuing
B45	AIRCREW INTEGRATED SYS-AD	962									7135

A. Mission Description and Budget Item Justification: This PE provides advanced development aviation support of tactical programs associated with air mobility, advanced maintenance concepts and equipment, and Aircrew Integrated Systems (ACIS). This program demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets developed enhance the functionality of current and future aircraft by improving the efficiency of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, enhance aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	7146	6542	6218	6757
Current BES/President's Budget (FY 2008/2009)	5384	9536	6481	7503
Total Adjustments	-1762	2994	263	746
Congressional Program Reductions	-72	-36		
Congressional Rescissions	-31			
Congressional Increases	1000	3100		
Reprogrammings				
SBIR/STTR Transfer		-269		
Adjustments to Budget Years	-2659	199	263	746

FY 07: $3.1 million increase for Aviation Ground Power Unit II;

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**	**B32**

COST (In Thousands)		FY 2006 Actual	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
B32	ADV MAINT CONCEPTS/EQ	4422	9536	6481	7503	8738	8674	8044	9537	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets developed enhance the functionality of current and future aircraft by improving the efficiency of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, enhance aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment. This program provides for development of rapid battle repair procedures, tools development to speed the return of aircraft to a full mission status and development of new equipment for aerial recovery of damaged aircraft. Included in this program are projects such as: diagnostics/prognostic monitoring systems, Battle Damage Assessment and Repair (BDAR) procedures and tools, support to modernized aircraft, Aviation Turbine Engine Diagnostics System (ATEDS), Flexible Engine Diagnostic System (FEDS), Unit Maintenance Aerial Recovery Kit (UMARK), Standard Towing System (SATS), Shop Equipment Contact Maintenance (SECM), Aviation -Sets, Kits, Outfits and Tools (A-SKOT) redesign, Aviation Vibration Analyzer II (AVA II) and development of the modular Aviation Ground Power Unit (AGPU), Generic Aircraft Nitrogen Generator (GANG), Aviation Intermediate Maintenance (AVIM) Shop Set used for performing intermediate and limited depot-level maintenance, and development support for tools needed to provide maintenance support to modernized/future force aircraft.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Aviation Turbine Engine Diagnostic System (ATEDS)	1065			
Battle Damage Assessment and Repair System (BDAR)		100	200	
Standard Aircraft Towing System (SATS)	110	310	813	
Generic Aircraft Nitrogen Generator (GANG)		100		
Flexible Engine Diagnostic System (FEDS) T-701 Engine		118		
FEDS Next Generation				533
Shop Equipment Contact Maintenance (SECM) Modernization	879	1346	1111	1377
Aviation Ground Power Unit (AGPU) II	1321	3100	800	1863
Unit Maintenance Aerial Recovery Kit (UMARK)		1200	1220	1092
Aviation - Sets, Kits, Outfits and Tools (A-SKOT)		1417	1475	1637
Aviation Vibration Analyzer II (AVA-II)	130			
Aviation Intermediate Maintenance (AVIM) Shop Set		538		
Management Support Services	107	332	190	218
Technical Engineering Services	700	581	542	633

RDT&E Project Test Support	110	125	130	150
Small Business Innovative Research (SBIR)/Small Business Technology Transfer Programs (STTR)		269		
Total	4422	9536	6481	7503

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Aircraft Procurement, Army(APA) SSN AZ3100	61349	59552	80221	104693	87152	65504	68745	96280	Continuing	Continuing

Comment:

C. Acquisition Strategy This project is an aggregate of advanced maintenance concepts-related projects. While the detailed acquisition strategy varies from project to project, the general strategy for each individual project is to complete the development effort through Government test (developmental and operational). Program documentation for milestone decision is prepared, as appropriate, concurrently with the development effort.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603801A - Aviation - Adv Dev

PROJECT
B32

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ATEDS - Multi Engine/Integration	Various	PIF, Redstone Arsenal, AL/Boeing/GE, Sikorsky/GE, Honeywell; PIF, Redstone Arsenal, AL	4582	1065	2-3Q								5647	5647
BDAR System	MIPR	PIF, Redstone Arsenal, AL				100	3Q	200	2Q				300	300
SATS	MIPR	Navy, Lakehurst, NJ	784	110	2Q	310	2Q	813	2Q				2017	2017
GANG	MIPR	AATD, Ft. Eustis, VA				100	2Q						100	100
FEDS T-701 Engine	MIPR	Navy, Lakehurst, NJ				118	2Q						118	118
FEDS Next Generation	MIPR	Navy, Lakehurst, NJ								533	2Q	Cont.	Cont.	Cont.
SECM	MIPR	PIF, Redstone Arsenal, AL	800	879	3Q	1346	2Q	1111	2Q	1377	2Q		5513	5513
AGPU II	Various	AM General, Detroit, MI/Solectra, Boston, MA, (Applied Geo Tech (AGT)/AAI Corp, Choctaw, MS	5803	1321	2Q	3100	2Q	800	2Q	1863	2Q	Cont.	Cont.	Cont.
UMARK	MIPR	ATTC, Ft. Rucker, AL / AEC, APG, MD / ATEC, Alexandria, VA				1200	3Q	1220	2Q	1092			3512	3512
A-SKOT	MIPR	PIF, Redstone Arsenal, AL / TACOM, Warren, MI				1417	2Q	1475	2Q	1637	2Q	Cont.	Cont.	Cont.
AVA-II	C/FP/Level of Effort	AMRDEC, Redstone Arsenal, AL	1333	130	4Q								1463	1463
AVIM Shop Set	MIPR	PIF, Redstone Arsenal, AL				538	2Q						538	538
Subtotal:			13302	3505		8229		5619		6502		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603801A - Aviation - Adv Dev

PROJECT
B32

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Technical Engineering Services	MIPR	AATD, Ft. Eustis, VA	4307	700	1-3Q	581	1-3Q	542	1-3Q	633	1-3Q	Cont.	Cont.	Cont.
Subtotal:			4307	700		581		542		633		Cont.	Cont.	Cont.

Remarks: None

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
RDT&E Project Test Support	MIPR	ATEC, Alexandria, VA	100	110	1-3Q	125	1-3Q	130	1-3Q	150	1-3Q	Cont.	Cont.	Cont.
Subtotal:			100	110		125		130		150		Cont.	Cont.	Cont.

Remarks: None

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Management Support Services	C/FP/ Level of Effort and InHouse	AGSE, Redstone Arsenal, AL & Science Applications Intl Corp, San Diego, CA	1890	107	1-4Q	332	1-4Q	190	1-4Q	218	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						269							269	
Subtotal:			1890	107		601		190		218		Cont.	Cont.	Cont.

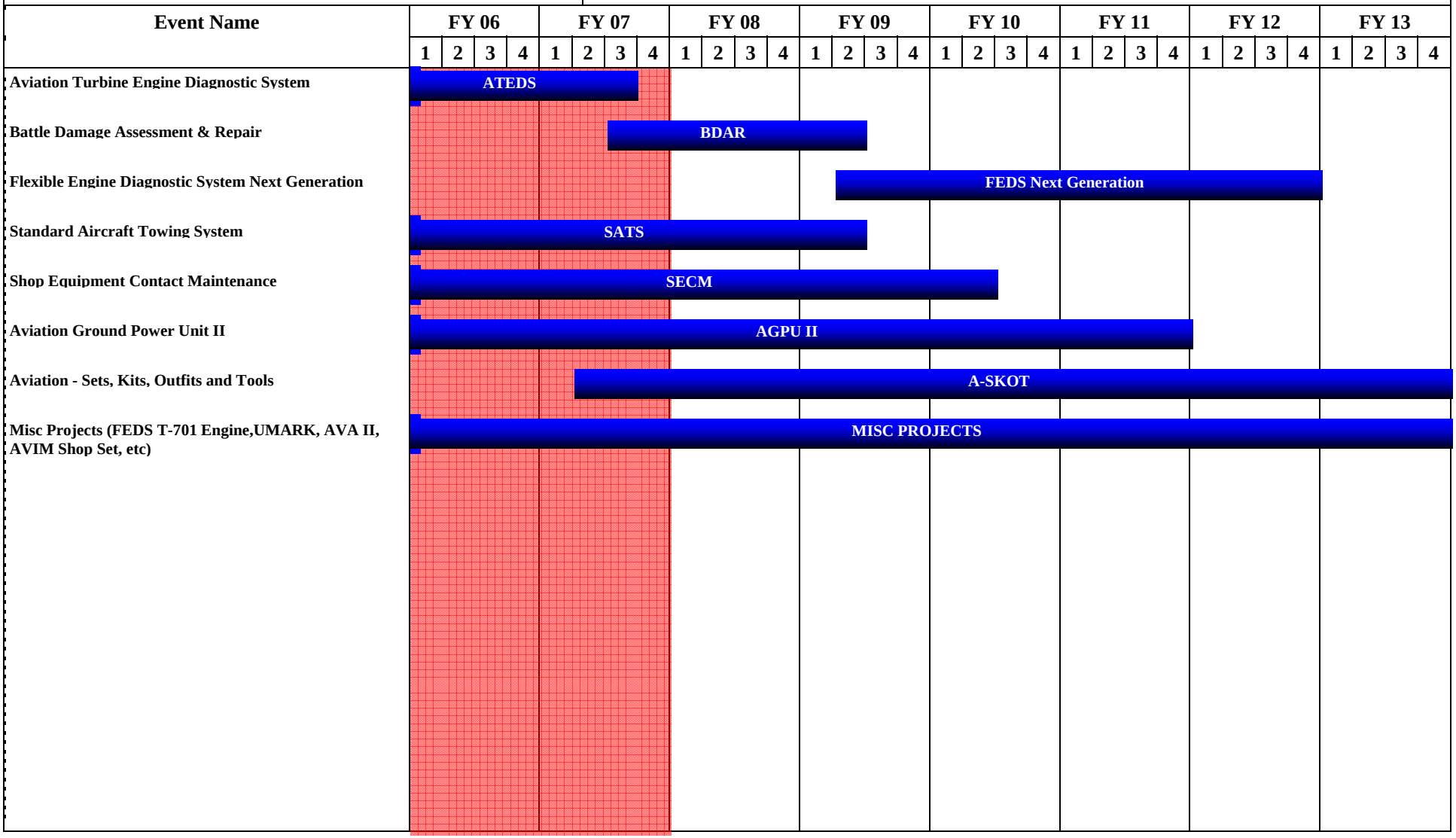
Remarks: None

Project Total Cost:			**19599**	**4422**		**9536**		**6481**		**7503**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**	**B32**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**	**B32**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Aviation Turbine Engine Diagnostic System	1Q - 4Q	1Q - 3Q						
Battle Damage Assessment & Repair		3Q - 4Q	1Q - 4Q	1Q - 2Q				
Flexible Engine Diagnostic System Next Generation				2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Standard Aircraft Towing System	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
Shop Equipment Contact Maintenance	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q			
Aviation Ground Power Unit II	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Aviation - Sets, Kits, Outfits and Tools		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Misc Projects (FEDS T-701 Engine,UMARK, AVA II, AVIM Shop Set, etc)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**

	COST (In Thousands)	FY 2006 Actual	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	12195	10103	27499	22237	29988	32111	15192	12417	Continuing	Continuing
526	MARINE ORIEN LOG EQ AD	2397	98	3079	3099	3104	3104	3071	3144		21096
G11	ADV ELEC ENERGY CON AD	1763	2030	3171	3390	2926	2942	1642	740	Continuing	Continuing
G14	MATERIALS HANDLING EQUIPMENT - AD	190	203	268	212						873
K39	Field Sustainment Support AD	5244	3230	12341	9853	17635	22731	5653	5533	Continuing	Continuing
K41	WATER AND PETROLEUM DISTRIBUTION - AD	2601	4542	2458	442	3303	2854	4826	3000		24026
K42	MATERIEL SUSTAINMENT SUPPORT AD			6182	5241	3020	480				14923

A. Mission Description and Budget Item Justification: This program element supports advanced component development and prototypes of new and improved technologies for combat support and combat service support equipment essential to sustaining combat operations. Advancements in watercraft, bridging, electric power generators and batteries, potable water, material-handling, environmental control, shelter systems, cargo aerial delivery, field service systems, mortuary affairs equipment and petroleum equipment are necessary to improve safety and increase the tactical mobility, operational capability, lethality and survivability on the digital battlefield and to provide for greater sustainment while reducing the logistics support burden.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	13184	13216	12692	13276
Current BES/President's Budget (FY 2008/2009)	12195	10103	27499	22237
Total Adjustments	-989	-3113	14807	8961
Congressional Program Reductions		-3039		
Congressional Rescissions	-989			
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years		-74	14807	8961

Change Summary Explanation:

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**526**

COST (In Thousands)	FY 2006 Actual	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
526 MARINE ORIEN LOG EQ AD	2397	98	3079	3099	3104	3104	3071	3144		21096

A. Mission Description and Budget Item Justification: This project supports advanced component development and prototype equipment for the Army's Logistics-Over-The-Shore (LOTS) missions. The primary mission of Army Watercraft Systems is inherently tied to the required capability to move tonnage/cargo from major sea going vessels to the shore in support of LOTS/Joint Logistic over the Shore (JLOTS) and various watercraft missions. The Army utilizes a combination of Modular Causeway Systems (MCS), Barge Derricks (BD), Barges, Landing Craft (Landing Craft Utility (LCU), Logistic Support Vessel (LSV), Landing Craft Mechanized (LCM-8) and Tug Boats to offload deep draft vessels. The time phased mix of numbers and types of vessels outlined are essential in maintaining a given level of capability to support JLOTS operations. This capability is only as strong as the weakest link and takes the full combination of all assets to accomplish.

Funding for the Joint Enable Theater Access-Seaports of Debarkation (JETA-SPOD) Advanced Concept Technology Demonstration (ACTD) will be used to support the Lightweight Modular Causeway System (LMCS) component of the program. This includes funding for LMCS core developmental requirements and Operational Testing/Military Utility Assessment (MUA) in FY08, and follow-on research and development funding to support the transition of LMCS to an acquisition Program of Record beginning in FY09. This funding will provide R&D of the full scale operational prototype in addition to a broader and more robust MUA designed to adequately test and assess the LMCS for military utility under the lead of the USPACOM ACTD Operational Manager (OM). Performance risk will be mitigated by ensuring the technology receives optimum test and evaluation to meet the warfighting operational requirements. Funding will also allow the development of an additional 50-60 foot section that will result in expanded technical development, testing, and utility assessment for the multiple operational uses and employment methods (eg. Army/Service Watercraft, JHSV, dry/wet gap crossings, and aerial delivery).

LMCS will optimize the throughput capabilities of the Joint High Speed Vessel (JHSV), current Army/USMC watercraft, and bridging requirements across extended mudflats/tidal estuaries by providing a more rapid and increased flow of combat power and sustainment through multiple austere theater access points. LMCS is transported on and rapidly employed by these vessels to provide the Joint and Combined force commanders a means to mitigate threat anti-access activities and increases flexibility to conduct operational maneuver from strategic distances. The ACTD complements the JHSV program by optimizing throughput and warfighting operational capabilities not currently available in support of Lines of Communication (LOC) in the theater of operations.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-FY09: JETA-SPOD	1800		2879	2824
FY06-FY09: Program Support.	335	96	200	275
FY06: HSV Demil,Completed Theater Support Vessel (TSV) advanced development to include programmatic documentation (i.e. TEMP, threat assessment, acquisition strategy, etc.)	212			
FY06 Medium Tug-Market Survey	50			
SBIR/STTR		2		
Total	2397	98	3079	3099

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 3, R97500, Causeway Systems	7103	8938							Continuing	Continuing

Comment:

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
526

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
TSV Studies/Development	PWD	Naval Underwater Warfare Center, Newport, R.I.	3286									Cont.	3286	
TSV - composite prototype hull design	MIPR	Naval Underwater Warfare Center, Newport, R.I.	4211										4211	
Medium Tug Market Survey	MIPR	TBS		50	2-3Q								50	
HCCC Design	PWD	TBD			1-2Q								300	
JETA-SPOD-Lightweight Modular Causeway System (LMCS)	MIPR	USAPACOM J14-12, Camp Smith, Hawaii		1800	1-2Q			2879		2824		Cont.	Cont.	
Subtotal:			7497	1850				2879		2824		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
TSV/Matrix Support	MIPR	TACOM CBU, Warren, MI	4366									Cont.	4366	
TSV - composite prototype hull design	MIPR	CASCOM, Ft. Lee, VA	5240									Cont.	5240	
TSV/Matrix Support	MIPR	TARDEC, Warren, MI/ICI	170										170	
TSV/In-house	MIPR	PM Force Projection, Warren, MI	2190									Cont.	2190	
TSV-Demil	MIPR	TACOM, PSID, Warren, MI		212	1-2Q							Cont.	Cont.	
JETA-SPOD-LMCS	MIPR	TACOM, PSID, Warren, MI			1-2Q		1-2Q					Cont.	Cont.	
Subtotal:			11966	212								Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
526

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
TSV	MIPR	DTC/ATEC, MD	1071									Cont.	1071	
TSV	MIPR	PM WIN-T	1500										1500	
HCCC	MIPR	USAFTCFE, Ft. Eustis, VA										Cont.	Cont.	
Subtotal:			2571									Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	MIPR	PM Force Projection, TACOM, Warren, MI	625	335		96		200		275			1531	
HCCC	MIPR	PM Force Projection, TACOM, Warren, MI										Cont.	Cont.	
JETA-SPOD-LMCS	MIPR	PM Force Projection, TACOM, Warren, MI										Cont.	Cont.	
SBIR/STTR						2							2	
Subtotal:			625	335		98		200		275		Cont.	Cont.	
Project Total Cost:			**22659**	**2397**		**98**		**3079**		**3099**		**Cont.**	**Cont.**	

Schedule Detail (R4a Exhibit)		February 2007
BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603804A - Logistics and Engineer Equipment - Adv Dev**	PROJECT **526**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**G11**

COST (In Thousands)	FY 2006 Actual	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
G11 ADV ELEC ENERGY CON AD	1763	2030	3171	3390	2926	2942	1642	740	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Mobile Electric Power (MEP) program was established by the Department of Defense to develop modernized, standard families of mobile electric power sources for all Services throughout the Department of Defense. This Project Office derives concept and technology developments that will improve the performance, mobility, readiness and survivability of the next generation power sources in support of all Services. It supports initiatives that are essential to the development and fielding to modernized Mobile Electric Power (MEP) sources from 0.5 KW to 750 KW that comply with environmental statutes and provide noise and signature-suppressed, energy efficiency, lightweight, deployable and reliable equipment. FY08 and FY09 will fund test and evaluation technologies for Small Tactical Electric Power (STEP) and initiate market survey and begin evaluation of components for Large Advanced Mobile Power Sources (LAMPS).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Continued Small Tactical Electric Power (STEP) proof of principle prototype development	1763			
FY07: Evaluate and conduct limited testing of specific commercial technologies for possible consideration as materiel solutions to STEP component and/or system level requirements.		1976		
FY07: Small Business Innovative Research (SBIR)		48		
FY07: Small Business Technology Transfer Programs (STTR)		6		
FY08: Conduct extensive test and evaluation of commercial technologies that are deemed to offer the best component and/or system level solutions for STEP.			2500	
FY08: Initiate market survey and begin evaluation of commercial components and system level solutions for the Large Advanced Mobile Power Sources (LAMPS).			671	
FY09: Begin development and limited testing and analysis of STEP components.				1535
FY09: Conduct engineering analysis of commercial components for LAMPS; define component performance parameters.				1855
Total	1763	2030	3171	3390

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDT&E:PE0604804A, Logistics and Engineer Equipment - Eng Dev L47			4465	5989	3500	1500				15454
RDT&E:PE0604804A, Logistics and Engineer Equipment - Eng Dev 194	3900	16826	8696	4402	1399	1400	2375	1552	Continuing	Continuing
OPA 3, Generators and Associated Eq. MA9800	65816	90789	92863	159816	142716	131504	131767	23601	Continuing	Continuing

Comment:

C. Acquisition Strategy Complete advanced development and transition to system development and demostration phase (Milestone B) and subsequent transition to production (Milestone C).

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
G11

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
STEP Components	MIPR	CECOM - Belvoir	971			891	1Q	450	1Q	500	1Q	Cont.	Cont.	
STEP Prototypes	MIPR	CECOM - Belvoir	880	1192	2Q							Cont.	Cont.	
LAMPS Components	MIPR	CECOM - Belvoir						400	1Q	450	1Q	Cont.	Cont.	
Subtotal:			1851	1192		891		850		950		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
STEP Components	MIPR	CECOM-Belvoir	670			981	1Q	600	1Q	600	1Q	Cont.	Cont.	
STEP Prototypes	MIPR	CECOM-Belvoir	400	271	1Q							Cont.	Cont.	
LAMPS Components	MIPR	CECOM-Belvoir						1000	1Q	1000	1Q	Cont.	Cont.	
Subtotal:			1070	271		981		1600		1600		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
STEP Components	MIPR	CECOM-Belvoir	789					250	2Q	340	2Q	Cont.	Cont.	
STEP Prototypes	MIPR	CECOM-Belvoir		150	2Q							Cont.	Cont.	
LAMPS Components	MIPR	CECOM-Belvoir						295	2Q	310	2Q	Cont.	Cont.	
Subtotal:			789	150				545		650		Cont.	Cont.	

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

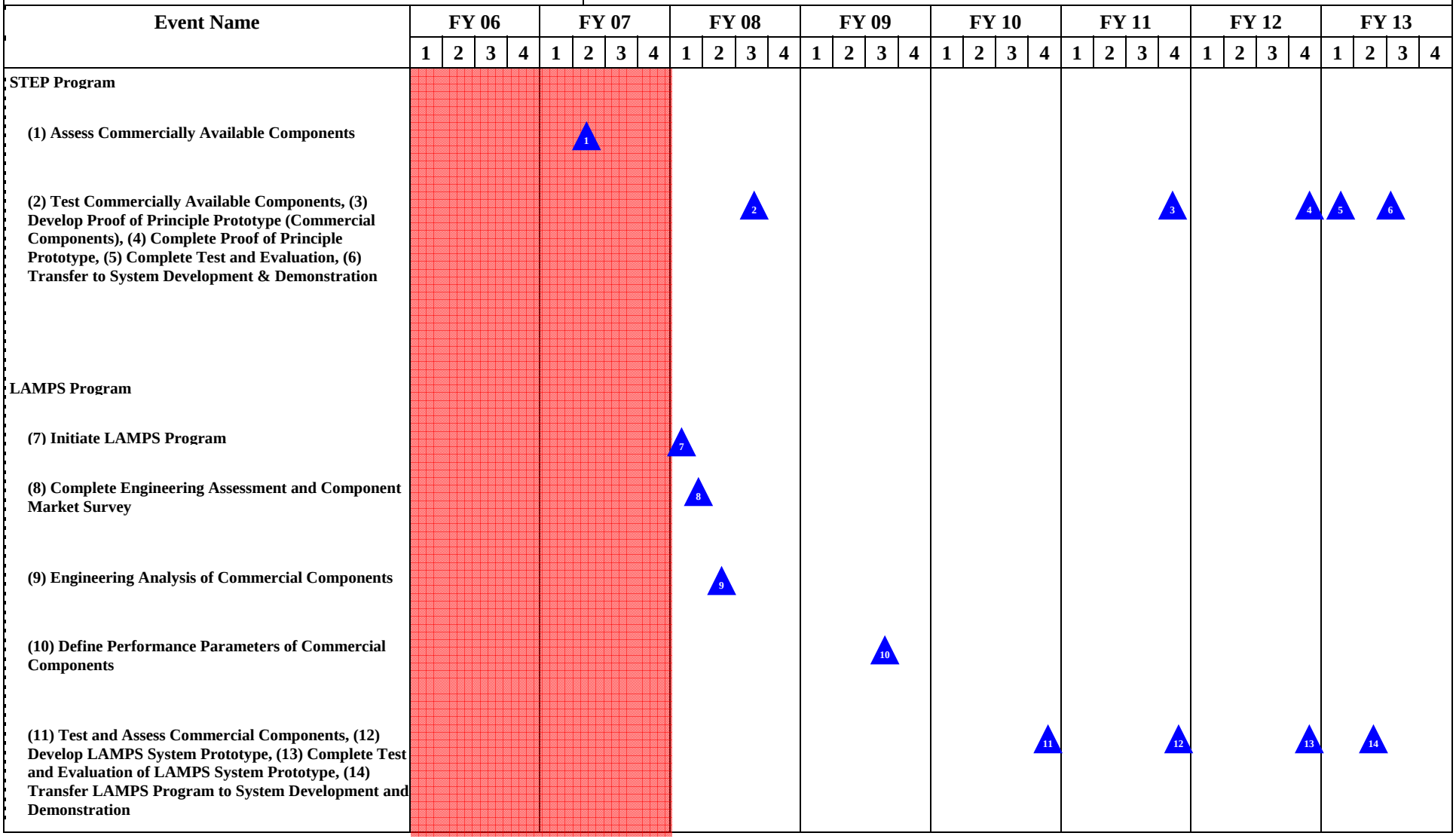
PROJECT
G11

	Type		Cost		Date		Date		Date		Date	e		Contract
STEP Components	In-house	In-house	301			158	1-4Q	88	1-4Q	95	1-4Q	Cont.	Cont.	
STEP Prototypes	In-House	In-house	127	150	1Q							Cont.	Cont.	
LAMP Components								88	1-4Q	95	1-4Q	Cont.	Cont.	
Subtotal:			428	150		158		176		190		Cont.	Cont.	
Project Total Cost:			**4138**	**1763**		**2030**		**3171**		**3390**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**G11**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**G11**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
STEP Program	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Assess Commercially Available Components		2Q						
Test Commercially Available Components			3Q					
Develop Proof of Principle Prototype (Commercial Components)						4Q		
Complete Proof of Principle Prototype							4Q	
Complete Test and Evaluation								1Q
Transfer to System Development & Demonstration								3Q
LAMPS Program								
Initiate LAMPS Program			1Q					
Complete Engineering Assessment and Component Market Survey			1Q					
Engineering Analysis of Commercial Components			2Q					
Define Performance Parameters of Commercial Components				3Q				
Test and Assess Commercial Components					4Q			
Develop LAMPS System Prototype						4Q		
Complete Test and Evaluation of LAMPS System Prototype							4Q	
Transfer LAMPS Program to System Development and Demonstration								2Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K39**

COST (In Thousands)	FY 2006 Actual	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
K39 Field Sustainment Support AD	5244	3230	12341	9853	17635	22731	5653	5533	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development of critical soldier support and sustainment systems including shelter systems (rigid and soft wall), cargo aerial delivery, field service systems, mortuary affairs equipment, heaters, improved environmental control units and other combat service support equipment. These systems will fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. This project also supports Advanced Component Development and Prototyping of Critical Distribution Capabilities to include cargo aerial delivery systems that provide improved safety and accuracy while increasing survivability of aircraft, personnel, and equipment. The project supports the development of tactical environmental control systems that support mobile, joint service platforms for vehicle-mounted command and control systems, medical care capabilities and high tech maintenance shelters and vans. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Modular Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment through aerial delivery initiatives and reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands in lift, combat zone footprint, and costs for logistical support.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY 06: Completed Developmental Testing (DT) and Operational Testing (OT) for Low Cost Aerial Delivery Low Velocity Parachute (LCADS Low-V). FY 07: Obtain Milestone C for LCADS Low-V. FY 08/09 Execute LCADS P3I effort to include evaluation of LCADS capability as a total replacement for current reusable cargo chutes and increase weight capacity.	350	20	600	250
FY 06: Awarded System Development and Demonstration (SDD) contract, fabricated test prototypes. Began Production Qualification Testing (PQT) for the 60k Improved Environmental Control Unit (IECU). FY 07: Continue engineering and logistics data deliverables. Complete PQT, logistics demonstration and user evaluation. FY 08: Obtain Milestone C Full Rate Production (RFP) decision for 60k IECU.	1700	1020		
FY 06: Issued Request for Procurement (RFP) for Joint Precision Airdrop System (JPADS) 2K. Conducted feasibility testing of candidate JPADS 2K technologies. FY 07: Obtain Milestone B for JPADS 2K and execute Source Selection process. Procure test prototypes, complete Design Validation (DV) of JPADS 2K. Transition JPADS 2K to SDD phase. Obtain Milestone B for JPADS 10K. Prepare RFP and execute Source Selection process for JPADS 10K. FY 08: Procure JPADS 10K Prototypes and complete 10K DemVal. Conduct Milestone B for JPADS 30K. FY 09: Purchase JPADS 30K prototypes and conduct DemVal	3194	2100	6126	5697
FY 08: Obtain Milestone B for Space Heater Convective (SHC) 120k BTUH. FY 09: Complete DT and OT for SHC 120k BTUH.			975	935
FY 08: Obtain Milestone B for Advanced Low Velocity Airdrop System (ALVADS). Procure test prototypes. FY 09: Complete DT for ALVADS.			2333	2130
FY 08/09: Evaluate utility of Multi-Mode Platform with MIRCs. Evaluate compatibility/integration on MIRCS trays with transfer case, based on feedback from the AOR regarding transfer case problems with current systems.			1007	341
FY 08/09: Execute Enhanced Containerized Delivery System (ECDS) P3I effort focused on increasing inter-modal capabilities in			1300	500

accordance with the Army Battlefield Distribution Concept. Execute ECDS P3I effort focused on reducing life cycle costs by employing technologically superior, cost effective materials.				
SBIR/STTR		90		
Total	5244	3230	12341	9853

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MF9303 Control Unit, Environmental	2719	3846	11628	16992	11220	11684			Continuing	Continuing
OPA 3,M77700 Mobile Integrated Remains Collection System			9941	17925	18491	5324			Continuing	Continuing

Comment:

C. Acquisition Strategy Accelerate Joint Precision Aerial Delivery System (JPADS) product development and testing to transition to System Development & Demonstration and/or Production. Improved Environmental Control Unit (IECU) complete Milestone B System Development and Demonstration phase and transition to production phase (MSC).

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
K39

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Soldier Support Equipment	In-House	PM Force Sustainment Sys (FSS), Natick	1807	2136	1-4Q	189	1-4Q	5308	1-4Q	4238	1-4Q	Cont.	Cont.	
Soldier Support Equipment	In-house	CECOM, Ft Belvoir	679	278	1-4Q	75	1-4Q	1051	1-4Q	838	1-4Q	Cont.	Cont.	
Soldier Support Equipment	Contracts	Various	4229	246	1-4Q	481	1-4Q	970	1-4Q	774	1-4Q	Cont.	Cont.	
Improved Environmental Control Unit (IECU)	In-House	CECOM, Ft Belvoir		278	1-4Q	118	3-4Q					Cont.	Cont.	
Subtotal:			6715	2938		863		7329		5850		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Improved Environmental Control Unit (IECU)	In-house	CECOM, Ft Belvoir				500	2Q						500	
Subtotal:						500							500	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	372	185	1-4Q	116	1-4Q	467	1-4Q	373	1-4Q	Cont.	Cont.	
Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ, AEC	3330	1738	1-4Q	1036	1-4Q	4175	1-4Q	3335	1-4Q	Cont.	Cont.	
IECU	MIPR	Various		228	2-4Q	190	3-4Q					Cont.	Cont.	
Subtotal:			3702	2151		1342		4642		3708		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

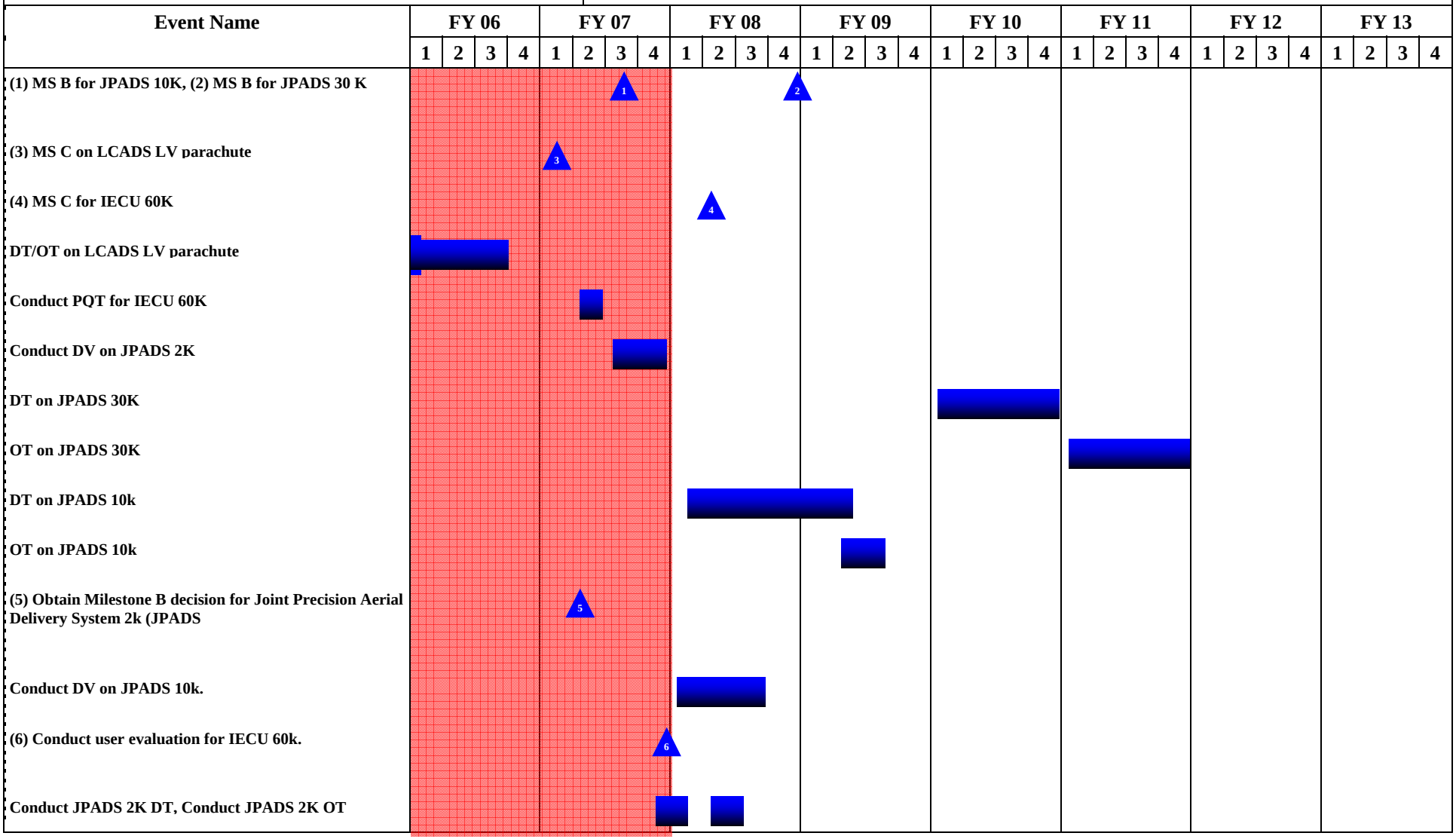
PROJECT
K39

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Management Support	In-House	PM Force Sustainment Sys (FSS), Natick	320	103	1-4Q	63	1-4Q	370	1-4Q	295	1-4Q	Cont.	Cont.	
Project Management Support	In-House	PM MEP Ft Belvoir		52	1-4Q	371	1-4Q					Cont.	Cont.	
SBIR/STTR						91							91	
Subtotal:			320	155		525		370		295		Cont.	Cont.	
Project Total Cost:			**10737**	**5244**		**3230**		**12341**		**9853**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K39**



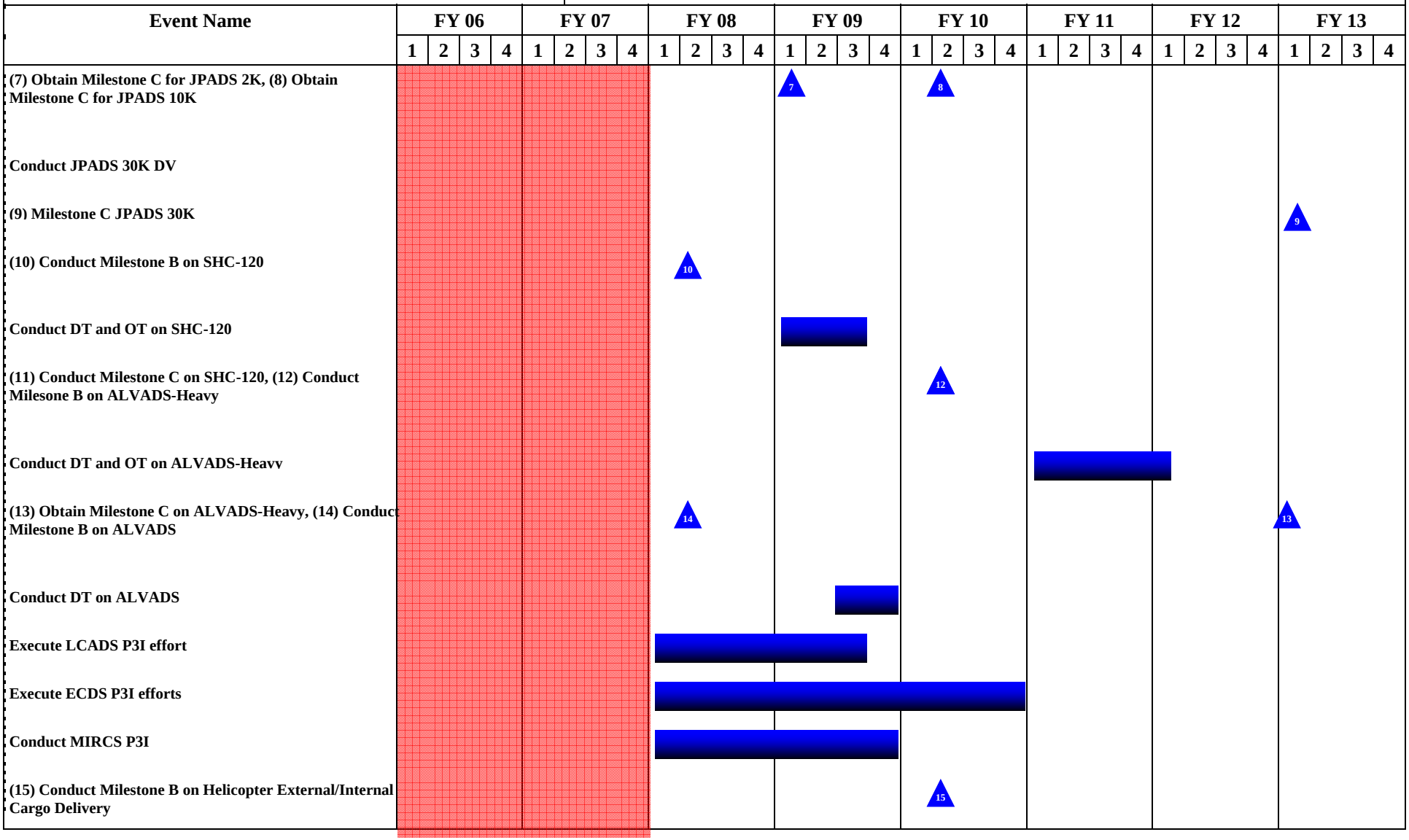
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
K39



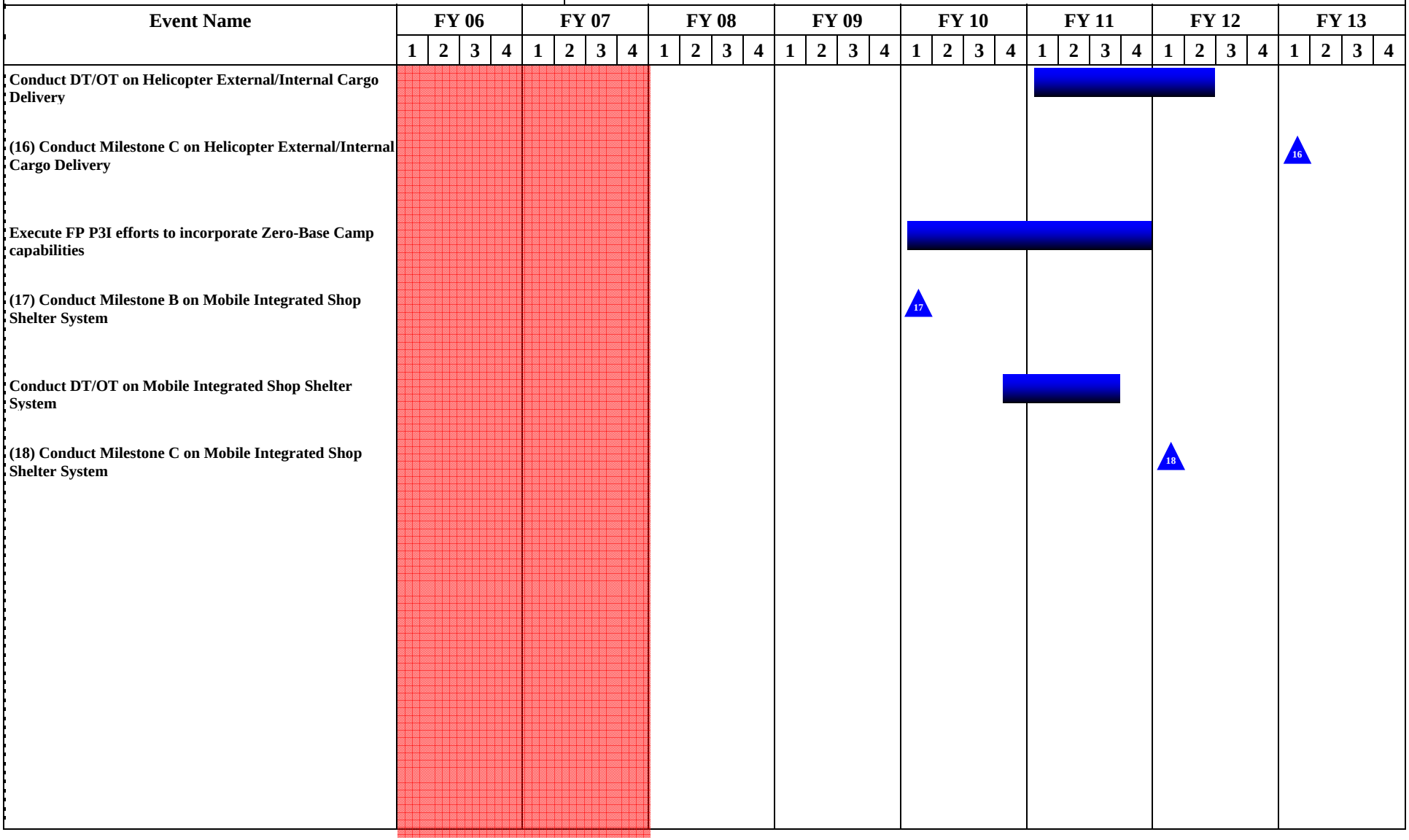
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
K39



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K39**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MS B for JPADS 10K		3Q						
MS B for JPADS 30 K			4Q					
MS C on LCADS LV parachute		1Q						
MS C for IECU 60K			2Q					
DT/OT on LCADS LV parachute	1Q - 3Q							
Conduct PQT for IECU 60K		2Q						
Conduct DV on JPADS 2K		3Q - 4Q						
DT on JPADS 30K					1Q - 4Q			
OT on JPADS 30K						1Q - 4Q		
DT on JPADS 10k			1Q - 4Q	1Q - 2Q				
OT on JPADS 10k				2Q - 3Q				
Obtain Milestone B decision for Joint Precision Aerial Delivery System 2k (JPADS		2Q						
Conduct DV on JPADS 10k.			1Q - 3Q					
Conduct user evaluation for IECU 60k.		4Q						
Conduct JPADS 2K DT		4Q	1Q					
Conduct JPADS 2K OT			2Q - 3Q					
Obtain Milestone C for JPADS 2K				1Q				
Obtain Milestone C for JPADS 10K					2Q			
Conduct JPADS 30K DV				2Q				
Milestone C JPADS 30K								1Q
Conduct Milestone B on SHC-120			2Q					
Conduct DT and OT on SHC-120				1Q - 3Q				
Conduct Milestone C on SHC-120					2Q			
Conduct Milesone B on ALVADS-Heavy					2Q			

Conduct DT and OT on ALVADS-Heavy						1Q - 4Q	1Q	
Obtain Milestone C on ALVADS-Heavy								1Q
Conduct Milestone B on ALVADS			2Q					
Conduct DT on ALVADS				2Q - 4Q				
Execute LCADS P3I effort			1Q - 4Q	1Q - 3Q				
Execute ECDS P3I efforts			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Conduct MIRCS P3I			1Q - 4Q	1Q - 4Q				
Conduct Milestone B on Helicopter External/Internal Cargo Delivery					2Q			
Conduct DT/OT on Helicopter External/Internal Cargo Delivery						1Q - 4Q	1Q - 2Q	
Conduct Milestone C on Helicopter External/Internal Cargo Delivery								1Q
Execute FP P3I efforts to incorporate Zero-Base Camp capabilities					1Q - 4Q	1Q - 4Q		
Conduct Milestone B on Mobile Integrated Shop Shelter System					1Q			
Conduct DT/OT on Mobile Integrated Shop Shelter System					4Q	1Q - 3Q		
Conduct Milestone C on Mobile Integrated Shop Shelter System							1Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K41**

COST (In Thousands)		FY 2006 Actual	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
K41	WATER AND PETROLEUM DISTRIBUTION - AD	2601	4542	2458	442	3303	2854	4826	3000		24026

A. Mission Description and Budget Item Justification: Description: This project develops and demonstrates the potential of prototype equipment and technologies to satisfy petroleum storage, distribution, and quality surveillance system requirements. The Concept and Technology Development program supports the development and enhancement of rapidly deployable Petroleum and Water equipment. The mission includes developing onboard fuels and lubrication quality analysis systems; achieving greater capabilities in the removal of Nuclear, Biological, Chemical (NBC) and other contaminates from water sources; reducing the logistics foot print; developing water reutilization systems to reduce the requirement for transport of water into the theatre; and material and systems to decrease the logistics foot print and employment time for the transfer of liquid logistics in the theatre. The Army fights with clean fuel and drinking water. This vital equipment enables the Army to achieve its transformation vision by providing the Army with the means to be highly mobile and self-sustaining in very hostile theaters of operations. Future Force operations demand that combat systems be rapidly deployable to the theater, rapidly emplaced upon arrival, and rapidly relocated to support a fast moving non-linear battlefield. The RIFTS is a bulk fluid distribution system which will consist of four major modules: conduit deployment/retrieval module (Block I), automated pumping station (APS), command and control module (C2M) with leak detection capabilities, and computer based planning aid (Block II). The state-of-the-art technology in Block II will significantly enhance the Army's bulk fuel distribution capabilities over the Inland Petroleum Distribution System (IPDS). IPDS pumps, due to their age and condition, are only marginally supportable. The APS will increase mobility by becoming smaller in size and provide fuel throughput of 850,000 gallons of liquid per day. The C2M and the computer based planning aid will increase alertness and responsiveness by providing a quick optimum route for system layout and provide real time system operational status. The leak detection capability will provide fast and precise location of leak points.

Justification: FY08/09 funding will focus on pre-planned product improvements (P3I) of both Petroleum and Water Systems and will address capabilities that were not met during the development phase for systems that are being fielded or soon will be fielded. To do this, commercially available technologies/components will be identified and evaluated to determine if they perform the required functions at the desired performance level. If fully proven, components will be integrated into the system and perform a system-level evaluation. Improvement opportunities for the family of Fuel Supply System Points (FSSP) will include conducting failure analysis, market investigation and analysis of alternatives of long life, rapid mobile fuel storage tanks, conducting investigation of commercial/non-developmental item (NDI)/emerging automatic gauging and accounting technologies and investigate alternative conduit manufacturing techniques and materials for the Rapidly Installed Fuel Transfer System (RIFTS) to reduce life cycle costs and increase system level capability. Improvements to water distribution and purification systems will include performing evaluation of real-time in-line water quality sensors to allow by-pass of reverse osmosis membranes on military water purifiers when operating on fresh water sources, performing market investigation and testing of potential commercial devices to dose and control chlorine levels in water tankers such as the Load Handling System Water Tank Rack (Hippo) and Unit Water Pod System (Camel). FSSP P3I will continue to include technical evaluation of long life, rapid mobile fuel storage tanks, evaluation of automated tank gauging systems and select best technical approach. RIFTS P3I will continue investigating alternative conduit manufacturing techniques and materials and the analyzing technical approaches for adding bulk fuel storage capacity to the RIFTS.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY07-FY08: Continues Pre-Planned Product Improvements (P3I) for the Lightweight Water Purifier (LWP) and Tactical Water		935	1464	

Purification System (TWPS). Investigate potential or organic and metal leaching in water storage systems and health effects, identify life cycle cost savings in consumables and higher reliable components, improve methods to measure service life of filtration membranes, determine upper performance limits of TWPS and LWP. In FY08, evaluate real-time-in-line water quality sensors, conduct a market investigation for devices to automatically dose and control chlorine levels in water tankers and evaluate potential candidates for performance and suitability for military environment.				
FY06: Conducted Production Qualification Testing (PQT) for the Camel	110			
FY06-FY07: Continues development and testing of Advanced Petroleum Test Kit (PTK) components, identify best technologies for system development, establish key technical and performance parameters and prepare development specifications.	63	500		
FY06: Continued development of Rapidly Installed Fuel Transfer System (RIFTS) Block I which includes components and high pressure conduit.	2428			
FY07: RIFTS Block II development of components which includes automated pumping station (APS), command and control module (C2M) with leak detection capabilities, and computer based planning aid.		1201		
FY07: Design and fabricate prototype Petroleum Quality Analysis System Full-Armored Solution (PQAS-FAS) components; test interfaces and prepare technical data.		1032		
FY07-FY09: Continues Fuel Systems P3I for Family of Fuel System Supply Points (FSSPs). Conduct market investigations and identify design standardization requirements for common pump for both fuel and water distribution systems, conduct market research for automatic tank gaging (ATG) systems and flow volume metering devices, conduct evaluation of methods to extend operational life of collapsible fuel storage tanks and investigate technical and military suitability of portable berms to contain fuel spills. In FY08, procure and test candidate common pumps for downselection and continue market research of ATG and metering devices. In FY09, evaluate performance and military usefulness of commercial ATG and metering systems and environmental testing.		750	994	442
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		124		
Total	2601	4542	2458	442

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0604804.L41, Logistics and Engineer Equipment - Engineering Development	2651	7271	10312	6391	3359	3383	2049	3965	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	8394	10530	41981	44338	37000	23715	23715	7089	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	68634	110194	34056	49954	86659	86920	13545	20834	Continuing	Continuing

Comment:

C. Acquisition Strategy Develop engineering prototypes or select Non-Developmental Item based on market surveys and proposals from industry. Competitive; sole source contraction. Modernization through spares.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
K41

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Water Purification Components (P3I)	MIPR	NFESC, Port Hueneme, CA	101			200	1Q	250	1Q			Cont.	Cont.	Cont.
Water Purification Components (P3I)	Purchase Orders	TBD	182			226	1-4Q	250	1-4Q			Cont.	Cont.	Cont.
Water Purification Components (P3I)	In-House	TARDEC, Warren, MI	408			50	1Q	57	1Q			Cont.	Cont.	Cont.
Water Purification Components (P3I)	C-CPFF	MTC, Dayton, OH				150	2Q					Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	In-House	TARDEC, Warren, MI	503	63	1Q	200	1Q					Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	Purchase Order	Micron Optical Incorporated, Portsmouth, VA				25	2Q					Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	MIPR	NAV AIR, Patuxent River, MD				175	3Q					Cont.	Cont.	Cont.
Rapidly Installed Fuel Transfer System (RIFTS) Block I	C-CPFF	Southwest Research Institute, San Antonio, TX	780	2428	1Q							Cont.	Cont.	Cont.
RIFTS Block II	In-House	TARDEC, Warren, MI				300	1Q					Cont.	Cont.	Cont.
RIFTS Block II	C-CPFF	Southwest Research Institute, San Antonio, TX				726	2Q					Cont.	Cont.	Cont.
Petroleum Quality Analysis System (Full Armored Solution)	In-House	TARDEC, Warren, MI				155	1Q					Cont.	Cont.	Cont.
Petroleum Quality Analysis System (Full Armored Solution)	MIPR	Rock Island Arsenal, Rock Island, IL				877	1Q					Cont.	Cont.	Cont.
Fuel Systems Components (P3I)	In-House	TARDEC, Warren, MI	151			150	1Q	150	1Q	200	1Q	Cont.	Cont.	Cont.
Fuel Systems Components (P3I)	TBD	TBD				150	2Q	674	2Q	150	2Q	Cont.	Cont.	Cont.
Subtotal:			2125	2491		3384		1381		350		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
K41

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Water Purification Components (P3I)	In-House	TARDEC, Warren, MI	703			50	1Q	100	1Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI	65		1Q	45	1Q					Cont.	Cont.	Cont.
RIFTS Block II	In-House	TARDEC, Warren, MI				60	1Q					Cont.	Cont.	Cont.
Fuel Systems Components (P3I)	In-House	TARDEC, Warren, MI				50	1Q	50	1Q			Cont.	Cont.	Cont.
Subtotal:			768			205		150				Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Water Purification Components (P3I)	In-House	TARDEC, Warren, MI	479			160	1-4Q	250	1Q			Cont.	Cont.	Cont.
Water Purification Components (P3I)	MIPR	NFESC, Port Hueneme, CA				305	1Q	257	1Q			Cont.	Cont.	Cont.
Water Purification Components (P3I)	MIPR	Aberdeen Proving Ground, Aberdeen, MD						300	2Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI	507			55	1Q					Cont.	Cont.	Cont.
Fuel Systems Components (P3I)	In-House	TARDEC, Warren, MI				100	2Q	120	1Q			Cont.	Cont.	Cont.
Fuel Systems Components (P3I)	MIPR	Yuma Proving Ground, Yuma, AZ				209	1Q			92	2Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel)	MIPR	Yuma Proving Ground, Yuma, AZ	1829	110	1-2Q							Cont.	Cont.	Cont.
Subtotal:			2815	110		829		927		92		Cont.	Cont.	Cont.

IV. Management Services	Contract	Performing Activity &	Total	FY 2006	FY 2006	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

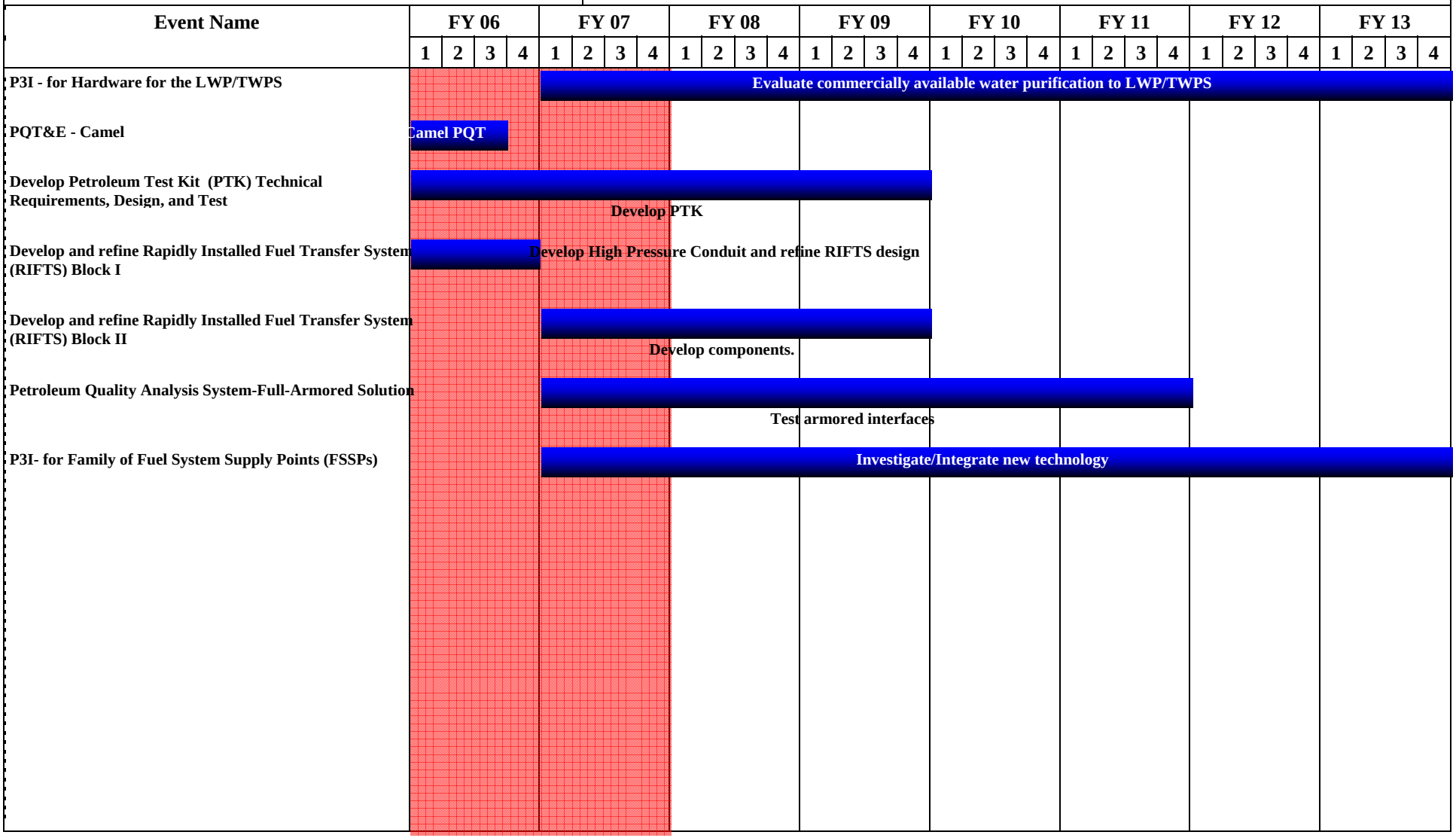
PROJECT
K41

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)						124	1Q						124	124
Subtotal:						124							124	124
Project Total Cost:			**5708**	**2601**		**4542**		**2458**		**442**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K41**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K41**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
P3I - for Hardware for the LWP/TWPS		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
PQT&E - Camel	1Q - 3Q							
Develop Petroleum Test Kit (PTK) Technical Requirements, Design, and Test	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Develop and refine Rapidly Installed Fuel Transfer System (RIFTS) Block I	1Q - 4Q							
Develop and refine Rapidly Installed Fuel Transfer System (RIFTS) Block II		1Q - 4Q	1Q - 4Q	1Q - 4Q				
Petroleum Quality Analysis System-Full-Armored Solution		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
P3I- for Family of Fuel System Supply Points (FSSPs)		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K42**

COST (In Thousands)	FY 2006 Actual	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
K42 MATERIEL SUSTAINMENT SUPPORT AD			6182	5241	3020	480				14923

A. Mission Description and Budget Item Justification: This project supports Advanced Component Development and Prototypes of reformulated surface coating materials for weapon systems production and maintenance operations. These materials will increase operational sustainment and warfighter training capabilities by reducing soldier health risks, environmental impacts and compliance enforcement actions against installations while increasing coatings performance and standardization across The Army. Together with project 0603779A, Environmental Quality Technology Dem/Val (E21), this project transitions advanced technologies developed under 0603728A, Environmental Quality Technology Demonstrations (025). The project tests and evaluates Sustainable Painting Operations for the Total Army (SPOTA) at facilities that produce and maintain Combat Support/Combat Service Support systems, Ground Combat Vehicles and other Army equipment. The project expedites technology transition from the laboratory to operational use by demonstrating the capabilities of reformulated materials to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals and other technical data.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Qualify, validate and approve reformulated Chemical Agent Resistant Coating (CARC) systems and other non-CARC paints			1226	1247
Qualify, validate and approve hazardous air pollutant (HAP) free solvents, thinners and cleaners			1026	829
Qualify, validate and approve chemical paint strippers containing no methylene chloride or other HAPs			1482	1128
Qualify, validate and approve reformulated sealants and adhesives for high-use applications			770	1082
Qualify, validate and approve alternative rubber-to-metal bonding materials for tracked vehicles			1678	955
Total			6182	5241

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0603728A, Environmental Quality Technology Demonstrations (025)	2979	3458	3559	3652	3725	3799	3883	3968		29023
0603779A, Environmental Quality Technology Dem/Val (E21)			1299	531						1830
0605857A, Environmental Quality Technology Mgmt Support (06I)			354	275	280	68				977

Comment:

C. Acquisition Strategy The SPOTA program is managed by the Director of the Environmental Acquisition and Logistics Sustainment Program at the Headquarters, U.S. Army Research, Development and Engineering Command (RDECOM). The SPOTA program is executed by RDECOM centers and laboratories in cooperation with the affected Life Cycle Management Commands.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation a**	**091**

COST (In Thousands)	FY 2006 Actual	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
091 CBT SVC SPT CONTRL SYS	10046	8549	19054	17893	10100	500				66142

A. Mission Description and Budget Item Justification: The Battle Command Sustainment Support System (BCS3) is the logistics Command and Control (C2) solution for U.S. land forces. BCS3 provides commanders the capability to execute end-to-end distribution and deployment management and brings better situational awareness resulting in better decision-making capability to warfighters. It enables warfighters to target, access, scale and tailor critical logistics information in near-real time. BCS3 provides more effective means to gather and integrate asset and in-transit information to manage distribution and deployment missions. BCS3 combines distribution management to include commodity and convoy tracking, and deployment management into a logistics Common Operating Picture (COP) for one mission-focused visual display.

BCS3 has been adopted and integrated into Joint and strategic logistics command and control processes. BCS3 is the only near-term end-to-end logistics COP solution for the Joint commander. BCS3 will maintain its core capabilities and continue to advance in development while integrating into the Joint command and control architecture. This continued development will enable decision superiority via advanced collaborative information sharing achieved through interoperability.

BCS3 has immediate, high pay-off benefit to warfighters and additional future growth in its capabilities. BCS3 is a force multiplier, a precision tool for logistics planning and execution that provides warfighters with the necessary tools to succeed.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continued Development of Joint, Logistics Info Systems (LIS) Interfaces and maintain interoperability requirements as well as COE upgrades and Security	4040	3001		
LCOP Integration	1578	1413		
LCOP/JDLM Simulation	1062	1039		
CAPES Integration	775	854		
Operational Testing	323	119		
Training Development	568	322		
Program Management	1700	1592	1500	1500
ABCS 6.4 Functionality and Integration			10100	10600
Migrate to Joint System "Common Viewer"			1000	900
Standardize Collaboration			400	401
Shift to Net-Centric Enterprise Services (NCES) (Common Operating Environment (COE) Upgrades)			1101	801
Automate Initialization and Data Load			3598	2798

BCS3 Tasks (Safety/Security)			1355	893
SBIR/STTR		209		
Total	10046	8549	19054	17893

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation a**	**091**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	10507	8645	8555	8430
Current BES/President's Budget (FY 2008/2009)	10046	8549	19054	17893
Total Adjustments	-461	-96	10499	9463
Congressional Program Deductions		-33		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-461	-63		
SBIR/STTR Transfer				
Adjustments to Budget Years			10499	9463

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Procurement, OPA 2 (W34600)	30531	31858	32935	29987	25833	8819			Continuing	Continuing

Comment:

D. Acquisition Strategy The BCS3 acquisition strategy uses a spiral development process that is structured for capabilities to mature and evolve over successive software versions. Versions 1 and 2 served as proof of principle. They provided initial division-level CSS functional capability on common hardware. Version 3 was built on the capabilities of the two previous versions and provided an Initial Operational Capability at Division and Corps level to include initial horizontal interoperability with other Battlefield Functional Area (BFA) systems. Version 4 development included expansion to echelons above Corps (EAC) but has recently undergone additional modification to include BCS3 functionality. BCS3 leverages key identified CSS functionality from the original capability and integrates it with ABCS systems and with numerous national level databases to provide multi-echelon CSS planning and enhanced combat power analysis capabilities. The objective software will provide functionality from tactical (down to maneuver brigade) to strategic level and extend capabilities to Joint, allied and coalition forces.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603805A - Combat Service Support Control System Evaluation a

PROJECT
091

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Software Development	SS/TM	Tapestry Solutions, San Diego, CA		4479	1-2Q	4095	1-2Q	10859	1-2Q	10502	1-2Q	Cont.	Cont.	29935
Software Development	SS/TM	Northrop Grumman, Carson, CA	128648	2976	1-2Q	2212	1-2Q	4030	1-2Q	3818	1-2Q	Cont.	Cont.	141684
Training Development	C/TM	Lockheed Martin, Tinton Falls, NJ	12056	568	1-2Q	322	1-2Q					Cont.	Cont.	12946
ABCS SE&I Effort	MIPR	PEO C3T, Ft Monmouth, NJ	7686										7686	7686
GFE	MIPR	Various	3601										3601	3601
Subtotal:			151991	8023		6629		14889		14320		Cont.	Cont.	195852

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CECOM, Matrix	MIPR	FT. Monmouth , NJ & Ft. Belvoir, VA	5154										5154	5154
Technical Support	TM	L3, Fort Lee, VA	8321					1310	1-2Q	1180	1-2Q	Cont.	Cont.	10811
Acquisition Support	TM	LMI, McLean, VA	1075										1075	1075
Technical Support	TM	BAE, Herndon, VA						1355	1-2Q	893	1-2Q	Cont.	Cont.	2248
Subtotal:			14550					2665		2073		Cont.	Cont.	19288

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GOVT	MIPR	VARIOUS	5575										5575	5575

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation a**	**091**

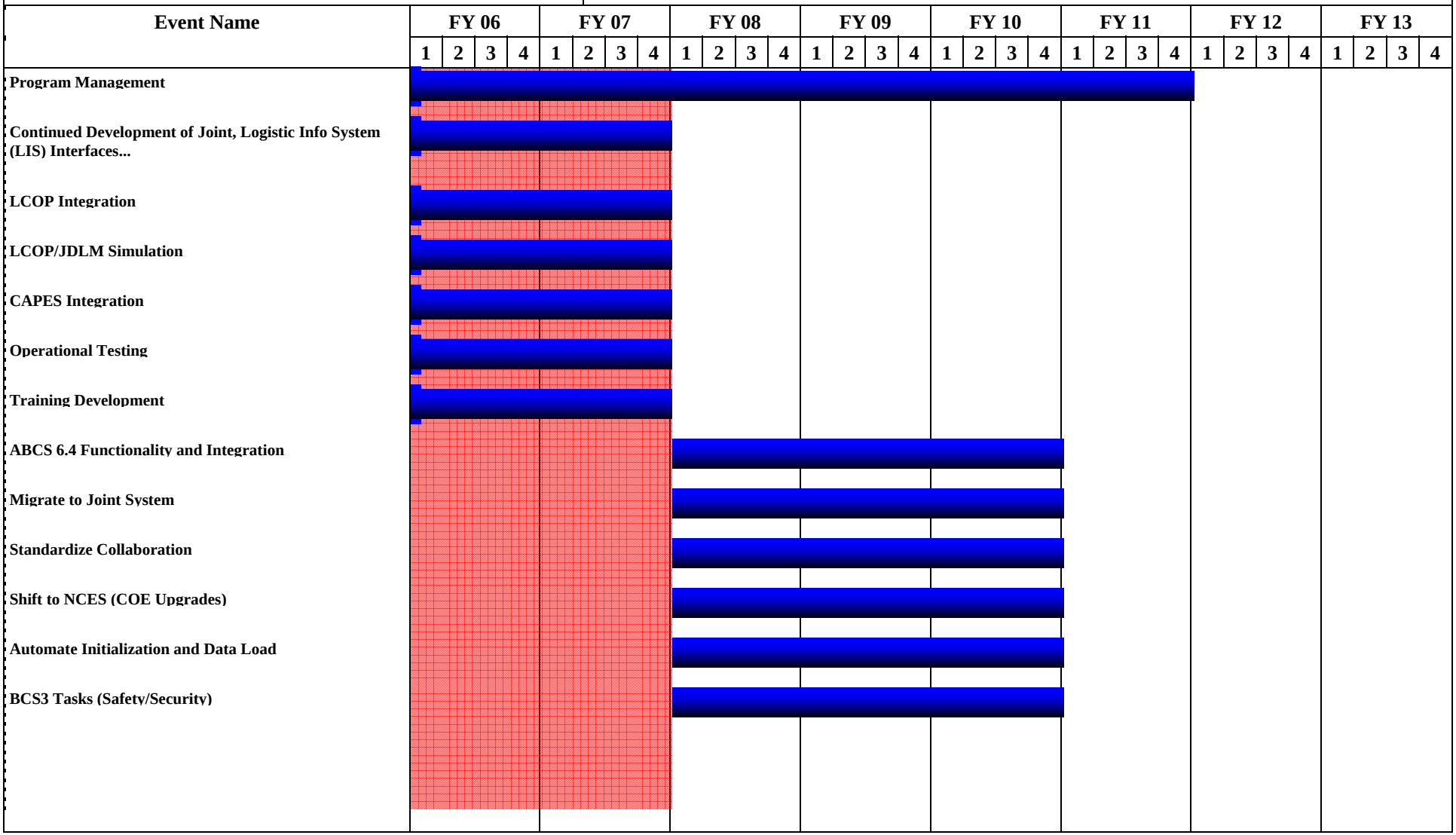
Dev. Testing & Eval.	MIPR	EPG, VARIOUS	1028										1028	1028
Oper. Testing	MIPR	ATEC, VARIOUS	1868	323	1-4Q	119	1-4Q					Cont.	2310	2310
Subtotal:			8471	323		119						Cont.	8913	8913

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Office Management	In House	FT. BELVOIR, VA	22801	1700	1-4Q	1801	1-4Q	1500	1-4Q	1500	1-4Q	Cont.	29302	29302
Subtotal:			22801	1700		1801		1500		1500		Cont.	29302	29302
Project Total Cost:			**197813**	**10046**		**8549**		**19054**		**17893**		**Cont.**	**Cont.**	**253355**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation a**	**091**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation a**	**091**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Program Management	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Continued Development of Joint, Logistic Info System (LIS) Interfaces...	1Q - 4Q	1Q - 4Q						
LCOP Integration	1Q - 4Q	1Q - 4Q						
LCOP/JDLM Simulation	1Q - 4Q	1Q - 4Q						
CAPES Integration	1Q - 4Q	1Q - 4Q						
Operational Testing	1Q - 4Q	1Q - 4Q						
Training Development	1Q - 4Q	1Q - 4Q						
ABCS 6.4 Functionality and Integration			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Migrate to Joint System			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Standardize Collaboration			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Shift to NCES (COE Upgrades)			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Automate Initialization and Data Load			1Q - 4Q	1Q - 4Q	1Q - 4Q			
BCS3 Tasks (Safety/Security)			1Q - 4Q	1Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**

	COST (In Thousands)	FY 2006 Actual	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	22104	23608	12479	21452	20675	10246	13971	13966		144536
808	DOD DRUG & VACC AD	5853	6418	6053	5693	5499	5404	6247	6052		47219
811	MIL HIV VAC&DRUG DEV	133	147	150	150	142	141	149	153		1165
836	COMBAT MEDICAL MATL AD	5329	3772	4375	13792	13336	3010	5786	5929		55329
837	SOLDIER SYS PROT-AD	869	2492	1901	1817	1698	1691	1789	1832		14089
A01	COMBAT SUPPORT HOSPITAL - MOBILE SURGICAL UNIT	3929	3362								7291
MD4	FUTURE MEDICAL SHELTER	5032	6428								16538
MD8	ELECTROSOMOTIC PAIN THERAPY SYSTEM (CA)	959	989								2905

A. Mission Description and Budget Item Justification: This program element (PE) funds advanced development of medical materiel within the early system integration portion of the System Development and Demonstration phase of the acquisition life cycle. The PE supports transition of Science and Technology initiatives, prototypes, or candidate technologies into the first scale-up, integrated models for initial technical and operational test and evaluation, when applicable. These programs are aligned to meet Future Force (F2) requirements stressed within concept documents and organizational structures. The PE provides funding for early Phase 1 and 2, U.S. Food and Drug Administration (FDA) regulated, human clinical trials. The major enablers supported by this PE are:

Infectious disease vaccines and preventive drugs that will reduce the risk of service members contracting debilitating or fatal diseases, an increasing risk with the growing potential for urban warfare and its associated disease hazards. Disease and non-battle injuries (DNBI) are the largest contributors to the level 3 medical footprint, and significant reductions of the medical footprint in theater is achieved by reducing the number of DNBI affected soldiers. More importantly, reduced patient evacuations within F2 units is a force multiplier, because timely replacement of these uniquely skilled and combat tested soldiers will be nearly impossible.

Combat Casualty Care devices and biologics, with two major focuses: enhance forward care at the first responder level and reduce the footprint of medical organizations for greater mobility and easier sustainment. The F2 concept places soldiers into a more austere environment with lengthened evacuation times (both arrival and transit). Supporting medics and first responders require greater lifesaving and extended stabilization capability to save lives. Reduction in weight, cube volume, and sustainment requirements, allows medical units to increase mobility and maintain contact with their supported Units of Action.

Soldier Performance Enhancers in the form of drugs or diagnostics that allow commanders to increase soldier's cognitive awareness and stamina. Enhancers have a direct relationship to increased soldier capabilities and a potential to reduce casualties.

Military Human Immunodeficiency Virus (HIV) Vaccine and Drug Development funds militarily relevant HIV medical countermeasures. These include advanced component

development of multiple candidate vaccines and drugs for large-scale field testing.

This program is managed by the U.S. Army Medical Research and Materiel Command.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	23149	11973	13160	22085
Current BES/President's Budget (FY 2008/2009)	22104	23608	12479	21452
Total Adjustments	-1045	11635	-681	-633
Congressional Program Reductions		-90		
Congressional Rescissions				
Congressional Increases		11900		
Reprogrammings	-1045	-175		
SBIR/STTR Transfer				
Adjustments to Budget Years			-681	-633

FY2007 -Congressional Plus-Up ($11,900)- DoD Drug & Vaccine Advanced Development ($1,000); Combat Support Hospital Mobile Surgical Unit ($3,400); Future Medical Shelter ($6,500); and Electrosomotic Pain Therapy ($1,000).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**

COST (In Thousands)	FY 2006 Actual	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
808 DOD DRUG & VACC AD	5853	6418	6053	5693	5499	5404	6247	6052		47219

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical countermeasures for infectious diseases that occur within militarily relevant areas of the world. Current products fall within three major areas: vaccines, drugs, and diagnostic kits. The funds support Phase 1 and 2 human clinical trials for safety and small-scale efficacy testing. This work, which is performed in military laboratories or civilian pharmaceutical firms, is directed toward the prevention of disease, early diagnosis if contracted, and speeding recovery once diagnosed. These trials are required to meet U.S. Food and Drug Administration (FDA) regulatory approval guidance, a mandatory obligation for all military products placed into the hands of medical providers or service members. Priority is based upon four major factors: (1) the extent of the disease within the Combatant Commands theater of operations, (2) the clinical severity of the disease, (3) the technical maturity of the proposed solution, and (4) the affordability of the solution (development and production).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Reviews, evaluations, and trials of malarial/anti-malarial vaccines, drugs, diagnostics and insect repellents: In FY06 completed study enrollment and observation phase in the Recombinant Plasmodium falciparum Malaria Vaccine plus Adjuvant (RTS,S) Vaccine Phase 1/2 trial in Kenya; completed the enrollment phase and continued the observation and follow-up phase of the FDA-mandated Phase 1 safety trial of the Antimalarial Drug, Tafenoquine (treatment and post-exposure prophylaxis of Plasmodium vivax malaria); and for the Combined Camouflage Face Paint/Insect Repellent (CCFP) completed pre-clinical toxicity testing of the new stick formulations, and prepared two protocols for clinical efficacy trials of the new CCFP formulation. In FY07, transition the anti-malarial drug, Artesunate (for intravenous treatment of severe and complicated malaria) to System Development and Demonstration (Milestone B) and initiate Phase 2b efficacy studies; conduct a Critical Design Review (CDR) to re-baseline product development plan for RTS,S Vaccine to be administered with another Malaria vaccine candidate to enhance efficacy and initiate data analysis for the RTS,S Vaccine Phase 1/2 trial in Kenya; and for CCFP initiate two clinical efficacy trials (laboratory and field), perform data analysis and monitor stability testing. In FY08, continue phase 2 efficacy studies for Artesunate and prepare for Phase 2 field trials of RTS,S vaccine. In FY09, continue clinical trials for Artesunate and RTS,S vaccine.	2193	2355	2882	2790
Trials, evaluations, and reviews for grouped infectious disease vaccines and drugs (Dengue and Leishmania): In FY06, continued data analysis of a Phase 2 trial in Thailand of the Dengue Tetravalent Vaccine (DTV), initiated a Phase 1/2 lot bridging study in the United States, and initiated pre-trial activities for a Phase 2 study in Thailand of the DTV; manufactured clinical lots for clinical testing and licensure of the Paromomycin/Gentamicin Topical Antileishmanial Cream and initiated Phase 2 field trial in Tunisia; for Pentostam (sodium stibogluconate intravenous drug treatment of cutaneous leishmaniasis) initiated database creation of clinical experience to support a FDA licensure submission; and for the Congressional-interest Leishmania Skin Test (LST) prepared for a Phase 2 trial in Tunisia. In FY07, conduct a Critical Design Review (CDR) to re-baseline product development plan and continue the Thailand Phase 2 study of the DTV; conduct a CDR to re-baseline product development plan, complete Tunisian Phase 2 trial and prepare for the Phase 3 pivotal field trial of the Antileishmanial Topical; for Pentostam complete clinical database verification and transfer to our industry partner who will incorporate in their FDA licensure submission package; and for the Congressional-interest LST conduct and perform data analysis for a Phase 2 trial in Tunisia. In FY08 continue the Phase 2 trial for DTV; for Pentostam monitor industry partners progress with FDA	3660	3922	3171	2903

licensure submission; and initiate a Phase 3 trial with the Congressional-interest LST. In FY09, complete the Phase 3 pivotal trial and perform data analysis for Topical Antileishmanial Cream; for DTV complete the Phase 2 trial and perform data analysis; and complete a Phase 3 trial with Congressional interest LST.				
Small Business Innovative Research/Small Business Technology Transfer Programs.		141		
Total	5853	6418	6053	5693

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

C. Acquisition Strategy Test and evaluate in-house and commercially developed products in extensive government-managed clinical trials to gather data required for FDA licensure and Environmental Protection Agency registration.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603807A - Medical Systems - Adv Dev

PROJECT
808

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			4321	527		577		545		512		Cont.	Cont.	Cont.
Subtotal:			4321	527		577		545		512		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			856	176		193		182		171		Cont.	Cont.	Cont.
Subtotal:			856	176		193		182		171		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			20902	4214		4621		4358		4099		Cont.	Cont.	Cont.
Subtotal:			20902	4214		4621		4358		4099		Cont.	Cont.	Cont.

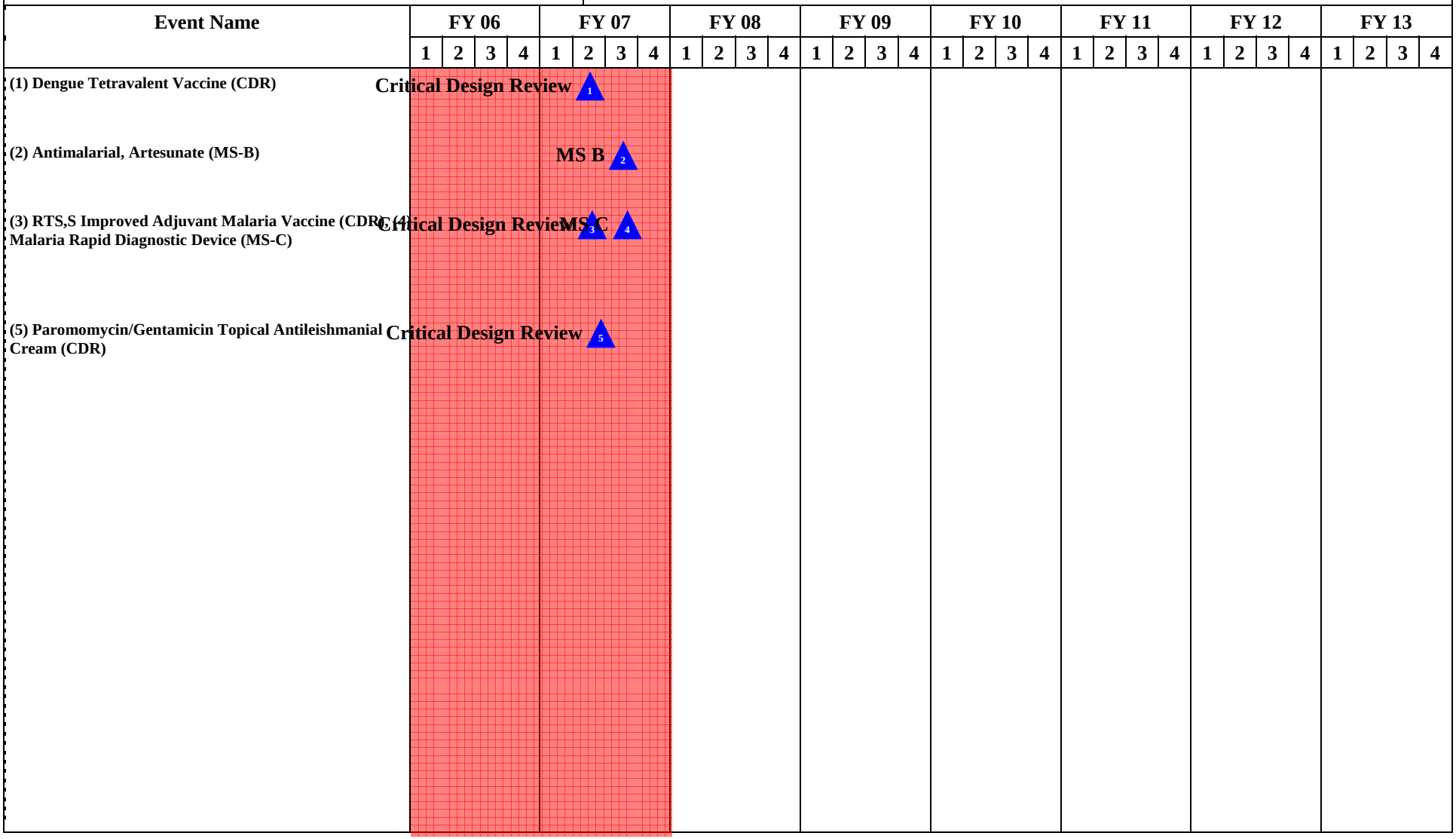
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			4550	936		1027		968		911		Cont.	Cont.	
Subtotal:			4550	936		1027		968		911		Cont.	Cont.	

Project Total Cost:	**30629**	**5853**		**6418**		**6053**		**5693**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Dengue Tetravalent Vaccine (CDR)		2Q						
Antimalarial, Artesunate (MS-B)		3Q						
RTS,S Improved Adjuvant Malaria Vaccine (CDR)		2Q						
Malaria Rapid Diagnostic Device (MS-C)		3Q						
Paromomycin/Gentamicin Topical Antileishmanial Cream (CDR)		2Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**836**

COST (In Thousands)	FY 2006 Actual	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
836 COMBAT MEDICAL MATL AD	5329	3772	4375	13792	13336	3010	5786	5929		55329

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical products for the advancement of combat casualty care; especially far forward on the battlefield for first responders, combat life savers, and field medics. This funds Phase 1 and 2 human clinical trials for safety and efficacy of devices unique to military operational requirements. These products will decrease mortality rates, and increase soldiers' morale and willingness to place themselves in danger. Additionally, several products will reduce the medical organizational sustainment footprint through smaller weight, cube volume, and equipment independence from supporting materials. Priority is given to those products that provide the greatest clinical benefit balanced with the technical and financial risks.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
(1) Hemostatic Dressing (HD): In FY06, completed report on affordability, manufacturability, and commercialization of current and emerging fibrin hemostat technologies. In FY07, determine whether to pursue technology or terminate program. (2) Chitosan Control Dressing (CCD): In FY06, full rate production was achieved for external use dressing. FDA approved antimicrobial barrier indication for external use dressing. FY07, continue work on development of long-term internal use dressing. Continue work on development of antimicrobial burn dressing. FY08, continue work on development of long-term internal use dressing. FY09, continue work on development of long-term internal use dressing. Continue work on development of antimicrobial burn dressing.	250			
Conduct/Perform development, testing and Milestone reviews for field medical treatment and treatment aid devices: (1)Ceramic Oxygen Generator (COG): In FY06, completed and took delivery of new 3-liter per minute prototype. In FY07, conduct technical environmental testing to determine ruggedness of oxygen cells. Conduct Milestone B. (2) Rotary Valve Pressure Swing Adsorption Oxygen Generator (RVPSAOG): FY06, commercialized Omni I system. FY07, conduct evaluation of new air compressor concept for Onmi II system. Begin construction of new prototype. In FY08, conduct technical testing of Omni II. Conduct Milestone B. (3) Battery Powered IV Fluid Warmer: In FY06, completed technical testing at WRAIR for FDA submission, and obtained FDA approval for use of line-powered unit. Conducted user evaluation. In FY07, develop/find battery acceptable for battery-powered model. In FY08, conduct user evaluation of battery-powered unit. (4) Future Medical Shelter System (FMSS): In FY06, the Operating Room Module with the Support Module including tent were delivered. FY07, conduct user evaluation. FY08, develop engineering development models. In FY09, conduct down-select to one system. (5) Future Combat System (FCS): In FY06, continued assisting the PM-UA with the development of the medical portion of the FCS Medical Variants. Development continued on an automated litter lift system, on-board oxygen generation, suction, storage space for essential medical items and equipment, and automated data management. In FY07, continue to provide consulting to PM-UA. (7) Electro-osmotic Pain Therapy System (EPTS): In FY06, initiated testing and evaluation of prototypes for FDA submission. In FY07, continue technical FDA requirement testing. In FY08, conduct user test and evaluation. In FY09, conduct Milestone B.	5079	3716	4375	13792
Small Business Innovative Research/Small Business Technology Transfer Programs		56		
Total	5329	3772	4375	13792

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

C. Acquisition Strategy Evaluate commercially developed materiel in government-managed tests for hardening or other modification.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603807A - Medical Systems - Adv Dev

PROJECT
836

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No other contract exceeds $1M			11824	1635		75		87		276			13897	
Subtotal:			11824	1635		75		87		276			13897	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: No product/contract costs greater than $1M individually.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: No product/contract costs greater than $1M individually.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $M individually.			17982	3694		3697		4288		13516			43177	
Subtotal:			17982	3694		3697		4288		13516			43177	

Project Total Cost:			**29806**	**5329**		**3772**		**4375**		**13792**			**57074**	

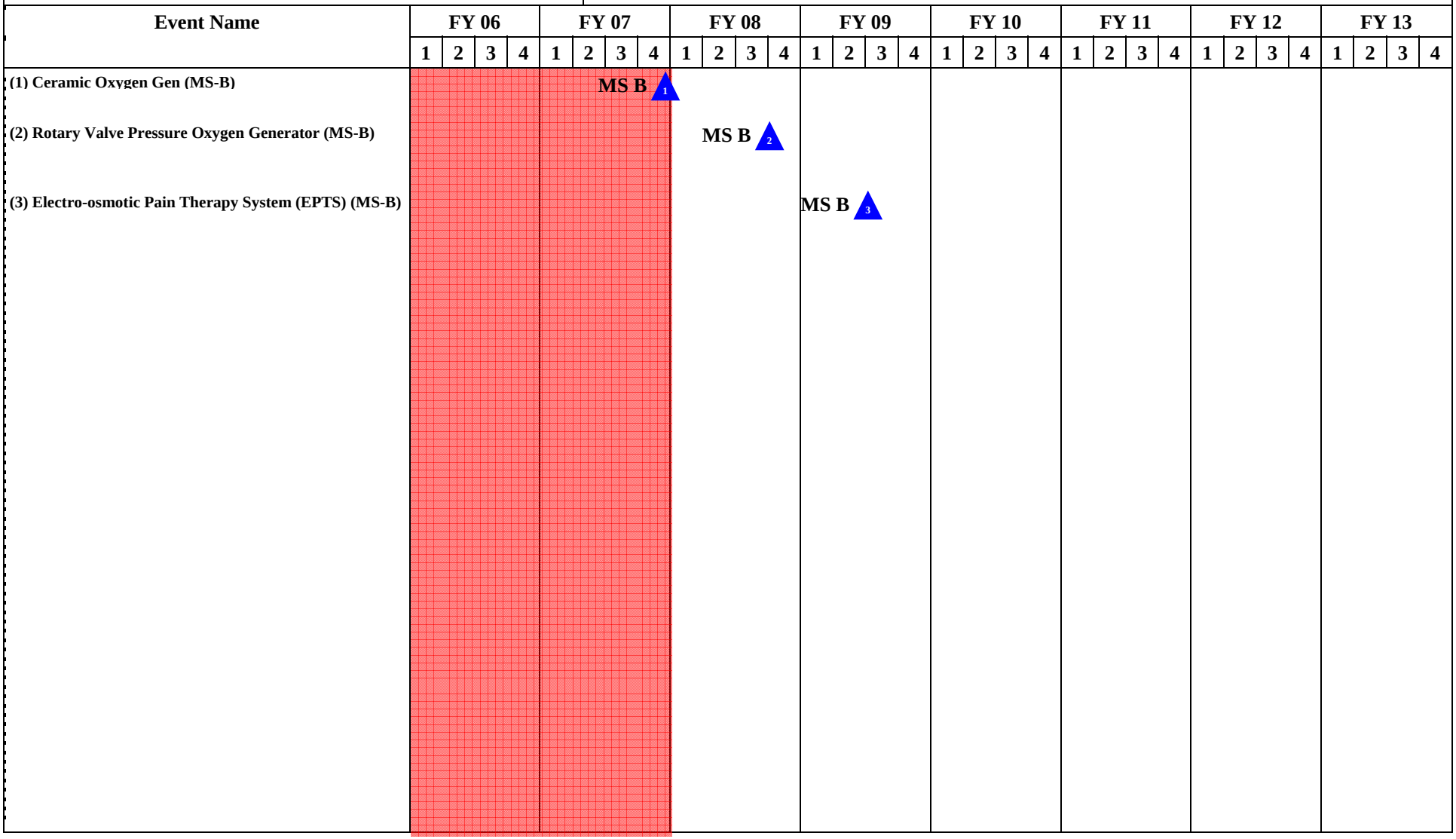
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603807A - Medical Systems - Adv Dev

PROJECT
836



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**836**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Ceramic Oxygen Gen (MS-B)		4Q						
Rotary Valve Pressure Oxygen Generator (MS-B)			3Q					
Electro-osmotic Pain Therapy System (EPTS) (MS-B)				2Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

COST (In Thousands)	FY 2006 Actual	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
837 SOLDIER SYS PROT-AD	869	2492	1901	1817	1698	1691	1789	1832		14089

A. Mission Description and Budget Item Justification: This project supports the conceptual and technical development of preventive medicine materiel including devices and medicines in order to provide protection, sustainment, and enhancement of the physical and psychological capabilities of soldiers across all conditions of combat. Focus is on the reduction of personnel losses due to preventable disease and non-battle injuries through the development of environmental and physiological performance monitors and other preventive medicine countermeasures.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
In FY06, conduct a Design Readiness Review and close out Leishmania skin test contract.	438			
(2) Coliform Analyzer: FY06, fabricated test articles for EPA certification of analyzer. In FY07, conduct technical tests for certification. In FY08, conduct user tests and evaluations. Conduct Milestone B.	431	2421	1901	1817
Small Business Innovative Research/Small Business Technology Transfer Programs		71		
Total	869	2492	1901	1817

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

C. Acquisition Strategy Test and evaluate materiel in government-managed trials to meet fielding requirements.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY: **4 - Advanced Component Development and Prototypes**

PE NUMBER AND TITLE: **0603807A - Medical Systems - Adv Dev**

PROJECT: **837**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			1789	389		1147		875		836		Cont.	Cont.	
Subtotal:			1789	389		1147		875		836		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			102	35		75		57		55		Cont.	Cont.	
Subtotal:			102	35		75		57		55		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually		Research and development; stability and potency testing	483	160		473		361		345		Cont.	Cont.	
Subtotal:			483	160		473		361		345		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			1105	285		797		608		581		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)												February 2007
BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603807A - Medical Systems - Adv Dev**											PROJECT **837**
Subtotal:	1105	285		797		608		581		Cont.	Cont.	
Project Total Cost:	**3479**	**869**		**2492**		**1901**		**1817**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

Event Name	FY 06				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	2	3	4
(1) Coliform Analyzer (MS-B)									**MS B** 1																							

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Coliform Analyzer (MS-B)			3Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**

	COST (In Thousands)	FY 2006 Actual	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	11084	11478	18178	14119	15503	15488	21974	22386	Continuing	Continuing
S51	AIRCREW INTEGRATED SYS AD	2572	3459	3179	2997	3136	2909	9996	10200		38448
S52	SOLDIER SUPPORT EQUIPMENT - AD	188	203								391
S53	CLOTHING AND EQUIPMENT	6694	6827	10050	9631	7193	7405	6878	6986	Continuing	Continuing
S54	SMALL ARMS IMPROVEMENT	1630	989	4949	1491	5174	5174	5100	5200		29707

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 S51 (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 (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 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	12119	10605	18439	14559
Current BES/President's Budget (FY 2008/2009)	11084	11478	18178	14119
Total Adjustments	-1035	873	-261	-440
Congressional Program Reductions	-53	-44		
Congressional Rescissions	-123			
Congressional Increases	1700	1000		
Reprogrammings	-2223			
SBIR/STTR Transfer	-336	-324		
Adjustments to Budget Years		241	-261	-440

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S51**

COST (In Thousands)	FY 2006 Actual	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	2572	3459	3179	2997	3136	2909	9996	10200		38448

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 soldier systems 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. Air Warrior enables the Army Aviation Warfighter to meet the approved Operational Requirements Document mission length of 5.3 hours with aviators in full chemical/biological protective gear. 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.

Funds for prior year efforts were funded in PE 0603801A (Project B45 - Aviation Advanced Development).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Concept exploration of pilot situational awareness and cognitive decision aiding tools.	848	1106	1104	995
Explore technology to upgrade environmental control and waste management systems.	500	502	500	502
Concept exploration of helmet technologies and helmet mounted devices.	974	1342	1325	1282
Continue advanced component development of Air Warrior preplanned technology improvements.	250	412	250	218
Small Business Innovative Reserach/Small Business Technology Transfer Programs		97		
Total	2572	3459	3179	2997

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, A PE 0603801A PROJ DB45 Adv Dev									Continuing	Continuing
RDTE, A PE 0604801A PROJ DC45-EMD									Continuing	Continuing
RDTE, A PE 0604601A PROJ S61-EMD	10727	2300	2542	2667	2751	2852	4500	4600	Continuing	Continuing
Aircraft Procurement, Army SSN AZ3110 - ACIS	31820	40632	42727	39430	57404	42849	138642	125577	Continuing	Continuing

Comment:

C. Acquisition Strategy Technologies developed under the System Integrator contract will integrate the Air Warrior (AW) Block 3 features. Specifically these Block 3 capabilities will include 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. The System Integrator contract is a 5 year delivery order cost plus fixed fee and was awarded in August 2004.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S51

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	General Dynamics C4 Systems		639	1Q	523	1Q	1323	1Q	1871	1Q		4356	
Subtotal:				639		523		1323		1871			4356	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	1-4Q	2427	1-4Q	1364	1-4Q	638	1-4Q		5838	
Subtotal:				1409		2427		1364		638			5838	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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	1-4Q	509	1-4Q	492	1-4Q	488	1-4Q		2013	
Subtotal:				524		509		492		488			2013	

Project Total Cost:				**2572**		**3459**		**3179**		**2997**			**12207**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S51**

Event Name	FY 06				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	2	3	4
Block 3 Component Development and Demonstration	**Block 3 RDT&E**																															
VCOP Components Demo in Adv Prototyping Engr Experimentation Sim	**VCOP**																															

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S51**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Block 3 Component Development and Demonstration	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
VCOP Components Demo in Adv Prototyping Engr Experimentation Sim	1Q - 3Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S53**

COST (In Thousands)	FY 2006 Actual	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	6694	6827	10050	9631	7193	7405	6878	6986	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 and sustainment of the individual Soldier.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Individual Soldier Ballistic Protection: (FY06) 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 trama 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. (FY07-09) 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 Blast Protective Footwear 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.	2273	2316	2350	2370
Soldier Uniforms and Clothing: (FY06) Conducted cold weather layer human factor evaluation on Combat Vehicle Crewman (CVC) aircrew uniform. Procured 200 Advanced Aviation Combat Uniforms for Testing. Completed technical testing on the Modular Boot System and User Testing to downselect to one boot that will replace multiple Organizational Clothing and Individual Equipment (OCIE) boots. (FY07-09) Leverage advancements in materials, nanotechnology, fabrication techniques, moisture management, flame resistance, antimicrobial treatments, insect protection, extreme environmental protection and advancements in chem/bio protection to increase the capabilities and durability of tactical and non-tactical clothing. Conduct test and evaluation of prototypes. Develop 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.	2290	2102	3350	2750
Individual Equipment: (FY06) Completed User test evaluation on Hydration on the Move. Initiated NBC Hydration Block II to provide the capability to hydrate hands free while in an NBC environment. Completed user test evaluation on the hydration on the move. Completed the Advanced Tactical Parachute System (ATAPS) operational testing. Completed User test and follow-on Technical test for Cold Weather Stove. (FY07-09) Leverage advancements in technology for load bearing equipment, hydration technologies including water filtration and NBC hydration, Special Operations Advanced RAM Parachute System (SOARAPS) and other mission essential and/or mission specific equipment for Soldiers. Initiate Test and evaluate prototype systems. Develop as much commonality as feasible across a broad spectrum of users and mission scenarios.	2131	2216	3495	3611
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 abilitity to conduct missions for longer periods of time in extreme environments.			855	900
SBIR/STTR		193		

Total	6694	6827	10050	9631

B. Other Program Funding Summary	FY 2006	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	8
RDTE, 0604601A.S60, Clothing and Eq	7546	11197	9699	9677	10044	10082	10080	10100	Continuing	Continuing
OMA, 121017, Central Funding and Fielding	123954	134328	110688	92715	89409	39529	79984	113404	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 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S53

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	1-2Q	1198	1-2Q	2779	1-2Q	2390	1-2Q	Cont.	Cont.	
Various	Contracts	Various		2491	1-2Q	2510	1-2Q	3000	1-3Q	3041	1-3Q	Cont.	Cont.	
Subtotal:				4491		3708		5779		5431		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	1-2Q	1000	1-2Q	1341	1-2Q	1450	1-2Q	Cont.	Cont.	
Subtotal:				1000		1000		1341		1450		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	1-4Q	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 2006 Cost	FY 2006 Award Date	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	1-4Q	829	1-4Q	1180		1200		Cont.	Cont.	
Subtotal:				803		829		1180		1200		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S53**

Project Total Cost:		**6694**		**6827**		**10050**		**9631**		**Cont.**	**Cont.**	

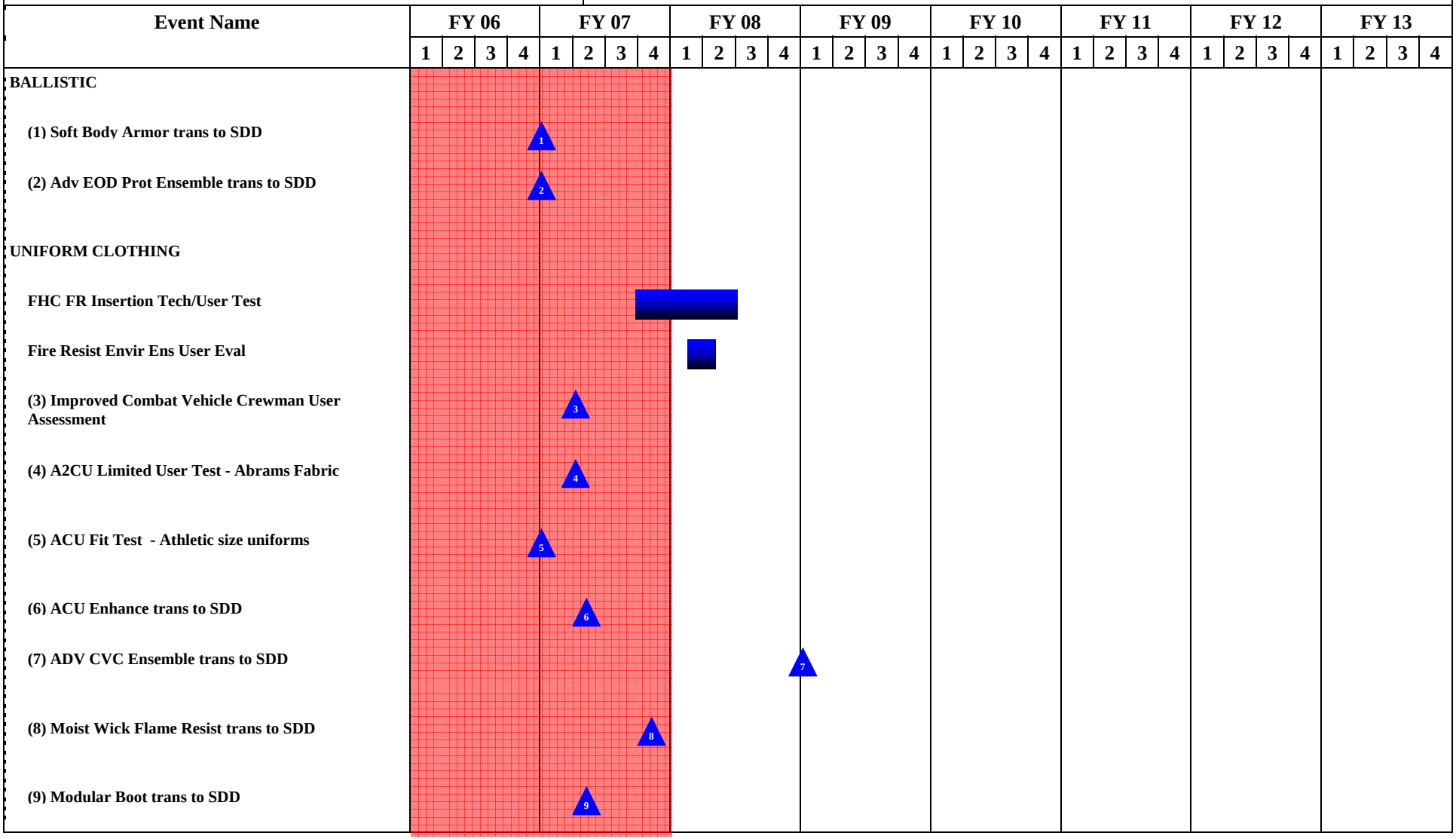
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S53



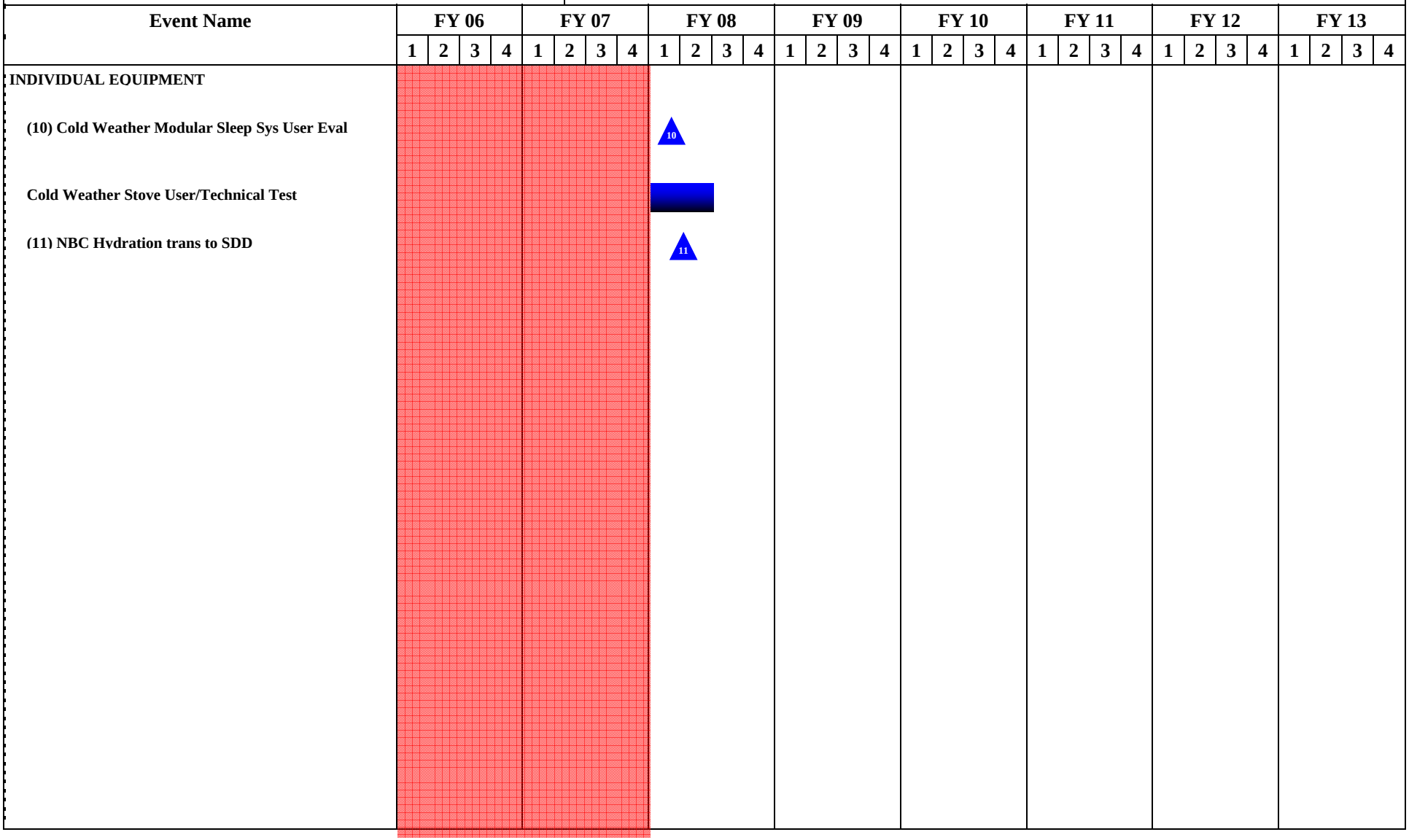
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S53



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S53

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BALLISTIC								
Soft Body Armor trans to SDD		1Q						
Adv EOD Prot Ensemble trans to SDD		1Q						
UNIFORM CLOTHING								
FHC FR Insertion Tech/User Test		3Q - 4Q	1Q - 2Q					
Fire Resist Envir Ens User Eval			1Q - 2Q					
Improved Combat Vehicle Crewman User Assessment		2Q						
A2CU Limited User Test - Abrams Fabric		2Q						
ACU Fit Test - Athletic size uniforms		1Q						
ACU Enhance trans to SDD		2Q						
ADV CVC Ensemble trans to SDD				1Q				
Moist Wick Flame Resist trans to SDD		4Q	1Q					
Modular Boot trans to SDD		2Q						
INDIVIDUAL EQUIPMENT								
Cold Weather Modular Sleep Sys User Eval			1Q - 2Q					
Cold Weather Stove User/Technical Test			1Q - 2Q					
NBC Hydration trans to SDD			2Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S54**

COST (In Thousands)	FY 2006 Actual	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	1630	989	4949	1491	5174	5174	5100	5200		29707

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.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Small Arms Weapons Enhancements				
- Design, Development and Engineering	275	200	150	240
- Prototype Fabrication	900	600	300	
- Testing and evaluation	455	189	260	270
- Demonstration				290
Ammunition				
- Design, Development and Engineering			837	341
- Prototype Fabrication			2124	
- Testing and Evaluation			400	215
- Demonstration				135
Fire Control				
- Design, Development			260	
- Prototype Fabrication			210	
- Testing and Evaluation			213	
- Demonstration			195	
Total	1630	989	4949	1491

B. Other Program Funding Summary	FY 2006	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	6905	5707	14112	4883	14978	16112	14995	14995	Continuing	Continuing

Comment: FY 2006 Congressional increase of $1.7M for Nickel Boron Coating Technology.
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 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S54

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		600		2634					4134	
Subtotal:				900		600		2634					4134	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		967		782			2024	
Subtotal:				150		125		967		782			2024	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		873		485			2002	
Subtotal:				455		189		873		485			2002	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		475		224			899	
Subtotal:				125		75		475		224			899	

Project Total Cost:				**1630**		**989**		**4949**		**1491**			**9059**	

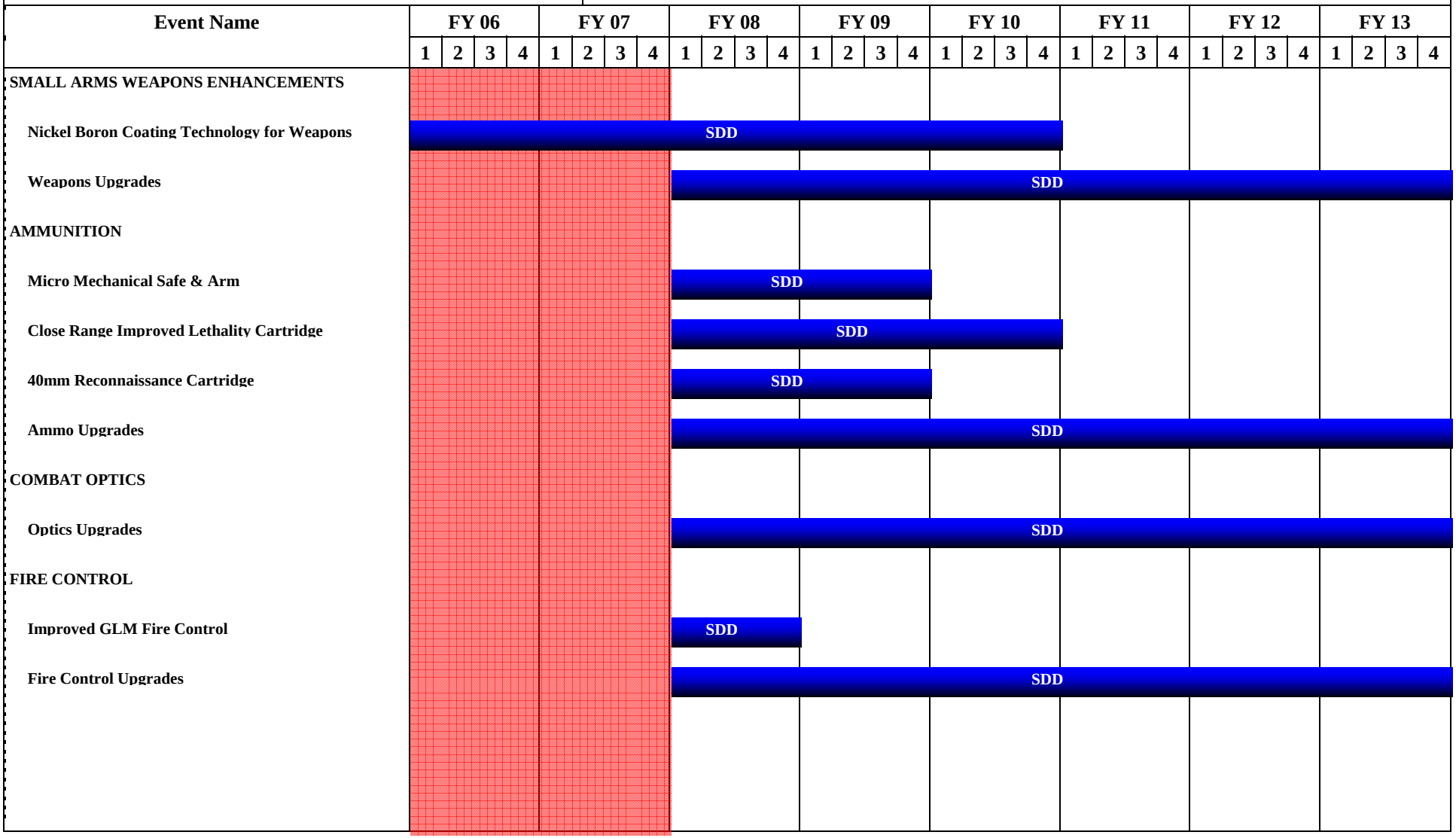
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S54



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S54**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SMALL ARMS WEAPONS ENHANCEMENTS	1Q							
Nickel Boron Coating Technology for Weapons	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	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 Range Improved Lethality Cartridge			1Q - 4Q	1Q - 4Q	1Q - 4Q			
40mm Reconnaissance Cartridge			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

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service (JMIP/DISTP)**	**472**

COST (In Thousands)		FY 2006 Actual	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
472	INTEGRATED BROADCAST SERVICE (JMIP/DISTP)	2723	1123	38213	11238	1500	1000				55797

A. Mission Description and Budget Item Justification: The Joint Tactical Terminal (JTT) Product Management Office (PMO) supports all Joint services and Special Operations Command (SOCOM). The Integrated Broadcast Service (IBS) is the worldwide Department of Defense (DoD) standard network for transmitting tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The JTT PMO_s role is to consolidate and replace existing IBS terminal functionality and capability with a "common family" of Integrated Broadcast Service-Modules (CIBS-M) - both hardware and software - and to expedite execution of the IBS Technical Transition Plan (TTP). The JTT family of systems currently consists of the JTT-Senior, JTT-Briefcase, JTT-IBS and ENTR CIBS-M IBS broadcast receiver/transceiver devices. The TTP is a comprehensive refresh effort of the entire IBS network focused on rearchitecting the broadcast from its current multi-broadcast, multi-data format structure, to a single broadcast (Common Interactive Broadcast - CIB) and single data format (Common Message Format - CMF). The JTT/CIBS-M family of systems is a critical component of the TTP as these systems are the only IBS receiver/transceiver devices in the DoD being modernized to support both the new consolidated broadcast architecture and the National Security Agencies (NSA) crypto modernization mandate. Failure to upgrade the JTT family of systems would result in an inability to execute the over-the-air broadcast portion of the TTP in the near term, and ultimately lead to a complete cessation of IBS data flow via the existing over-the-air IBS broadcast networks. The JTT program leverages early tech-based efforts initiated by organizations such as the National Reconnaissance Office (NRO) for the ENTR CIBS-M. Management control for JTT/CIBS-M efforts that contribute to increased value in performance or sustainment will transition to the JTT PMO. These capabilities will be integrated into the JTT/CIBS-M family of hardware and software modules. The JTT/CIBS-M family of modules will be the "sole" IBS provider, ensuring continued IBS interoperability to a variety of tactical receivers across DoD and the services throughout the TTP implementation period and beyond. This program funds the design, development, test and evaluation of JTT/CIBS-M hardware and software modules, as well as implementing performance enhancements to the family of JTT equipment. This is necessary to ensure crypto modernization compliance and to facilitate migration to a rearchitected CIB and CMF-based IBS broadcast structure. Funds also support JTT/CIBS-M training, equipping and supporting the Warfighter with improved Joint Readiness and Interoperability.

FY08 Funds support the development of the Common Interactive Broadcast (CIB) waveform for migration to the IBS Worldwide standard DoD Network. Development for JTT Sr upgrade kit (COMSEC and SBC). Development of objective ENTR.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Develop and test modules for Software Communications Architecture (SCA) compliant legacy waveforms for JTRS.	200			
Develop Integrated Broadcast Service (IBS) Common Message Format (CMF) to support migration to the IBS Worldwide standard DOD Network.	2523	1123		
Sierra Chip COMSEC Algorithms Integration (NRE)			5213	738
COMSEC Refresh JTT Sr (NRE-CDR)			7000	1500
Objective ENTR Development			10000	2000

JTT Sr CIB Network Refresh Devel & Integration			2500	2500
JTT IBS CIB Network Refresh Devel & Integration			2500	2500
SBC NRE Redesign (JTT Sr)			11000	2000
Total	2723	1123	38213	11238

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service (JMIP/DISTP)**	**472**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	2723	1135		
Current BES/President's Budget (FY 2008/2009)	2723	1123	38213	11238
Total Adjustments		-12	38213	11238
Congressional Program Reductions		-12		
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			38213	11238

Change Summary Explanation: Funding - FY 2007: Funds support testing of the Integrated Broadcast Service (IBS) Common Message Format (CMF) to support migration to the IBS Worldwide standard DoD Network. Funding - FY 2008/09: Funds support the development of the Common Interactive Broadcast (CIB) waveform for migration to the IBS Worldwide standard DoD Network. Development for JTT Sr upgrade kit (COMSEC and SBC). Development of objective ENTR.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
V29600 Other Procurement, Army - JTT/CIBS-M (Tiara),	9862	981	3560	8632	2900	1430			Continuing	27365

Comment:

D. Acquisition Strategy Modifications for the design, development and delivery to JTRS JPO of JTRS SCA compliant legacy IBS waveforms has been awarded to Boeing under an existing Air Force contract, to complete ongoing work funded by USAF Airborne Intelligence System Program Office. The CMF development has been awarded to the JTT Original Equipment Manufacturer (OEM). As the broadcast networks continue to evolve and modify their formats and protocols, the JTT program will support IBS and various existing and future radios and host systems. Funds support the development of the Common Interactive Broadcast (CIB) waveform for migration to the IBS Worldwide standard DoD Network. Development for JTT Sr upgrade kit (COMSEC and SBC). Development of objective ENTR.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603850A - Integrated Broadcast Service (JMIP/DISTP)

PROJECT
472

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
JTRS SCA/IBS Modules	MIPR	Air Force/Boeing	3981	200									4181	4181
Common Message Format	T&M	Raytheon, St. Petersburg, FL	2223	2123	1-4Q								4346	4346
Common Interactive Broadcast Sr	CP/FF	Raytheon, St. Petersburg, FL						2500	1-2Q	2500	1-2Q		5000	5000
Common Interactive Broadcast IBS	CP/FF	DRS, Dayton, OH						2500	1-2Q	2500	1-2Q		5000	5000
COMSEC Refresh JTT Sr	CP/FF	Raytheon, St. Petersburg, FL						7000	1-2Q	1500	1-2Q		8500	8500
Sierra Chip COMSEC Algorithms Integration	MIPR	NRO/L3 West, San Diego, CA						5213	1-2Q	738	1-2Q		5951	5836
SBC NRE Redesign JTT Sr	CP/FF	Raytheon, St. Petersburg, FL						11000	1-2Q	2000	1-2Q		13000	13000
Objective ENTR Development	MIPR	NRO/L3 West, San Diego, CA						10000	1-2Q	2000	1-2Q		12000	12000
Subtotal:			6204	2323				38213		11238			57978	57863

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	CECOM/RDCOM, Ft. Monmouth, NJ	960		1Q	205	1Q						1165	
Subtotal:			960			205							1165	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service (JMIP/DISTP)**	**472**

IOT&E support	MIPR	Various	1402			242	1Q						1644	
JITC DAMA Certification of JTT	MIPR	JITC	400			231	1Q						631	
Certification of CMF	MIPR	Various		200	4Q	250	1Q						450	
JTEL Certification of SCA	MIPR	SPAWAR, CA	200										200	
Subtotal:			2002	200		723							2925	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	In House	PM JTT, Ft. Monmouth, NJ	982	200	1Q	195	1Q							
Subtotal:			982	200		195								
Project Total Cost:			**10148**	**2723**		**1123**		**38213**		**11238**			**62068**	**57863**

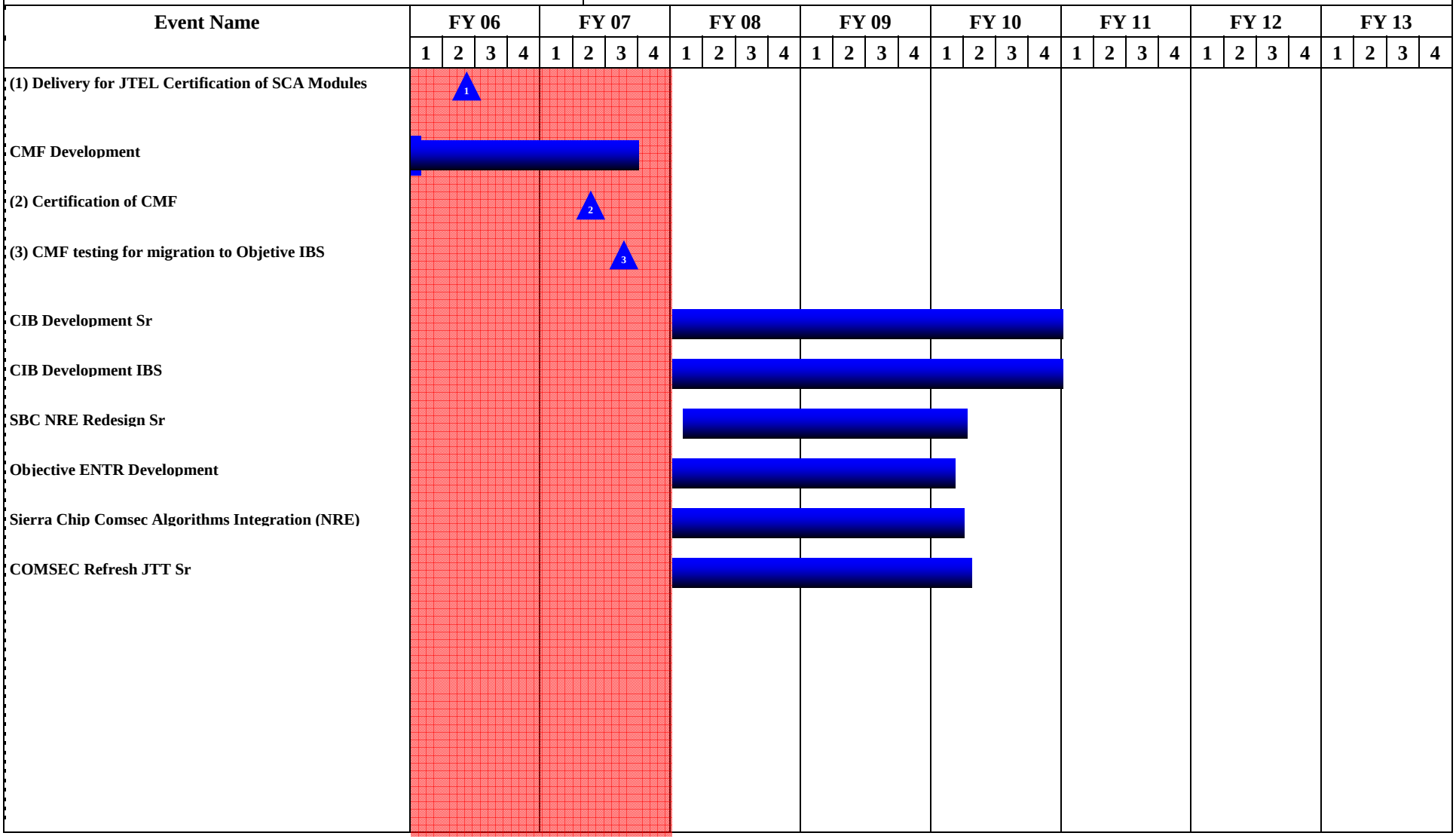
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603850A - Integrated Broadcast Service (JMIP/DISTP)

PROJECT
472



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service (JMIP/DISTP)**	**472**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
JTRS SCA Compliant Legacy Waveforms								
Delivery for JTEL Certification of SCA Modules	2Q							
CMF Development	1Q - 4Q	1Q - 3Q						
Certification of CMF		2Q						
CMF testing for migration to Objetive IBS		3Q						
CIB Development Sr			1Q - 4Q	1Q - 4Q	1Q - 4Q			
CIB Development IBS			1Q - 4Q	1Q - 4Q	1Q - 4Q			
SBC NRE Redesign Sr			1Q - 4Q	1Q - 4Q	1Q - 2Q			
Objective ENTR Development			1Q - 4Q	1Q - 4Q	1Q			
Sierra Chip Comsec Algorithms Integration (NRE)			1Q - 4Q	1Q - 4Q	1Q			
COMSEC Refresh JTT Sr			1Q - 4Q	1Q - 4Q	1Q - 2Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604201A - AIRCRAFT AVIONICS**	**C97**

COST (In Thousands)	FY 2006 Actual	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
C97 ACFT AVIONICS	9898	48554	57786	71880	78163	53246	68869	12417	Continuing	Continuing

A. Mission Description and Budget Item Justification: This Program Element (PE) funds the development of avionics systems required to horizontally and vertically integrate the battlefield and the integration of those systems into Army Aviation aircraft. Tasks in this PE support research, development and test efforts in the System Development and Demonstration (SDD) phases of these systems.

Aviation Tactical Communication Systems (ATCS) is an Army Aviation Program that requires RDT&E funds for the A-Kit (hardware and software) development, integration, test and certification of Alternative Communications (ARC-231 and ARC-201D) and the Joint Tactical Radio System (JTRS) radio hardware onto the Apache (AH-64D), Blackhawk (UH-60M) and Chinook (CH-47F) modernized aircraft. JTRS is the transformational system that will provide Army Aviation the required interoperability capability for Future Force and Joint Force operations.

Army Aviation originally planned to integrate the JTRS Cluster 1 radio onto all modernized platforms in this timeframe to meet a FY10 fielding. However, due to the JTRS program restructure, Army Aviation is now aligned with the Airborne Maritime Fixed (AMF) JTRS Program and plans to field JTRS AMF radios in FY14. This delay in the JTRS Cluster 1 program resulted in a lack of critical communications equipment to support modernized Army Aviation aircraft production line requirements and Alternative Communications (Alt Comms) was initiated to mitigate this issue. Alt Comms provides two ARC-231 and two ARC-201D radios with power amplifiers to meet the minimum interim JTRS requirements for Military Satellite Communications (MILSATCOM), Single Channel Ground and Airborne Radio System (SINCGARS), HAVEQUICK, Very High Frequency (VHF), Air Traffic Control (ATC), and Land Mobile Radio and funds the integration and test of the radios onto each platform to meet production line schedules. FY08 funds are required to continue A-Kit development, integration, and system testing for AH-64D, CH-47F, and UH-60M.

Alt Comms will be Army aviation's communication solution until FY14 when it will be supplemented by the JTRS AMF Small Airborne (SA) radio set. Increment 1 of the AMF SA will provide the Wideband Networking Waveform, Soldier Radio Waveform, and Link-16 required for interoperation with the Future Force. Increment 2 of the AMF SA, planned for FY20 will provide all legacy waveforms allowing aircraft to install a single hardware solution to meet all waveform requirements. FY08 funds are required to initiate JTRS integration onto aviation platforms. JTRS integration efforts planned for FY08 include defining standardized control and data interfaces and initiating development of reusable control software to be provided to JTRS integrators.

The Improved Data Modem (IDM) is the common solution for digitizing Army Aviation. It performs as an internet controller and gateway to Tactical Internet (TI) and Fire Support (FS) internet for Army aircraft. With interfaces supporting a six channel transmit/receive terminal, the IDM provides radio connectivity to the ARC-201D/210/220/231, ARC-186, ARC-164, and the Blue Force Tracker's (BFT) MT-2011 Transceiver. The IDM also provides 1553 and Ethernet portals for rapid data transfer. This hardware/software solution provides a flexible, software driven digital messaging system that is interoperable with existing Army and Joint forces battlefield operating systems. The IDM provides Situational Awareness and Variable Message Format messages capability to the cockpit. FY08 funds are required to continue development and integration effort for an Open Systems Architecture IDM solution compatible with the Common Avionics Architecture System (CAAS) cockpit for the CH-47F and HH/UH-60M helicopters. This effort provides the foundation for future open architecture solutions which will reduce space, weight, and power demands for the CAAS aircraft and also matures technology for the AH-64D Block III. Funds are also required to begin development and integration of the Future Combat Systems (FCS) database-to-database exchange interoperability

standard.

The Joint Precision Approach and Landing System (JPALS) is a precision approach and landing system providing joint operational capability for U.S. forces assigned to conventional and special operations missions including those operating from fixed base, ship, tactical, and special mission environments. This effort evaluates technical approaches for incorporating JPALS into Army aircraft while considering aircraft environment, electrical power, system space, weight, antenna placement, and electromagnetic compatibility without nullifying low observable capability requirements. This effort also develops fixed base and man pack ground stations for the Army. The Army's involvement in JPALS prior to MS B is to: ensure Army requirements are addressed in the joint program; participate in program management and provide systems engineering and acquisition documentation for the joint program; and monitor technology readiness to ensure it is sufficiently mature to meet the Army's technical requirements/solution. Army Aviation's technical solution is to include JPALS capability within the Embedded GPS/Inertial Navigation System (EGI).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue A-Kit Development, Integration and System Testing for AH-64D, CH-47F, and UH-60M (ATCS)	2837	29795	42776	45814
Continue System Engineering, Antenna Support and Logistics Effort (ATCS)	924	3000	3257	3000
Program Managment Support for A-Kit Development (ATCS)			2435	2713
Continue Test and Evaluation Support (ATCS)	677	2662	1002	2500
Continue development and integration of an open systems architecture IDM solution and Future Combat System (FCS) database-to-database exchange (IDM)	3898	9748	2485	3420
Program Management Support (IDM)	84	151	131	180
Continue to provide; system engineering; product support; and programmatic, cost, test, and technical documentation for JPALS land and sea based development efforts. (JPALS)	1399	1764	3698	4000
Begin JPALS SDD with Milestone B in FY08. Continue execution of joint and Army effort to develop a JPALS-capable Embedded GPS Inertial (EGI) receiver. (JPALS)			700	7895
Begin JPALS Test and Evaluation planning. (JPALS)			1000	1600
Program Management Support (JPALS)	79	96	302	758
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR) reductions.		1338		
Total	9898	48554	57786	71880

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604201A - AIRCRAFT AVIONICS**	**C97**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	13259	61946	71307	85450
Current BES/President's Budget (FY 2008/2009)	9898	48554	57786	71880
Total Adjustments	-3361	-13392	-13521	-13570
Congressional Program Reductions		-15185		
Congressional Recissions	-551			
Congressional Increases		2150		
Reprogrammings	-2472	-357		
SBIR/STTR Transfer	-338			
Adjustments to Budget Years			-13521	-13570

FY08: Funding realigned ($13.521 million) to higher priority requirements
FY09: Funding realigned ($13.570 million) to higher priority requirements

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Airborne Avionics SSN AA0700	88471	155824	179565	176475	259254	287331	359098	318238	Continuing	Continuing

Comment:

D. Acquisition Strategy This project is comprised of multiple systems:

1) ATCS - Alt Comms is required to meet minimum acceptable near-term communications requirements as defined by the U.S. Army Aviation Warfighting Center (USAAWC) to mitigate production line communications equipment gaps for modernized Army aircraft (UH-60M, CH-47F, and AH-64D). The Alt Comms acquisition strategy is to use currently available communications equipment to fill these gaps. However, this equipment must be incorporated onto the modernized aviation platforms through A-Kit development, platform hardware and software development/integration, and platform testing of the Alt Comms suite. These efforts will be accomplished using host platform development contracts, integration labs, and Airworthiness testing and certification.

2) IDM - The non-recurring engineering and software development is used to integrate the IDM into open systems architecture. The initial effort is to develop a data exchange capability with the CAAS processors. The software will be ported into the CAAS by providing the IDM capability on a card that can be included in the platform's onboard systems to eliminate the need for a stand-alone IDM box. This development effort will be accomplished by a sole source cost-plus-fixed fee contract with ICI, McLean, VA.

3) JPALS - Currently the Air Force is the lead service for this joint program. However, the Navy will assume this lead service role when the CDD is approved (scheduled for February 2007). The overall JPALS program acquisition strategy is to complete the current risk reduction effort and TD phase and enter into the SDD phase, currently scheduled for Milestone B in the second quarter of FY08. The TD phase led to the development of combined specifications for land, sea, and avionics. Using this specification, the JPALS prototype ground-based increment was tested in both benign and jamming environments in November 2006, with positive results for operating successfully in a jamming environment.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604201A - AIRCRAFT AVIONICS

PROJECT
C97

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Integration, development and system testing for AH-64D, CH-47F, UH-60M (ATCS)	Various	Boeing, AZ, PA, & CA; Rockwell Collins, Cedar Rapids, IA; Sikorsky, Stratford, CT; Raytheon, IN	104129	2837	3-4Q	29795	1-3Q	42776	1-3Q	45814	1-3Q	Cont.	Cont.	Cont.
Integr and Dev of an Open Sys Architecture IDM solution and FCS database-to-database exchange (IDM)	SS/CPFF	ICI, McLean, VA	1916	3898	3Q	9748	2Q	2485	2Q	3420	2Q		21467	
JPALS Development (JPALS)	Various	Various						700	2-3Q	7895	2-3Q	Cont.	Cont.	Cont.
Subtotal:			106045	6735		39543		45961		57129		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Engineering, Antenna Integration Support and Logistics Efforts (ATCS)	Various	Westar, Quantum, Teclote, AL; ARINC, CSC, NJ	3946	924	1-3Q	3000	1-3Q	3257	1-3Q	3000	1-3Q	Cont.	Cont.	Cont.
System Engineering, Logistics, and Technical Support (JPALS)	Various	Various	1774	1399	1-3Q	1764	1-3Q	3698	1-3Q	4000	1-3Q	Cont.	Cont.	Cont.
Subtotal:			5720	2323		4764		6955		7000		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test and Evaluation (ATCS)	MIPR	Various	2201	677	1-3Q	2662	1-3Q	1002	1-3Q	2500	1-3Q	Cont.	Cont.	Cont.
Test and Evaluation (JPALS)	MIPR	Various						1000	1-3Q	1600	1-3Q	Cont.	Cont.	Cont.

Subtotal:			2201	677		2662		2002		4100		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Spt (ATCS)	In-House	AMCOM, Redstone Arsenal, AL/PM AME	6170					2435	1-4Q	2713	1-4Q	Cont.	Cont.	Cont.
PM Spt (IDM)	In-House	AMCOM, Redstone Arsenal, AL/PM AME	1245	84	1-4Q	151	1-4Q	131	1-4Q	180	1-4Q		1791	
PM Spt (JPALS)	In-House	AMCOM, Restone Arsenal, AL/PM AME	39	79	1-4Q	96	1-4Q	302	1-4Q	758	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						1338							1338	
Subtotal:			7454	163		1585		2868		3651		Cont.	Cont.	Cont.
Project Total Cost:			**121420**	**9898**		**48554**		**57786**		**71880**		**Cont.**	**Cont.**	**Cont.**

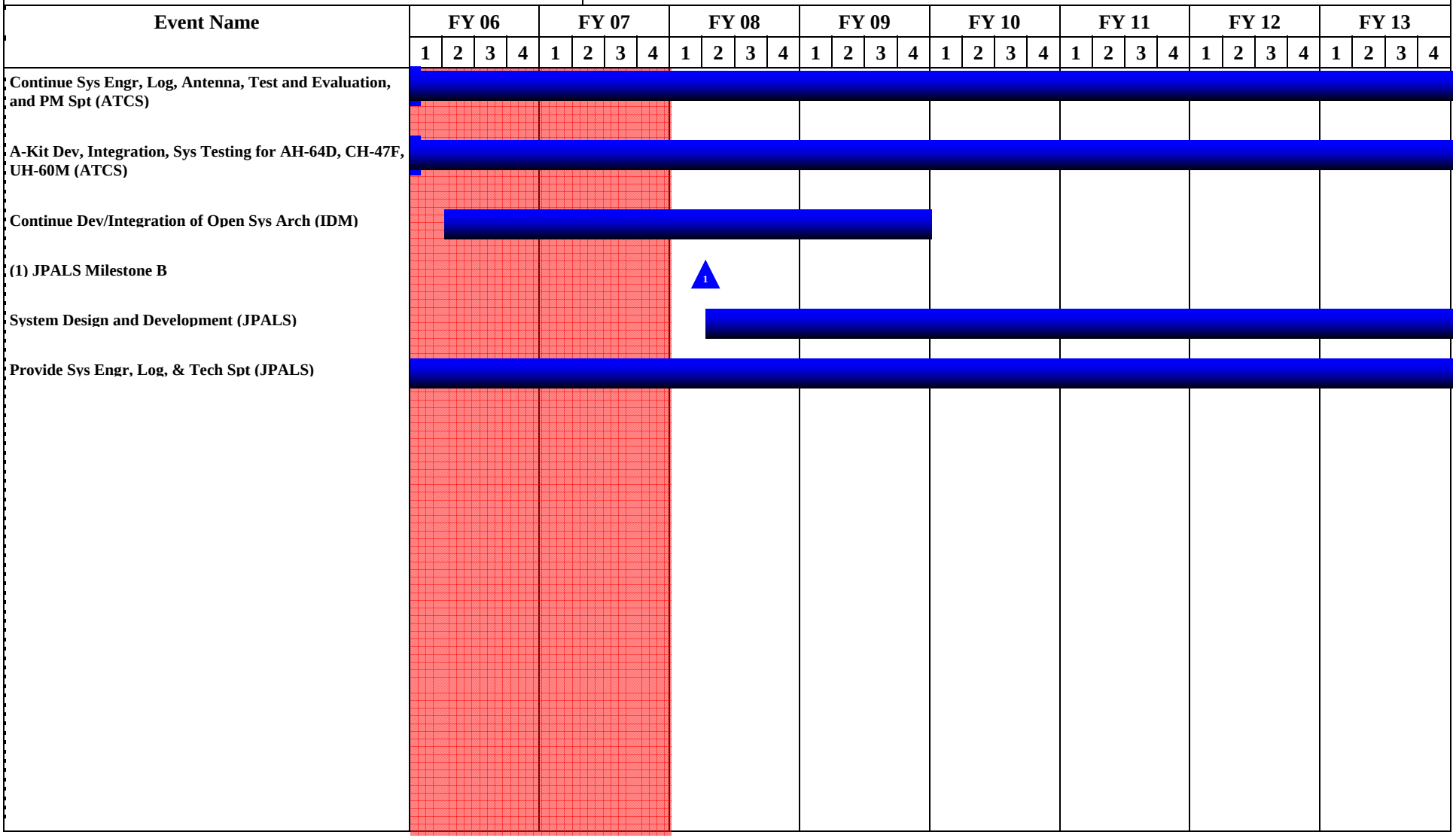
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604201A - AIRCRAFT AVIONICS

PROJECT
C97



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604201A - AIRCRAFT AVIONICS**	**C97**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Continue Sys Engr, Log, Antenna, Test and Evaluation, and PM Spt (ATCS)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
A-Kit Dev, Integration, Sys Testing for AH-64D, CH-47F, UH-60M (ATCS)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Continue Dev/Integration of Open Sys Arch (IDM)	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
JPALS Milestone B			2Q					
System Design and Development (JPALS)			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Provide Sys Engr, Log, & Tech Spt (JPALS)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**	**53H**

COST (In Thousands)		FY 2006 Actual	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
53H	ARMED RECONNAISSANCE HELICOPTER (ARH)	88509	131315	82310	13027						315161

A. Mission Description and Budget Item Justification: The mission of the Armed Reconnaissance Helicopter (ARH) is to provide a robust reconnaissance and security capability for the Joint Combined arms air-ground maneuver team. The ARH is a combination of a modified off-the-shelf (OTS) airframe integrated with a non-development item (NDI) mission equipment package (MEP). The ARH will be fielded to support current forces in the Global War on Terror (GWOT) and will possess the growth potential to bridge the capability gaps to Future Combat Force. The ARH will be a direct replacement for the aging OH58D Kiowa Warrior fleet.

The rapidly reconfigurable ARH provides the space, weight, and power to incorporate the MEP, as Mission, Enemy, Terrain, Troops available, Time and Civilian considerations (METT_TC) dictates, for use in High/hot (4K/95°F with growth potential to 6K/95°F) conditions, complex terrain, and urban environments. The MEP provides a robust communications and navigation suite, advanced state-of-the-art sensor assembly, and self-defense armament capability to fight for, collect, and distribute critical information to all members of the Joint air-ground maneuver team. Specifically, the ARH's robust communication suite when combined with the sensors assembly provides real time delivery of actionable combat information to the joint force while enabling precision employment of Joint sensors and fires.

The ARH will provide a highly deployable, reconnaissance and security capability that will employ immediately upon arrival into theater. The platform will address the capability gaps of interoperability, survivability, versatility, agility, lethality, and sustainability to ensure interoperability over extended ranges, enhance mission effectiveness throughout the operational environment, and focus on system survivability against threats operating in the contemporary operational environment, while reducing the logistical burden on the tactical unit. The fundamental purpose of ARH is to perform reconnaissance and to provide security in combat operations. In doing so, it improves the commander's ability to maneuver and concentrate superior combat power against the enemy at the decisive time and place.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Program Support	14761	9965	7102	4412
Aircraft System Development and Demonstration	66028	110102	65711	
Test and Evaluation	7720	11248	9497	8615
Total	88509	131315	82310	13027

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**	**53H**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	91860	132781	83100	13200
Current BES/President's Budget (FY 2008/2009)	88509	131315	82310	13027
Total Adjustments	-3351	-1466	-790	-173
Congressional Program Reductions		-502		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-3351	-964		
SBIR/STTR Transfer				
Adjustments to Budget Years			-790	-173

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
A04203 HELICOPTER, OBSERVATION, Kiowa Warrior Replacement		101409	468259	565776	642551	598521	540967	537033	784148	4238664

Comment:

D. Acquisition Strategy The Milestone B Acquisition Decision Memorandum (ADM) was signed on 27 July 2005. The Armed Reconnaissance Helicopter (ARH) program is currently in the Systems Development and Demonstration (SDD) phase. Critical Design review is set for 2nd Quarter 2007 and the Limited User Test (LUT) is scheduled for 2nd Quarter 2007. SDD contract includes 2 Low Rate Initial Production (LRIP) options. Milestone C review for an LRIP decision is scheduled for 3rd Quarter FY 2007. Initial Operational Test and Evaluation (IOTE) is scheduled for 4th Quarter 2008. Full Rate Decision Review is scheduled for 2nd Quarter 2009 and First Unit Equipped (FUE) is scheduled for Jun 2009.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604220A - Armed, Deployable OH-58D

PROJECT
53H

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Aircraft Subsystem Integration	CPIF	TBD	71932	66028		110102		65711					313773	
Subtotal:			71932	66028		110102		65711					313773	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test and Evaluation	MIPR	Various Activities	309	7720		11248		9497		8615			37389	
Subtotal:			309	7720		11248		9497		8615			37389	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	Various	ARH Internal Operating Budget, Matrix Support and Support Contracts	6675	14761		9965		7102		4412			42915	
Subtotal:			6675	14761		9965		7102		4412			42915	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**	**53H**

Project Total Cost:	**78916**	**88509**		**131315**		**82310**		**13027**			**394077**	

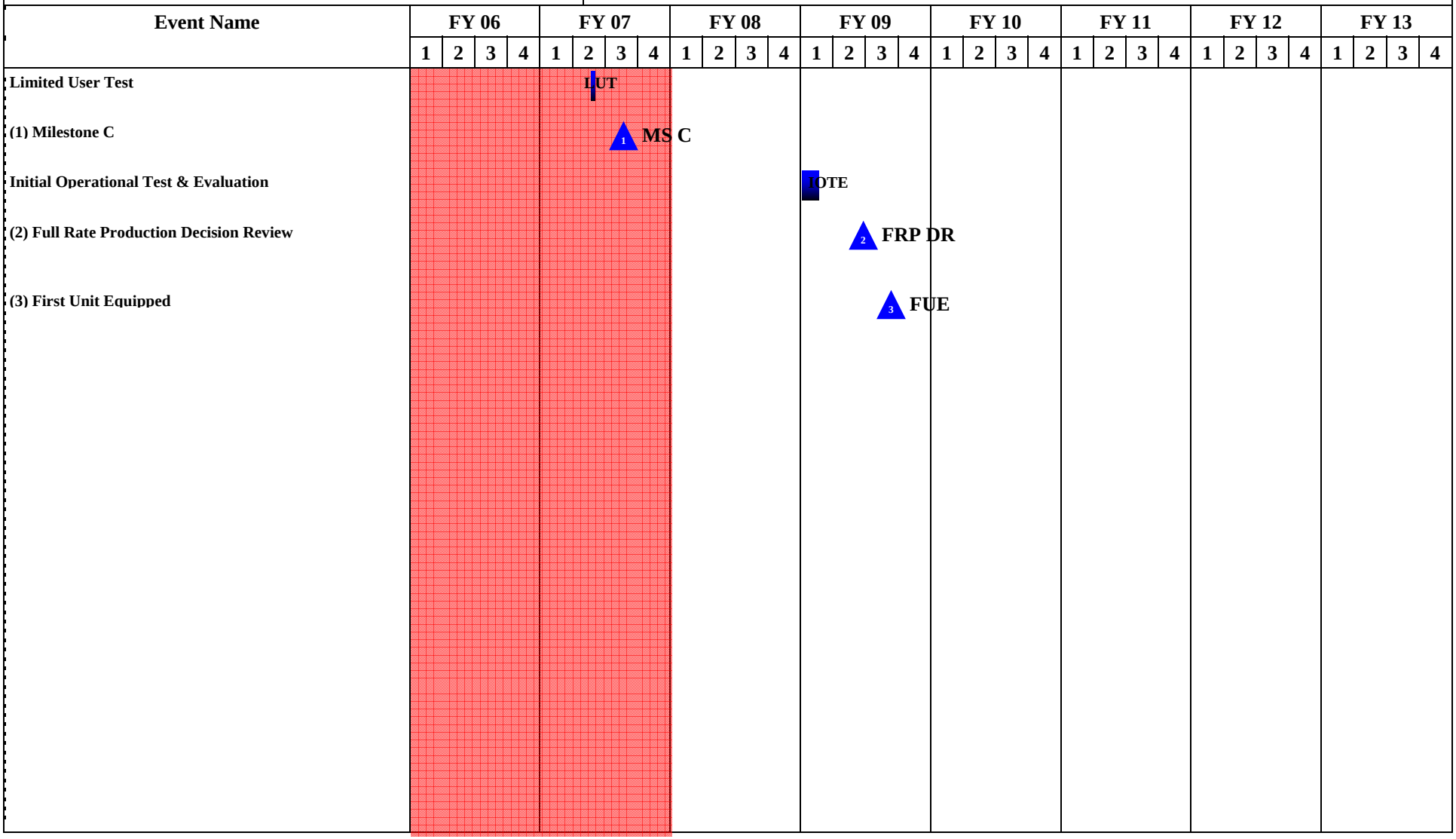
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604220A - Armed, Deployable OH-58D

PROJECT
53H



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**	**53H**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Milestone B								
Contract Award								
Limited User Test		2Q						
Milestone C		3Q						
Initial Operational Test & Evaluation			4Q	1Q				
Full Rate Production Decision Review				2Q				
First Unit Equipped				3Q				

Milestone B occurred 4th Quarter FY 2005 (07 Jul 2005) as well as Contract Award for System Development and Demonstration (SDD) (29 Jul 2005).

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**			PE NUMBER AND TITLE **0604220A - Armed, Deployable OH-58D**					PROJECT **53H**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Armed Reconnaissance Helicopter (ARH)	66028	110102	65711					
Total Termination Liability Funding:	66028	110102	65711					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**

	COST (In Thousands)	FY 2006 Actual	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	33158	45053	55716	39974	40005	38066	76310	57059	Continuing	Continuing
665	A/C SURV EQUIP DEV	9040	10493	4065	4091	5174	5691	7500	8500		54554
L12	Signals Warfare Development (TIARA)	12879	16946	10602	11079	5174	5174	27000	11000		99854
L13	COUNTER-IEDS							5800	6014		11814
L15	ARAT-TSS	1238	1283	2148	2272	2382	2359	2538	2537	Continuing	Continuing
L16	TROJAN DEVELOPMENT	1530	1590	1456	1495	1534	1573	1607	1643		12428
L20	ATIRCM/CMWS	8471	14741	37445	21037	25741	23269	31865	27365		189934

A. Mission Description and Budget Item Justification: This program element encompasses engineering and manufacturing development for tactical electronic warfare (EW), signals warfare (SW), aircraft survivability equipment (ASE), battlefield deception, rapid software reprogramming and protection of personnel and equipment from hostile artillery. EW encompasses the development of tactical EW equipment and systems mounted in both ground and air vehicles. The systems under this program provides the Army with the capability to degrade or deny hostile forces the effective use of their communications, countermortar/counterbattery radars, surveillance radars, infrared/optical battlefield surveillance systems and electronically fused munitions. Existing Army EW systems must be replaced or upgraded to maintain their capability in the face of threats. This program element satisfies requirements for brigade, division, corps and higher commanders to conduct electronic warfare to meet tactical and Special Electronic Mission Aircraft (SEMA), attack/scout, and assault/cargo mission requirements. The Prophet program provides for the development of multifunction ground based and airborne intelligence and electronic warfare systems. Trojan will complete Proof-of-Principle R&D for specific applications in advanced threat signals processing, prototype software upgrades, high frequency (HF) algorithms for compact antenna array technology (CAAT), search and acquisition capabilities for unattended signal collectors, and new digital intelligence collection, processing and dissemination technology. The Army Reprogramming Analysis Team (ARAT) Project will develop, test and equip an Army-wide infrastructure capable of rapidly reprogramming electronic combat software embedded in offensive and defensive weapon systems.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	33397	41655	33144	29999
Current BES/President's Budget (FY 2008/2009)	33158	45053	55716	39974
Total Adjustments	-239	3398	22572	9975
Congressional Program Reductions	-146	-172		
Congressional Rescissions	-336			
Congressional Increases	1700	3900		
Reprogrammings				
SBIR/STTR Transfer		-746		
Adjustments to Budget Years	-1457	416	22572	9975

FY 2006 Congressional Increase to Signal Warfare Development of $1.7 Million for Blue Marauder Enhanced Systems.

FY08 and FY09 increases are due to the consolidation of multiple Line Replaceable Units (black boxes) into fewer (probably ONE) LRU to reduce weight and cost.

Insert technology from a development program called Cost Effective Light Aircraft Missile Protection (CELAMP).

Insert technology from a development program called Distributed Aperture into ATIRCM. Distributed Aperture is a USN program that uses Low-Loss Infrared Fiber Optic Cable to transmit laser energy out to the same CMWS detectors that are used to detect hostile IR Missiles in the ATIRCM System. It does away with the IR Laser Jam Head Turret in the current ATIRCM design. Lowers cost, less weight.

Investigate using the Fiber Optic technology above on the CELAMP system.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**665**

COST (In Thousands)	FY 2006 Actual	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
665 A/C SURV EQUIP DEV	9040	10493	4065	4091	5174	5691	7500	8500		54554

A. Mission Description and Budget Item Justification: The objective of the Aircraft Survivability Equipment (ASE) Development project is to improve radio frequency (RF) ASE for Army aviation. Milestone Decision Authority (MDA) approved phase 1 of a phased/incremental path forward, this decision was concurred upon by the user and HQDA.

Phase I upgrades the Processor Line Replaceable Unit (LRU) of the AN/APR-39A(V)1 Radar Signal Detecting Set through modernization and reduced parts count. Along with improved maintainability and reliability, performance will be enhanced via increased processing speed and expanded memory. These improvements will result in faster response time, better dense environment capability and improved parameter measurement. Phase 1 serves to make the currently fielded system viable until affordable improved RF ASE capability can be pursued in Phases 2 and 3. Phase 2 initiates development of an improved digital Radar Warning Receiver (RWR) and Phase 3 adds active Electronic Countermeasures (ECM) for selected aircraft.

FY 07 funding completes testing of the AN/APR-39A(V)1 upgrade and begins development of the digital Radar Warning Receiver (RWR). FY 08 funding continues the development of the digital RWR.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
In-house and program management administration	907	1253	1268	1293
Phase I Product Development (AN/APR-39A(V)1 Upgrade)	7738	1160		
Phase II Product Development (Digital RWR)		4941	2797	2798
Testing (Qualification, Chamber, etc.)	395	2843		
Small Business Innovative Research/Small Business Technology Transfer Programs		296		
Total	9040	10493	4065	4091

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
AZ3511 RFCM		21040	36564	37203	57252	54437	4600	4300	Continuing	Continuing

Comment:

C. Acquisition Strategy The Army Radio Frequency (RF) Aircraft Survivability Equipment (ASE) is managed by Program Director ASE (PD ASE) for integration and

installation on Army Aviation platforms. PD ASE proposed a three phased path forward commensurate with user priorities and life cycle management philosophy. Phase 1, approved by MDA, upgrades the currently fielded AN/APR-39A(V)1 Radar Signal Detecting Set which is employed by approximately 3,000 aircraft; awarded sole source via ECP to the existing contractor of the APR-39A. Phase 2 develops an improved digital Radar Warning Receiver for modernized Army platforms by capitalizing on emerging technologies to provide enhanced aircrew situational awareness. Phase 3 will develop and integrate active Electronic Countermeasures jamming capability for select aircraft. Competition will be considered for the future phases.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
665

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AN/APR-39(V)1 Upgrade	FFP	Northrop Grumman San Jose, CA	3500	7738	1Q	1160	1-3Q						12398	
Digital Radar Warning Receiver (RWR)	Comp	TBD				5237	1-3Q	2797	1Q	2798	1Q		10832	
Subtotal:			3500	7738		6397		2797		2798			23230	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Huntsville, AL	602	727	1Q	928	1-2Q	930	1-2Q	935	1-2Q		4122	
Contractor Support	C/FFP	Huntsville, AL	71	153	1Q	161	1Q	165	1Q	170	1Q		720	
Subtotal:			673	880		1089		1095		1105			4842	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test and Evaluation	MIPR	CECOM, Ft. Monmouth, NJ		145	2-4Q	749	1-2Q						894	
Flight Test/Range Support	MIPR	ATTC, Ft. Rucker, AL			3-4Q	731	1-2Q						731	
Life Cycle Extended Testing	MIPR	AED AMCOM, Redstone Arsenal, AL		250	3-4Q	719	3Q						969	
Phase I Test and Evaluation	MIPR	TSSQ, Eglin AFB, FL				619	1-2Q						619	
Processor Upgrade Evaluation	MIPR	Evaluation Center APG, MD				25	1Q						25	
Subtotal:				395		2843							3238	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
665

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Management	In-House	PD ASE	32	27	1-4Q	164	1-4Q	173	1-4Q	188	1-4Q		584	
Subtotal:			32	27		164		173		188			584	
Project Total Cost:			**4205**	**9040**		**10493**		**4065**		**4091**			**31894**	

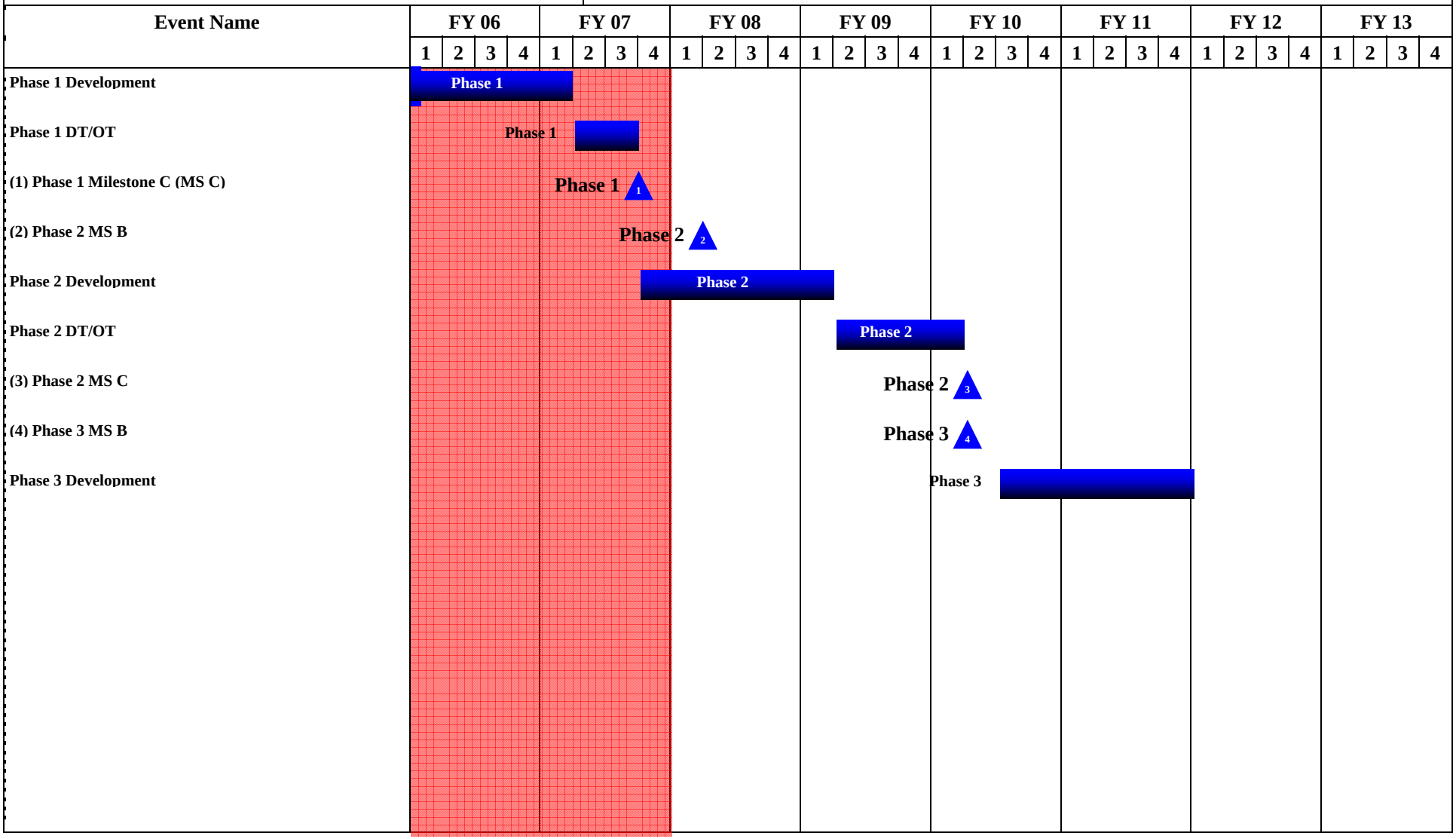
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
665



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
665

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Phase 1 Development	1Q - 4Q	1Q						
Phase 1 DT/OT		2Q - 3Q						
Phase 1 Milestone C (MS C)		3Q						
Phase 2 MS B			1Q					
Phase 2 Development		4Q	1Q - 4Q	1Q				
Phase 2 DT/OT				2Q - 4Q	1Q			
Phase 2 MS C					2Q			
Phase 3 MS B					2Q			
Phase 3 Development					3Q - 4Q	1Q - 4Q		
Phase 1 Development	1Q							
Phase 1 DT/OT	1Q							
Phase 1 Milestone C (MS C)	2Q							
Phase 2 MS B	2Q							
Phase 2 Development	2Q - 4Q	1Q - 4Q	1Q					
Phase 2 DT/OT			2Q - 4Q	1Q				
Phase 2 MS C				2Q				
Phase 3 MS B				2Q				
Phase 3 Development				3Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**L12**

COST (In Thousands)		FY 2006 Actual	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
L12	Signals Warfare Development (TIARA)	12879	16946	10602	11079	5174	5174	27000	11000		99854

A. Mission Description and Budget Item Justification: Prophet's primary mission is providing 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. Prophet is an integral part of the Army Transformation, providing near real time (NRT) information to the Brigade Commander within his combat decision cycle. It is the tactical commander¿s sole organic ground-based Signals Intelligence/Electronic Warfare (SIGINT/EW) system for the Division, Brigade Combat Team (BCT), Stryker Brigade Combat Team (SBCT) and Armored Calvary Regiments (ACR). Prophet provides the tactical commander with the next generation SIGINT/EW - radio detection/direction finding and electronic attack capabilities. Prophet stationary and on-the-move direction finding information develops battlespace visualization, intelligence preparation of the battlefield (IPB) and target development for enemy and gray emitters within radio line-of-sight across the brigade area of responsibility. This NRT information when processed provides a key component of the fused intelligence common operating picture (COP). Initially Prophet will interface with the maneuver brigade Analysis Control Team's (ACT) All Source Analysis System (ASAS)-Remote Work Stations (ASAS-RWS) via Prophet Control. Prophet Control is a surrogate for the Distributed Common Ground System-Army (DCGS-A). The ACT forwards the gathered information to the division and armored cavalry Analysis Control Element's (ACE) ASAS. Prophet enables the Brigade Commander to detect signals while the vehicle is moving, a first for a Tactical SIGINT system. Prophet functionality will be resident within the Future Combat System (FCS) and Prophet developed technology as well as Tactics, Techniques and Procedures (TTPs) will be leveraged for the FCS program. Prophet is being developed in a user prioritized block approach: Block I - Electronic Support (ES) (SIGINT), Block II - Electronic Attack (EA), and Block III - Modern Signals. Prophet Block III adds the ability to address modern signals.

FY2008 Funds continue development of Block III, with DT and IOT&E testing in 4QFY09 to support a MS C Decision in the 1QFY10.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Prophet Block III System Development and Demonstration (SDD)	11321	14326	8102	8579
Prepare for and conduct Prophet Block III Testing	1558	2620	2500	2500
Total	12879	16946	10602	11079

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
BZ7326 Prophet Ground (TIARA)	104624	100521	119482	114837	89808	100176	29400	22089	Continuing	Continuing
PE 030885G Defense Cryptological Program for PROPHET	4040	2921	6431	6463	6713	6994	7164	7232	Continuing	Continuing
BZ9751 Special Purpose Systems (TIARA) (Prophet Only)	462	3801	2351	2439	2610	3138	3500	3600	Continuing	Continuing

Comment:

C. Acquisition Strategy The Prophet Acquisition Strategy is structured to optimize system capability while reducing risk and streamlining business and engineering processes. Block I ES (SIGINT) Engineering and Manufacturing Development (EMD) was a sole source effort which leveraged off existing COTS equipment. Follow-on Block II (EA) and Block III (Modern Signals) efforts were combined into a single SDD phase following an evolutionary acquisition process. Block II/III SDD was competitively awarded in 2QFY03. Following MS C review the Block II(EA) entered LRIP, contract awarded under Cost Plus Incentive Fee, and Block III continued in the SDD phase (using current SDD contract). A Block III (Interim) capability was approved for production under a CPIF contract.
Prophet P3I and TI efforts will utilize competitive contracting to the maximum extent possible.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
L12

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Prophet Block II/III SDD Contract	C-CPIF	General Dynamics Decision Systems, Scottsdale, AZ	33121	142	1-4Q								33263	
Prophet Block III SDD Contract	C-CPIF	General Dynamics Decision Systems, Scottsdale, AZ		8317		10367	2Q	6742	2Q	7174	3Q		32600	
Prophet Block II/III GFE	FFP	Titan Systems	1768										1768	
Prophet Modeling and Simulation	C/T&M	CACI, Alexandria, VA	1000			350	3Q	300	3Q	300	3Q		1950	
Leviathon Development and Prototyping	CPFF	Sensytech, Newington, VA	963										963	
Subtotal:			36852	8459		10717		7042		7474			70544	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	CECOM, Fort Monmouth NJ	6907	797	1-2Q	740	1-3Q	600	1-3Q	600	1-3Q		9644	
Contractor Engineering Support	C/T&M	Sytex Group, Eatontown, NJ	708										708	
Contractor Engineering Support	C/T&M	CACI, Eatontown, NJ	2425	500	2Q	600	2Q	630	2Q	662	2Q		4817	
TSM/NSTO	MIPR	TSM, Ft Huachuaca, AZ	603										603	
Contractor Engineering Support	C/T&M	Dynetics, Huntsville, AL	60										60	
Contractor Engineering Support	C/T&M	Mitre, Eatontown, NJ		259	2-4Q	164	2Q	170	2Q	173	2Q		766	
Subtotal:			10703	1556		1504		1400		1435			16598	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
L12

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Prepare for and Conduct Prophet Block II and III DT, LUT/IOTE	MIPR	EPG/AEC	6754	701	1-4Q	2000	2Q	2000	2Q	2000	2Q		13455	
Geo-Location Testing	C/T&M	BAH, Eatontown, NJ		357	4Q	120	2Q						477	
Subtotal:			6754	1058		2120		2000		2000			13932	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	In-House	PM, Signals Warfare, Fort Monmouth NJ	5752	106	1-4Q	155	1-4Q	160	1-4Q	170	1-4Q		6343	
Program Support	MIPR	ASPO, Alexandria, VA	204										204	
Blue Marauder (Congressional Add)	Funds passed thru - not related to Prophet	PM CSIS, Fort Belvoir, VA		1700	3Q	1450							3150	
Warrior SIGINT Capability	Funds passed thru - not related to Prophet	PM ACS, Fort Monmouth, NJ				1000							1000	
Subtotal:			5956	1806		2605		160		170			10697	

Project Total Cost:			**60265**	**12879**		**16946**		**10602**		**11079**			**111771**	

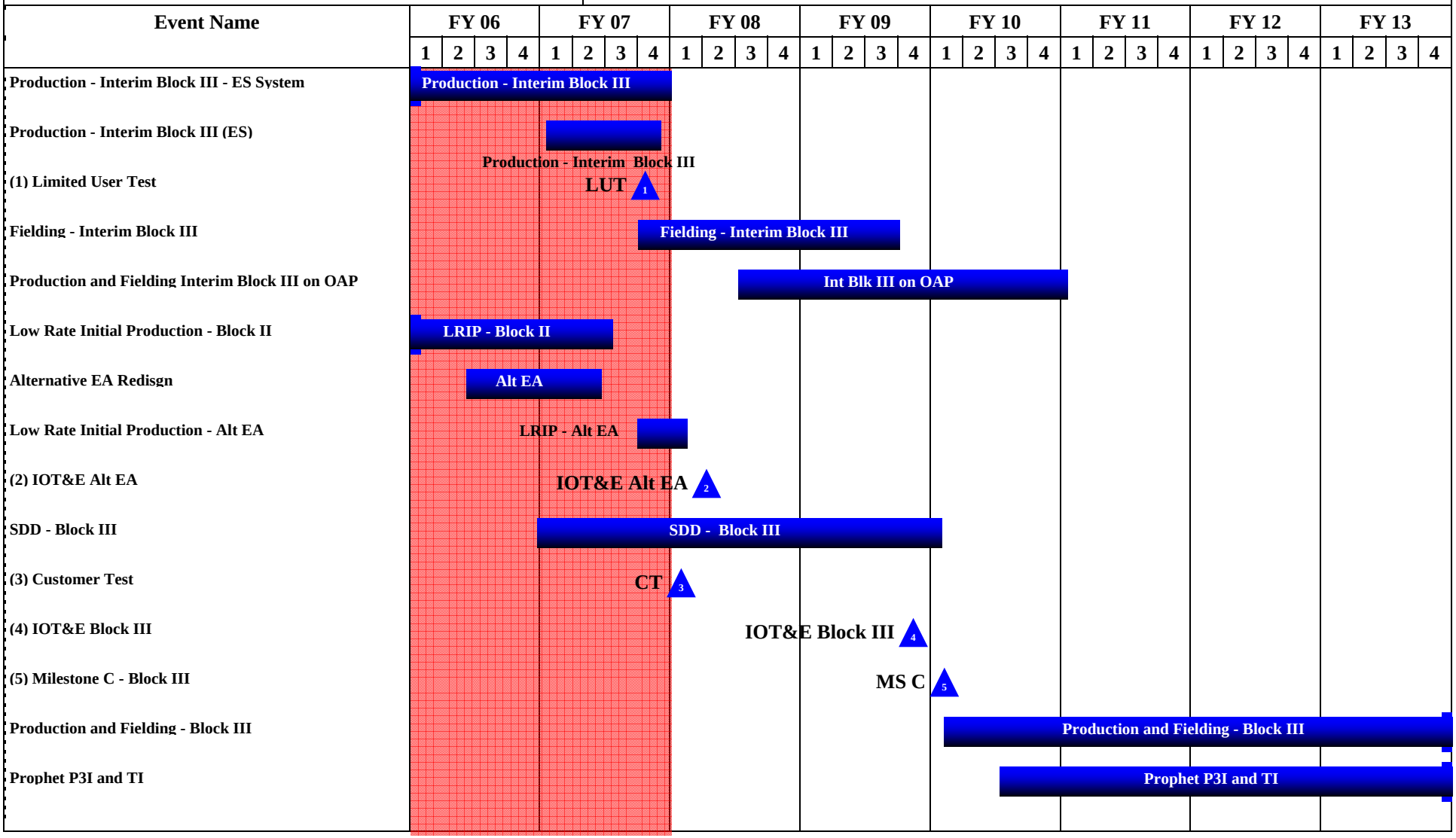
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
L12



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
L12

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PROPHET								
Production - Interim Block III - ES System	1Q - 4Q	1Q - 4Q						
Production - Interim Block III (ES)		1Q - 4Q						
Limited User Test		4Q						
Fielding - Interim Block III		3Q - 4Q	1Q - 4Q	1Q - 3Q				
Production and Fielding Interim Block III on OAP			3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		
Low Rate Initial Production - Block II	1Q - 4Q	1Q - 3Q						
Alternative EA Redisgn	2Q - 4Q	1Q - 2Q						
Low Rate Initial Production - Alt EA		3Q - 4Q	1Q					
IOT&E Alt EA			2Q					
SDD - Block III	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q			
Customer Test			1Q					
IOT&E Block III				4Q				
Milestone C - Block III					1Q			
Production and Fielding - Block III					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Prophet P3I and TI					3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**L15**

COST (In Thousands)	FY 2006 Actual	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
L15 ARAT-TSS	1238	1283	2148	2272	2382	2359	2538	2537	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army Reprogramming Analysis Team (ARAT) Target Sensing System (TSS) supports the tactical Commander by providing timely/rapid reprogramming of any Army supported, joint, allied service, Army Electronic Warfare (EW) Integrated Reprogramming (EWIR) or Measurement Intelligence (MASINT) based target acquisition, target engagement, or vehicle/aircraft survivability equipment (ASE). ARAT provides software changes not readily possible by operator input, to respond to rapid deployments or changes in the threat environment. The ARAT Software Engineering (SE) Project Office coordinates the development of ARAT infrastructure to support the needs of all TSS developers and users; develops the capability to conduct real-time hardware and software technical enhancements of validated threat changes; examines and identifies the best technical approaches for development of field reprogramming capabilities of ATSS with commonality at a desired end-state; supports the developments of flagging models; participates in the operational and developmental test design of ATSS; and supports Service and JCS Reprogramming Exercises.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Engineering Development (TSS Survey): Complete the Survey initiated in FY02 to identify TSS requiring support in Army Battlefield Functional Area (BFAs) with a focus on operational, technical, and intelligence aspects. This would include technical information about the actual TSS and their near and far term support requirements for intelligence collection, flagging, and threat analysis, Mission Data Set (MDS), communications, and filed support.	150	172	288	305
Intelligence Support (Platform Intelligence Integration): Analyze capability of using data from US Army Aviation Platform systems to increase tactical situational awareness as well as providing additional intelligence collection data. This would include evaluation of system modifications.	250	250	419	443
Intelligence Support (Platform Intelligence Integration): Building on the work completed in FY02 determine individual platform benefits vs. potential costs to upgrade systems on each Aviation platform. Initiate lab testing of potential system updates to verify the additional benefit and identify intelligence collection methodology to integrate the collected intelligence data onto an intelligence network.	252	255	427	452
Database Support (Flagging Model): Work jointly with the USAF at Kelly AFB, TX to complete the conversion of the current flagging database structure shared by the US Army and USAF flagging models to a more modern database structure. In addition, initiate converting the US Army flagging models over to the new database structure.	150	130	218	230
Engineering Development, Intelligence Support, Database Support, & Dissemination (Common Intel Database): Define requirements for a common intelligence database analysis and MDS tool for use by ARAT-TA (Kelly and Eglin AFBs) and ARAT-SE. The functionality must include common user interface, intelligence inputs, modular threat analysis and MDS generator tools, and output formats to support intelligence reporting, RF scenarios inputs and MDS inputs for EWOSS/MLV to leverage the use of existing tools such as the Major Radar Database (MRDB) as much as practical.	200	200	335	354
Engineering Development, Intelligence Support, Database Support, & Dissemination (Common Intel Database): Using the requirements definition completed in FY02, initiate the development of the common intelligence database analysis and MDS tool. Complete the user	236	240	461	488

interface, database structure, output formats, and placeholders for the internal threat analysis and MDS generator tools.				
Small Business Innovative Research/Small Business Technology Transfer Programs		36		
Total	1238	1283	2148	2272

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

C. Acquisition Strategy The efforts to be funded in this project will require a combination of systems specific and high-tech knowledge. The contractual services portion for the project will be obtained from both the CECOM SEC competitive omnibus and the RDEC High Tech contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
L15

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Labor (internal Gov't)	Labor (internal Gov't)	CECOM, Fort Monmouth, NJ	2165	463	1-4Q	508	1-4Q	850	1-4Q	900	1-4Q	Cont.	Cont.	Cont.
Travel	Travel	TBD/Various sites	214	60	1-4Q	60	1-4Q	100	1-4Q	106	1-4Q	Cont.	Cont.	Cont.
Subtotal:			2379	523		568		950		1006		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support (INSCOM Full Spectrum)	Development Support (INSCOM)	TBD/Various sites	1365	303	1-4Q	325	1-4Q	544	1-4Q	576	1-4Q	Cont.	Cont.	Cont.
Development Support (CECOM RDEC T&E CECOM SEC Omnibus)	Development Support (CECOM)	TBD/Various sites	1698	412	1-4Q	390	1-4Q	654	1-4Q	690	1-4Q	Cont.	Cont.	Cont.
Subtotal:			3063	715		715		1198		1266		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Labor and ranges	TBD	TBD	500										500	
Subtotal:			500										500	

IV. Management Services	Contract	Performing Activity &	Total	FY 2006	FY 2006	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
L15

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
Labor (Int and Contact)	TBD	CECOM and INSCOM	1544									Cont.	Cont.	Cont.
Subtotal:			1544									Cont.	Cont.	Cont.
Project Total Cost:			**7486**	**1238**		**1283**		**2148**		**2272**		**Cont.**	**Cont.**	**Cont.**

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**L16**

COST (In Thousands)		FY 2006 Actual	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
L16	TROJAN DEVELOPMENT	1530	1590	1456	1495	1534	1573	1607	1643		12428

A. Mission Description and Budget Item Justification: This project is a Tactical Intelligence and Related Activities (TIARA) program. TROJAN RDT&E supports TROJAN Classic XXI (TCXXI) future capabilities to fulfill the Army's need for a worldwide, deployable, remotable, intelligence, surveillance and reconnaissance (ISR) support that can dynamically execute operations from sanctuary-based to deployed assets in theater. In support of the Objective Force and Future Combat System (FCS), TCXXI will provide soldiers with a real-world, hands-on, live and near-real time SIGINT training environment sustaining, maintaining and enhancing their military occupational specialty (MOS) proficiencies and specific target expertise. This operational readiness training will fulfill the Army's larger intelligence training requirement via a secure collaborative architecture.

A key factor for success the Objective Force and FCS will be the ability to collect, process and use information about an adversary while preventing similar information from being disclosed. TROJAN is a combined operational and readiness mission system which uses advanced networking technology to provide seamless rapid radio relay, secure communications to include voice, data, facsimile, and electronic reconnaissance support to U.S. forces throughout the world. TROJAN operations may be easily tailored to fit military intelligence unit training schedules and surged during specific events to involve every aspect of the tactical intelligence collection, processing, analysis and reporting systems. This project engineers, tests and evaluates new digital intelligence collection, processing and dissemination technology using the fielded TROJAN systems, prior to the acquisition of those technologies. As part of the Objective C4ISR Architecture, these capabilities will enable processing and dissemination of real-time intelligence data from various sources to form the intelligence needed to issue orders inside the threat decision cycle. To that end, it is imperative that TROJAN keeps pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Integrate and test specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms.	150	290	250	260
Acquire and apply multi-bandwidth compression algorithm technology to maximize TROJAN intelligence network throughput.	150	100	111	115
Develop prototype QRC Receiver packages for fixed and transportable TROJAN systems to acquire non-standard modulations using DSP and FPGA technologies.	302	527	300	310
Integrate Direction Finding (DF) and geolocation technologies into TROJAN Remote Receiving Groups (RRGs).		392	320	325
Develop hardware/software interface for TCXXI system to ONEROOF storage system	350		275	280
Develop specialized software enhancements to the TROJAN audio streaming subsystems to improve system redundancy & throughput capacity and system management capabilities; Investigate compression/processing technologies to reduce communications bandwidth requirements for remoted TROJAN systems, including streaming audio technologies.	578	281	200	205
Total	1530	1590	1456	1495

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA BA0331 Trojan	6067	7557	7627	7757	7878	8000				38399

Comment:

C. Acquisition Strategy This Acquisition Strategy for the TROJAN Classic XXI System supported by TROJAN RDT&E is to adapt and leverage from Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) products. Additionally leverage off of development by DoD and other Government agencies to the greatest extend possible. TROJAN RDT&E is used to fund the development of enhancing these technologies to meet specific user requirements. The funding for production and fielding of these capabilities are funded under TROJAN BA0331.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - EW DEVELOPMENT

PROJECT
L16

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Prototype QRC Receiver packages	MIPR	CERDEC I2WD Ft Monmouth	1863	302		527		300		310		Cont.	Cont.	Cont.
Develop DF Capabilities for TROJAN RRG	MIPR	CERDEC I2WD Ft Monmouth	250			392		320		325		Cont.	Cont.	Cont.
Investigate Compression /processing technologies	MIPR	CERDEC I2WD Ft Monmouth	1038									Cont.	Cont.	Cont.
Develop specialized software enhancements to TROJAN audio streaming	MIPR	CERDEC I2WD Ft Monmouth		578		281		200		205			1264	
Develop hardware/software interface to ONEROOF	MIPR	CERDEC I2WD Ft Monmouth		350				275		280			905	
Subtotal:			3151	1230		1200		1095		1120		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Aquire & Apply muliti bandwidth compr Algorithm	MIPR	CECOM I2WD FT Monmouth	500	150		100		111		115		Cont.	Cont.	Cont.
Subtotal:			500	150		100		111		115		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Integrate/test hardware/software	MIPR	CECOM I2WD FT Monmouth	1500	150		290		250		260		Cont.	Cont.	Cont.
Operational test/eval of enhanced	MIPR	CECOM I2WD Ft	429									Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**L16**

SIG Processing		Monmouth												
Subtotal:			1929	150		290		250		260		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														
Project Total Cost:			**5580**	**1530**		**1590**		**1456**		**1495**		**Cont.**	**Cont.**	**Cont.**

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**L20**

COST (In Thousands)		FY 2006 Actual	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
L20	ATIRCM/CMWS	8471	14741	37445	21037	25741	23269	31865	27365		189934

A. Mission Description and Budget Item Justification: The Advanced Threat Infrared Countermeasure (ATIRCM) is a US Army program to develop, test, and integrate defensive infrared (IR) countermeasures capabilities into existing, current generation host platforms for more effective protection against a greater number of IR- guided missile threats than afforded by currently fielded IR countermeasures. The US Army operational requirements concept for IR countermeasure systems is known as the Suite of Integrated Infrared Countermeasures (SIIRCM). It is an integrated warning and countermeasure system to enhance aircraft survivability against IR guided threat missile systems. The core element of the SIIRCM concept is the Advanced Threat Infrared Countermeasure (ATIRCM), Common Missile Warning System (CMWS) Program. The ATIRCM/CMWS, a subsystem to a host aircraft, is an integrated ultraviolet (UV) missile warning system and an IR Lamp/Laser Jamming and Improved Countermeasure Dispenser (ICMD).

The CMWS also functions as a stand-alone system with the capability to detect missiles and provide audible and visual warnings to the pilot(s); and, when installed with the ICMD, activates expendables to provide a degree of protection. ATIRCM/CMWS is the key IR survivability system for Future Force Army aircraft.

The A-Kit is the modification hardware, wiring harness, cable, etc., necessary to install and interface the ATIRCM/CMWS Mission Kit to each platform. The A-Kit ensures the Mission Kit is functionally and physically operational with the host platform.

The Mission Kit consists of the ATIRCM/CMWS which performs the missile detection, false alarm rejection, and missile declaration functions of the system. The Electronic Control Unit (ECU) of the CMWS sends a missile alert signal to on-board avionics and other Aircraft Survivability Equipment (ASE) such as expendable flare dispensers. Threat missiles detected by the CMWS are handed over to the ATIRCM.

FY08/09 funding supports improvements to CMWS Electronic Control Unit (ECU) and continuation of ATIRCM modernization.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Support Cost				
Product Development	2375	800	25800	12900
Management Services		300	300	300
Test and Evaluation	6096	13227	11345	7837
Small Business Innovative Research/Small Business Technology Transfer Programs		414		
Total	8471	14741	37445	21037

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost

APA, BA 4 AZ3507 ASE Infrared CM	440300	304403	365472	437328	338862	254020	227700	223000	1979100	4570185

Comment: FY08 and FY09 increases are due to the consolidation of multiple Line Replaceable Units (black boxes) into fewer (probably ONE) LRU to reduce weight and cost.

Insert technology from a development program called Cost Effective Light Aircraft Missile Protection (CELAMP).

Insert technology from a development program called Distributed Aperture into ATIRCM. Distributed Aperture is a USN program that uses Low-Loss Infrared Fiber Optic Cable to transmit laser energy out to the same CMWS detectors that are used to detect hostile IR Missiles in the ATIRCM System. It does away with the IR Laser Jam Head Turret in the current ATIRCM design. Lowers cost, less weight.

Investigate using the Fiber Optic technology above on the CELAMP system.

C. Acquisition Strategy Funding supports an acquisition strategy of buying CMWS separately from ATIRCM, while installing A-kits on all modernized aircraft. The current production contract is a fixed-priced, five year, Indefinite Delivery, Indefinite Quantity (IDIQ) contract to BAE Systems. Due to acceleration of CMWS, the acquisition strategy has changed to account for separate IOT&E's and Full Rate Production decisions for CMWS and ATIRCM. Based on the Army OIPT's recommendation to the AAE in Nov 05, the CMWS will enter the Full Rate Production and Deployment phase of the acquisition, upon completion of the Beyond LRIP Report to Congress in 2FY06. The AAE approved the ATIRCM path forward in December 05 with the incorporation of the Multi-band Laser into the production baseline. Schedule and costs have been updated to reflect the revised strategy.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY
5 - System Development and Demonstration

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0604270A - EW DEVELOPMENT

PROJECT
L20

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AIRCMM	C/CPIF	Thiokol, Brigham City, UT	1563										1563	1563
ATIRCM EMD Basic Contract	C/CPAF	BAE Systems, Nashua, NH	23574										23574	23574
ATIRCM 6 Lot/EMD/RDT	SS/CPFF	BAE Systems, Nashua, NH	56675										56675	56675
ATIRCM	C/CPFF	Cowley, Chantilly, VA	100										100	100
Test Facility	C/CPFF	Amherst, Huntsville, AL	1300										1300	1300
Modeling and Simulation	C/FFP	CAS, Huntsville, AL	600	1500	3-4Q	1200	1-2Q	1200	1-2Q	1100	1-2Q	4000	9600	7100
Modernization Efforts	Various	TBD	1062	200	1-2Q	577		23000	1-2Q	10000	1-2Q	50000	84839	6944
Tier 2/3 Threat Upgrades	Various			675	1-3Q			1800	1-2Q	1800	1-2Q	2000	6275	14709
Subtotal:			84874	2375		1777		26000		12900		56000	183926	111965

Remarks: FY99 & Prior funding in Project 665

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Contractor Support	C/FFP	Huntsville, AL	9554										9554	9554
Matrix Support	MIPR	CECOM, Ft Monmouth NJ; AMCOM, Huntsville AL	3055										3055	
Subtotal:			12609										12609	9554

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

Technical Support for User Tests	MIPR	Electronic Proving Ground, Ft. Huachuca, AZ	7548	303	1Q	1000	1Q	550	1-3Q	400	1-3Q	2750	12551	
ATIRCM E2E	MIPR	TSMO	303					595		400	1-3Q	4000	5298	
ACR2			609										609	
ATIRCM ACR3 in support of IOT&E	MIPR	WSMR	8					500		400	1-3Q	2350	3258	
ATIRCM/CMWS IOT&E	MIPR	ATEC and others	10706	75				500	1-3Q	400	1-3Q	900	12581	
Test Support (EMI Reliability)	MIPR	ATTC, Ft. Ruckel, AL; RTTC, Redstone Ars, AL	3118	2324	2Q	500	1Q	500	1-3Q	400	1-3Q	2700	9542	
Test Support (Instrumentation)	C/FFP	Westar, Huntsville, AL and Neer/Thomsen, Huntsville, AL	3519	675	3Q								4194	3519
Test Support With Live Missile Firing. Data Gathering and System Evaluation	MIPR	PM, Instrumentation Targets and Threat Simulators (ITTS) and 46th Test Wing, Eglin AFB, FL	3858	131	1Q			500	1-3Q	400	1-3Q	2950	7839	
Test Support (Missile)	C/FFP	BAE Systems, Eglin AFB, FL		1206	1Q	1100	1Q	500	1-3Q	400	1-3Q	3150	6356	3000
SMEOS Phase 2	C/FFP		309	67	3Q								376	296
Simulation And Evaluation	MIPR	TSMO, Redstone Arsenal, AL	85					600		500	1-3Q	3050	4235	
Missiles and Telemetry Kits for Testing	MIPR	Various	3702	1150	1Q	2200	1Q	900	1-3Q	300	1-3Q	5400	13652	
Guided Weapons Evaluation Facility (GWEF)	MIPR	46th Test Wing, Eglin AFB, FL		165	4Q	250	1Q	500	1-3Q	500	1-3Q	1965	3380	
ATIRCM Test Flights	MIPR	ATTC, Ft. Ruckel, AL; RTTC, Redstone Ars, AL						900	1-3Q	900	1-3Q	5750	7550	
Tier I Threat Verification Testing/Missile Shots	MIPR	Various				3500	1Q	800	1-3Q	900	1-3Q	5806	11006	
Tier I Threat Verification	MIPR	ATTC, Ft. Ruckel, AL;				1500	1Q	600	1-3Q	600	1-3Q	4750	7450	

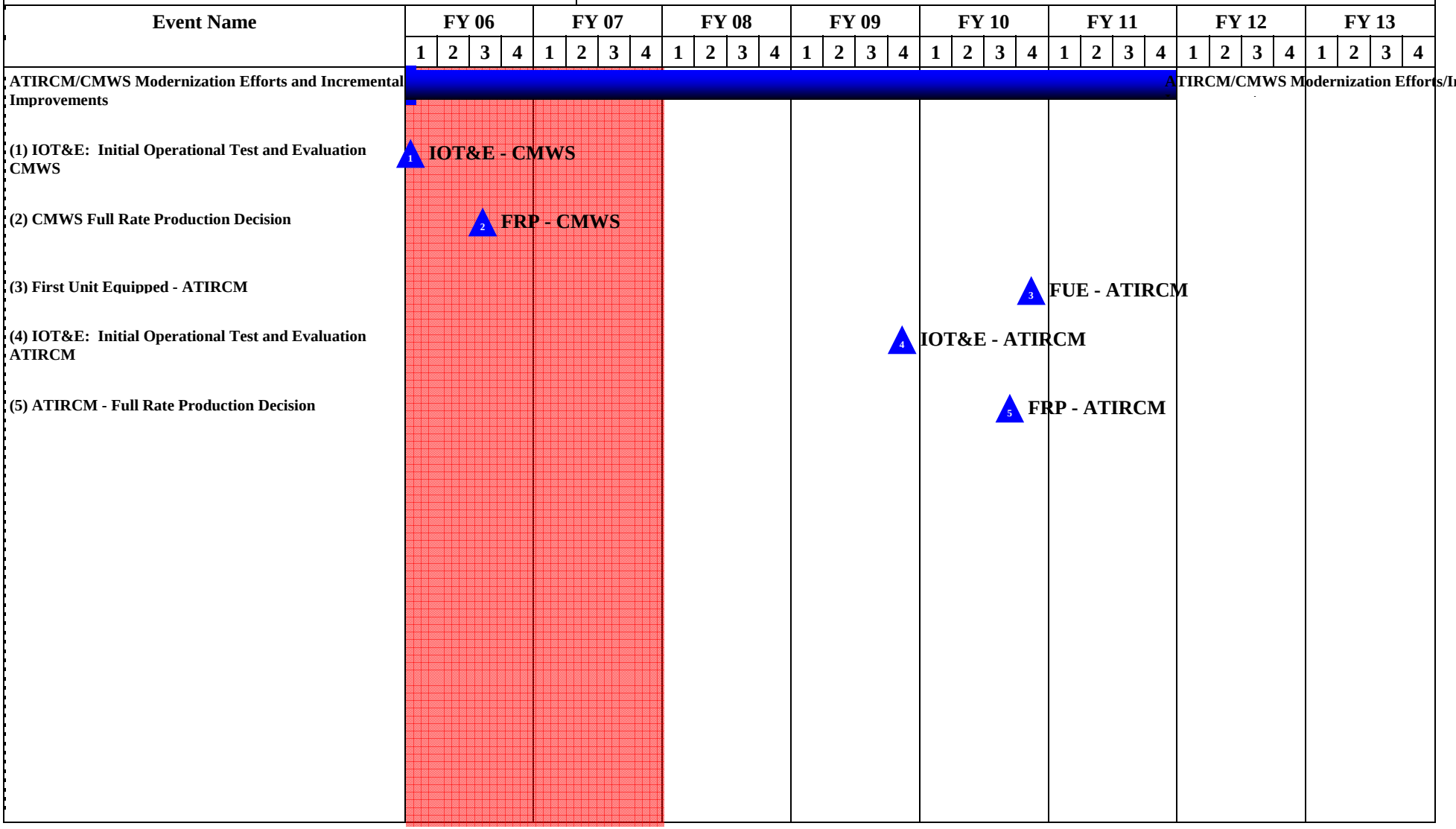
Testing/FAR Trolling		RTTC, Redstone Ars, AL											
AWR Testing	MIPR	ATTC, Ft. Ruckel, AL; RTTC, Redstone Ars, AL				1200	1Q	600		575	1-3Q	2300	4675	
Delta A-Kit for UH-60	MIPR	Various				1000	1Q	875				500	2375	
Captive Seeker Test	MIPR	TBD						875	1-3Q			1500	2375	
Sled Test #2	MIPR	TBD						850	1-3Q				850	
PM Jammer Test	MIPR	TBD										1219	1219	
New RDT (Government)										762	1-3Q		762	
Subtotal:			33765	6096		12250		11145		7837		51040	122133	6815

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Management	In house support	PD ASE, Huntsville, AL	5410			300	1-4Q	300		300		1200	7510	
SBIR/STIR						414	1Q						414	
Subtotal:			5410			714		300		300		1200	7924	
Project Total Cost:			**136658**	**8471**		**14741**		**37445**		**21037**		**108240**	**326592**	**128334**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**L20**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - EW DEVELOPMENT**	**L20**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
LRIP contract award								
First Unit Equipped - CMWS								
ATIRCM/CMWS Modernization Efforts and Incremental Improvements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Integration Testing Aerial Cable Range-2								
IOT&E: Initial Operational Test and Evaluation CMWS	1Q							
CMWS Full Rate Production Decision	3Q							
First Unit Equipped - ATIRCM					4Q			
IOT&E: Initial Operational Test and Evaluation ATIRCM				4Q				
ATIRCM - Full Rate Production Decision					3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio System**	**162**

COST (In Thousands)		FY 2006 Actual	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
162	Network Enterprise Domain (NED)	131681			270560	198127	98178	100337	102545		901428

A. Mission Description and Budget Item Justification: The JTRS budget justification will be found in Navy FY 2008 President's budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

The mission of the Joint Tactical Radio System (JTRS) is to provide the Department of Defense (DoD) with software programmable, reconfigurable digital radio systems to meet Joint Vision (JV) 2010/2020 requirements for interoperability, flexibility, adaptability, and information exchange. JTRS will acquire a family of affordable, scaleable, high-capacity, interoperable Line of Sight (LoS) and Beyond LoS radios to support simultaneous networked voice/data/video transmissions with low probability of intercept. The program will provide operational forces with an upgraded, interoperable communications capability for improved battle space management and increased Warfighter effectiveness. Interoperability with allied and coalition partners is pursued through international cooperative efforts, including signed agreements with Japan, UK and Sweden.

In Feb 2005, by direction of the Defense Acquisition Executive, all JTRS Product Lines were realigned and are now managed by the Joint Program Executive Office (JPEO) JTRS. Beginning in FY07, all JTRS RDT&E Program Elements (PE) are realigned under the Navy JTRS PE (0604280N) for the current Budget Year (BY) only. From the BY+1 through the end of the FYDP, all JTRS RDT&E projects are funded in three equal shares by each Military Department (MILDEP). This transition results in the total JTRS development funding being managed out of three MILDEP PEs (0604280A, 0604280N, and 0604280F) across the FYDP, and consolidated into one Navy PE (0604280N) for the current BY.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
JOINT NETWORK ENTERPRISE DOMAIN				
Wideband Networking Waveform (WNW)is a high data rate networking waveform application that provides the lower tactical Internet backbone and connects tactical forces across the battle sphere. WNW will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNW will provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNW will support network nodes on mobile, airborne, and maritime platforms. WNW includes networking services, security, High Assurance IP Equipment (HAIPE) capabilities, red-black switching, and internal routing of other WNW signals. Completed development of Version 1.1 in 4Q FY06. Platforms include: GMR and AMF.	32412			
Soldier Radio Waveform (SRW) will operate on JTR sets to provide a networked battlefield communications capability for disadvantage users engaged in land combat operations and will support voice, data, and video communications on and over the immediate battlefield. These forces include vehicles, rotary wing, dismounted soldiers, munitions, sensors, and unmanned air vehicles (UAV). Functional software applications will use SRW enabled JTR sets over IP capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNW, through gateways. As applicable, these IP-based networking waveforms will enable information exchanges through the GIG to the soldier and provide entirely new capabilities for battlefield communications and	26020			

information sharing. Platforms include: GMR, AMF and HMS.				
Joint Airborne Networking- Tactical Edge (JAN-TE) will operate on JTR airborne sets to provide a networked tactical communications capability for tactical aircraft. JAN-TE will provide increased throughput, highly responsive connectivity, and ad hoc mobile networking for fighters engaged in air operations. This networking waveform is uniquely designed and engineered for highly maneuverable, fast moving aircraft for rapidly establishing networks to share high value data communications. Platforms include MIDS and Battlefield Airborne Communications Node (BACN).	5400			
Mobile User Objective System (MUOS) will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. MUOS offers secure streaming video, netted communications, and voice/data in real time to provide essential connectivity. JNED program will modify this waveform, making it compatible and certifiable to meet DoD security requirements plus enable porting to JTR sets. Platforms include: AMF.	350			
Continued the development and acquisition of software-defined legacy radio waveforms, JTRS Hardware Domain support, JNED program support, and other waveform related activities to support the legacy waveform development of High Frequency (HF) and Link 16. High Frequency (HF) radios provide beyond line-of-sight (BLOS) and some LOS voice and data communications for military platforms in all domains. The JTRS HF capabilities comprise an aggregation of four (4) different legacy radio system types: HF Independent Side Band (ISB) w/Automatic Link Establishment (ALE), HF Single Side Band (SSB) w/Automatic Link Establishment (ALE) and with anti-jam (AJ), STANAG 5066 (HF Message Protocol), and STANAG 4529 (HF Narrow Band Modem). Completed development of Enhanced Position Location and Reporting System (EPLRS) version 1.5 and performed FQT in 4Q FY06. Continued to develop EPLRS Build 2.1. Continued the development of Ultra High Frequency Satellite Communication Demand Assigned Multiple Access (UHF SATCOM DAMA). Continued to develop Single-Channel Ground and Airborne Radio System (SINCGARS) Enhanced Operating Mode version 1.3 and the Internet Controller (INC). Began the development and acquisition of Network Enterprise Services (JNES) to include a Network Manager, Common Network Services (CNS), and the JTRS unique Gateway. Continued to provide NED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Provided technical guidance to Platform Program Management Offices (PMO). Continued to support Waveform integration, test and evaluation to include hardware and software waveform certification process (SCA compliance testing) to meet program requirements. Continued JNED program management office support.	67499			
The JTRS budget justification will be found in Navy FY 2008 President's budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.				270560
Total	131681			270560

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio System**	**162**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	139546	832259	285870	271043
Current BES/President's Budget (FY 2008/2009)	131681			270560
Total Adjustments	-7865	-832259	-285870	-483
Congressional Program Reductions		-832259		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-7865			
SBIR/STTR Transfer				
Adjustments to Budget Years			-285870	-483

Change Summary Explanation: Funding - FY 06: $3.902M was reprogrammed from this PE to support O&M requirement for stand-up and operation of JPEO JTRS Organization. Additional $3.963M adjustment reflects reprogramming to fund higher Army priorities.
FY 07: $832.3M was realigned from this PE to the Navy JTRS RDT&E PE 0604280N in support of the JTRS joint program acquisition strategy.
FY 08: $285.9M was realigned from this PE to the Navy JTRS RDT&E PE 0604280N in support of the JTRS joint program acquisition strategy.
FY 09: $.483M adjustment reflects a reduction to fund higher Army priorities.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SEE FOOTNOTE									Continuing	Continuing

Comment: **The JTRS budget justification will be found in Navy FY 2008 President's budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

D. Acquisition Strategy The JTRS budget justification will be found in Navy FY 2008 President's budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604280A - Joint Tactical Radio System

PROJECT
162

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
JOINT NETWORK ENTERPRISE DOMAIN														
Architecture Development and Validation, Evolve and Provide CM Mgmt of SCA	Various	Various	66834	909	2Q							Cont.	Cont.	Cont.
Waveform Development; Crypto S/W; Waveform Sustainment Engineering	Various	Various	367121	106086	1-2Q							Cont.	Cont.	Cont.
Certification (SCA Compliance Testing)	Various	Various	60464	6900	1-2Q							Cont.	Cont.	Cont.
Technology Advancement/Problem Resolution	Various	Various	8260										8260	
JTF WARNET	Various	Various	57000										57000	
SEE FOOTNOTE										270560			270560	Cont.
Subtotal:			559679	113895						270560		Cont.	Cont.	Cont.

Remarks: **The JTRS budget justification will be found in Navy FY 2008 President's budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
JOINT NETWORK ENTERPRISE DOMAIN														
FFRDC - MITRE and Other contracted Technical Support	FFP	Various	59360	9500	1-2Q							Cont.	Cont.	Cont.
Subtotal:			59360	9500								Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604280A - Joint Tactical Radio System

PROJECT
162

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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
JOINT NETWORK ENTERPRISE DOMAIN														
Program Support	Various	Various	44847	8286	1-2Q							Cont.	Cont.	Cont.
Subtotal:			44847	8286								Cont.	Cont.	Cont.
Project Total Cost:			**663886**	**131681**						**270560**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio System**	**162**

Event Name	FY 06				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	2	3	4
SEE FOOTNOTE	** SEE FOOTNOTE **																															

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio System**	**162**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SEE FOOTNOTE	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

**The JTRS budget justification will be found in Navy FY 2008 President's budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**

	COST (In Thousands)	FY 2006 Actual	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	13177	6888	5384	5465	3017	3223	3500	3700		44477
B19	ASAS EVOLUTIONARY ACQ (TIARA)	11942	3315	3409	3411						22077
B41	CI/HUMINT Software Products (TIARA)	918	3242	1644	1721	3017	3223	3500	3700		20965
B44	ASAS TADSS (TIARA)	194	203	203	205						805
B49	CHIMS TADSS (TIARA)	123	128	128	128						630

A. Mission Description and Budget Item Justification: The All Source Analysis System (ASAS0 provides US Army commanders at all echelons from battalion to Army Service Component Command with automated support to the management and planning, processing and analysis, and dissemination of intelligence, counterintelligence, and electronic warfare. ASAS provides the means to enhance the commander's timely and comprehensive understanding of enemy deployments, capabilities, and potential courses of action. The system uses standard joint and Army protocols and message formats to interface with selected National, joint, theater, and tactical intelligence, surveillance, and reconnaissance systems and preprocessors and Army, joint, and coalition battle command systems. The ASAS product set currently includes : ASAS-Light (L) laptops, ASAS-L Intelligence Fusion Station desktop computers, the shelterized, High Mobility Multipurpose Wheeled Vehicle (HMMWV)-mounted Analysis and Control Team-Enclave (ACT-E), and various Analysis and Control Element (ACE) configurations at Special Forces Group, Armored Cavalry Regiment, division, Corps, and Military Intelligence Brigade. From FY07 through FY09 these ASAS systems will be configured to operate as integral components of the Army's initial Distributed Common Ground System-Army (DCGS-A)capability.

FY08 and FY09 funding will be used to reconfigure ASAS systems into an integral component of the Army's initial DCGS-A capability, resolve high priority Software anomaly reports (SAR); conduct interoperability development and test; and comply with DOD mandates and provide Defense Infromation Infrastructure (DI) Common Operating Environment (COE)/Net Centric Enterprise Services (NCES) maintenance for the ASAS family of systems.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	9042	7074	5427	5474
Current BES/President's Budget (FY 2008/2009)	13177	6888	5384	5465
Total Adjustments	4135	-186	-43	-9
Congressional Program Reductions		-186		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	4135			
SBIR/STTR Transfer				
Adjustments to Budget Years			-43	-9

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

COST (In Thousands)		FY 2006 Actual	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
B19	ASAS EVOLUTIONARY ACQ (TIARA)	11942	3315	3409	3411						22077

A. Mission Description and Budget Item Justification: The All Source Analysis System (ASAS) is a ground based, mobile, command and control, intelligence processing system that provides tactical commanders a common view of the battlefield and a means for gaining a timely and comprehensive understanding of enemy force deployments, capabilities, and potential courses of action. The system interfaces with selected national, joint, and theater Intelligence assets, adjacent/higher/lower military intelligence preprocessors, Distributed Common Ground System-Army (DCGS-A), Army Battle Command System (ABCS), and organic deployed Intelligence/Electronic Warfare (IEW) teams and assets. The ASAS product set currently includes: ASAS-Light, Intelligence Fusion Station (IFS), Analysis and Control Team-Enclave (ACT-E), Analysis and Control Element (ACE), and the Communications Control Set (CCS). The ASAS system uses standard joint and Army protocols and message formats to interface with forward deployed sensor/teams, intelligence preprocessors and joint/national/Army C3I systems.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Conduct SDD of ASAS Light (Software Blocking 2(SWB2))	2971			
Resolve high priority Software Anomaly Reports (SARs); conduct interoperability development and test; and comply with DOD mandates and provide Defense Information Infrastructure (DII) Common Operating Environment(COE)/Network Centric Enterprise Services(NCES) maintenance for ASAS Light, Analysis Control Team-Enclave (ACT-E), and Analysis and Control Element (ACE).	4836	3315	3409	3411
Procure two-way Speech-to-Speech Systems and sustainment support for Investigational Fielding	1451			
Establish and Maintain Machine Based Language Translation Office in Iraq	461			
Establish for Machine Language Testbeds	990			
Develop requirements and metrics for Machine Language Translation	1180			
Matrix Support	53			
Total	11942	3315	3409	3411

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA (K28801) ASAS Modules	61619	34293	36132	38674						170718
Spares (BS9704)	2483	2291	1975	1361						8110
Language Translation	1464									1464

Comment: Language Support: $1,195 thousands received from DOD Washington Headquarters Services to procure laptop translation systems for investigational fielding. $269 thousands from Rapid Equipping Force for sustainment of investigational fielded systems.

C. Acquisition Strategy The ASAS development program builds upon and expands the capabilities and functionality developed and produced in the ASAS Block I System including conversion to the Common Hardware Systems (CHS) and the Defense Information Infrastructure Common Operating Environment/Network Centric Enterprise Services (DII COE/NCES) and Modernized Integrated Database (MIDB). ASAS is being developed using a block upgrade evolutionary acquisition strategy.

- ASAS Block I: Fielded ruggedized, tactical systems at Active Component (AC) corps, divisions, and the institutional training base.

- ASAS-Extended: Provided the rest of the AC and National Guard enhanced separate brigades with an interim ASAS capability running Block I software on commercial hardware.

- ASAS Block II: Uses common hardware and software, built on the DII COE/NCES standard. Provides open architecture, assured interoperability, and enhanced capability with room for growth. ASAS Light is the key intelligence provider for Army Battle Commmand Systems (ABCS).

- Army Software Blocking: ASAS Light synchronizes with Software Block 1 and 2 execution phases.

The program emphasizes multiple evolutionary deliveries, with incremental enhancements of ASAS products, integrated test, and continuous evaluation opportunities. ASAS builds upon experience and feedback gained from the fielded ASAS products and real-world operational deployments providing the soldier with improved reliability, supportability, and survivability.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B19

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Development	CPAF	Lockheed Martin, Denver, CO	272731										272731	
Subsystem Development	GSA D.O.	Electronic Warfare Associates, Huntington, WV	12095	1200									13295	
Subsystem Development	GSA D.O.	Overwatch Systems, Austin, TX	21953	1161	1Q								23114	
SARs, Safety and Interop	GSA D.O.	Overwatch Systems, Austin, TX	1027	2216	1-3Q	1622	1-3Q	2423	1-3Q	2425	1-3Q		9713	
Two Way Speech-to-Speech (S2S)				967	4Q								967	
Subtotal:			307806	5544		1622		2423		2425			319820	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Facility Support	MIPR	Ft. Belvoir, VA	1134	192	1-4Q	199	1-4Q						1525	
License Maintenance	MIPR	Ft. Monmouth, NJ	500	2076	1-3Q	308	1-3Q						2884	
Training and Sustainment of Two-Way S2S Investigational Fielding Systems	MIPR	Marine Experimentation Center, Port Hueneme, CA		484	3Q								484	
Engineering Lead - Coordination of DOD service engineering efforts and establish Engineering Testbed	MIPR	Army Research Laboratory, Adelphi, MD		620	3Q								620	
Engineering -Develop collection plan for linguistic data for machine translation	MIPR	Naval Research Laboratory, Washington, DC		270	3Q								270	
Develop User requirement for automated Machine language	MIPR	Army Intelligence Center, Fort Belvoir,		520	4Q								520	

Translation systems		VA												
Engineering-Establish Testbed for machine translation systems	MIPR	Air Force Research Laboratory, Wright-Patterson AFB, OH		370	3Q								370	
Engineering-Develop effective measures metrics for Machine Foreign Language Translation Systems	MIPR	Electronic Systems Center, Hanscom AFB, MA		390	4Q								390	
Establish and maintain the Machine Based Language Translation (MBLT) training in Baghdad, Iraq	MIPR	NAWCAD, Patuxant River, MD		461	4Q								461	
Subtotal:			1634	5383		507							7524	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ASAS Developmental and Operational Testing	MIPR	EPG, Ft Huachuca, AZ	6708										6708	
Continuous Evaluation	MIPR	EPG, Ft. Huachuca, AZ	763										763	
Joint Interoperability Test Command (JITC)	MIPR	Ft. Huachuca, AZ				50	2Q						50	
Army Test and Evaluation Command (ATEC)	MIPR	Ft. Hood, TX				150	2Q						150	
Subtotal:			7471			200							7671	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
FFRDC	MIPR	MITRE/Washington, DC	9922										9922	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

Contractor Support	BPA	SYTEX, Inc. Vienna, VA	28428	486	1-4Q	486	1-4Q	486	1-4Q	486	1-4Q		30372	
Government In House	Direct Allotment	PD IF, Ft. Belvoir, VA	18326	476	1-4Q	500	1-4Q	500	1-4Q	500	1-4Q		20302	
Matrix Support	MIPR	HQ CERDEC, Fort Monmouth, NJ		53	4Q								53	
Subtotal:			56676	1015		986		986		986			60649	
Project Total Cost:			**373587**	**11942**		**3315**		**3409**		**3411**			**395664**	

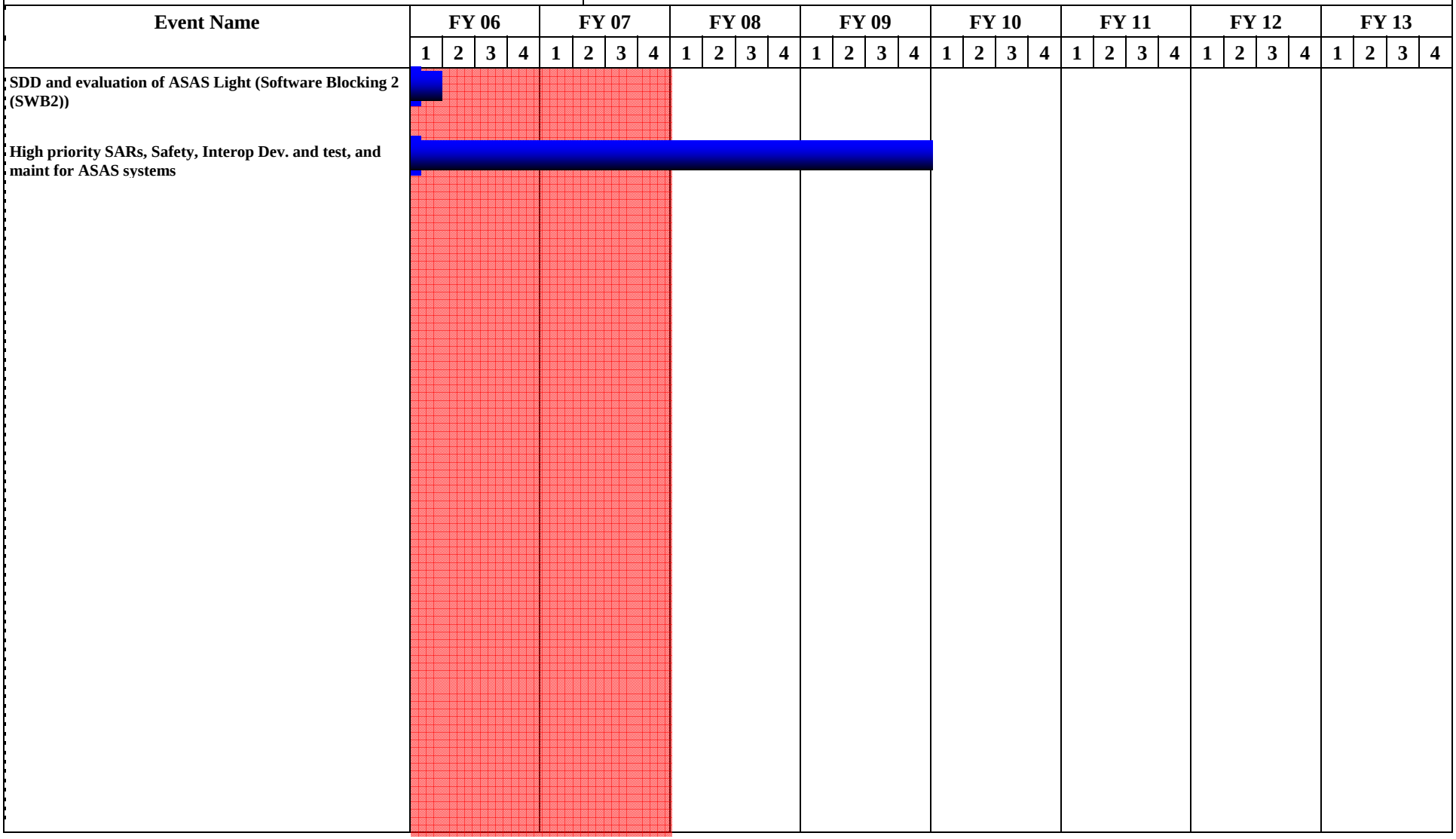
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B19



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SDD and evaluation of ASAS Light (Software Blocking 2 (SWB2))	1Q							
High priority SARs, Safety, Interop Dev. and test, and maint for ASAS systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B41**

COST (In Thousands)		FY 2006 Actual	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
B41	CI/HUMINT Software Products (TIARA)	918	3242	1644	1721	3017	3223	3500	3700		20965

A. Mission Description and Budget Item Justification: The Counterintelligence/Human Intelligence (CI/HUMINT) Information Management System (CHIMS) is the Army system responsible for collection, processing, and analysis of CI/HUMINT data to satisfy tactical human intelligence requirements. CHIMS provides automation support for Army tactical CI/HUMINT information collection, investigation, interrogation, operations, biometrics, document exploitation, and force protection. The CHIMS architecture extends from the individual Tactical HUMINT Team Soldier or CI agent to Theater and National intelligence organizations. CHIMS is the CI and HUMINT information provider for All-Source architectures for Future Force, including: ASAS Block 2, Distributed Common Ground System Army (DCGS-A), PORTICO and Future Combat System (FCS). CHIMS systems are used to produce intelligence products to feed and maintain HUMINT databases and the All Source Correlated Data Base (ASCDB). CHIMS provides systems to both vertical and horizontal customer bases. Vertical (Army) clients include: all MACOMS, Special Forces, Reserves, National Guard, Stryker Brigade Combat Teams (SBCT), and the Intelligence School. Horizontal clients (non-Army) include U.S. Navy, U.S. Marine Corps, Joint Task Force (JTF) Guantanamo Bay (GTMO) Cuba, and Defense Intelligence Agency (DIA). CHIMS can produce and disseminate messages and reports through an array of communications systems including: combat Net Radio, SINCGARS, PRC-150 STE, STU, satellite, and other organic communications devices. The CHIMS suite of systems incorporates a multi-tiered architecture that reaches from handheld devices to Web servers providing multiple security level access with both brilliant push and smart pull tools to the battlefield commander and National interests. In FY07 development begins on the next generation of CI/HUMINT collection and reporting tools and software. CI/HUMINT Automated Collection Reporting Systems (CHARCS) will provide improved collection, reporting, biometrics, language, communications and mission management capabilities to CI agents and HUMINT collectors.

FY 2008/2009 funding continues the development of Counterintelligence Human Intelligence Automated Reporting Collection System (CHARCS).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue spiral development of CHAMS functionality and SW Problem Reporting implementation.	700	2524		
Transition of CHAMS SW Baseline V4.2 to CECOM for Life-Cycle Support	190	537		
Developed Counterintelligence/Human Intelligence Automating Reporting Collection Systems (CHARCS)		46	1107	1619
Continue Test and Security Accreditation efforts.	28	135	537	102
Total	918	3242	1644	1721

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE (PE 35208, Proj 956) DCGS-A (JMIP)	19516	24037	10941	11302	2020	2187	190	190	Continuing	Continuing
OPA (BK5275) CHIMS (TIARA)	7592	19625	26310	35087	10215	12494	10500	10500	Continuing	Continuing
RDTE (PE 64321, Project B49) CHIMS TADSS	123	128	128	128						507

Comment:

C. Acquisition Strategy The CI/HUMINT Automated Management Software (CHAMS), a software baseline common to all CHIMS automation systems, is being developed under a competitively awarded Indefinite Delivery/Indefinite Quantity (ID/IQ) type contract. CHAMS is the common SW on two collection and reporting products (CI/HUMINT Automated Tool Set (CHATS) and Individual Tactical Reporting Tool (ITRT)) and is used by PM Distributed Common Ground System-Army (DCGS-A) in its Counterintelligence and Interrogation Operations (CI&I OPS) Workstations. CHAMS will be continuously improved through spiral development to keep pace with evolving capability requirements through FY07 and transitioned to CECOM in 4QFY07. In FY07 development begins on CHARCS. The hardware for all product lines is an integration of commercial off-the-shelf (COTS) and Government off-the-shelf (GOTS) hardware. As COTS technology evolves, new hardware will be introduced to keep CHIMS' users at the forefront of intelligence automation. This integration of new development and COTS/GOTS ensures both a cost and time to field advantage for CHIMS users.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B41

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CI/HUMINT Utilities SW Development	IDIQ Competitive	Northrop Grumman, Sierra Vista, AZ	224										224	
CHAMS Software Development	IDIQ Competitive	Northrop Grumman, Sierra Vista, AZ	5890	607	2Q	2157	2Q					Cont.	Cont.	
CHATS Development	Competitive T&M	TAMSCO, Eatontown, NJ	1808										1808	
CI/HUMINT SS SW Development	IDIQ Competitive	Northrop Grumman, Sierra Vista, AZ	50										50	
CI & I OPS WS Development	Competitive T&M	TAMSCO, Eatontown, NJ	1566										1566	
ITRT Development	Competitive T&M	TAMSCO, Eatontown, NJ	444										444	
Refugee Management System	CPFF	EWA, Fairmont, WV	3000										3000	
CECOM Transition Support	MIPR	CECOM, SW Engineering Center, Ft. Huachuca AZ	187	170	1Q	501	1Q						858	
CHARCS Development	IDIQ	Northrup Grumman, Sierra Vista, AZ				39	1Q	946	1Q	1386	1Q		2371	
Subtotal:			13169	777		2697		946		1386		Cont.	Cont.	

Remarks: SW Engineering Support for transition of CHIMS SW baseline V4.2 to CECOM SEC.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Contractor Support	BPA	The Sytex Group Inc./Newington, VA	1775	91	1Q	410	1Q	148	1Q	230	1Q	Cont.	Cont.	
Matrix Support	MIPR	I2WD, CECOM Fort Monmouth, NJ	368										368	
Subtotal:			2143	91		410		148		230		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Developmental Test	MIPR	PRC, McLean, VA	401								1Q		401	
Developmental Test	MIPR	JITC, Ft. Huachuca, AZ	304	25	1Q	20	1Q	20	1Q	35	1Q		404	
Test Support and Interoperability	MIPR	CTSF, Ft. Hood Tx.	75			35	1Q	10	1Q	35	1Q	Cont.	Cont.	
Operational Test	MIPR	TBD	79				1Q	390	1Q				469	
Test Articles	MIPR	ESS, Frederick, MD	120					50	1Q				170	
Security Accreditation Collateral	MIPR	CECOM, Ft. Monmouth, NJ	235			45	2Q	45	2Q			Cont.	Cont.	
SCI PL2	MIPR	NGMS, Sierra Vista, AZ	80										80	
SCI PL2 Certification	MIPR	Air Force Research Lab (AFRL), Rome, NY	160										160	
Safety Release	MIPR	CECOM, Ft. Monmouth, NJ	15			10	1Q	10	1Q	10	1Q		45	
Subtotal:			1469	25		110		525		80		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		PM DCGS-A/CHIMS Fort Monmouth, NJ	654	5	2Q	5	2Q	5	2Q	5	2Q	Cont.	Cont.	
Facility Support		PM NV/RSTA, Ft Belvoir, VA	575	20	1Q	20	1Q	20	1Q	20	2Q	Cont.	Cont.	
Subtotal:			1229	25		25		25		25		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)												February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604321A - ALL SOURCE ANALYSIS SYSTEM**										PROJECT **B41**	
Project Total Cost:	**18010**	**918**		**3242**		**1644**		**1721**		**Cont.**	**Cont.**	

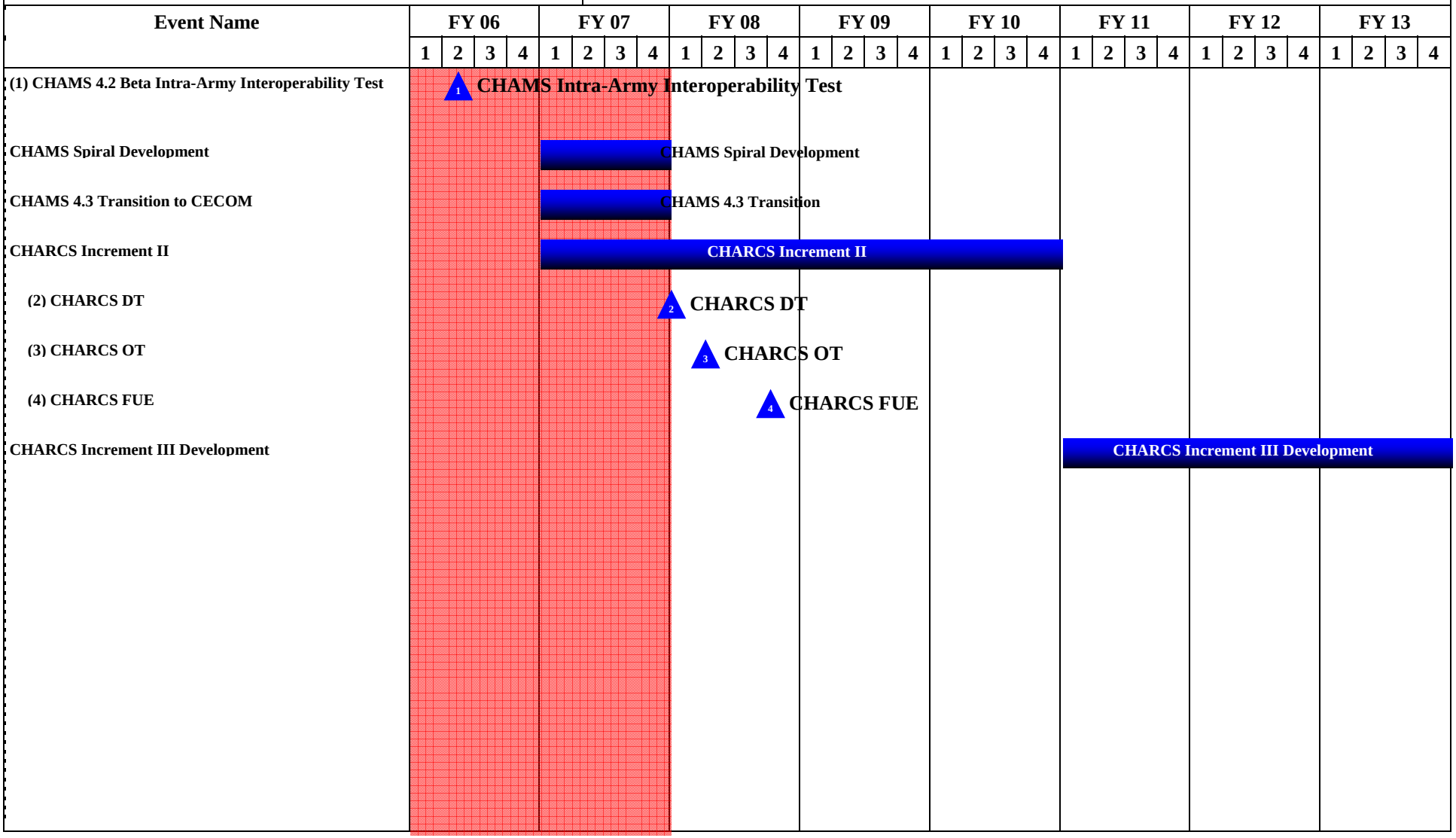
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B41



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B41

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
CHAMS 4.2 Beta Intra-Army Interoperability Test	2Q							
CHAMS Spiral Development		1Q - 4Q						
CHAMS 4.3 Transition to CECOM		1Q - 4Q						
CHARCS Increment II		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
CHARCS DT			1Q					
CHARCS OT			2Q					
CHARCS FUE			4Q					
CHARCS Increment III Development						1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B44**

COST (In Thousands)		FY 2006 Actual	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
B44	ASAS TADSS (TIARA)	194	203	203	205						805

A. Mission Description and Budget Item Justification: The All Source Analysis System (ASAS) is a ground based, mobile, command and control, intelligence processing system that provides tactical commanders a common view of the battlefield and a means for gaining a timely and comprehensive understanding of enemy force deployments, capabilities, and potential courses of action. The system interfaces with selected national, joint, and theater Intelligence assets, adjacent/higher/lower military intelligence preprocessors, Distributed Common Ground System-Army (DCGS-A), Army Battle Command System (ABCS), and organic deployed Intelligence/Electronic Warfare (IEW) teams and assets. The ASAS product set currently includes: ASAS-Light, Intelligence Fusion Station (IFS), Analysis and Control Team-Enclave (ACT-E), Analysis and Control Element (ACE), and the Communications Control Set (CCS). The ASAS system uses standard joint and Army protocols and message formats to interface with forward deployed sensor/teams, intelligence preprocessors and joint/national/Army C3I systems.

FY08 and FY09 funding provides for Training Aids Devices Simulators and Simulations (TADSS).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Training Aids Devices Simulators and Simulations	194	203	203	205
Total	194	203	203	205

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

C. Acquisition Strategy Not appplicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B44

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Training Aids Devices Simulators and Simulations	GSA-BPA	Mantech, Killeen, TX	196	194	1Q	203	2Q	203	1Q	205	1Q		1001	
Subtotal:			196	194		203		203		205			1001	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:			**196**	**194**		**203**		**203**		**205**			**1001**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**

	COST (In Thousands)	FY 2006 Actual	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	49954	43165	45229	32585	44001	40276	46945	46445		382297
033	ADV CREW SVC WPN		3214								36911
S58	SOLDIER ENHANCEMENT PROGRAM	12200	15476	18985	15367	16228	11230	16650	16750		122886
S59	SOLDIER SUPPORT EQUIPMENT - ED	282	305								587
S60	CLOTHING & EQUIPMENT	7546	11197	9699	9677	10044	10082	10800	10100		79145
S61	ACIS ENGINEERING DEVELOPMENT	10727	2300	2542	2667	2751	2852	4500	4600		32939
S62	OBJECTIVE INDIVIDUAL COMBAT WEAPON	9993	1794								11787
S63	SMALL ARMS IMPROVEMENT	6905	5665	14003	4874	14978	16112	14995	14995		92527
S64	COMMON REMOTELY OPERATED WPN SYS (CROWS)	2301	3214								5515

A. Mission Description and Budget Item Justification: This program element for System Development and Demonstration (SDD) manages the Soldier as a system, with the goal of increasing Soldiers' combat effectiveness, increasing survivability, and improving the Soldiers' quality of life. It develops and tests prototypes of weapons, clothing, equipment, and other items useful to support the Soldier.

Project 033 (Advanced Crew Served Weapon) develops the 25mm XM-307 light weight, low recoil grenade machine gun, which enables the Soldier to effectively suppress and incapacitate exposed and defilade personnel targets out to 2000 meters using airbursting, fragmenting, or armor piercing ammunition. Starting in FY 06 and continuing through FY 11, the Future Combat System (FCS) version of the XM-307 machine gun will be funded directly from PE 0604645 to support the(FCS) Unit of Action requirement.

Project S58 (Soldier Enhancement Program) supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons, and improved soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids.

Project S59 (Soldier Support Equipment) supports system development and prototyping of critical Soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.

Project S60 (Clothing and Equipment) supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility and sustainment affecting the quality of life of the individual Soldier.

Project S61 (Aircrew Integrated Systems) provides System Development programs 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.

Project S62 (Objective Individual Combat Weapon) The XM25 is the air burst portion of the XM-29 Integrated Air Burst Weapon. The XM-25 dramatically increases Soldier lethality, survivability, and standoff capability when engaged in combat operations.

Project S63 (Small Arms Improvements) demonstrates 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 ammunition.

Project S64 (CROWS Lightning) funds will be applied to continue integrating a lightweight weapon station including fire control, sensors and control grip onto light and/or medium tactical vehicles to obtain a safety release for operational assessment in Iraq. This capability will enhance the Soldiers survivability, lethality and situational awareness.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	53257	31748	48644	33238
Current BES/President's Budget (FY 2008/2009)	49954	43165	45229	32585
Total Adjustments	-3303	11417	-3415	-653
Congressional program reductions	-233	-165		
Congressional rescissions	-537	-318		
Congressional increases	19400	11900		
Reprogrammings	-20459			
SBIR/STTR Transfer	-1474			
Adjustments to Budget Years			-3415	-653

FY07 Congressional increases include the following:

1) $3.25 million for XM307 25mm Advanced Crew Served Weapon System (Project 033)
2) $3.25 million for CROWS Lightning Integrated Acoustic Sensor (Project S64)
3) $3.3 million for the Joint Service Small Arms Program's (JSSAP) Polymer Cased Small Arms Ammunition Production Program was appropriated incorrectly to this PE in Project S63. Funds will be reprogrammed to PE 0602624A.
4) $1.1 million for Durable Nylon/Cotton Army Combat Uniform Fabric (Project S60).
5) $1.0 million for Development of Enhanced Self-Sintered Silicon Carbide Body Armor (Project S60).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S58**

COST (In Thousands)		FY 2006 Actual	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
S58	SOLDIER ENHANCEMENT PROGRAM	12200	15476	18985	15367	16228	11230	16650	16750		122886

A. Mission Description and Budget Item Justification: This program supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons, and improved soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids. Soldiers are managed in three categories: dismounted Soldiers, combat crews (air and ground), and other Soldiers. Projects are generally completed in three years or less.

Funds for prior year efforts were funded under PE 0604713A (Project 668 - Soldier Enhancement Program).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY07-FY08: Accomplishments and Current Plan include evaluation and procurement of prototypes and/or test for the following Soldier Equipment Items: Enhanced Hearing Protection, Family of Flashlights, Parachute Electronic Activation Device, Parachute Oxygen Mask, and On-The-Move Hydration System.	4098	5310	9418	6659
FY07-FY08: Accomplishments and Current Plan include evaluation and procurement of prototypes and/or test for the following Soldier Weapons Items: Close Combat Mission Capability Kit, 12 Ga Non-lethal Extended Range Round, 40 MM Extended Range Non-lethal Round, Close Quarters Battle Kit Re-compete, Modular Accessory Shotgun System, Family of Suppressors, XM320 Genade Launcher Module, Advanced Sniper Accessory Kit, and the M2 Quick Change Barrel Kit.	2769	2338	2601	2280
FY07-FY08: Continue in-house engineering support services, conduct technical evaluations and program reviews.	2222	2693	2537	2527
FY07-FY08: Initiate market surveys and/or evaluations on new items to commence development and demonstration. New items initiated will continue evaluation/procurement of new prototypes.	1107	2828	1971	1792
FY07-FY08: Current Plan includes evaluation and procurement of prototypes and/or test for Soldier equipment and Lethality programs that will be reviewed in a semi-annual review scheduled for Feb 2007 which could include: Modular Thermal Target (MTT), Shaving/Field & Non-Field Item, Concertina Cutter, Carbon X flight and armor crew suits, Modular Boonie Hat System, Head and Neck Restraint System, A Multi-Shot Grenade Launcher, Utility Automatic Knife, Heat Moldable Boot Insole, Compact Tactical Illuminator, Small Arms Collimator (SAC), Outer Tactical Vest, Ballisticallly Corrected Telescopic Sight, Hammock Shelter System, Battle Lab Commander's Arm Board, Universal Mamba Weapon Sling, SLAM-DEP Counter IED Jammer, Next Generation Microfiber.	2004	2307	2458	2109
Total	12200	15476	18985	15367

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MA68000, Soldier Enhancement	4553	13245	13540	3463	7462	5541	12500	13052	Continuing	Continuing
OPA2, BA5300, Soldier Enhancement	5925	9893	10192	6410	7210	5188	14800	15500	Continuing	Continuing

WTCV, GC0076, Small Arms (SEP)	10689	2739	5424	1261	5177	4197	5200	5200	Continuing	Continuing
WTCV, GZ1290,Squad Automatic Wpn (Mods)	21533	5232	12361	7153	8090	6150	5200	5300	Continuing	Continuing
WTCV, GZ2800, M16 Rifle Mods	12141	1008	3900	1017	3563	3558	3500	3500	Continuing	Continuing
WTCV, GB3007, M4 Carbine Mods	87375	30809	13696	6081	13472	14441	13692	13535	Continuing	Continuing
WTCV, GO1500, Sniper Rifle	20228	8424	417	225	231	244			Continuing	Continuing
WTCV,GC0925, Mods	16169	1693	2791	497	3067	2113	3123	3259	Continuing	Continuing
PAA, F47500, 7.62mm AP	4833	5154	8424	8736	5900				Continuing	Continuing
PAA, F47600, 5.65mm AP	6727	7283	11813	12187	8264				Continuing	Continuing
OMA, 121017, Central Funding & Fielding	123954	134328	110688	92715	89409	39529	79984	113404	Continuing	Continuing

Comment:

C. Acquisition Strategy The Soldier Enhancement Program (SEP) focuses on developmental initiatives and integration efforts that lend themselves to accelerated acquisiton and fielding in the near term (within three years). New SEP candidates are reviewed and approved semi-annually. SEP items are procured from multiple appropriations, i.e., OMA, OPA, WTCV, and PAA.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S58

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Various	TBD		8871	1-2Q	8305	1-2Q	11625	1-3Q	8532	1-3Q		37333	
Subtotal:				8871		8305		11625		8532			37333	

Remarks: Candidates for the Soldier Enhancement Program are received, reviewed, and approved semi-annually. Contractual efforts are focused on procuring prototypes for testing.
Funding for PE 0604713A, Project 668 transitions to PE 0604601A Project S58 beginning in FY06.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Various	TBD		750	1-4Q	1551	1-4Q	1672	1-4Q	1896	1-4Q		5869	
Subtotal:				750		1551		1672		1896			5869	

Remarks: Support costs vary annually depending on the type of items that are being evaluated. Research, Development, and Engineering Centers support to evaluate these items also varies annually depending on the number and types of items.
Funding for PE 0604713A, Project 668 transitions to PE 0604601A Project S58 in FY06.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Various			1107	1-4Q	2628	1-4Q	2653	1-3Q	2543	1-3Q		8931	
Subtotal:				1107		2628		2653		2543			8931	

Remarks: Testing costs vary annually depending on number and type of items being evaluated.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	MIPR	PEO Soldier, Ft Belvoir, Va		1472	1-4Q	2992	1-4Q	3035	1-4Q	2396	1-4Q		9895	
Subtotal:				1472		2992		3035		2396			9895	

Remarks: Costs vary annually depending on number and type of items being evaluated.

Project Total Cost:		**12200**		**15476**		**18985**		**15367**			**62028**	

Schedule Detail (R4a Exhibit)		February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604601A - Infantry Support Weapons**	PROJECT **S58**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S60**

COST (In Thousands)	FY 2006 Actual	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
S60 CLOTHING & EQUIPMENT	7546	11197	9699	9677	10044	10082	10800	10100		79145

A. Mission Description and Budget Item Justification: Funding supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility and sustainment affecting the quality of life of the individual Soldier.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Individual Soldier Ballistic Protection: (FY06) Continued Product Improvement on Interceptor Body Armor (IBA) in support of fielding and executing incremental capability improvements related to technology maturity and operational feedback. Evaluated and guided industry to product improve commercial ballistic eyewear and selected the most viable for incorporation of standard prescription carriers and protection against lasers. Tested advanced photochromic technology and dielectric stack technology to ballistic protective lenses. Conducts system integration and formal DT/OT of pre-production and production representative systems applying advanced ballistic materials to increase Soldier survivability while decreasing weight, cube and cost. (FY07-09) Integrate and enhance Soldier Body Armor, Combat Eyewear, Bomb Suit, Face Shield, Blast Protective Footwear and Combat Helmet capabilities providing head-to-toe protection from current and emerging ballistic/blast threats. Prove out commonality at the component and subsystem levels to provide a modular layered/integrated ballistic protection system.	3804	4734	4923	4849
Soldier Uniforms and Clothing: (FY06) Continued efforts to incorporate new fabrics, fabric finishes and design features in the black windbreaker. Modified Self Contained Toxic Environmental Protective Outfit (STEPO) bootie and harness. Completed User testing of STEPO modification. Completed the field test of Extreme Cold Weather Clothing System (ECWCS) Generation III. (FY07-09) 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 chem/bio protection to increase the capabilities and durability of tactical and non-tactical clothing. 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.	537	2150	2640	2628
Individual Equipment: (FY06) Built Operational Test assets for Advanced Tactical Parachute System (ATPS) and conducted developmental and operational testing. Initiated effort to incorporate evolving filtration/purification technologies into On-the-Move Hydration systems and conducted user test. (FY07-09) 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.	3205	3998	2136	2000
Soldier Cooling: Conduct System integration and formal DT/OT of preproduction and production representative advanced lightweight, low power cooling systems for use with NBC and ballistic protection ensembles. Prove out courses of action from trade-off analyses and system integration providing Soldiers enhanced ability to conduct missions for longer periods of time in extreme environments.				200
FY07: SBIR/STTR		315		

Total	7546	11197	9699	9677

B. Other Program Funding Summary	FY 2006	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	8
RDTE, 0603827.S53, Clothing and Equipment	6924	6827	10050	9631	7193	7405	6878	6986	Continuing	Continuing
OMA, 121017, Central Funding and Fielding	123954	134328	110688	92715	89409	39529	79984	113404	Continuing	Continuing

Comment:

C. Acquisition Strategy Acquisition strategies will vary in methods: quick fixes in 12-24 months or less from concept to Type Classification (TC), 2) Moderization improvements which require limited RD&E and will be completed in more than 24-48 months from inception to Type Classification, 3) Fully integrated development that will require substantial RDT&E funding and will be completed in 4 years or more.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	1-3Q	2100	1-3Q	1039	1-3Q	1070	1-3Q	Cont.	Cont.	
Various	Contracts	Various		2071	1-3Q	4307	1-3Q	3800	1-3Q	3750	1-3Q	Cont.	Cont.	
Subtotal:				4071		6407		4839		4820		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		1702	1-2Q	2125	1-2Q	2250	1-2Q	2207	1-2Q	Cont.	Cont.	
Subtotal:				1702		2125		2250		2207		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		1057	1-3Q	1740	1-3Q	1560	1-3Q	1550	1-3Q	Cont.	Cont.	
Subtotal:				1057		1740		1560		1550		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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		716	1-4Q	925	1-4Q	1050	1-4Q	1100	1-4Q	Cont.	Cont.	
Subtotal:				716		925		1050		1100		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S60**

Project Total Cost:		**7546**		**11197**		**9699**		**9677**		**Cont.**	**Cont.**		

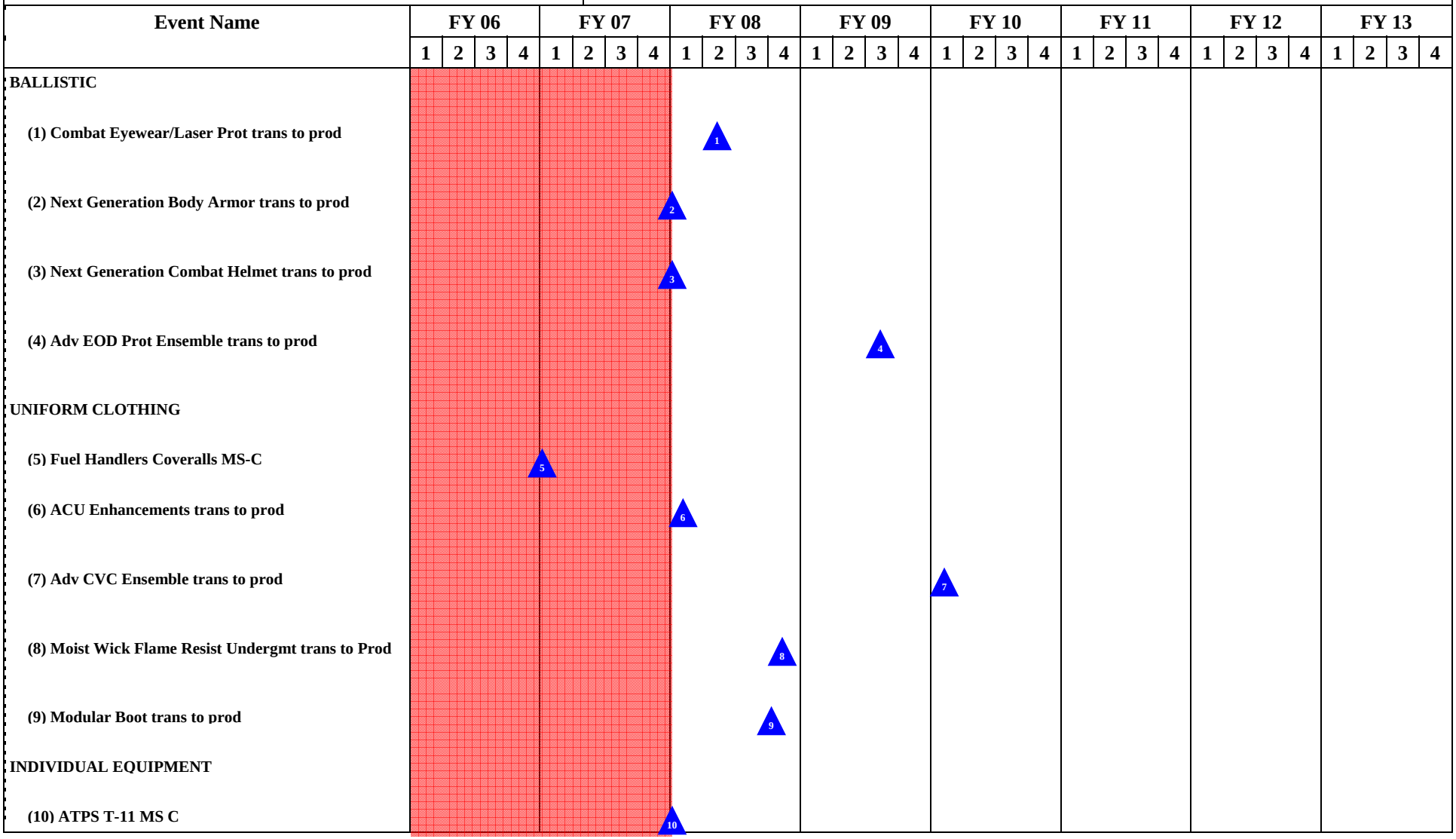
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60



Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60

Event Name	FY 06				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	2	3	4
(11) Cold Weather stove trans to prod															11																	

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BALLISTIC								
Combat Eyewear/Laser Prot trans to prod			2Q					
Next Generation Body Armor trans to prod			1Q					
Next Generation Combat Helmet trans to prod			1Q					
Adv EOD Prot Ensemble trans to prod				3Q				
UNIFORM CLOTHING								
Fuel Handlers Coveralls MS-C		1Q						
ACU Enhancements trans to prod			1Q					
Adv CVC Ensemble trans to prod					1Q			
Moist Wick Flame Resist Undergmt trans to Prod			4Q					
Modular Boot trans to prod			4Q					
INDIVIDUAL EQUIPMENT								
ATPS T-11 MS C			1Q					
Cold Weather stove trans to prod				3Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**

COST (In Thousands)		FY 2006 Actual	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
S61	ACIS ENGINEERING DEVELOPMENT	10727	2300	2542	2667	2751	2852	4500	4600		32939

A. Mission Description and Budget Item Justification: This project provides System Development programs 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 soldier systems 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 systems approach to noise protection, three-dimensional audio and external audio capability, microclimate conditioning, crash and post-crash survivability, concealment and environmental protection, ballistic protection, night vision capability and heads-up display, directed energy eye protection and flame/heat protection. Air Warrior enables the Army Aviation Warfighter to meet the approved Operational Requirements Document mission length of 5.3 hours with aviators in full chemical/biological protective gear. 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. This program does not duplicate any aircraft platform program efforts. Both joint and service independent efforts continue to be pursued under the scope of this program. FY06 funding was provided for the development of the Personnel Recovery Support Equipment operations support program which currently consists of three efforts, two of which are classified.

Funds for prior year efforts were funded in PE 0604801A (Project C45 - Aircrew Integrated Systems).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue the integration of preplanned Air Warrior Block 2 and 3 improvements	1317	854	1191	1498
Aircrew wireless intercom system (AWIS) encryption certification	1468	1381	1351	1169
Development of Personnel Recovery Support Equipment	7942			
Small Business Innovative Research/Small Business Technology Transfer Programs		65		
Total	10727	2300	2542	2667

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, A PE 0604801A PROJ DC45 EMD									Continuing	Continuing
RDTE, A PE 0604801A, PROJ DB45 - Adv Dev									Continuing	Continuing
RDTE, A PE 0603827A, PROJ S51 - Adv Dev	2572	3459	3179	2997	3136	2909	9996	10200	Continuing	Continuing

Aircraft Procurement, Army SSN AZ3110 - ACIS	31820	40632	42727	39430	57404	42849	138642	125577	Continuing	Continuing

Comment:

C. Acquisition Strategy System Development and Demonstration efforts are for the Air Warrior Block 2 Aircraft Wireless Intercom System (AWIS). The AWIS is a hands-free telecommunication device using radio signals for aircrew communication. Development efforts are awarded through competitive cost plus fixed fee contracts or by Military Interdepartmental Purchase Requests (MIPRs) to other government agencies. The Personnel Recovery Support Equipment program development effort provides integration and optimization of personnel recovery systems performance support equipment being executed through cost plus fixed fee contracts and Military Interdepartmental Purchase Requests to other government agencies.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S61

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Development	C - CPFF	Various		2588	1Q	2113	1Q	2347	1-2Q	2470	1-2Q		9518	
Personnel Recovery Support Equipment Development	MIPR	Various		7942	3Q								7942	
Subtotal:				10530		2113		2347		2470			17460	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 and Project Order	Various Government		32	1-4Q	32	1-4Q	38	1-4Q	38	1-4Q		140	
Subtotal:				32		32		38		38			140	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Developmental Testing	MIPR	Various		27	1-2Q	23	1-2Q	28	1-2Q	32	1-2Q		110	
Subtotal:				27		23		28		32			110	

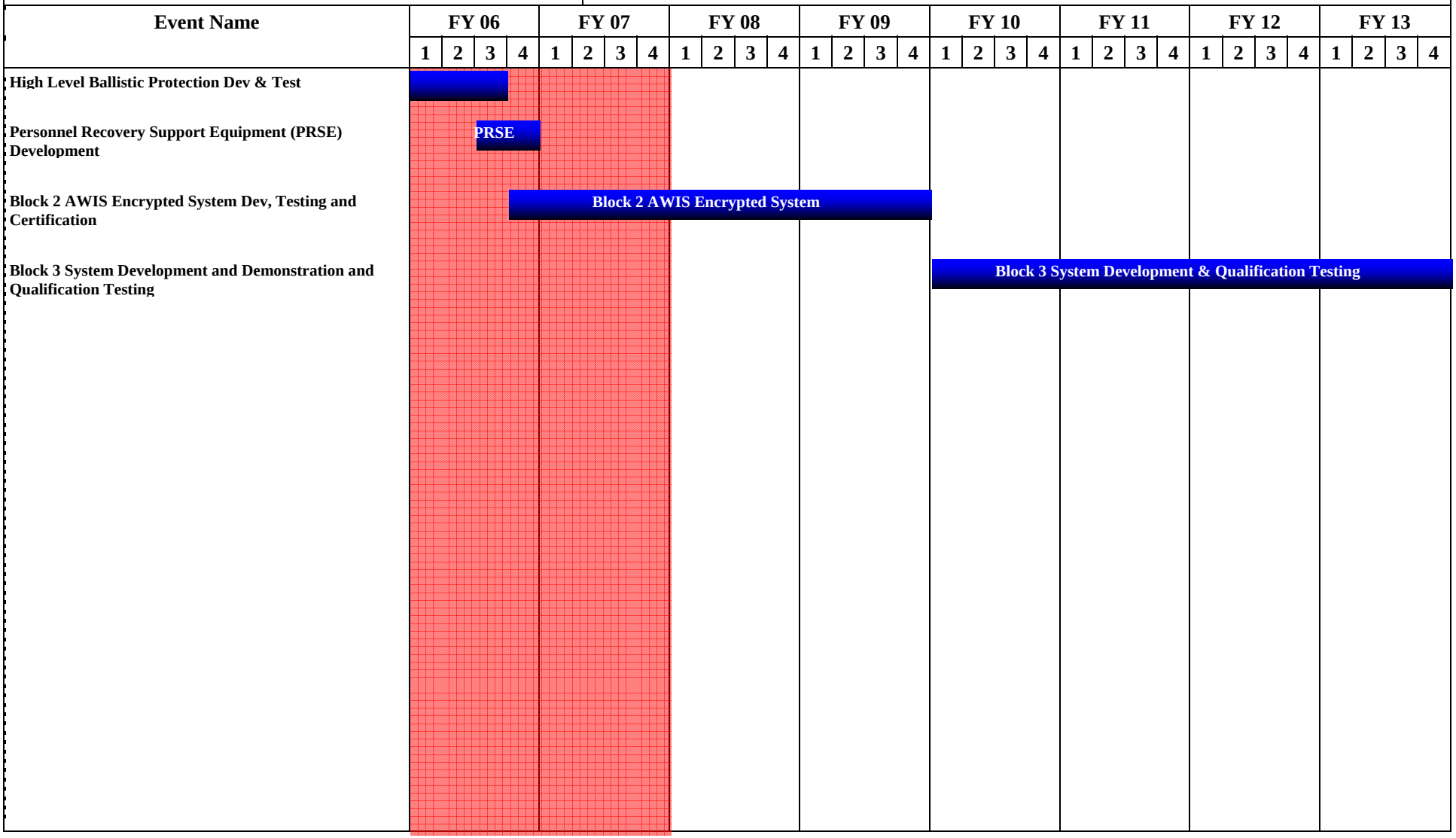
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allotment	Various Government		138	1-4Q	132	1-4Q	129	1-4Q	127	1-4Q		526	
Subtotal:				138		132		129		127			526	

Project Total Cost:		**10727**		**2300**		**2542**		**2667**			**18236**		

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
High Level Ballistic Protection Dev & Test	1Q - 3Q							
Personnel Recovery Support Equipment (PRSE) Development	3Q - 4Q							
Block 2 AWIS Encrypted System Dev, Testing and Certification	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Block 3 System Development and Demonstration and Qualification Testing					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S63**

COST (In Thousands)	FY 2006 Actual	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
S63 SMALL ARMS IMPROVEMENT	6905	5665	14003	4874	14978	16112	14995	14995		92527

A. Mission Description and Budget Item Justification: The Small Arms Improvement program funds system demonstration of engineering development models/studies and the integration of commercial items with weapons/ammunition. Small arms include individual and crew-served 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 small arms weapons/ammunition. Focus areas include the demonstration, integration and study of 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.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Polymer Cased Small Arms Ammunition Production Program (see note below)		3300		
Common Remotely Operated Weapon System (CROWS) (see note below)	1200			
Small Arms Weapons Enhancements				
- Design, Development and Engineering	646	1016	1980	454
- Prototype Fabrication	262	135	2504	1596
- Testing and Evaluation	1229	449	3051	120
- Demonstration	340		175	561
Ammunition				
- Design, Development and Engineering	605	465	1660	
- Prototype Fabrication	410	120	3157	1233
- Testing and Evaluation	460	180	1351	650
Demonstration	70		125	10
Combat Optics				
- Design,Development and Engineering	548			
- Prototype Fabrication	185			
- Testing and Evaluation	690			
- Demonstration	260			
Fire Control				

- Design, Development and Engineering				250
Total	6905	5665	14003	4874

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
WTCV, GZ1290, Squad Automatic Weapon (SAW) MODS	21533	5232	12361	7153	8090	6150	5200	5300	Continuing	Continuing
WTCV, GZ2800, M16 Rifle MODS	12141	1008	3900	1017	3563	3558	3500	3500	Continuing	Continuing
WTCV, GB3000, MK19 MODS	4988	3155	6264	7724	8433	8581	11000	11270	Continuing	Continuing
WTCV, GZ1300, M240 Medium Machine Gun MODS	25917	5272	10177	6000	6277	5558	4800	5000	Continuing	Continuing
WTCV, GB3007, M4 Carbine MODS	87375	30809	13696	6081	13472	14441	13692	13535	Continuing	Continuing
WTCV, GB4000, M2 Machine Gun MODS	13339	5000	17173						Continuing	Continuing

Comment: FY06 funds in the amount of $1.2 million were realigned from Project S63 Small Arms Improvement to Project S64 Common Remotely Operated Weapon System (CROWS) within this PE.

FY07 funds in the amount of $3.3 million for the Joint Service Small Arms Program's (JSSAP) Polymer Cased Small Arms Ammunition Production Program were appropriated incorrectly to this PE. Funds will be reprogrammed to PE 0602624A.

C. Acquisition Strategy Primary strategy is to mature and finalize design efforts, award RDT&E hardware contracts, and test and evaluate systems that will result in type classification and follow-on production contract awards.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S63

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	TBD	Various		689		295		6131		2186		Cont.	Cont.	
See Remarks				1200		3300							4500	
Subtotal:				1889		3595		6131		2186		Cont.	Cont.	

Remarks:
FY06 funds in the amount of $1.2 million were realigned from Project S63 Small Arms Improvement to Project S64 Common Remotely Operated Weapon System (CROWS) within this PE.

FY07 funds in the amount of $3.3 million for the JSAAP's Polymer Cased Small Arms Ammunition Production Program were appropriated incorrectly to this PE. Funds will be reprogrammed to PE 0602624A.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	MIPR	RDECOM - ARDEC, Picatinny Arsenal, NJ		1740		881		2891		1639			7151	
Logistics	MIPR	TACOM, Rock Island Arsenal, IL		85				175					260	
Human Research and Eng Directorate	MIPR	Aberdeen Proving Ground (APG), MD		310		110		520		50			990	
Subtotal:				2135		991		3586		1689			8401	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Developmental Testing	MIPR	Developmental Test Command (DTC), Aberdeen Proving Ground (APG), MD		927		549		620		550		Cont.	Cont.	
Operational Testing	MIPR	Army Test and		351				800					1151	

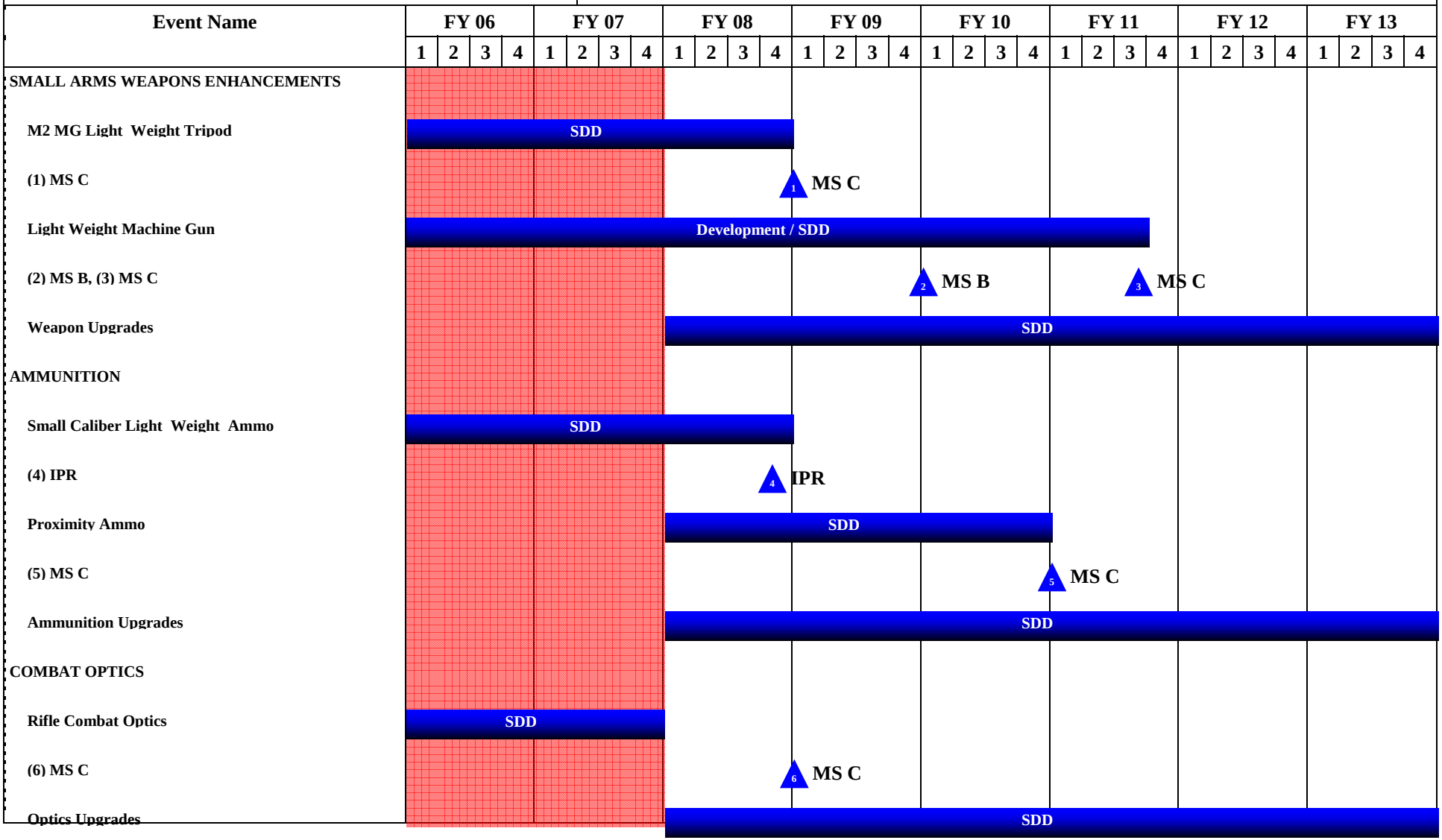
		Evaluation Command (ATEC), Alexandria, VA												
Validation Testing	MIPR	Developmental Test Command (DTC), Aberdeen Proving Ground (APG), MD		1038		445		1430		50			2963	
Subtotal:				2316		994		2850		600		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	In House	PM Soldier Weapons, Picatinny Arsenal, NJ		500		85		1331		394			2310	
Travel	In House	PM Soldier Weapons, Picatinny Arsenal, NJ		65				105		5			175	
Subtotal:				565		85		1436		399			2485	
Project Total Cost:				**6905**		**5665**		**14003**		**4874**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S63**



Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S63

Event Name	FY 06				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	2	3	4
FIRE CONTROL																																
Fire Control Upgrades									SDD																							

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S63

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SMALL ARMS WEAPONS ENHANCEMENTS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
M2 MG Light Weight Tripod	1Q - 4Q	1Q - 4Q	1Q - 4Q					
MS C			4Q					
Light Weight Machine Gun	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q		
MS B			1Q - 4Q		4Q			
MS C						3Q		
Weapon Upgrades			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AMMUNITION		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Small Caliber Light Weight Ammo	1Q - 4Q	1Q - 4Q	1Q - 4Q					
IPR			4Q					
Proximity Ammo			1Q - 4Q	1Q - 4Q	1Q - 4Q			
MS C					4Q			
Ammunition Upgrades			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
COMBAT OPTICS	1Q - 4Q							
Rifle Combat Optics	1Q - 4Q	1Q - 4Q						
MS C				1Q				
Optics Upgrades			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FIRE CONTROL								
Fire Control Upgrades			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**

COST (In Thousands)		FY 2006 Actual	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
H07	FAMILY OF MED TAC VEH	18006	12881	1994	1942	1811	1875	1855	1899	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element supports continued modernization of the vehicles chartered to PM, Medium Tactical Vehicles, including the Army's medium truck fleet and the Armored Security Vehicle (ASV). In the medium fleet, the Family of Medium Tactical Vehicles (FMTV) replaces aging M35 2 1/2-ton trucks, and M809 and M900 Series 5-ton trucks that are beyond their economic useful life of 20-22 years. FMTV fills 2 1/2-ton Light Medium Tactical Vehicle (LMTV) and 5-ton truck Medium Tactical Vehicle (MTV) requirements, performs over 55% of the Army's local and line haul, and unit resupply missions, and operates throughout the theater as multi-purpose transportation vehicles in combat, combat support and combat service support units. The ASV is an all-wheel drive armored vehicle that provides ballistic protection, overhead protection and protection against landmines. It is used by the Military Police to perform missions of area security, maneuver and mobility support, police intelligence, and law and order across the entire operational continuum. It is also being used as a Convoy Protection Platform for Combat Support and Combat Service Support units. This PE funds government technical insertion initiatives that will feed into implementation of the Tactical Wheeled Vehicle (TWV) Transformation Strategy and the TWV Armoring Strategy, as a bridge to future tactical vehicle efforts. This PE allows the PM to leverage technology to make enhancements which improve performance and reliability in harsh mission environments as identified by the user community and reported in the field. FY08 funding will be used to continue Alternative Powertrain Technology Insertion or address field issues requiring RDT&E funds to do so.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Demonstrator/Prototype Development	10094	6856		
Demonstrator/Prototype Test	2210	700		
Embedded Diagnostics	3744	2807		
Limited User Test (LUT) (Load Handling System, Expansible Van, 10T Dump)	1750	325		
Alternative Powertrain Technology Insertion		1443	1994	1942
Other	208	387		
Small Business Innovative Research/Small Business Technical Transfer Program		363		
Total	18006	12881	1994	1942

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	18518	1925	2010	1945
Current BES/President's Budget (FY 2008/2009)	18006	12881	1994	1942
Total Adjustments	-512	10956	-16	-3
Congressional Program Reductions		-49		
Congressional Rescissions				
Congressional Increases		11100		
Reprogrammings	-512	-95		
SBIR/STTR Transfer				
Adjustments to Budget Years			-16	-3

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA1 Family of Medium Tactical Vehicles (D15500)	674810	1484041	828403	834429	982325	1009381	1115772	1011464	Continuing	Continuing

Comment:

D. Acquisition Strategy Contractual efforts will be on a Fixed Price or Cost Plus Fixed Fee (Level of Effort) basis. The procurement of vehicle platforms will use the current multiyear Firm Fixed Price (FFP) production contract or successor production contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604604A - MEDIUM TACTICAL VEHICLES

PROJECT
H07

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Demonstrator/Prototype Development*	SS-FFP	General Purpose Vehicles, LLC New Haven, MI	3232	2210	2Q	2446	2Q						7888	
Demonstrator/Prototype Development	SS-CPFF	Stewart & Stevenson, Sealy, TX	7273	7884	3Q	4410	3Q						19567	
Diagnostics	C-CPFF	TBS		3744	3Q	2712	2Q						6456	
Alternative Powertrain Technology Insertion	SS-CPFF	Stewart & Stevenson, Sealy, TX				1538	2Q	1994	2Q	1942	2Q		5474	
Other	Various or MIPR/PO		2136	208	3Q	387	3Q						2731	
SBIR/STTR	N/A					363	1Q						363	
Subtotal:			12641	14046		11856		1994		1942			42479	

Remarks: * FY06 Demonstrator/Prototype Development of 2,210K is scheduled for award Jan 07.

Other Includes:
FY06 (208K): Shipping(8K); Robotic Convoy (200K)
FY07 (387K): Track-over-Tire (Congressional Add)

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: Not Applicable

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Demonstrator	MIPR/PO	Yuma Proving Ground, AZ		2210	4Q	700	4Q						2910	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**

Limited User Test s (LUTs) - LHS/Van/Dump	MIPR/PO	ATEC, Various Test Sites	2474	1750	1-4Q	325	2Q					4549	
Subtotal:			2474	3960		1025						7459	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: Not Applicable

Project Total Cost:	**15115**	**18006**		**12881**		**1994**		**1942**			**49938**	

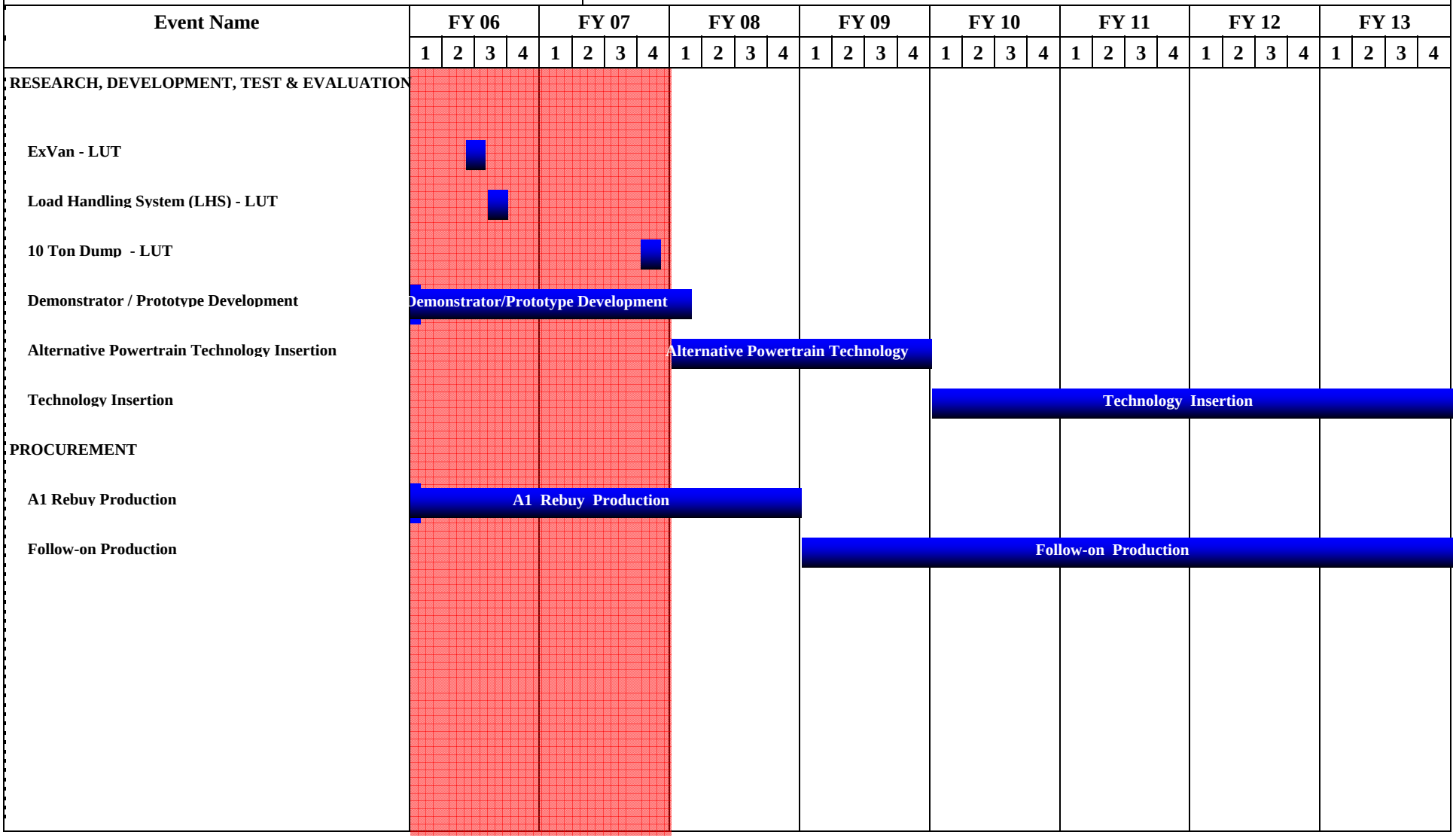
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604604A - MEDIUM TACTICAL VEHICLES

PROJECT
H07



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
RESEARCH, DEVELOPMENT, TEST & EVALUATION								
ExVan - LUT	2Q - 3Q							
Load Handling System (LHS) - LUT	3Q							
10 Ton Dump - LUT		4Q						
Demonstrator / Prototype Development	1Q - 4Q	1Q - 4Q	1Q					
Alternative Powertrain Technology Insertion			1Q - 4Q	1Q - 4Q				
Technology Insertion					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
PROCUREMENT								
A1 Rebuy Production	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Follow-on Production				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604609A - Smoke, Obscurant and Target Defeating Sys-Eng Dev**	**198**

COST (In Thousands)	FY 2006 Actual	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
198 Target Defeating System		5239	1347	5639	481	480	491	501		14178

A. Mission Description and Budget Item Justification: Project 0604609A supports the conduct of System Development and Demonstration (SDD) of logistically supportable, high performance smoke and obscurants, munitions, and devices to improve the survivability of the combined armed force and complement combined weapons systems. The program element supports critical management studies and analyses that are conducted on a continuing basis to ensure that engineering and manufacturing development efforts are targeted against the emerging threat. Program element supports the conduct of SDD in smoke and obscurant agents, munitions, and devices to improve the survivability of the combined armed forces, complement combined weapon systems, and enhance force effectiveness and combat power.

U.S. Forces must be able to effectively neutralize and degrade energy weapon systems and electro-optical systems/smart weapons that operate in the full range of the electromagnetic spectrum. Improvements are sought across the entire multi-spectral range from visual through infrared (IR) and millimeter wavelengths (MMW) radar for incorporation into self-protection large area and projected smoke systems. The smoke obscuration technologies supported by this program element enhance smoke systems as force multipliers.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY07: Prepare and award Limited Objective Experiment (LOE)/LOE contract.		739		
FY07: Initiate, design and fabricate hardware.		4500	1000	
FY08: Conduct Loe.			347	
FY09: Prepare, conduct and complete Milestone B.				289
FY09: Prepare and award SDD contract.				450
FY09: Design and build 3 EDT systems.				4900
Total		5239	1347	5639

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604609A - Smoke, Obscurant and Target Defeating Sys-Eng Dev**	**198**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)		5297	6704	5649
Current BES/President's Budget (FY 2008/2009)		5239	1347	5639
Total Adjustments		-58	-5357	-10
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings		110		
SBIR/STTR Transfer				
Adjustments to Budget Years		-168	-5357	-10

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
New OFS item									Continuing	Continuing
New OFS item										

Comment:

D. Acquisition Strategy Acquisition Strategy Engineering development will begin in FY07 with a full and open competition contract for engineering design, construction and testing of prototype systems.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604609A - Smoke, Obscurant and Target Defeating Sys-Eng Dev

PROJECT
198

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	TBD					4500	3Q			4900	3Q		9400	
Subtotal:						4500				4900			9400	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Engineering Support of Hardware Development.		JPM NBCCA, APG, MD				500	1Q	347	1Q	450	1Q		1297	
Subtotal:						500		347		450			1297	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Conduct hardware testing.		OGAs TBD						1000	1-2Q				1000	
Subtotal:								1000					1000	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Conduct Management Studies.		TBD				239	1-3Q			289	3Q		528	
Subtotal:						239				289			528	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604609A - Smoke, Obscurant and Target Defeating Sys-Eng Dev**	**198**

Project Total Cost:				**5239**		**1347**		**5639**			**12225**	

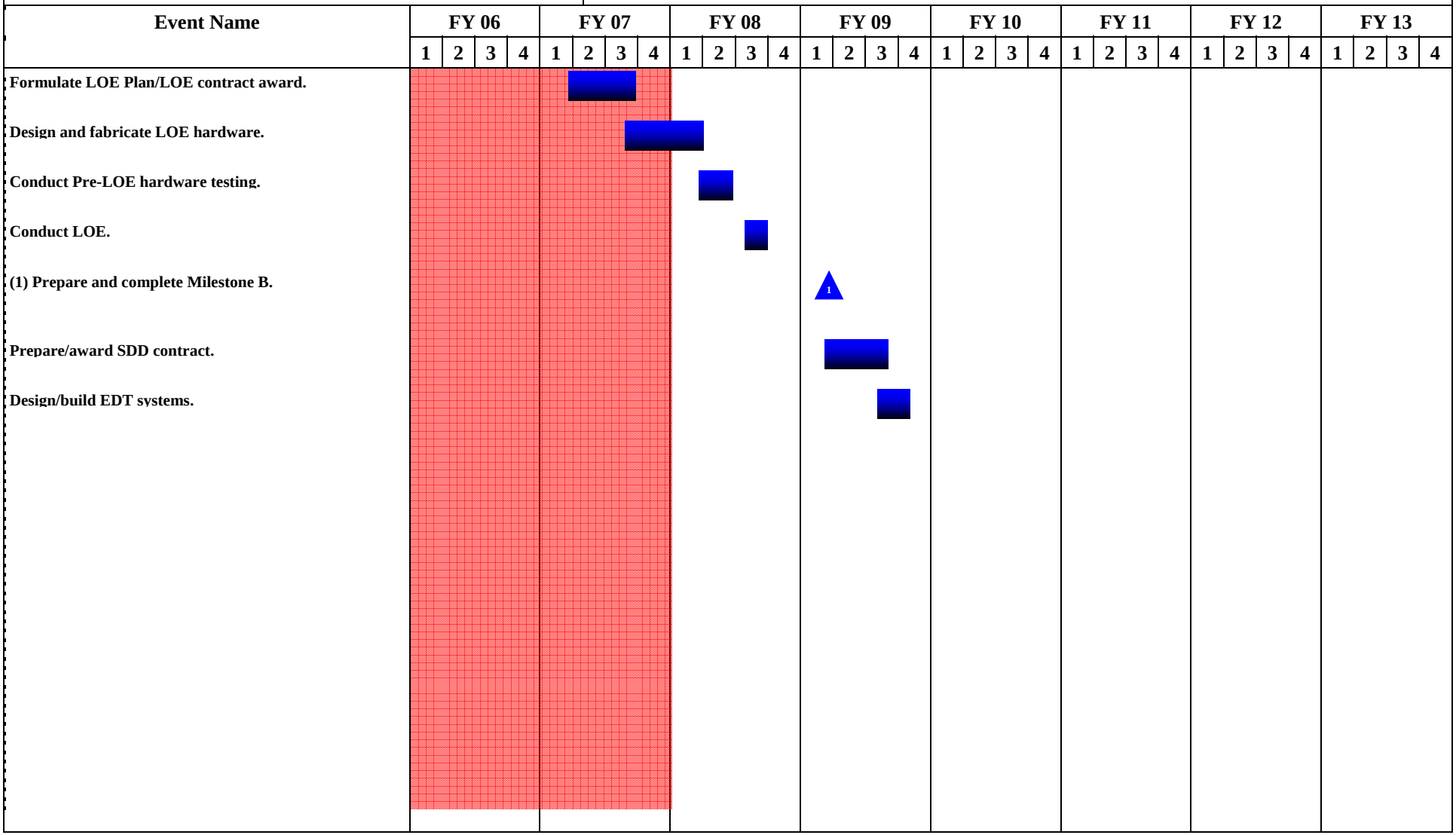
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604609A - Smoke, Obscurant and Target Defeating Sys-Eng Dev

PROJECT
198



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604609A - Smoke, Obscurant and Target Defeating Sys-Eng Dev**	**198**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Formulate LOE Plan/LOE contract award.		1Q - 3Q						
Design and fabricate LOE hardware.		3Q - 4Q	1Q					
Conduct Pre-LOE hardware testing.			1Q - 2Q					
Conduct LOE.			3Q					
Prepare and complete Milestone B.				1Q - 2Q				
Prepare/award SDD contract.				1Q - 3Q				
Design/build EDT systems.				3Q - 4Q				

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**			PE NUMBER AND TITLE **0604609A - Smoke, Obscurant and Target Defeating Sys-Eng Dev**					PROJECT **198**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Target Defeating System		5239	1347	5639	481			
New Program Line								
Total Termination Liability Funding:		5239	1347	5639	481			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**

	COST (In Thousands)	FY 2006 Actual	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	20937	13311	1947	2920	3471	3167	2946	3016	Continuing	Continuing
659	FAMILY OF HVY TAC VEH	7325	8								10690
65A	MOVEMENT TRACKING SYSTEM (MTS)	2314	3884	930	1898	1401	1098	899	920	Continuing	Continuing
E49	HEMTT	8243	6280								21230
E50	TRAILER DEVELOPMENT	3055	3139	1017	1022	2070	2069	2047	2096		16515

A. Mission Description and Budget Item Justification: This program element aligns system development and demonstration of Heavy Tactical Vehicles with Future Modular Force requirements to support combat and combat support missions. These missions include the following: line haul, local haul, and unit resupply. These trucks transport water, ammunition, and general cargo over all terrain and throughout the battle-space. Funding will also be used for developing the Army's next generation of tactical truck, as part of the Army's Tactical Wheeled Vehicle Modernization Strategy. Funding in Project 65A is for the development of the Movement Tracking System (MTS). Funding in Project E50 supports the continued modernization of the Army's trailer fleets and supports the continuous product improvements, technology insertion, and new capabilities for tactical trailers.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	20913	3960	1962	1965
Current BES/President's Budget (FY 2008/2009)	20937	13311	1947	2920
Total Adjustments	24	9351	-15	955
Congressional Program Reductions		-51		
Congressional Rescissions				
Congressional Increases		9500		
Reprogrammings	24	-98		
SBIR/STTR Transfer				
Adjustments to Budget Years			-15	955

Change Summary Explanation:
Funding: FY2009: Funds increased $955 thousand for Movement Tracking System.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**

COST (In Thousands)		FY 2006 Actual	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
65A	MOVEMENT TRACKING SYSTEM (MTS)	2314	3884	930	1898	1401	1098	899	920	Continuing	Continuing

A. Mission Description and Budget Item Justification: Movement Tracking System (MTS) is a satellite based, asset visibility and situational awareness enabler that assists Combat Support/Combat Service Support (CS/CSS) commanders and their staffs. MTS identifies and tracks the location of vehicles, communicates with vehicle operators, and redirects missions on a worldwide, near real-time basis during peacetime operations and war. MTS provides the capability to link ground level operators conducting missions and commanders/managers that plan, direct, and control operations and allows for continuous CS/CSS asset visibility across the tactical area of operations. FY08/09 funding supports development of block modifications on the MTS. This block modification will develop and test required interfaces to TC AIMS II (direct electronic interface) and GCSS-Army (direct electronic interface).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Development of block modifications on the Movement Tracking System	2314	3774	930	1898
Small Business Innovative Research/Small Business Technology Transfer Programs		110		
Total	2314	3884	930	1898

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA1 D16103000, Movement Tracking System (MTS)	2685	102794	73204	109601	131398	119916	120115	45170	Continuing	704883

Comment:

C. Acquisition Strategy RDTE efforts to support block development approach through a continuous series of overlapping modular development and integration testing to include multiple interface developments in support of follow-on production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604622A - Family of Heavy Tactical Vehicles

PROJECT
65A

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Software development, engineering, testing, program management	FFP/IDIQ	Comtech Data, Mobile, Germantown, MD	2374	1796		2913	3Q	698		1424		3239	12444	
Subtotal:			2374	1796		2913		698		1424		3239	12444	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Software Testing	MIPR	Electronic Proving Ground, Aberdeen, MD		518		861		232		474		1079	3164	
Subtotal:				518		861		232		474		1079	3164	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SBIR/STTR						110							110	
Subtotal:						110							110	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

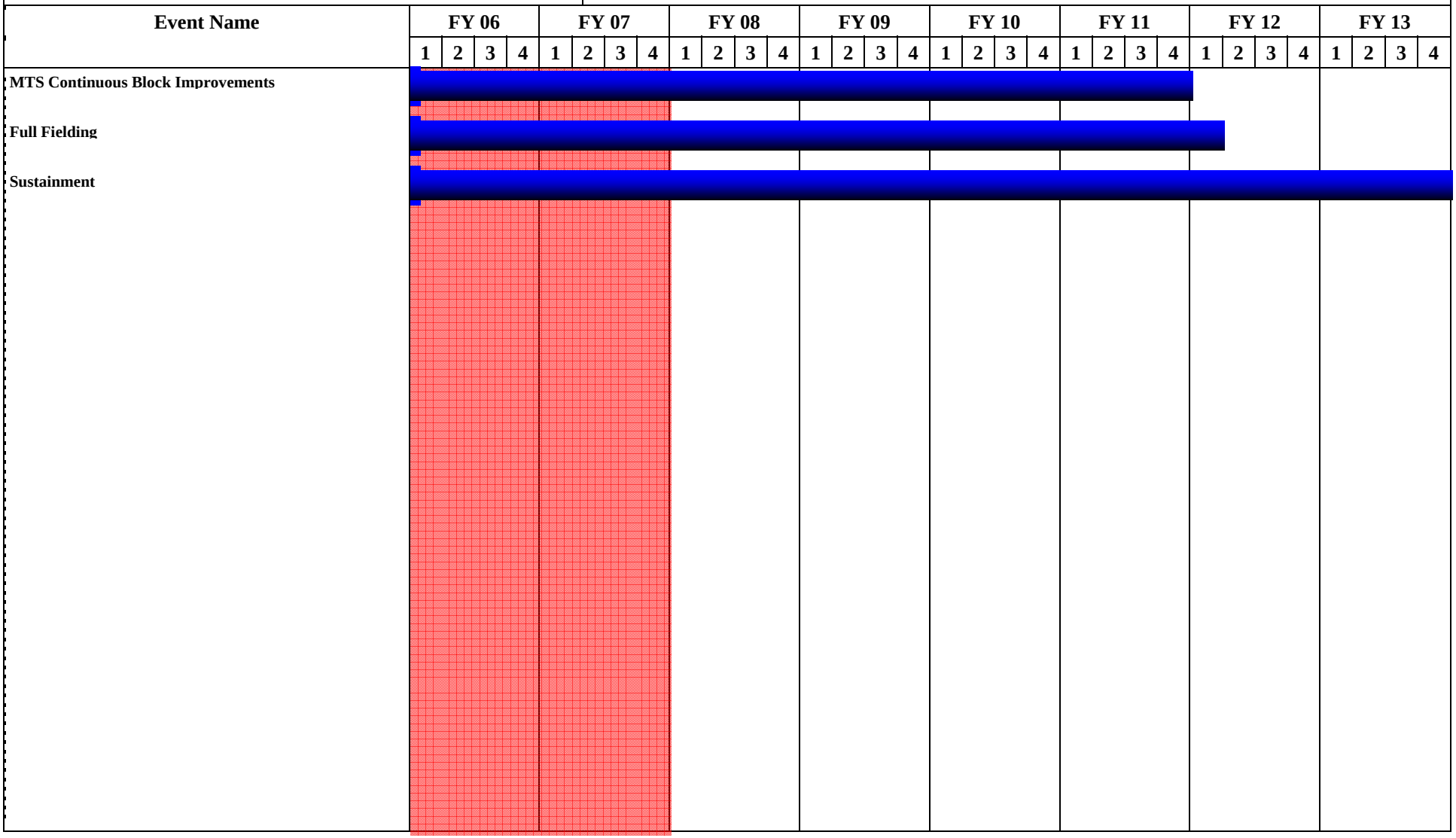
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**

Project Total Cost:	**2374**	**2314**		**3884**		**930**		**1898**		**4318**	**15718**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MTS Continuous Block Improvements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Full Fielding	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Sustainment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**

COST (In Thousands)	FY 2006 Actual	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
E50 TRAILER DEVELOPMENT	3055	3139	1017	1022	2070	2069	2047	2096		16515

A. Mission Description and Budget Item Justification: This program element supports continued modernization of the Army's trailer fleet. The funds support development and integration of emerging state of the art technology improvements and new capabilities. FY08/09 funding will develop, design and build prototype trailers to meet Army operational capability gaps identified by CASCOM, and also will support continued insertion of new technology to the current trailer fleet, including the testing of hitch devices and leg modernization. Other on-going technologies being looked at are corrosion prevention and modularity and transportability enhancements such as improved suspension, electrohydraulic brakes, lift bed, and enhanced coupling/uncoupling. Modernized trailers are better able to match the capabilities of today's improved tactical wheeled vehicles and tractors.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Program Management	686	535	250	250
Current fleet technical insertion and testing	261	100	100	100
Design, develop and build System Prototype Demonstrator Trailer(s)	2108	2416	667	672
Small Business Innovative Research/Small Business Technology Transfer Programs		88		
Total	3055	3139	1017	1022

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 1 D00700 Semi-Trailer LB 40T M870A3	550								Continuing	550
OPA 1 D01500 Semi-Trailer Flatbed 22.5T M871A3	1304	96726	6100	7486	3755		1395		Continuing	116766
OPA 1 D01600 Semi-Trailer Flatbed 34T M872A4	5954	65229	2185	24005					Continuing	97373

Comment: Initial efforts relate to flatbed trailers; however, any member of the tactical trailer fleet may be affected.

C. Acquisition Strategy Conduct feasibility testing on existing tactical semi-trailers. Identify enhanced transportability and safety concepts and other responses to field issues. Modify existing equipment or develop new equipment. The ultimate goal is to develop and test improvements, acquire necessary technical data, and place improved hardware into production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604622A - Family of Heavy Tactical Vehicles

PROJECT
E50

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Integrator	Firm Fixed Price (FFP)	Kalyn Siebert Gatesville, TX	175										175	
Program Management	In-House	TACOM-WRN	900	686		535		250		250			2621	
Enhanced M800 Series Semi-Trailer	Firm Fixed Price (FFP)	Davis Technologies, Inc. Addison, TX	120										120	
Current fleet technical insertion	Firm Fixed Price (FFP)	Williams EZ Hitch, Durham, NC	100	149	2Q								249	
Design, develop and build System Prototype Demonstrator Trailer(s)	Firm Fixed Price (FFP)	American Systems Technology, Inc. Troy, MI	700										700	
Design, develop and build System Prototype Demonstrator Trailers	Firm Fixed Price (FFP)	Alion Science & Technology Corp. Chicago, IL		2103	2Q								2103	
Design, develop and build System Prototype Demonstrator Trailers	TBD	TBD				2416		667		672			3755	
Subtotal:			1995	2938		2951		917		922			9723	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
M870A3 Suspension testing	MIPR	Yuma Proving Ground,	445	117	2-4Q	100		100		100			862	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**

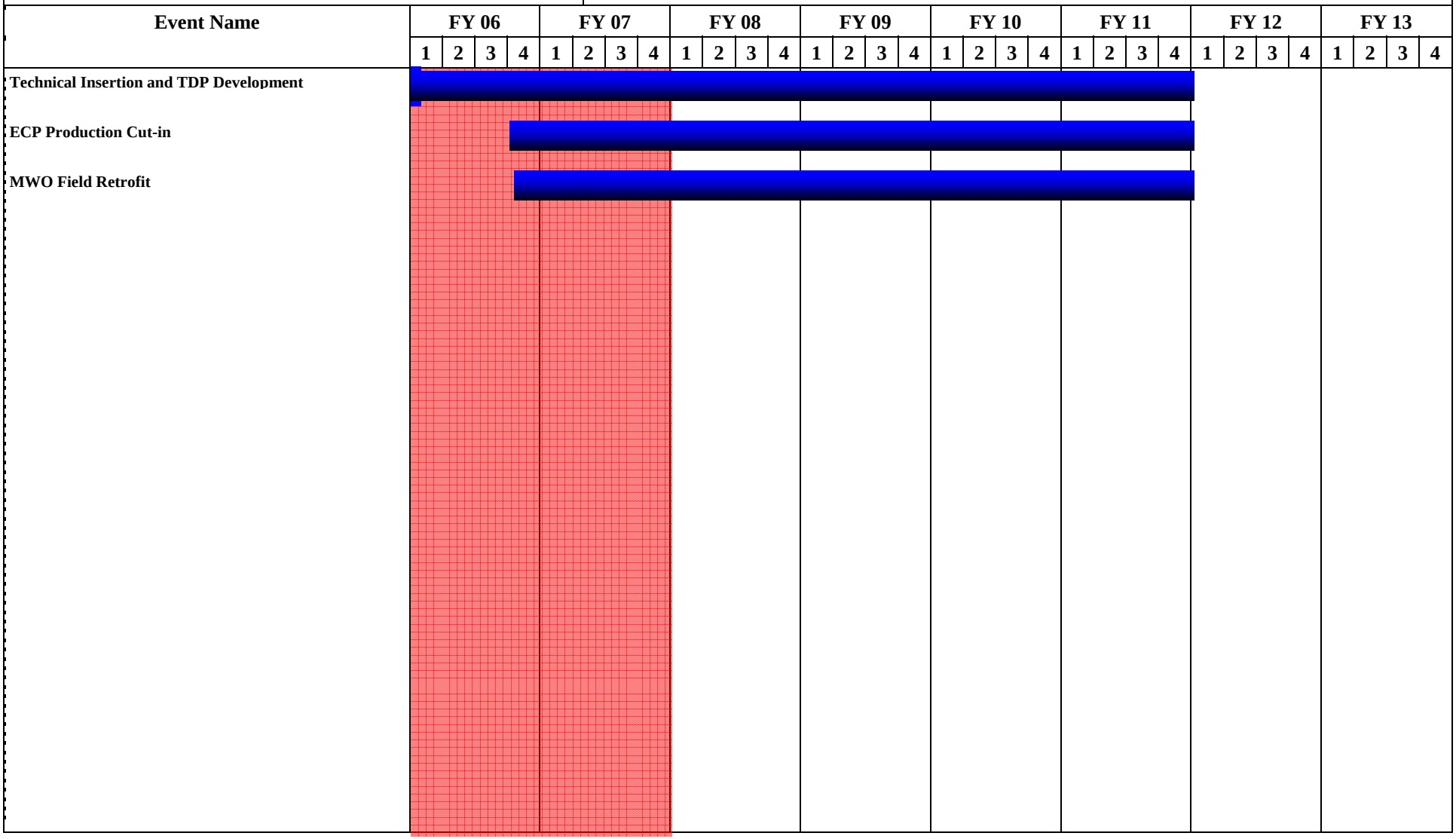
		Yuma, AZ												
Subtotal:			445	117		100		100		100			862	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SBIR/STTR						88							88	
Subtotal:						88							88	
Project Total Cost:			**2440**	**3055**		**3139**		**1017**		**1022**			**10673**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Publish R&D Plan								
Industry Day								
Start of Work (SOW)								
Build System Prototype Demonstrator								
Preliminary Design Review (PDR)								
Drawing Development, Level III								
Critical Design Review (CDR)								
Technical Feasibility Test								
Technical Insertion and TDP Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
ECP Production Cut-in	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
MWO Field Retrofit	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Build System Prototype Demonstrator								
Drawing Development								
Critical Design Review (CDR)								
Technical Feasibility Test								
Technical Insertion and TDP Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
ECP Production Cut-In	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
MWO Field Retrofit	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

COST (In Thousands)	FY 2006 Actual	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
586 AIR TRAFFIC CONTROL	6307	4477	8956	14268	2720	4864	7135	6636		55363

A. Mission Description and Budget Item Justification: This program element funds continuous efforts in the development of modernized tactical and fixed base Air Traffic Control (ATC) systems that will significantly enhance aviation safety in both the tactical and strategic ATC domains. Funded in this program element is the development of the Mobile Tower System (MOTS). The MOTS is a tactical mobile tower designed to meet the deployability and communication requirements of the current to future force. The MOTS will be equipped with modernized and secure avionics to ensure highly reliable and consistent tactical aircraft communications across all frequency bands and ranges to ensure compatibility with all Army, Joint, and Allied aircraft. MOTS will provide modern digital, secure, anti-jam communications, a digital recorder, basic weather information, a precision location capability, and full compatibility with all military and civilian airfields as well as tactical landing zones in an armored, survivable vehicle. MOTS is an effective risk management tool.

Funded product improvements include the Alternative Communications/ATC Networking (Alt Comms/AN) integration; the Air Traffic Navigation, Integration, and Coordination System (ATNAVICS); the Tactical Airspace Integration System (TAIS); and the Automatic Dependent Surveillance-Broadcast (ADS-B)/Combat Identification (CID) technologies. As the Federal Aviation Agency (FAA) and Department of Defense (DoD) transition to aircraft self-reporting technologies such as ADS-B/CID and Mode 5, PM ATC will equip tactical and fixed base ATC units with ground receivers and networks to process the aircraft positional data. The ATNAVICS will be upgraded with a capability to interface with other ATC equipment and Army systems. Ultimately, ATNAVICS will feed positioning and identification data of friendly air vehicles (fixed, rotary, and unmanned aerial vehicles) into the Single Integrated Air Picture (SIAP) for improved low altitude situational awareness, track continuity, airspace deconfliction and fratricide prevention. Precision Approach Radar (PAR) Range Detection product improvement will ensure that ATNAVICS can detect objects at a closer range. As part of the Army Battle Command System (ABCS), TAIS migration plans include development of Army Airspace Command and Control (A2C2) services, integration into Joint Battle Command service based architecture, and migration from a Universal Network Information Exchange (UNIX) to Windows. Windows migration is required to improve obsolescence costs and supportability issues. In addition, TAIS will develop airspace management services supporting unmanned aerial vehicles, manned flight deconfliction and future combat system interfaces, as well as integrating CID technologies. TAIS P3I will also integrate Blue Force Tracking (BFT) solutions into TAIS Shelters. Beginning in 2008, voice radios currently integrated into ATC systems will begin migration to accommodate both voice and high bandwidth data throughput. In a networked battlefield, joint service systems and radars can provide data beneficial to ATC missions assuming a communications infrastructure and data processing capability is embedded in ATC systems.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
MOTS System Development, Demonstration & Testing	5996	3954	6398	2434
Alt Comms/ATC Networking				1675
ATNAVICS Modernization				2363
TAIS Battle Command Migration			2160	5500
TAIS P3I				1545
ADS-B/CID				300

Tech and Log support	237	301	314	363
Program Management Support	74	75	84	88
Small Business Innovative Research/Small Business Technology Transfer Programs		147		
Total	6307	4477	8956	14268

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	4444	4527	4026	3693
Current BES/President's Budget (FY 2008/2009)	6307	4477	8956	14268
Total Adjustments	1863	-50	4930	10575
Congressional Program Reductions		-17		
Congressional Rescissions	-158			
Congressional Increases				
Reprogrammings	2126	-33		
SBIR/STTR Transfer	-105			
Adjustments to Budget Years			4930	10575

FY 2008: $4.9 million funding increase for (1) MOTS contract to support uparmor requirements directed by DoD; (2) TAIS Battle Command Migration to support Army software blocking interoperability requirements and ensure development of Service based software to support interoperability with Battle Command Systems of Systems Architecture and integration of Air Traffic Services (ATS) requirements.
FY 2009: $10.5 million funding increase for (1) Completion of MOTS System Development and Demonstration contract; (2) Completion of TAIS Battle Command Migration effort begun in FY08; (3) Use Alt Comms/ATC Networking to begin migration to support future ATC communications which are evolving to provide capabilities supporting both voice and high band width data throughput and ensure connectivity to net centric operations providing critical tactical, planning, and situational awareness information to DoD and National Airspace users.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
APA AA0050 - Air Traffic Control	63492	92504	94841	123576	78992	85900	85808	88658	Continuing	Continuing

Comment:

D. Acquisition Strategy PM ATC will continue to embrace new technology initiatives for the development of tactical ATC equipment and the integration of new technology into existing systems. Technology insertion will be acquired through contract modifications, engineering services tasks, and new/follow-on contracts. MOTS System Development and Demonstration contract was awarded competitively in FY 2006. MOTS development and testing to be completed in FY 2009.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

PROJECT
586

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MOTS System Development and Demo	C/FFP/CPFF	Sierra Nevada Corp, Sparks, Nevada		5841	3Q	3707	3Q	5565	2Q	1533	2Q		16646	
Tech and Log Development Support	Inhouse	PM ATC, Redstone Arsenal, AL	599	237	1-4Q	301	1-4Q	314	1-4Q	363	1-4Q	Cont.	Cont.	Cont.
Subtotal:			599	6078		4008		5879		1896		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MOTS Systems Development Support	Various	Various	555	94	1-4Q	147	1-4Q	293	1-4Q	301	1-4Q		1390	
Alt Comms/ATC Networking	C/CPFF	TBD								1675	2-4Q	Cont.	Cont.	Cont.
ATNAVICS Modernization	SS/CPFF	Raytheon, Marlboro, MA								2363	3Q	Cont.	Cont.	Cont.
TAIS Battle Command Migration	SS/CPFF	General Dynamics C4S, Huntsville, AL						2160	1Q	5500	1Q		7660	
TAIS P3I	SS/CPFF	General Dynamics C4S, Huntsville, AL								1545	1Q		1545	
ADS-B/CID	C/CPFF	TBD								300	2Q	Cont.	Cont.	Cont.
Subtotal:			555	94		147		2453		11684		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MOTS Prototype Testing	MIPR	Various		61	2Q	100	2Q	540	4Q	600	3Q		1301	
Subtotal:				61		100		540		600			1301	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

PROJECT
586

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	In-House	PM ATC, Redstone Arsenal, AL	1788	74	1-4Q	75	1-4Q	84	1-4Q	88	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						147							147	
Subtotal:			1788	74		222		84		88		Cont.	Cont.	Cont.
Project Total Cost:			**2942**	**6307**		**4477**		**8956**		**14268**		**Cont.**	**Cont.**	**Cont.**

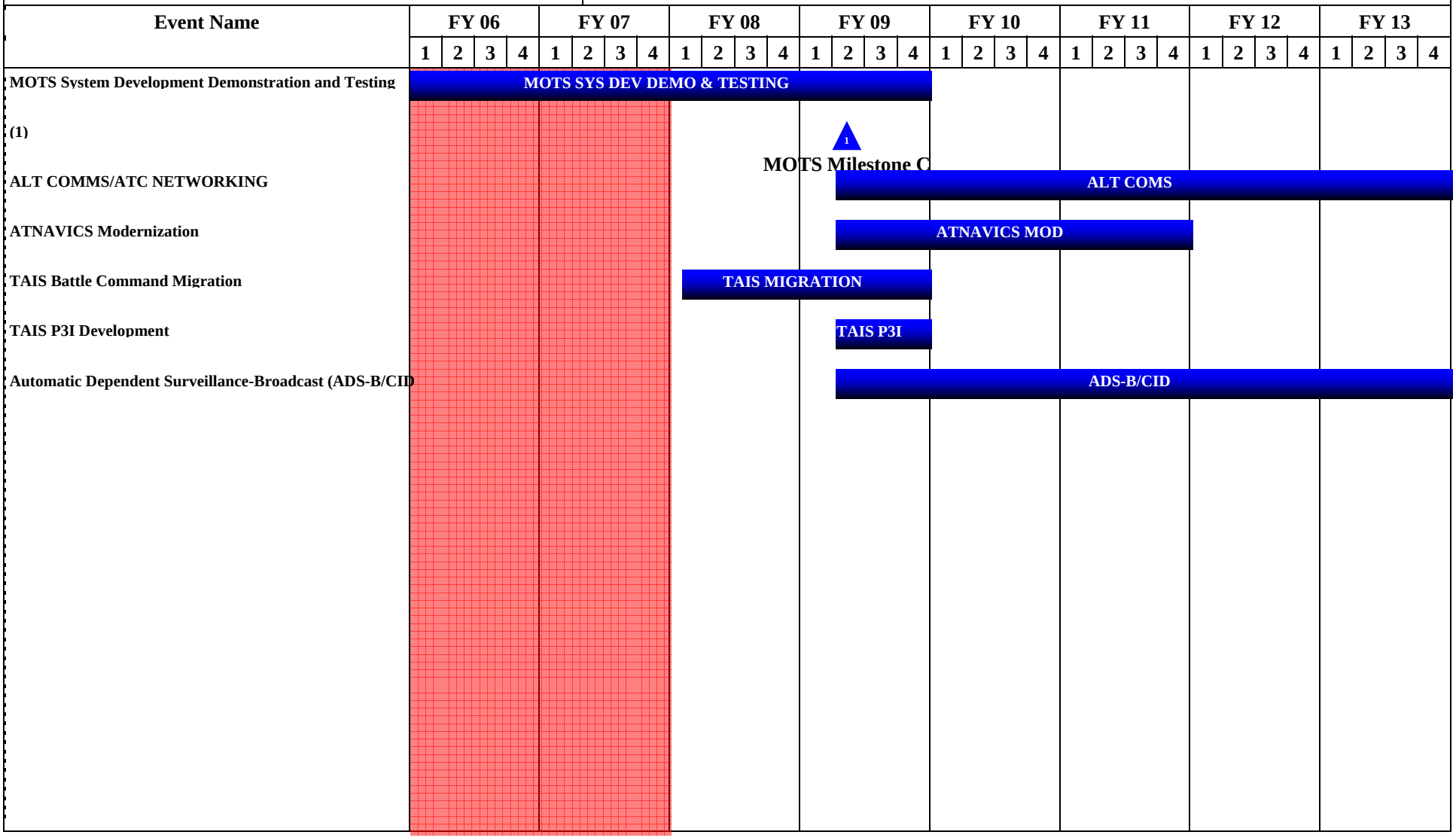
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

PROJECT
586



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

PROJECT
586

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MOTS System Development Demonstration and Testing	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
				2Q				
ALT COMMS/ATC NETWORKING				2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
ATNAVICS Modernization				2Q - 4Q	1Q - 4Q	1Q - 4Q		
TAIS Battle Command Migration			1Q - 4Q	1Q - 4Q				
TAIS P3I Development				2Q - 4Q				
Automatic Dependent Surveillance-Broadcast (ADS-B/CID				2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604642A - LIGHT TACTICAL WHEELED VEHICLES**

	COST (In Thousands)	FY 2006 Actual	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	9192	4450	82300	22220	22820	20800				161782
E40	LTV Prototype	2004	4450	82300	22220	22820	20800				154594
E46	Applied Vehicle Concepts	7188									7188

A. Mission Description and Budget Item Justification: The High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) is a lightweight, high performance, four-wheel drive, air transportable and air droppable, high mobility tactical wheeled vehicle. The HMMWV consists of a basic design with several variants including Cargo/Utility, Armament Carrier, Ambulance, Shelter Carrier and Armored Armament Carrier. Funding supports improvements to the HMMWV family of vehicles through the use of more recent technologies and maintainability improvements, which will result in decreased operational support costs, product improvements and increased power for vehicles with armor in theatre. Technology advancements in both armor and ballistic glass materials have progressed to the point that improved ballistic protection is available that is lighter and less expensive. FY08 and future funding supports the development and testing of the Joint Light Tactical Vehicle (JLTV), being developed as a joint system between the Army and the Marine Corps. The new joint fleet of vehicle is intended to replace the HMMWV. The JLTV concept is based on a Family of Vehicles (FOV) focused on integrated scalable personnel protection, and regaining vehicle agility and mobility required of the light tactical vehicles fleet while addressing passenger protection. JLTV will also reduce system life cycle cost through commonality of replacement spare and repair parts at the sub-assembly and component level. As a light tactical system, the JLTV will provide defensive measures covering troops while in transport, increase payload capability, maintain configuration management to reduce or improve the logistics footprint, and reduce onerous soldier and Marine workload associated with system operation and field maintenance activities.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604642A - LIGHT TACTICAL WHEELED VEHICLES**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	7393			
Current BES/President's Budget (FY 2008/2009)	9192	4450	82300	22220
Total Adjustments	1799	4450	82300	22220
Congressional Program Reductions		-17		
Congressional Rescissions				
Congressional Increases		4500		
Reprogrammings	1799	-33		
SBIR/STTR Transfer				
Adjustments to Budget Years			82300	22220

Change Summary Explanation: Funding - FY08 and FY09 increases to support JLTV program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604642A - LIGHT TACTICAL WHEELED VEHICLES**	**E40**

COST (In Thousands)	FY 2006 Actual	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
E40 LTV Prototype	2004	4450	82300	22220	22820	20800				154594

A. Mission Description and Budget Item Justification: The High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) is a lightweight, high performance, four-wheel drive, air transportable and air droppable, high mobility tactical wheeled vehicle. The HMMWV consists of a basic design with several variants including Cargo/Utility, Armament Carrier, Ambulance, Shelter Carrier and Armored Armament Carrier. Funding supports logistics improvements to the HMMWV family of vehicles through the use of more recent engine technologies and maintainability improvements, which will result in decreased operational support costs and product improvements and increased power for vehicles with add-on armor in theatre. Technology advancements in both armor and ballistic glass materials have progressed to the point that improved ballistic protection is available that is lighter and less expensive. This effort will also address a removable armor package that could potentially be used on a portion of the HMMWV fleet to increase ballistic and blast protection on non-protected vehicles. FY08 and future funding supports the development and testing of the Joint Light Tactical Vehicle (JLTV), being developed as a joint system between the Army and the Marine Corps. The new joint fleet of vehicle is intended to replace the HMMWV. The JLTV concept is based on a Family of Vehicles (FOV) focused on integrated scalable personnel protection, and regaining vehicle agility and mobility required of the light tactical vehicles fleet while addressing passenger protection. JLTV will also reduce system life cycle cost through commonality of replacement spare and repair parts at the sub-assembly and component level. As a light tactical system, the JLTV will provide defensive measures covering troops while in transport, increase payload capability, maintain configuration management to reduce or improve the logistics footprint, and reduce onerous soldier and Marine workload associated with system operation and field maintenance activities.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
HMMWV Technology Improvement		4192		
Support Costs (Engineering/Quality/Matrix Support)		133		
JLTV Documentation Development	2004			
JLTV Program Management			4619	5329
JLTV Variant Prototype Design, Development and Fabrication			77681	
JLTV Developmental Test and Evaluation				16891
Small Business Innovative Research/Small Business Technology Transfer Programs		125		
Total	2004	4450	82300	22220

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA1 Hi Mob Multi-Purp Whld Veh (D15400)	1281393	1659007	596627	668548	721542	645437	721915	291141		6585610

Comment:

C. Acquisition Strategy The JLTV Acquisition Strategy is to competitively award up to three (3) contracts for System Development and Demonstration (SDD). Testing performed during SDD will result in a decision point based on system test results, to award contracts for a single vehicle system or set of vehicle systems that closely meet the spectrum of the Capability Development Document (CDD) requirements and complete the development and definition of the selected systems into each of the variants and/or sub-configurations of the JLTV. It is intended to acquire existing sub-system technologies that are at or above Technology Readiness Level seven (7) and manage the integration of them into specific mission capable vehicles.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604642A - LIGHT TACTICAL WHEELED VEHICLES

PROJECT
E40

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Engineering (TACOM)	N/A	TACOM, Warren, MI	2121			100	2Q						2221	2481
HMMWV Technology Improvement	SS/FFP	AM General, Mishawaka, IN	64			3100	3Q						3164	64
JLTV Documentation Development				2004	1-4Q								2004	
JLTV Variant Prototype Design & Development		TBD						77681	1-2Q				77681	
JLTV Program Management		TACOM, Warren, MI						4619	1-4Q	5329	1-4Q		9948	
JLTV Development Test & Evaluation		TBD								16891	1-4Q		16891	
Subtotal:			2185	2004		3200		82300		22220			111909	2545

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: Not applicable

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test/Validate Near Term Armor Protection	MIPR	ATC, Aberdeen, MD	807										807	807
Repower Testing	MIPR	ATC, Aberdeen, MD	2042										2042	1027
HMMWV Bloc Mod Improvement Testing	MIPR	ATC, Aberdeen, MD				625	2-3Q						625	
HMMWV Bloc Mod Improvement Testing	MIPR	Yuma Proving Ground, AZ				625	2-3Q						625	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604642A - LIGHT TACTICAL WHEELED VEHICLES**	**E40**

Subtotal:			2849			1250						4099	1834

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

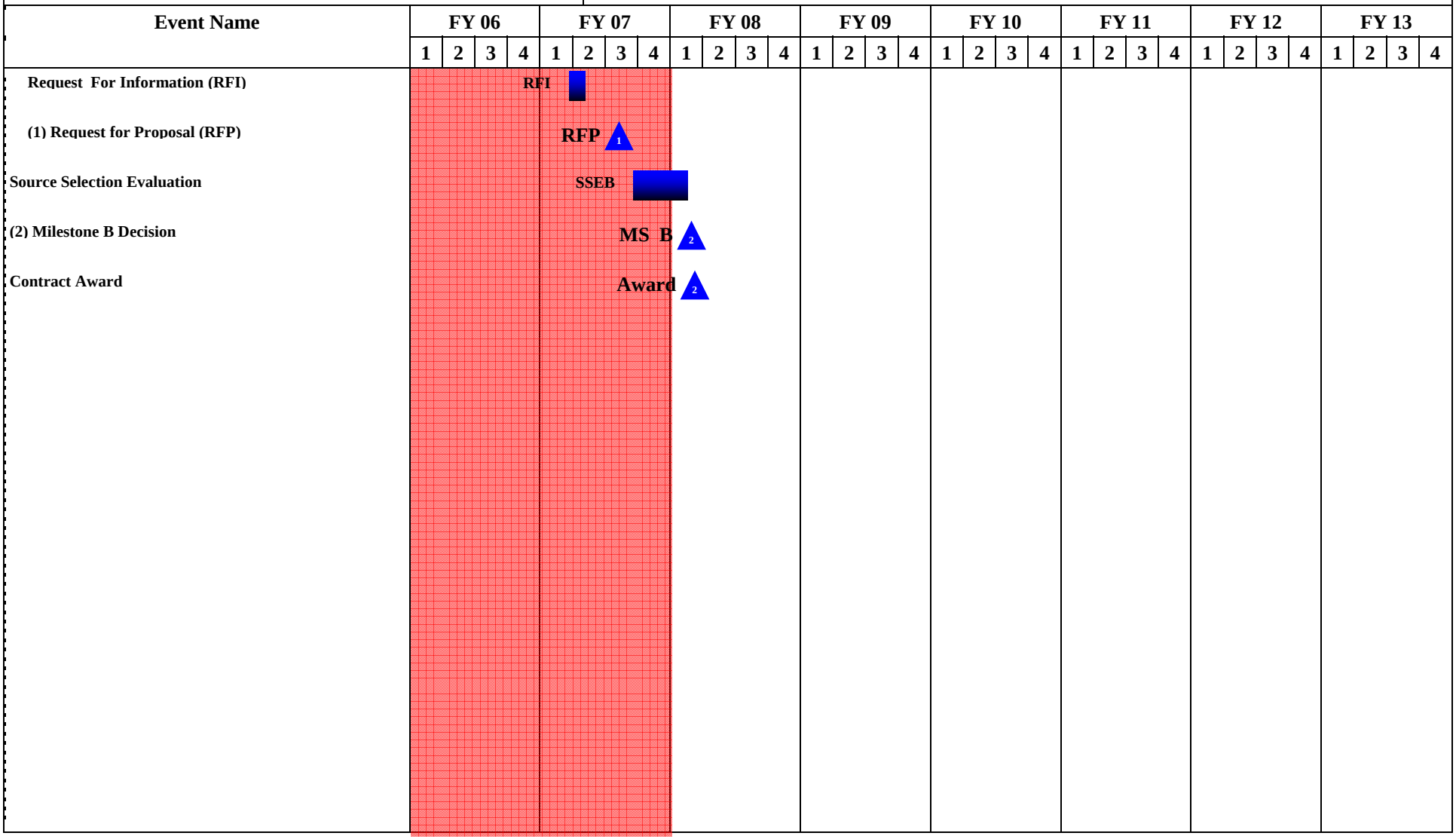
Remarks: Not applicable

Project Total Cost:	**5034**	**2004**		**4450**		**82300**		**22220**			**116008**	**4379**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604642A - LIGHT TACTICAL WHEELED VEHICLES**	**E40**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604642A - LIGHT TACTICAL WHEELED VEHICLES

PROJECT
E40

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Request For Information (RFI)		1Q - 2Q						
Request for Proposal (RFP)		3Q						
Source Selection Evaluation		3Q - 4Q	1Q					
Milestone B Decision			1Q					
Contract Award			1Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**

	COST (In Thousands)	FY 2006 Actual	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	2870086	2956921							Continuing	Continuing
F52	FCS- RECON PLATFORMS & SENSORS	50692	26360							Continuing	Continuing
F53	FCS- UNMANNED GROUND VEHICLES (UGV)	121528	106516							Continuing	Continuing
F54	UNATTENDED SENSORS	31242	10612							Continuing	Continuing
F55	SUSTAINMENT	139389	106517							Continuing	Continuing
F57	MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
F61	S o S Engineering and Program Management	2027766	2142970							Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This Future Combat System(FCS) project covers all air platforms (Class I, Class II, Class III, and Class IV) and includes contractor development, engineering, prototype procurement and integration, test, and assembly. The UAVs are the eyes, the ears and the gun sights of the BCT.

The Class I Unmanned Aerial Vehicle (UAV) provides the dismounted soldier Reconnaissance, Surveillance, and Target Acquisition (RSTA). It has the ability to hover and stare at military operations on rural and urban terrain. The Class I senses and provides imaging to recognize personnel, day and night. It provides targeting information to the FCS network during day and night operations and in adverse weather from 500 feet. Weighing less than 30 pounds, the air vehicle operates in complex urban and rural terrains with a vertical take-off and landing capability. It is carried in a standard MOLLE and is air droppable with the soldier. As part of the POM process the Army has decided to include a Laser Designator Sensor on the Class I UAV.

The Class II Unmanned Aerial Vehicle (UAV) will be a vehicle-carried system that provides Line-of-Sight (LOS), Non-Line of Sight (NLOS) and Beyond Line of Sight (BLOS) capabilities, including enhanced dedicated imagery. The distinguishing capability of this UAV is target designation in day, night, and adverse weather. The Class II weights 112 pounds dry and does not require an airfield. The Class II Unmanned Aerial Vehicle (UAV) is carried on the MGV and is capable of being lifted by two Soldiers, has a 16 km radius of action, and can remain aloft for two hours.

Due to fiscal budget constraints, the Class II effort was terminated at the beginning of FY07 and the requirement has been made objective.

The Class III Unmanned Aerial Vehicle (UAV) is a multifunction aerial system that has the range and endurance to support battalion level RSTA within the Brigade Combat Team (BCT) battle space. It provides the capabilities of the Class I and Class II, but at longer ranges and higher altitudes, in addition to communications relay, mine detection, Chemical, Biological, Radiological and Nuclear detection, and meteorological survey. The Class III vehicle has a payload of up to 215 pounds and can be lifted by two soldiers. Based on Army decisions related to Budget Constraints in the (FY08-13 POM), the Class II and Class III UAV's will be deferred from the FCS(BCT) in FY07 and become objective requirements.

The Class IV Unmanned Aerial Vehicle (UAV) has a range and endurance appropriate for the brigade mission. It supports the Brigade Combat Team (BCT) Commander with communications relay, long endurance persistent stare, and wide area surveillance over 75km radius. Unique missions include dedicated manned and unmanned teaming (MUM) with manned aviation; Emitter Mapping; Wide Band Communications Relay across 150-175 km; and standoff Chemical Biological Radiological, Nuclear, and Energy (CBRNE) detection with on-board processing. Additionally, it has the payloads to enhance the RSTA capability by cross-cueing multiple sensors. It operates at survivable altitudes at standoff range at day and night and during adverse weather. Like the Class III, the Class IV must be able to take-off and land without a dedicated air field. The Class IV vehicle weighs about 1800 pounds and has a setup time of 30 minutes.

The FY07 funding reflected in these R-Forms does not contain FY07 SBIR/STTR reduction of $83,210 million.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	2745716	3310477	3282408	3118477
Current BES/President's Budget (FY 2008/2009)	2870086	2956921		
Total Adjustments	124370	-353556	-3282408	-3118477
Congressional Program Reductions		-337135		
Congressional Rescissions				
Congressional Increases		5300		
Reprogrammings	124370	-21721		
SBIR/STTR Transfer				
Adjustments to Budget Years			-3282408	-3118477

Change Summary Explanation: Funding - FY 2007: The above reprogramming has not yet occurred, but is reflected in the Army's budget database. At present, the Army does not intend to use actual appropriated funds in 0604645A as an offset for a reprogramming action, therefore, the program will be executing to a funding level of $2,895.5 million for the FY07 program year. The following R2s and R3s reflect the current database position.

FY 08 & 09: Program restructured per Congressional direction -- funds moved to 0604660A, FCS Manned Ground Vehicles & Common Ground Vehicle; 0604661A, FCS Systems of Systems Engineering & Program Development; 0604662A, FCS Reconnaissance Platforms; 0604663A, FCS Unmanned Ground Vehicles; 0604664A, FCS Unattended Ground Sensors; 0604665A, FCS Sustainment & Training R&D; and 0604666A, Modular Brigade Enhancement (Spin Off).

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)	February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**

Funding in $000

Program	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Other Termination		547500						
Special Termination		427600						
Total Termination Liability Funding:		975100						

Remarks:

The SDD Contract contains FAR 52.232-22, Limitation of Funds, and FAR 52.249-6, Termination (Cost-Reimbursement) clauses to define allowable termination costs. The above costs are estimated to cover contract performance and termination liability incurred. Special Termination Cost (STC) clause is approved and included in LSI's FAR contract. STC are not included in the program budget. If the contract is terminated, the government will pay for the following prime and subcontractor costs:

- Severance Pay, as provided in FAR 31.205-6(g)
- Reasonable costs continuing after termination, as provided in FAR 31.205-42(b)
- Settlement of expenses, as provided in FAR 31.205-42(g), and
- Costs of return of field service personnel from sites, as provided in FAR 31.205-35 and FAR 31.205-46(c)

Other termination is currently not covered by the Government. Therefore, due to Limitation of Funds clause in the FAR, the LSI must retain funding to cover the full other termination costs in case of termination. Those costs governed by FAR part 31 include prime and subcontractor costs for:

- Allowable Fee
- Cost incurred, but not billed to the FAR contract
- Non-cancelable commitments
- Unexpired leases
- Alteration/restorations required by leases
- Loss of useful value of capital property

Full termination liability is a combination of the above Special Termination Cost and Other Termination Costs.

IAW Section 214 of the FY2006 National Defense Authorization Act, projects in this PE will be converted to a stand alone Program Elements commencing with the FY2008 President's Budget submission to Congress. Concurrently, Termination Liability for those PEs will be contained in PE 0604661A Project FC2.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F52**

COST (In Thousands)		FY 2006 Actual	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
F52	FCS- RECON PLATFORMS & SENSORS	50692	26360							Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This Future Combat System(FCS) project covers all air platforms (Class I, Class II, Class III, and Class IV) and includes contractor development, engineering, prototype procurement and integration, test, and assembly. The UAVs are the eyes, the ears and the gun sights of the BCT.

The Class I Unmanned Aerial Vehicle (UAV) provides the dismounted soldier Reconnaissance, Surveillance, and Target Acquisition (RSTA). It has the ability to hover and stare at military operations on rural and urban terrain. The Class I senses and provides imaging to recognize personnel, day and night. It provides targeting information to the FCS network during day and night operations and in adverse weather from 500 feet. Weighing less than 30 pounds, the air vehicle operates in complex urban and rural terrains with a vertical take-off and landing capability. It is carried in a standard MOLLE and is air droppable with the soldier. As part of the POM process the Army has decided to include a Laser Designator Sensor on the Class I UAV.

The Class II Unmanned Aerial Vehicle (UAV) will be a vehicle-carried system that provides Line-of-Sight (LOS), Non-Line of Sight (NLOS) and Beyond Line of Sight (BLOS) capabilities, including enhanced dedicated imagery. The distinguishing capability of this UAV is target designation in day, night, and adverse weather. The Class II weights 112 pounds dry and does not require an airfield. The Class II Unmanned Aerial Vehicle (UAV) is carried on the MGV and is capable of being lifted by two Soldiers, has a 16 km radius of action, and can remain aloft for two hours. Due to Fiscal budget constraints, the Class II effort was terminated at the beginning of FY07 and the requirement has been made objective.

The Class III Unmanned Aerial Vehicle (UAV) is a multifunction aerial system that has the range and endurance to support battalion level RSTA within the Brigade Combat Team (BCT) battle space. It provides the capabilities of the Class I and Class II, but at longer ranges and higher altitudes, in addition to communications relay, mine detection, Chemical, Biological, Radiological and Nuclear detection, and meteorological survey. The Class III vehicle has a payload of up to 215 pounds and can be lifted by two soldiers. Due to Fiscal budget constraints, the Class III effort was terminated at the beginning of FY07 and the requirement has been made objective.

The Class IV Unmanned Aerial Vehicle (UAV) has a range and endurance appropriate for the brigade mission. It supports the Brigade Combat Team (BCT) Commander with communications relay, long endurance persistent stare, and wide area surveillance over 75km radius. Unique missions include dedicated manned and unmanned teaming (MUM)

with manned aviation; Emitter Mapping; Wide Band Communications Relay across 150-175 km; and standoff Chemical Biological Radiological, Nuclear, and Energy (CBRNE) detection with on-board processing. Additionally, it has the payloads to enhance the RSTA capability by cross-cueing multiple sensors. It operates at survivable altitudes at standoff range at day and night and during adverse weather. Like the Class III, the Class IV must be able to take-off and land without a dedicated air field. The Class IV vehicle weighs about 1800 pounds and has a setup time of 30 minutes.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
UAV CLASS I - FY06 - Complete systems engineering contract, with Honeywell, for the maturation of the DARPA MAV into the FCS Class I system. Baseline FCS Class I UAVS Prime Item Development Specification (PIDS).Award SDD Contract in 3Q FY06 to begin FCS Class I UAVS design.Completed Platform-Unique System Functional Review (SFR) to demonstrate convergence on and achievability of the system requirements and readiness to initiate system design. Initiated design efforts to ensure a successful PDR in May FY07. Completed baseline system and software architectures. Completed baseline system risk assessment. Completed initial Interface Control Documents (ICDs) for internal and external interfaces.FY07- Obtain soldier feedback from lessons learned and experimentation and test at the 25th ID, in accordance with Congressional Direction. to demonstrate Technical Readiness Level -7 (w/25th ID) by 1Q 2007. Complete system Preliminary Design Review to verify that functional allocations, detailed performance specifications, processes and plans are defined and initial detailed design is ready to be initiated. Complete baseline hardware and software configuration item specifications. Begin prototype hardware procurement. Initiate delivery and integration of hardware sub-systems and avionics to Honeywell's production facility. Complete system and software architectures and requirements. Complete initial validation and verification plan. Provide hardware to participate in Experiment 1.1 and document experiment results of operation of the MAV system utilizing a JTRS surrogate (SLICE) radio link and the SRW waveform. Co-Deliver Class I simulation to SoSIL. Co-Begin Micro Air Vehicle (MAV) SIL integration. Begin software Build 2 simulation.	5027	11673		
UAV CLASS II - FY06- Request for Proposals to downselect to the Phase 2 contractors was completed, but due to Army decision to defer the Class II UAV, contracts for the Phase II effort were never executed.	5605			
UAV CLASS III - FY06 - Request for Proposals to downselect to the Phase 2 contractors was completed, but due to Army constaints in the FY08-13 POM, a decision was made to defer the Class III UAV. Therefore, contracts for the Phase II effort were never executed.	16112			
UAV CLASS IV -FY06 - 1. Component level testing conducted through vendors. 2. Landing Gear Drop Test begun in cooperation with the US Navy. 3. Rotor Hub Fatigue Test begun in cooperation with US Navy. Testing should conclude by mid-FY07. FY07 - 1. Landing Gear Drop Test will be completed. 2. Rotor Hub Fatigue Test will be completed. 3. Cooperative E3 Testing with the US Navy will be conducted. 4. Vendor level component and subsystem delta testing for E3 and Temperature will begin and conclude in FY08.Definitize Class IV PIDS Requirements with Vehicle Integrator based on PIDS Updates. NGC (Pkg 1) Contract MOD. Complete Phase 1 air vehicle assembly for first 2 Air Vehicles at Moss Point, MS, less FCS-unique avionics/payloads. Schweizer Aircraft expected early delivery of 5th and 6th airframes with propulsion systems to Northrop Grumman. Provide a platform simulation engineering release to the FCS SoSIL. Continue Modeling and Simulation and software development and integration. Continue initial build software development.	17550	13946		
GFX - ASTAMIDS Sensors - FY 06. Army Airborne Standoff Minefield Detection System (ASTAMIDS) and RSTA Sensors in FY06 only. Integration of RSTA Sensors with the current Army ASTAIMIDS program to support Integrated Verification testing. This combining of sensors will decrease overall weight while allowing the platform to carry an additional sensor. Based on the agreed to FCS Work Breakdown Structure (WBS),beginning in FY07, all sensor costs are included in the Network hardware development leg of the WBS and,therefore, are included in SoS Engineering and Program Management project.	6398			

Small Business Innovative Research/Small Business Technology Transfer Programs		741		
Total	50692	26360		

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program management	2027766	2142970							Continuing	Continuing

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to

implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F52

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CLASS I	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 1	5087	5027	1Q	12044	1Q						22158	
CLASS II	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 4, 7	348	5605	4Q								5953	
CLASS III	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 4, 5, 6, 7	338	16112	4Q								16450	
CLASS IV	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 2	60355	17549	1Q	14316	1Q						92220	
Subtotal:			66128	44293		26360							136781	

Remarks: Remark 1: Subcontractor: Honeywell,- Albuquerque, New Mexico
Remark 2: Subcontractor: Northrop Grumman Systems Corp.- San Diego, CA
Remark 4: Subcontractor: Piasecki Aircraft Corporation - Essington, PA
Remark 5: Subcontractor: Teledyne Brown Engineering - Huntsville, AL
Remark 6: Subcontractor: AAI Corporation - Hunt Valley, MD
Remark 7: Class II and Class III Phase 2 contracts terminated due to POM 08-13 decisions.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government GFX ASTAIMIDS, RSTA Sensor, Firescout	Direct	PM FCS (BCT) , St. Louis, MO	17596	6399	1Q								23995	
Subtotal:			17596	6399									23995	

Remarks: All support costs for this project are included in F61 SoS Engineering and Program Management project.

III. Test And Evaluation	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F52**

	Type		Cost		Date		Date		Date		Date	e		Contract
Subtotal:														

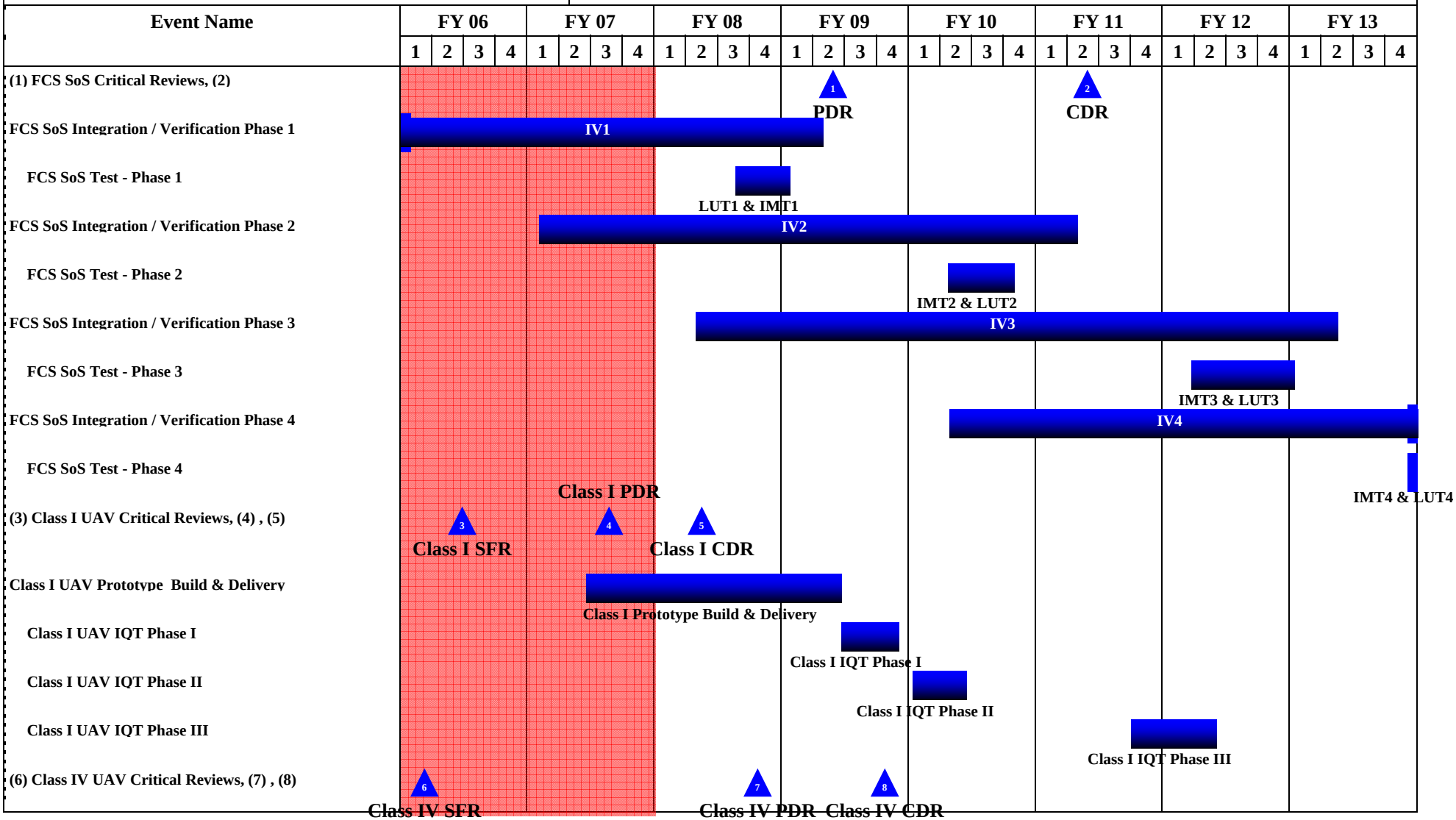
Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														
Project Total Cost:			**83724**	**50692**		**26360**							**160776**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F52**



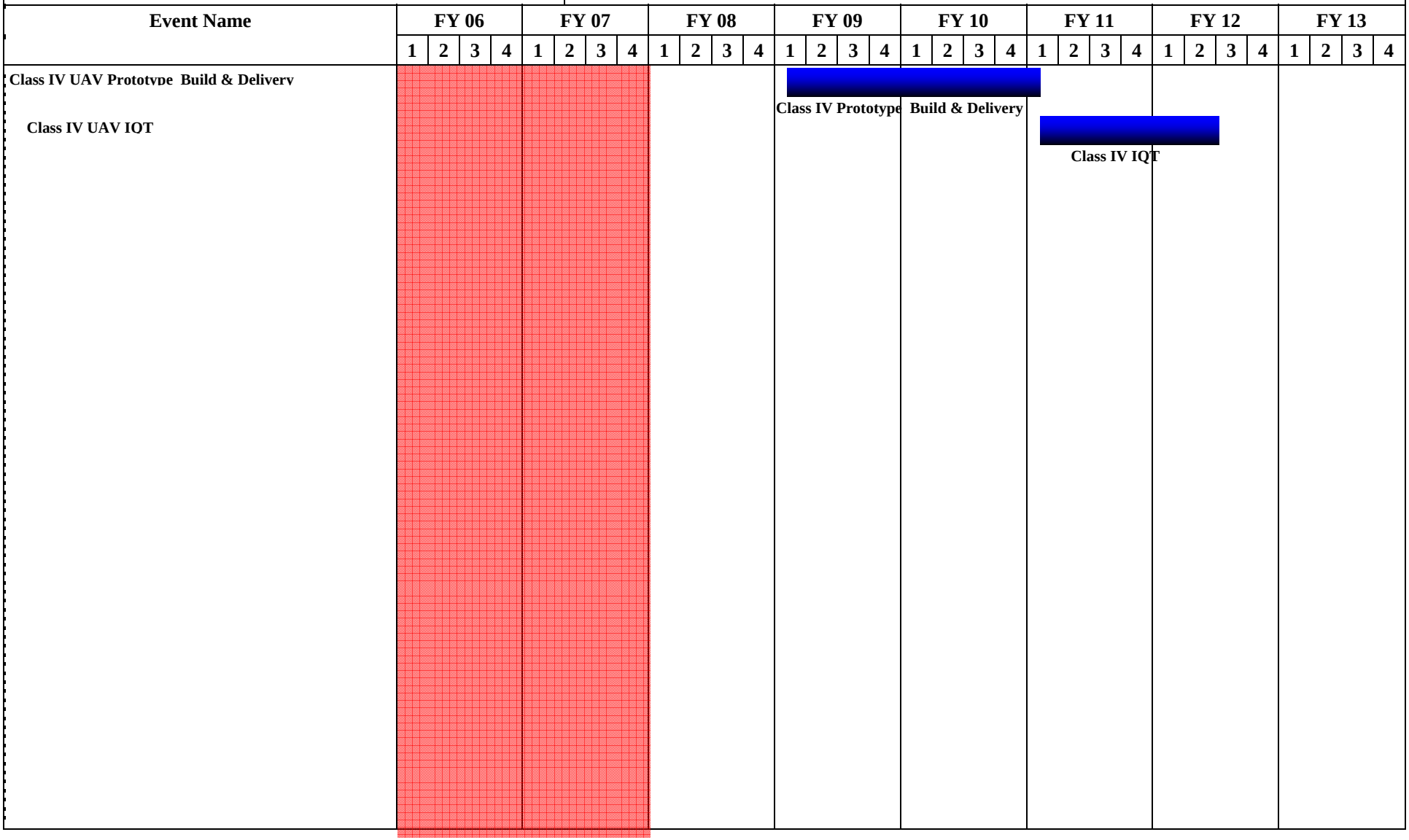
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F52



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F52

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
Class I UAV Critical Reviews	2Q							
		3Q						
			2Q					
Class I UAV Prototype Build & Delivery		2Q - 4Q	1Q - 4Q	1Q - 2Q				
Class I UAV IQT Phase I				2Q - 4Q				
Class I UAV IQT Phase II					1Q - 2Q			
Class I UAV IQT Phase III						3Q - 4Q	1Q - 2Q	
Class IV UAV Critical Reviews	1Q							
			4Q					
				4Q				
Class IV UAV Prototype Build & Delivery				1Q - 4Q	1Q - 4Q	1Q		
Class IV UAV IQT						1Q - 4Q	1Q - 2Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F53**

COST (In Thousands)		FY 2006 Actual	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
F53	FCS- UNMANNED GROUND VEHICLES (UGV)	121528	106516							Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. FCS is the #1 priority acquisition program for the Army.

This FCS project includes contractor developmental and engineering efforts for requirement analysis, specification development, and detail design packages for integration of common and mission equipped Unmanned Ground Vehicles. Also included are subsystem prototypes, models, and/or simulations to support development, tests, and demonstrations. Unmanned platforms include: Armed Robotic Vehicles-Reconnaissance (ARV-RSTA) and ARV-Assault (ARV-A), Small Unmanned Ground Vehicle (SUGV), Multi-function Utility/Logistics Equipment-Transport (MULE-T), MULE-Countermine (CM), and ARV-Assault Light (ARV-A-L). In addition to the UGV platforms, this project includes the development of the hardware and software for the Autonomous Navigation System (ANS) required for operation of the UGVs and leader-follower capability for the Manned Ground Vehicles (MGV).

Small Unmanned Ground Vehicle (SUGV)
The Small Unmanned Ground Vehicle (SUGV) is a small, lightweight, manportable, DC powered UGV capable of conducting military operations in urban terrain tunnels, sewers, and caves. The SUGV enables the performance of manpower intensive or high-risk functions (i.e. urban Intelligence, Surveillance, and Reconnaissance (ISR) missions, chemical/Toxic Industrial Chemicals/Toxic Industrial Materials, reconnaissance, etc.) without exposing soldiers directly to the hazard. Weighing less than 30 pounds, it is capable of carrying up to six pounds of payload weight. The SUGV will have the following capabilities: tether payload, manipulator arm, CBRN capabilities and the potential for integrating future technologies for Sense Through the Wall and Mine/UXO/IED detection ability. The SUGV can operate up to six hours on a single charge.

Multifunctional Utility/Logistics and Equipment (MULE) Vehicle is a 2.5-ton Unmanned Ground Vehicle (UGV) that will support dismounted operations. It is comprised by the integration of four major components: Common Mobility platform, Autonomous Navigation System (ANS), Centralized Controller (CC) and three mission equipment packages/variants. The MULE platform's centerpiece is the common mobility platform providing superior mobility built around an articulated suspension system to negotiate obstacles and gaps that a dismounted squad might encounter. The MULE has three variants sharing the common mobility chassis: Transport, Countermine and the Armed Robotic Vehicle (ARV)-Assault-Light (ARV-A-L). The Transport MULE (MULE-T) will carry 1,900-2,400 pounds of equipment and rucksacks for dismounted infantry squads with the mobility needed to follow squads in complex terrain. The Countermine MULE (MULE-CM) will provide the capability to detect, mark and neutralize individual anti-tank mines by integrating a mine detection mission equipment package from the Ground Standoff Mine Detection System (GSTAMIDS) program to support force mobility. The ARV-Assault-Light (ARV-A-L) is a mobility platform with an integrated weapons and target acquisition package to support the dismounted infantry's efforts to locate and destroy enemy platforms and positions. The ARV-A-L includes the M240 machine gun, JAVELIN missile and medium range EOIR sensors to engage and destroy the enemy in dismounted operations. The MULE platforms are UH-60 transportable.

Autonomous Navigation System(ANS) is the mission payload package that will be integrated on both the MULE and ARVs to provide robotic semiautonomous capability. ANS provides GPS/IPS core navigation, targeting support and timing. It also detects obstacles and provides alternate routes. The ANS primary system components are: the LADAR Imaging Perception Module (LIPM), the Imaging Perception Module (IPM), the Millimeter Wave Radar (MMWR), the Global Positioning System/Inertial Navigation System (GPS/INS) and the ANS Computer System (ACS). ANS provides for day and night capability in all weather and mobility control for on/off roads, cross country and complex terrain. MMWR provides tracking in rain, smoke or fog along with an early warning for approaching vehicles with high closing rates. ACS provides SoSCOE interface, path planning, video processing, hardware sensor processing object processing and speed and curvature commands. As part of the Army Budget Constraints contain in the FY08-13 POM decision, the leader follower MGV mission is being deferred and made an objective requirement.
Armed Robotic Vehicle (ARV)

The Armed Robotic Vehicle (ARV) has two variants: the Assault variant (ARV-A) and the Reconnaissance, Surveillance and Target Acquisition variant (ARV-RSTA). The two variants share a common chassis. The ARV-A and ARV-RSTA will have different mission payloads mounted on a common chassis capable of staying with MGVs. These two variants are being deferred and made an objective requirement as part of the Army Budget Constraints contain in the FY08-13 POM.

The ARV-A will be utilized to maneuver forward of the mounted and dismounted elements in the attack or within the defense. The Assault variant will support the mounted and dismounted forces in the assault providing Line-of-Sight (LOS) and overwatching fires with direct fire and anti-tank (AT) weapons to destroy enemy platforms and fortified positions; remotely occupies key terrain providing ISR/TA reconnaissance capability in MOUT and other battlespace; remotely deploy sensors; locate or by-pass threat obstacles; remotely assess battle damage, employ non-lethal munitions; remotely provide limited reconnaissance capability and acts as a communications relay.

The ARV-RSTA accompanies mounted and reconnaissance units and fills the role of an additional "scout", gathering information forward of the MGVs. The ARV-RSTA consists of a common chassis platform with payloads that provide video capability, digital communications/audio relay modules (plug in/out), and advanced sensors/mission modules. The ARV-RSTA variant will provide Reconnaissance, Surveillance and Target Acquisition for the FCS (BCT). The ARV-RSTA will provide reconnaissance capability in Urban Military Operations in Urban Terrain and other battlespace; deploy sensors, highlight targets, locate or by-pass threat obstacles in buildings, bunkers, tunnels, and other urban areas and act as a communications relay and perform battle damage assessment.
IAW Section 214 of the FY2006 National Defense Authorization Act, this project will be converted to a stand alone Program Element (0604663A Project FC4) commencing with the FY2008 President's Budget submission to Congress

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
ARV - FY06 Accomplishment - The ARV platform specifications continued refinement and work continued on the Integrated UGV Platform Simulations; ensuring adequate maturity for SFR completion in Dec 06. Utilizing the verified system level requirements, ARV continued to flow down the Common Mobility Platform and common subsystems for the ARV-Assault (ARV-A and the ARV-RSTA variants. After the completion of the ARV SFR, the ARV effort will transfer back to the tech base to develop/mature a faster, lighter, less expensive variant.	35973	3570		
FY06 MULE - Completed SFR for the MULE-Transport, MULE-Countermine, ARV-Assault-Light (~1500 Requirements) 2Q FY06. This activity led to the establishment of a Best Technical Approach to beginning engineering design in support of a Dec 07 Preliminary Design Review (PDR). Continued to refine the platform specifications and developed Integrated UGV Platform Simulations from the	40417	44945		

MULE SFR to verify that system level requirements were properly aligned with the SoS. Specification and correctly flowed down to MULE common sub-systems. Common component level testing initiated to support efforts leading to the PDR. This effort was tied to the conduct of Technology and Integration Risk Reduction Activities. These Risk Reduction Activities supported the path to PDR. MULE completed preliminary design, fabrication and integration of the MULE Common Platform Engineering Evaluation Unit (EEU). Initial integrated system checkout began at the end of FY06. FY07 MULE - Continue the maturation of the MULE platform designs leading to the MULE PDR, Dec 08, to show readiness to enter detailed design. PDR will verify that system preliminary designs are compliant with system level requirements as outlined in the MULE PIDS documents. Complete testing integration of subsystems on the EEU, to include installing pre-prototype Autonomous Navigation System (ANS). The MULE Common Platform Pre-prototype Engineering Evaluation Unit (including the ANS system) will complete all component level fabrication, procurement, and testing including integrated system checkout. The Demonstration and Evaluation phase of EEU testing will be completed in FY07. The data outputs and lessons learned will be reported to UGV IPT at completion of these activities, results will be incorporated into design decisions prior for MULE PDR while reducing the software risk which is the greatest risk to the MULE critical path. Updated digital system simulations will be delivered to the LSI and C4ISR SILs.				
MULE SYSTEM ENGINEERING & PROGRAM MANAGEMENT(SEPM) - FY06 - Continued refining the MULE platform specifications. This activity will be reviewed at the MULE SFR, which will be used to verify that system level requirements are properly aligned with the SoS Specification and correctly flowed down to MULE sub-systems. FY07 will continue the maturation of the MULE platform designs. This activity will be reviewed at the MULE PDR. This review will be used to verify that system designs are compliant with system level requirements as outlined in the MULE PIDS documents. Complete the MULE simulation and support testing at the SoSIL. Simulations and Emulations - FY07 - Updated digital system simulations will be delivered to the LSI SoS and C4ISR SILs to support IV1 activities.				
FY06 AUTONOMOUS NAVIGATION SYSTEM (ANS) - Continue to refine the ANS specifications. Completed System Functional Reviews (establishment of requirements baseline). The ANS SFR was used to verify that system level requirements were properly aligned with the SoS Specification and the MGV and UGV platform PIDS, and correctly flowed down to ANS sub-systems. Initiated fabrication of ANS pre-prototypes and began installation on both legacy vehicles to conduct robotic operations and for the MULE Engineering Evaluation Unit (EEU). Updated the ANS simulation for delivery and integration into the MULE, ARV, and MGV simulations. GPS/INS hardware was delivered to the NLOS-C prototypes. Developed system specification and test approach for Robotic Convoy systems including design and build of FMTV drive-by-wire capability, surrogate communication system, and Operator Control Unit(OCU). Initiated the software design and development activities for required Robotic Convoy behaviors and initiated build of the ANS OCU,CPU, LADAR Imaging Perception Model (LIPM), and IPM breadboards. FY07 ANS - Continue the maturation of the ANS design, to be reviewed at the ANS PDR. Complete fabrication of the ANS engineering prototypes for current force vehicles and initiate testing of robotic operations to support the PDR. Continue integration and test of ANS hardware on six surrogate vehicles to support ANS development. Fabricate ANS pre-prototypes for the MULE EEU and ARV ATR. Support integration of the ANS simulation into the MULE, ARV, and MGV simulations. Continue component fabrication and testing of Image Perception Module (IPM) of the ANS. Conduct Robotic Convoy system integration and test of all hardware/software systems (LIPM, IPM, ANS computer, MMW, GPS/INS) on current force vehicles. Conduct increasingly difficult experiments and demonstrations of Robotic Convoy capabilities, including teleoperation, leader/follower, move-on-route, wingman, and forward leading.	33806	43915		
FY06 SUGV - The SUGV program refined their requirements and specifications to support the SUGV SFR held in Dec 05. These SUGV level requirements and specifications were used to verify that system level requirements were properly aligned with the SoS Specification and correctly flowed down to SUGV sub-systems. The SUGV program completed it's internal round 1 design pre-prototypes and testing	11332	11089		

and proceeded into round 2 design pre-prototype development. These pre-prototypes included initial chassis design, brushless DC motor controller, power management board, head and neck controller board, video board, and neck drive board. These prototypes were used to support SUGV risk reduction in mobility performance, weight, and integration. SUGV simulation was delivered for use in the SoSIL. The SUGV program also conducted technology and integration risk reduction activities that included technical interchange meetings and SUGV platform simulations. FY07 SUGV - The SUGV program will conduct it's PDR in Dec 07. The internal round 2 pre-prototypes will be completed and tested. Internal round 3 prototype development will begin and continue through FY 07 leading up to the SUGV CDR in May 08. The continued maturation of the design will verify that system design is compliant with system level requirements as outlined in the SUGV PIDS and ready for full prototype fabrication. The internal round 2 pre-prototypes will be used to support FCS Experiment 1.1 in 2Q07 at White Sands. Simulation and support testing will be conducted using the SoSIL. Integrated head and neck activities will commence that lead to a fully integrated head and neck assembly prior to CDR in FY08.				
Small Business Innovative Research/Small Business Technology Transfer Programs		2997		
Total	121528	106516		

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
60046661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
6064664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
6064665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non-Line of Sight- Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non-Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Out			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing

0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

C. Acquisition Strategy Due to FCS requirements changing in the last 3 years, coupled with the challenge to meet all its reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army focus on FCS-equipped Brigade Combat Team development at reduced program risk. The adjustments to the FCS Program acquisition strategy fall into the following categories:
1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and "Spin Out" capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Const $) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sept 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

IAW Section 214 of the FY2006 National Defense Authorization Act, this project will be converted to a stand alone Program Element (0604663A Project FC4) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F53

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Armed Robotic Vehicle (ARV-A)	OTA/FAR	The Boeing Company St. Louis, MO see remark 2	4068		1Q	3570							7638	
Small Unmanned Ground Vehicle (SUGV)	OTA/FAR	The Boeing Company St. Louis, MO see remark 1	11610	11332	1Q	11089	1-3Q						34031	
MULE T	OTA/FAR	The Boeing Company St. Louis, MO see remark 3	17742		1Q								17742	
Autonomous Navigation System - Software	OTA/FAR	The Boeing Company St. Louis, MO see remark 4	29304	33806	1Q	43915	1-3Q						107025	
MULE CM	OTA/FAR	The Boeing Company St. Louis, MO see remark 3		28465	1Q	31246	1-3Q						59711	
ARV SEPM	OTA/FAR	The Boeing Company St. Louis, MO see remark 2	11098	18692	1Q								29790	
ARV COMMON	OTA/FAR	The Boeing Company St. Louis, MO see remark 2	6226	17282	1Q								23508	
MULE STE	OTA/FAR	The Boeing Company St. Louis, MO see remark 3			1Q									
MULE SEPM	OTA/FAR	The Boeing Company St. Louis, MO see remark 3	8294	11951	1Q	16696	1-3Q						36941	
Subtotal:			88342	121528		106516							316386	

Remarks: Remark 1: Subcontractor: iRobot Corp. - Burlington, MA, award date Nov 2003

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F53**

Remark 2: Subcontractor: BAE - Ground Systems Division - Santa Clara, CA, award date Nov 2003
Remark 3: Subcontractor: Lockheed Martin Missile and Fire Control - Grand Prairie, TX, award date Nov 2003
Remark 4: Subcontractor: General Dynamics Robotic Systems - Westminister, MDaward date Nov 2003, award date Nov 2003

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

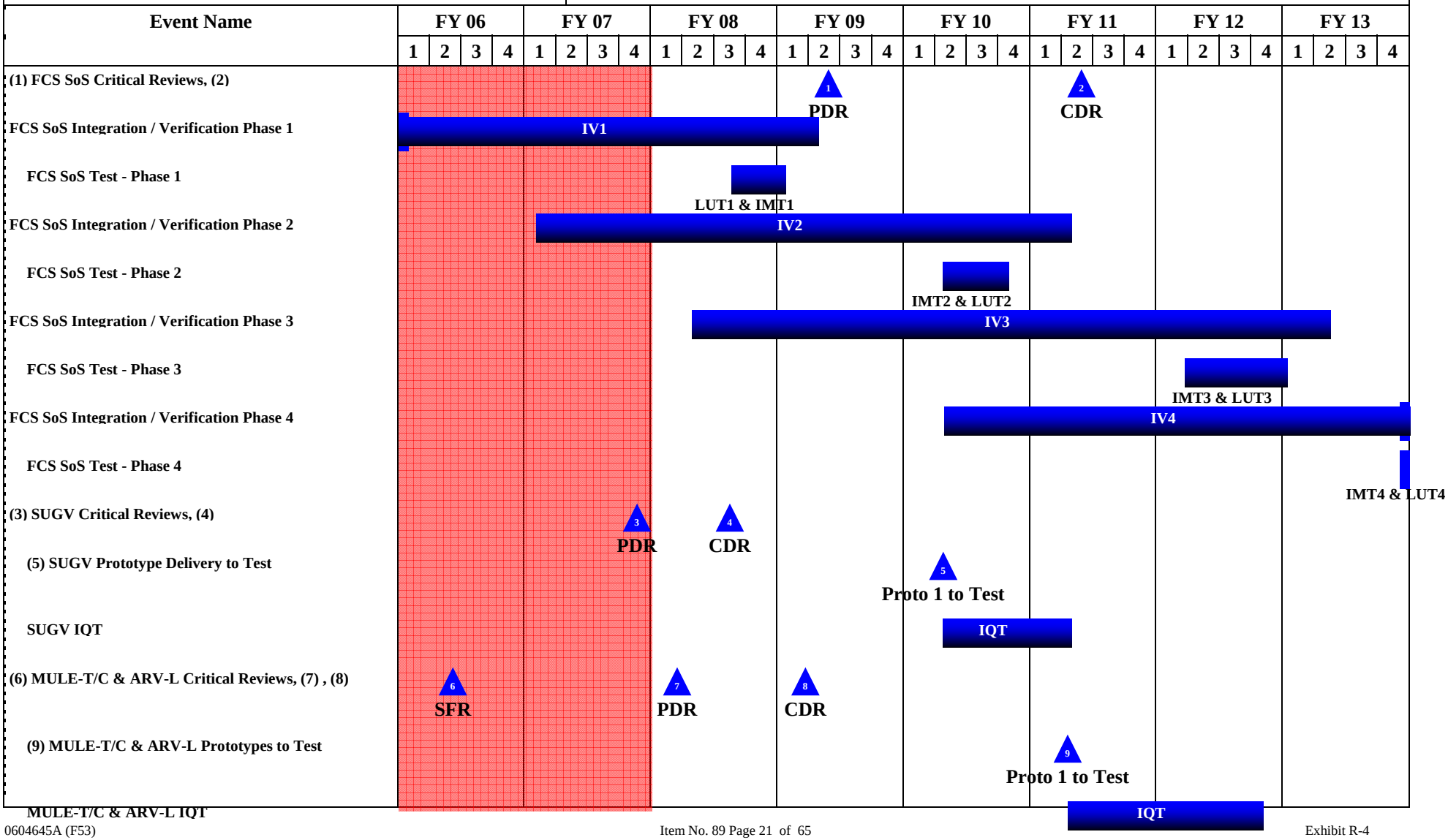
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:			**88342**	**121528**		**106516**							**316386**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F53**



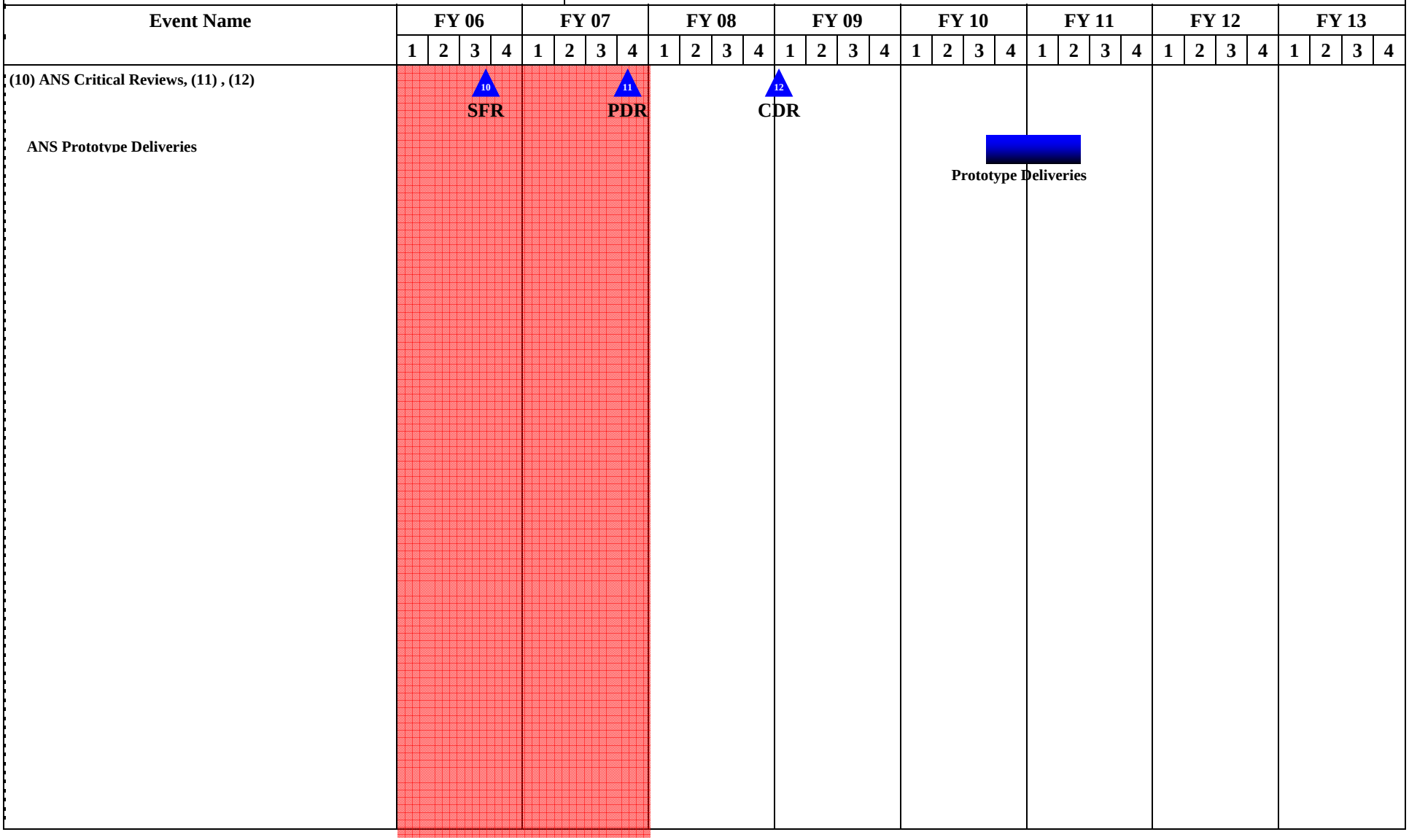
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F53



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F53

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
SUGV Critical Reviews		4Q						
			3Q					
SUGV Prototype Delivery to Test					2Q			
SUGV IQT					2Q - 4Q	1Q - 2Q		
MULE-T/C & ARV-L Critical Reviews	2Q							
			1Q					
				1Q				
MULE-T/C & ARV-L Prototypes to Test						2Q		
MULE-T/C & ARV-L IQT						2Q - 4Q	1Q - 4Q	
ANS Critical Reviews	3Q							
		4Q						
				1Q				
ANS Prototype Deliveries					3Q - 4Q	1Q - 2Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F54**

COST (In Thousands)	FY 2006 Actual	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
F54 UNATTENDED SENSORS	31242	10612							Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

U-UGS - The Urban-Unattended Ground Sensors (U-UGS), also known as Urban Military Operations in Urban Terrain Advanced Sensor system, will provide a low cost, network-enabled reporting system for SA and force protection in an urban setting, as well as residual protection for cleared areas of Urban Military Operations in Urban Terrain (MOUT) environments. The (U-UGS) system can support BCT operations by monitoring urban choke points such as rooms, halls attics, basements, sewers, culverts, tunnels, caves, and alleyways. They can be hand-employed by Soldiers or robotic vehicles either inside or outside buildings and structures. When a platoon or squad clears a building for example, U-UGS are left behind to perform surveillance that would otherwise require dedicated soldiers.
The U-UGS system provides a self-organizing wireless network that consists of three configuration items; personnel detect sensors, imaging sensors, and gateways.
1. Personnel Detect Sensors provide dual mode, passive infrared and RF microwave motion sensing for "trip-wire" detection of intruders.
2. Imaging Sensors provide electro-optical visual imaging with a near-infrared illuminator for operation in full darkness.
3. Gateways organize and manage the sensor network, and communicate sensor data to FCS C2 JTRS systems and to the local dismounts.

T-UGS-Tactical-UGS (t-ugs) includes Intelligence, Surveillance and Reconnaissance (ISR)-UGS and Chemical, Biological, Radiological and Nuclear (CBRN)-UGS. The UGS (T-UGS) are designed for remote tactical operations in open spaces, at road choke points, avenues of approach, etc, and are designed to be emplaced by hand or by remote deployment methods. T-UGS provoides ISR and CBRN awareness to the FCS (BCT) of areas not covered by manned/unmanned ground/air vehicles. the common form factor enables simplified scalability and upgrade paths for future technology insertion, while the distributed sensing capability enhances mission flexibility and system versatility. The T-UGS system consists of five configuration items (nodes), each containing a unique set of sensing capabilities, and sharing a common hardware form factor.
1. The T-UGS ISR sensor node provides for vehicle and personnel detection capabilities via seismic, acoustic and magnetic sensors. Seismic sensors are the primary means of personnel detection. The principal means of vehicle detection and tracking are the acoustic bearing sensors. Th ISR-UGS will be modular and composed of tailorable sensor groups using multiple ground-sensing technologies. Multiple sensors support precision location and simultaneous tracking of multiple targets.
2. When confirmed as a valid target of interest, Electro Optical/Infrared (EO/IR) sensor nodes will autonomously capture multiple images of the target.
3. The CBRN node provides for chemical, biological, radiological, and nuclear sensing and reporting capability.
4. The Hazard/Clear Lane Marker (H/CLM) nodes are deployed to mark hazardous keep-out zones, or to define cleared lanes though hazardous areas such as minefields.
5.The final component of the T-UGS system is the Long-Haul gateway node that provides radio communications and integration into the FCS network.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
UGS FY06 . Program has completed system concept definition and the SFR. concept definition, UGS design analysis and trades, and integration into the FCS (SoS) network-centric environment. UGS CIs/SCSIs were released in early FY06 to support PDR Phases 1 and 2 and began the detailed design phase of the program. The Critical Design Review (CDR), Aug 2006, marked the design completion and initiated the fabrication and prototype build phase. A IV phase 1 (IV1) was performed to develop and exercise models consistent with the Spin Out 1 UGS configuration and FCS Environment Tests and Experiments. Tests include HALT Test, HAST Test, and Endurance test as well as the start of system integration testing were completed. Completed SFR for UGS, Air, and Ground Sensors. Delivered UGS Engineering Development Models. FY07 UGS PLANNED ACCOMPLISHMENTS - Delivery of pre-qualification hardware to Boeing's C4ISR System Integration Lab (SIL) is scheduled in FY07 for integration testing with the C4ISR network elements. The delivery will augment other UGS Modeling & Simulation (M&S) efforts to conduct the Integration & Verification (IV) phase activities. A series of Integration & Verification (IV) phase activities are planned. Testing will be completed in FY07 to be followed by full system Integrated Qualification Test (IQT). Integration & Verification efforts and BCT feedback will be utilized to refine the Spin Out 1 UGS system design and products, as well as provide input in subsequent Spin Outs. The UGS program is on track to deliver fully qualified UGS systems to the (SoS) SIL in FY 2007. Complete SO1 UGS design LUT Configuration. Complete SO1 UGS developmental testing LUT Configuration. Deliver C4SIL pre-qual units: 2 T-UGS and 2 U-UGS systems Deliver SO1 prototype units (LUT Configuration): 10 T-UGS and 16 U-UGS systems. Conduct T-UGS CDR. Deliver SoSCOE v. 1.5 and 1.8 for UGS. Conduct U-UGS CDR. Participate in Exp 1.1 T-UGS and U-UGS.	31242	10313		
Small Business Innovative Research/Small Business Technology Transfer Programs		299		
Total	31242	10612		

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
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0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
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0604646A Non-Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non-Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Out			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A Stricom/ NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

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	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F54

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Unattended Ground Sensors (UGS)	OTA/FAR	The Boeing Company - St. Louis, MO - See Remark 1	21015	31242	1Q	10612	1-3Q						62869	
Subtotal:			21015	31242		10612							62869	

Remarks: Remarks 1: Subcontractor: Textron Systems,Intelligent Battlefield System Division - Willington, MA, award date Oct 2003

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

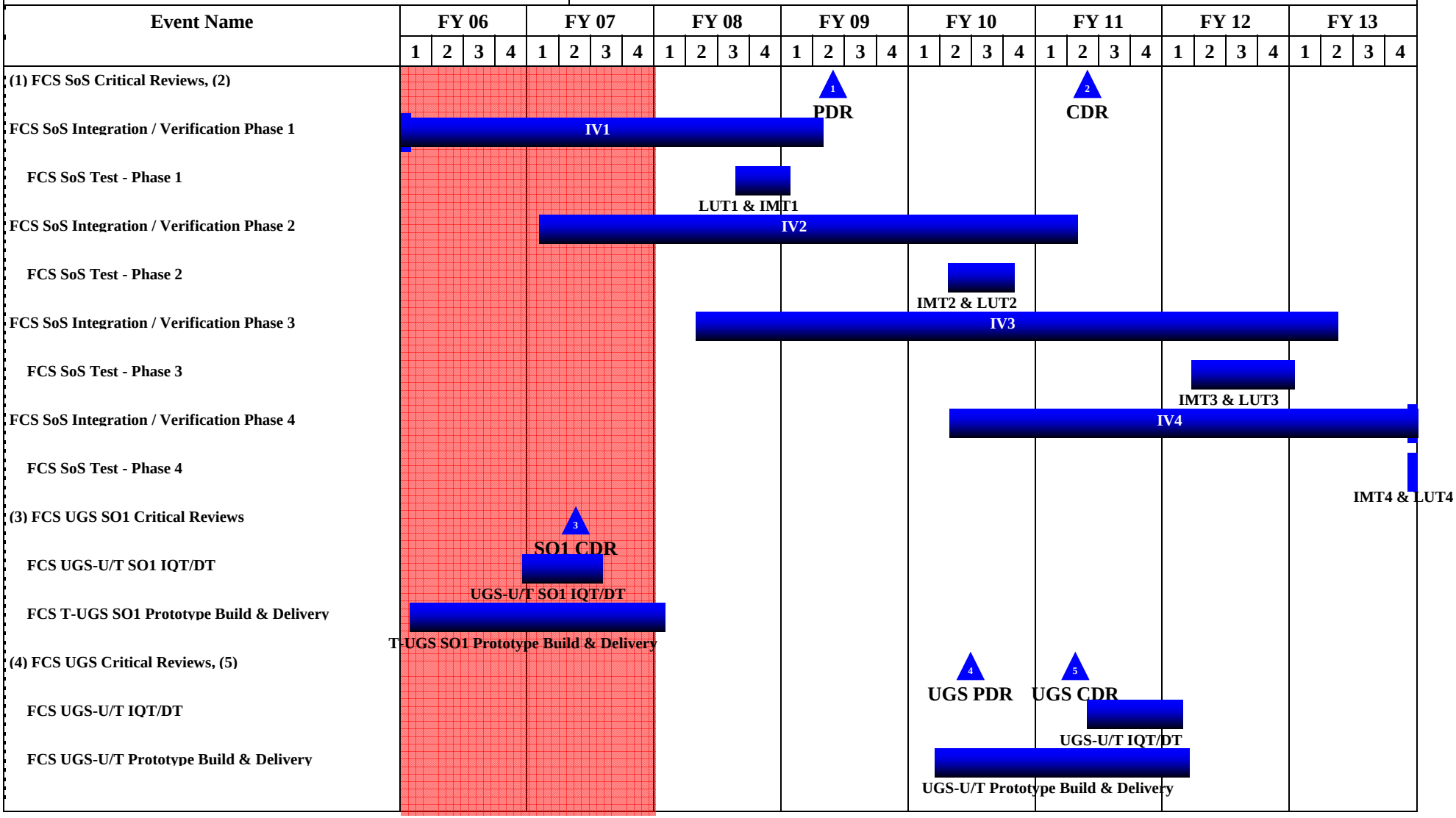
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:			**21015**	**31242**		**10612**							**62869**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F54**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F54**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
FCS UGS SO1 Critical Reviews		2Q						
FCS UGS-U/T SO1 IQT/DT	4Q	1Q - 3Q						
FCS T-UGS SO1 Prototype Build & Delivery	1Q - 4Q	1Q - 4Q	1Q					
FCS UGS Critical Reviews					2Q			
						2Q		
FCS UGS-U/T IQT/DT						2Q - 4Q	1Q	
FCS UGS-U/T Prototype Build & Delivery					1Q - 4Q	1Q - 4Q	1Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F55**

COST (In Thousands)	FY 2006 Actual	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
F55 SUSTAINMENT	139389	106517							Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project contains funding for Training and Logistics Development for the Future Combat Systems (FCS) Brigade Combat Team (BCT). The logistics effort includes the development of the management, products, and services required to design, develop, assemble, integrate, and test the supportability processes and supporting automated applications within the FCS System of Systems (SoS). Validation of maneuver sustainment, Production Based Logistics (PBL), and other applicable logistics support concepts during SoS Test and SoSIL simulations. Assurance that sensor collection of data for logistics modeling verification and validation efforts, as well as operational PBL. It also funds analysis to aid in life cycle product support decision making. Commonality of hardware and software within the FCS program is a priority action needed to reduce the Lifecycle costs and logistical footprint of the FCS. Logistics Management Product Integration - Provides integration of supportability products into the SoS elements, including diagnostics and prognostics functions and conducts logistics technical reviews at the system, vehicle, and component levels.
Logistics Fielding includes development of the process for deploying vehicles to home base locations to include facilities analysis.
Networked Logistics Systems is integrated in the FCS software to achieve the logistics goals of reducing the logistics footpring, enhancing deployability, increasing operational availability, and reducing total ownership costs. These critical program goals are included in the two logistics Key Performance Parameters (KPP), KPP 4 (Transportability/Deployability) and KPP 5 (Sustainability/Reliability). Inherent to meeting these KPPs is the integration of logistics in the command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) network primarily through the Platform-Soldier Mission Readiness System (PSMRS) and the Logistics Decision Support System (LDSS). These systems provide unprecedented depth and accuracy of logistics information and decision tools to the commanders and logisticians by enabling the distribution system to deliver the right stuff to the right place at the right time, thus reducing O&S costs and improving operational availability. The supportability of the FCS (BCT) is further enabled by the reduction of demand designed into the System of Systems (SoS). Increased Reliability Availability Maintainability Test (RAM-T) goals and implementing a Performance Based Logistics (PBL) support concept through extensive up front systems engineering efforts will result in increased Operational Availability and significant decreases in both parts and maintenance personnel while generating increased combat power. The time required to execute a repair is significantly decreased through implementation of Pit-Stop Engineering designs for maintenance, easing both crew and maintainer burdens. Training includes contractor analysis to support training for the SoS. This effort includes the design and development, engineering, integration, embedded training, and testing of unique training devices, training systems engineering, training products, training support packages, and training integration. Training also provides for the management, plans, products, verification and validation, and services required to ensure design, development, fabrication, integration, and test of a FCS (BCT) training program and FCS (BCT) training system capable of meeting Operational Requirements Document (ORD) objectives. This mission assures that the training system is designed as an integral part of the overall SoS design to meet Increment 1 requirements and provides

for future increment upgrades. Identify, assess, and mitigate training risks as part of the SDD risk reduction effort and coordinate these risk reduction efforts with the SoS Engineering technical risk manager. Support the distributed network and platform development efforts required to implement embedded and stand alone training designs within (FoS) products necessary to ensure these designs meet ORD requirements. Includes training product design and interfaces as required to address U.S. Army training implementation beyond the SoS and/or FoS levels for consistency with the existing and planned U.S. Army training infrastructure. Apply a common systematic approach to identify, define, and assess training system technologies and training environments for potential application to FCS training requirements. Embedded Training assures the FCS (BCT) network facilitates the Soldier's ability to train anywhere, any time. Technology has matured to a level that supports these requirements. Embedded Training (ET) will be developed as an integral part of the FCS (BCT) manned platform and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) architectures.

The Embedded Live-Virtual-Constructive (LVC) Multi-more Training is the cornerstone of the networked Embedded Training (ET) and will satisfy the Key Performance Parameter (KPP#6) which states the FCS Family of Systems (FoS) must have an embedded individu7al and collective training capability that supports live, virtual, and constructive training environments. ET must be designed-in at the start of the program to ensure it is developed in conjunction with the other FCS (BCT) System of Systems (SoS) components. Embedding the training capabilities as an inherent part of the operational system mitigates negative training inherent with attempting to replicate operational performance, since an embedded solution stimulates and uses the operational capabilities as an organic part of the solution.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
TRAINING SYSTEMS - FY06. Developed Embedded Training (ET) capability, software and products, including training support for Spin Out #1; Training (Instructional) Support Packages (TSPs); Interactive Multi-media Instruction (IMI); Training Aids and Devices, Simulations and Simulators (TADSSs). Delivered first increment of Training Common Components (TCCs) integrated with SOSCOE. TRAINING SYSTEMS FY07. 32 One Team Partners continue to develop Embedded Training capability, software and products, including Training (Instructional) Support Packages (TSPs), Interactive Multi-media Instruction (IMI), Training Aids and Devices, Simulations and Simulators (TADSSs) for Experiment 1.1 & Spin Out #1. Continue integration of embedded training software and products in the Training Systems Integration Lab (SIL). Deliver second increment of Training Common Components for FCS. Continue to develop Embedded Training capability and products. Continue development of Training Support Plans (1,500+ tasks). Deliver the third increment of the (SORL) and the (SITL). Develop Leader and Battle Staff tasks for the FCS equipped units (500+ tasks). Identify training requirements and develop training support products in preparation for Integrated Mission Test 1 (IMT-1). Test Training products and support for Experiment 1.1 in Training SIL and during experiment. Provide training inputs and support to FCS Systems PDRs & CDRs (14+1+1 systems). Continue Key Performance Parameter (KPP) #6 (Training) trace, development, and execution. Continue integration of Training software with Warfighter Machine Interface (WMI). Update and Deliver: Training Management Plan, Training Data Products Report, Training Support Packages, Training Facilities Survey Report.	97816	14791		
SUSTAINMENT FY06. Completed Material Fielding Plan, PBL Implementation Plan and Supportability Strategy, Modeling and Simulating (M&S) plans updated. Logistics Analysis supported development of data sets and model software to insert logistics impacts as Operational Availability (Ao), Log Footprint and Life Cycle Costs into war fighter models (JANUS Simulation) and supportability assessments and trades. Provided logistics attributes and capabilities documents to support modeling and simulation activities in War games and major availability analyses. SUSTAINMENT FY07 - Update the Material Fielding Plan, the PBL implementation plan, the Supportability Strategy, and the M&S models. Conduct Test Readiness Reviews for PS-MRS and LDSS Build 1 software. Deliver the first phase of logistics products (Logistics Planning software) that were developed during the FCS Program's engineering iteration 1, to the C4ISR System Integration Lab (SIL) in February. Log Data Management Service (LDMS) contract, awarded Dec 2006. LDMS will be	40272	87376		

integrated with the Army_s Logistics Enterprise and supports a network-enabled, performance-based logistics solution that will reduce the logistics footprint, increase operational availability and significantly lower life-cycle costs for FCS (BCT).Continue PDR quality maturation of platform Sustainment and Transportation specifications. PIDS to CSCI Interfaces Documented. Interoperability (I/O) Kits PIDS developed and SFR completed. Complete LRR IMT1 detailed test procedures. Logistics Decision Support System EI1 Development continued. IETM Specification and Requirements Development continued. SO 1 Supportability Strategy Final Draft Released. SO1 PBL Implementation Plan approved. FCS Materiel Fielding Plan updated for EI1 RAP. Platform Soldier-Mission Readiness System EI1 Development continued. Conduct ILS and KPP Assessments for platform PDRs and CDRs. Continue logistics analysis of Complementary Programs supporting the FCS (BCT).				
GFX FY06/07 - PEO STRI SME SUPPORT - This includes the US Government Subject Matter Experts who oversee the integration of over 14.6 million lines of GFX training software code and the associated requirement into the total SoS training planned software code.	1301	1353		
Small Business Innovative Research/Small Business Technology Transfer Programs		2997		
Total	139389	106517		

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing

0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2020366	2142970							Continuing	Continuing

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F55

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Training Specifications &Training Products	OTA	The Boeing Company - St. Louis, MO - see remarks 1-3	72329	97816	4Q	74014	1-3Q						244159	
Logistics Systems Management	OTA	The Boeing Company - St. Louis, MO - see remarks 4-6	80623	40272	1Q	31150	1-3Q						152045	
Subtotal:			152952	138088		105164							396204	

Remarks: Remark 1: Subcontractor: Computer Science Corp. Federal Sector Defense Group, Fslls Church,VA
Remark 2: Subcontractor: Dynamics Research Corp. Systems Division, Andover, MD
Remark 3: Subcontractor: Northrop Grumman, Info Tech, Def Enterprise Solutions Div, Mclean,VA
Remark 4: Subcontractor: Northrop Grumman-Mission Systems, Carson CA
Remark 5: Subcontractor: Honeywell-Defense & Electronic Systems, Albuquerque, NM
Remark 6: Subcontractor: IBM. Bethesda, MD

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GFX - PEO STRI SME Training Support	Direct	PM FCS (BCT), St. Louis, MO		1301	1Q	1353	1Q							
Subtotal:				1301		1353								

Remarks: All support costs for this project are included in F61 SoS Engineering and Program Management project.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

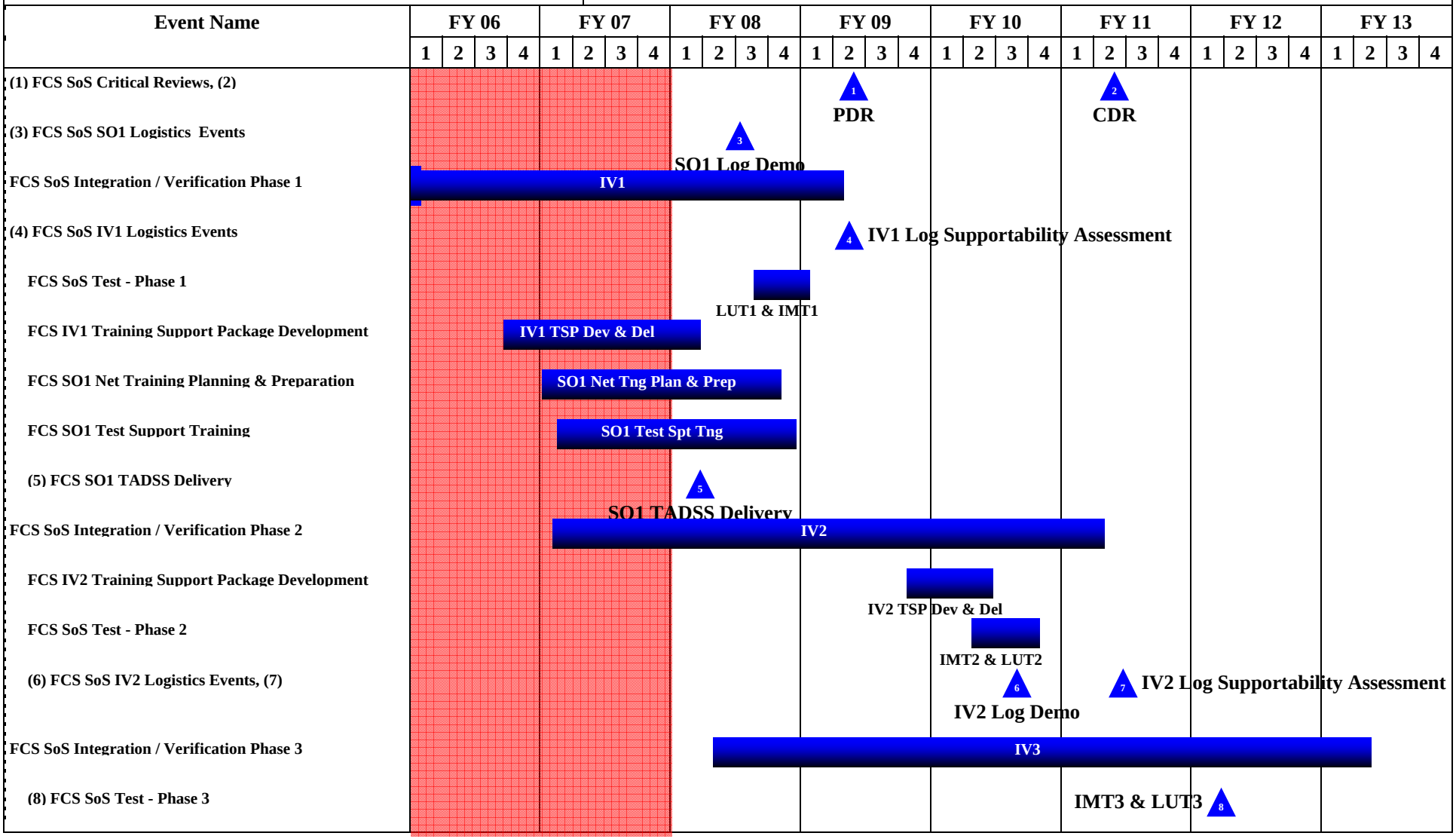
PROJECT
F55

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														
Project Total Cost:			**152952**	**139389**		**106517**							**396204**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F55**



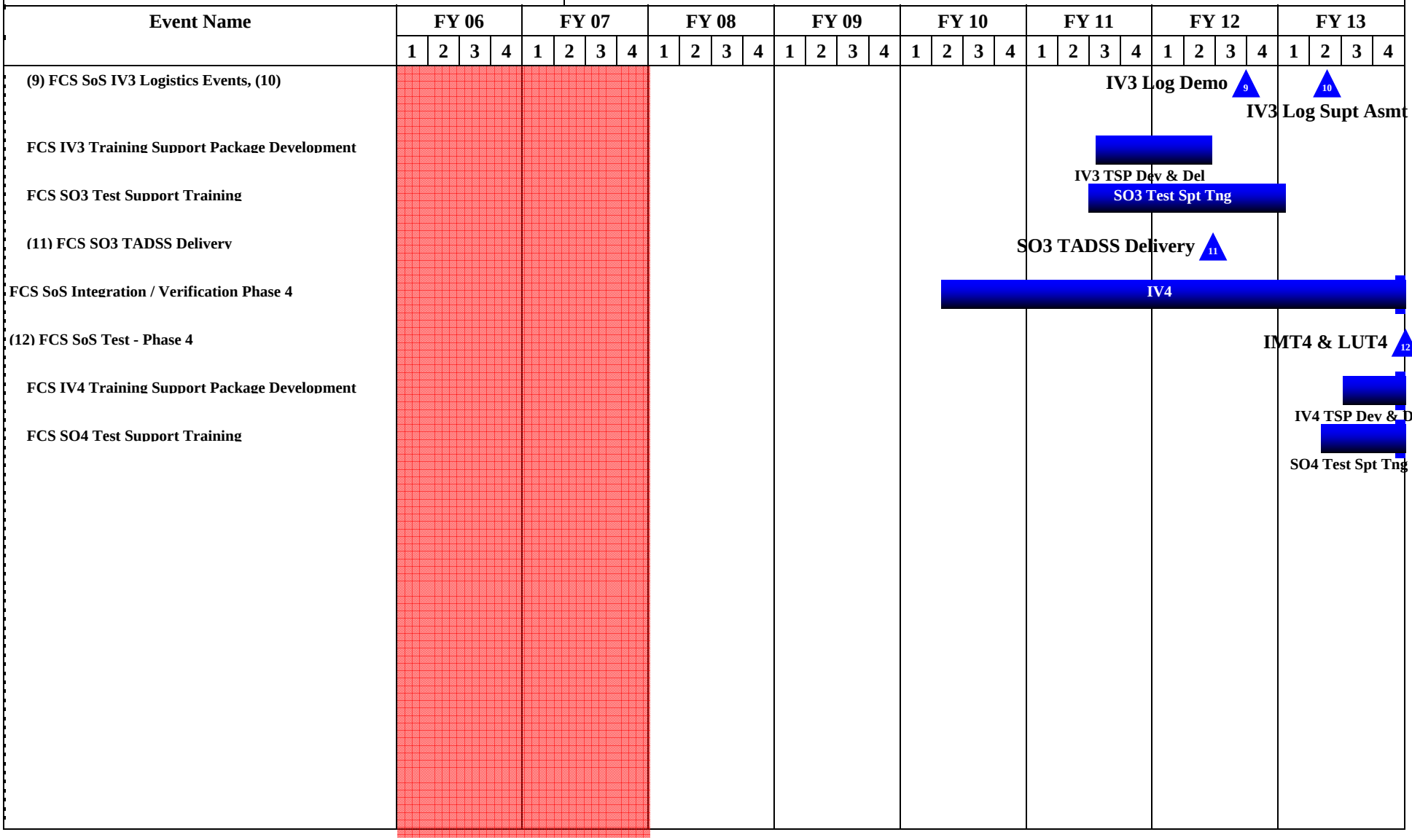
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F55



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F55

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS SO1 Logistics Events			3Q					
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS IV1 Logistics Events				2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS IV1 Training Support Package Development	3Q - 4Q	1Q - 4Q	1Q					
FCS SO1 Net Training Planning & Preparation		1Q - 4Q	1Q - 4Q					
FCS SO1 Test Support Training		1Q - 4Q	1Q - 4Q					
FCS SO1 TADSS Delivery			1Q					
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS IV2 Training Support Package Development				4Q	1Q - 2Q			
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS IV2 Logistics Events					3Q			
						2Q		
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS IV3 Logistics Events							3Q	
								2Q
FCS IV3 Training Support Package Development						3Q - 4Q	1Q - 2Q	
FCS SO3 Test Support Training						2Q - 4Q	1Q - 4Q	1Q
FCS SO3 TADSS Delivery							2Q	
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

FCS SoS IV4 Logistics Events								
FCS SoS Test - Phase 4								4Q
FCS IV4 Training Support Package Development								2Q - 4Q
FCS SO4 TADSS Delivery								
FCS SO4 Test Support Training								2Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F57**

COST (In Thousands)	FY 2006 Actual	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
F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat Systems, Brigade Combat Team (FCS BCT) is a joint system of systems (SoS) consisting of an advanced network integrated within of a series of manned/unmanned systems that via electronic architecture enables unprecedented joint connectivity, situational awareness/understanding, and synchronized operations. It will enhance the Army's most formidable weapon - the Warfighter. FCS provides unprecedented capability to see first, understand first and decisively defeat the enemy on the 21st Century battlefield. This FCS BCT SoS Force will be adaptable - from traditional to irregular warfare - conducted in various complex environments (rural/urban). FCS is the Army's Modernization Strategy and as such, is the #1 acquisition program for the Army.

This project supports development for a variety of Manned Ground Vehicles (MGVs)(exclusive of Non-Line of Sight - Cannon (NLOS-C) specific mission equipment) and includes technology maturation, systems engineering, subsystem/variant unique mission equipment (i.e. armament/fire control), integration/assembly, and prototype build. Also includes following common MGV subsystem development (to include NLOS-C subsystems): armor, suspension, structures, defensive armament system, signature management, NBC, vetronics, power and energy (includes hybrid electric drive), auxiliary systems and hit avoidance system. Project specified MGVs include: Infantry Carrier Vehicle (ICV), Mounted Combat System (MCS), Non-Line of Sight Mortar (NLOS-M), Command and Control Vehicle (C2V), Recon and Surveillance Vehicle (RSV), FCS Recovery and Maintenance Vehicle (FMRV), and Medical Vehicle (MV).

The ICV provides mobility for 11 personnel (two man crew and nine-man infantry squad) on the battlefield. Located within the infantry platoons and companies within the CA battalions. Delivers the dismounted force to the close battle and supports the squad by providing self defense and supporting fires. The ICV carries the majority of equipment freeing the individual Soldier from being burdened with equipment.

The MV provides advanced trauma life support within 1 hour to critically injured Soldiers. The MV serves as the primary medical system within the BCT and will have two mission modules (Evacuation and Treatment). The time-sensitive nature of treating critically injured soldiers requires an immediately responsive force health protection system with an expedient field evacuation system. The MV-Evacuation (MV-E) vehicle allows trauma specialists, maneuvering with combat forces, to be closer to the casualty's point-of-injury and is used for casualty evacuation. The MV-Treatment (MV-T) vehicle provide Advanced Trauma Management (ATM)/Advanced Trauma Life Support (ATLS) treatments and procedures forward for more rapid casualty interventions and clearance of the battlespace. Both MVs will be using installed networked telemedicine interfaces.

The FRMV is the recovery and maintenance system for employment in the FCS BCT. The Brigade Support Battalion (BSB) maintainers will be organized into Combat Repair Teams (CRT) supported by 10 FRMVs. These CRTs will perform in-depth BDAR and unscheduled field-level maintenance requirements beyond the capabilities of the crew to include lift, welding, cutting, and heating of materials.

The NLOS-M is the short-to-mid-range indirect fire support component within the FCS BCT. It will be organic to and provide networked, responsive and sustained indirect fire support to the Combined Arms Maneuver Battalion in the FCS BCT. It fires a suite of 120mm munitions that include special purpose capabilities to provide a variety of fires on demand including precision guided munitions such as precision guided mortar munitions (PGMM). NLOS-M will provide close support and destructive fires for tactical standoff engagement during both offensive and defensive operations in concert with line-of-sight, beyond-line-of-sight, other NLOS, external and joint capabilities in combat scenarios

spanning the spectrum of ground combat and threats.

The RSV features a suite of advanced sensors to detect, locate, track, classify and automatically identify targets from increased standoff ranges under all climatic conditions, day or night. Included in this suite are a mast-mounted, long-range electro-optic infrared sensor, an emitter mapping sensor for radio frequency intercept and direction finding, remote chemical detection, and a multifunction RF sensor. The RSV carries 6 Soldiers (2 common crew and 4 scouts).

The C2V provides the tools for commanders and staffs to command and control various elements of the FCS BCT. Via mission workstations and a common warfighter-machine interface, C2Vs contain the interfaces that allow commanders and their staffs to perform tasks such as fusing friendly, enemy, civilian, weather and terrain situations and distributing this information via a common operating picture. The C2V carries 6 Soldiers (2 common crew and 4 mission crew).

The MCS provides offensive maneuver to close with and destroy enemy forces. The MCS is capable of conducting mounted operations, mounted operations supported by dismounted infantry, and supporting dismounted infantry operations in all environments. The MCS delivers precision fires at a rapid rate to destroy multiple targets at standoff ranges quickly and complements the fires of other systems in the FCS BCT. It is highly mobile and maneuvers out of contact to positions of advantage. It is capable of providing direct support to the dismounted infantry in an assault, defeating bunkers, and breeching walls during the tactical assault. The MCS can engage targets from Beyond Line of Sight (BLOS). The BLOS capability allows the FBCT the ability to stand-off from the enemy's lethality envelope, allowing the MCS to be more lethal, at greater ranges.

The MGV Common Subsystems project includes developmental and engineering effort for the detailed design and integration of common components and sub-systems into a common chassis configuration applicable to the entire fleet of MGV combat vehicles. Major subsytems included in the Common Chassis design include a Hit Avoidance System (HAS), Propulsion (Hybrid Electric Drive with a High Power Density Diesel Engine), active dampening suspension with band track, Common Crew Station (CCS), Close Combat Armament System (CCAS), hull structure and armor, chassis auxiliary, Vehicle Electronics and Power Distribution (Vetronics). The focus of this effort is on a producible, reliable, sustainable, maintainable, and affordable common chassis design.

GOVERNMENT MGV GFX
Government GFX XM307 Prototypes- A light weight portable Advanced Crew Served Weapon utilizing 25mm air burst ammunition. XM307 has a full solution fire control system that includes a laser range finder and a day/night sight. It is highly portable within small soldier units and provides overwhelming lethality compared to existing systems. General Dynamics Ordnance and Tactical Systems is developing ammo. Kaman Dayron is developing the fuze and Raytheon is developing the full solution fire control.
FY06 - Develop requirements/specifications and ICDs for the XM307 weapon to be used on UGV or MGV variants. As a result of the Army decision in support of the FY08-13 POM, XM307 is no longer funded in the FCS Program.
Government GFX mobility Shaker Table rent to test the Mounted Combat System Mobility Firing fixture on the TARDEC Shaker Table.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
CONTRACTOR INFANTRY CARRIER VEHICLE (ICV)FY06 Develop specification, SOW and release Request for Proposal (RFP) for ICV multimedia slip ring. Release Gun Turret Drive System (GTDS) and Multi-Media Slip Ring (MMSR) Request for Proposal (RFP) and execute competitive source selection. Ammunition Feed System Brassboard Complete. Conducted ICV SFR. Initiate preliminary design and integration activities. Developed and update Subsystem Interface Control Documents(ICD) and critical item development specifications (CIDS). Developed Best Technical Approach (BTA) concepts. Update Subsystem Interface Control Documents (ICDs).	6179	11474		

Develop ammo feed system demonstrator and dry cycled 30mm rounds in initial turret test rig.FY07 Award subcontracts for the MMSR and the GTDS. Release ammunition feed system RFP, execute competitive source selection and award subcontract. Perform specialty engineering analysis (reliability, maintainability, logistics, HFE, and system survivability). Conduct Manned Ground Vehicles (MGV) Interim Program Review (IPR). Initiate Preliminary Design. Update Architecture products. Update ICDs. Initiate design activities for MK44 turret for ICV and RSV, Software builds, SigMan tests. Complete Human Factors Engineering (HFE) testing. Integrate C4ISR Emulators into SIL and Turret Test Rig. Start brass board ammunition feed system fabrication to evaluate reliability versus affordability trade. Perform specialty engineering analysis (reliability, maintainability, logistics, HFE, and system survivability).				
CONTRACTOR MOUNTED COMBAT SYSTEMS (MCS)- FY06/07 Preliminary Design Ammunition Sympathetic Detonation Mitigation System. Preliminary Design Ammunition Data Link for Beyond Line Of Site (BLOS) ammunition. Preliminary design and test of 120mm light weight gun system (XM360)to include firing of over tube. Preliminary design of 120mm Ammunition Handling System (AHS). Preliminary Design of Armament System and Mission Module (Turret Structure and Hardware/Software Integration). Completed the majority of the preliminary design efforts of the Armament consisting of the turret structure, ammunition handling system and the primary weapons assembly.Conducted System Functional Review (SFR). Designed sympathetic detonation barrier and conducted coupon testing. Fabricated three cannons for testing. Completed contracts for major sub-systems. Completed long lead procurement for initial assembly of the static firing fixture. Begin long lead procurements for the mobile firing test rig. Delivery of Prototype Ammunition Handling System. Delivery of the Lightweight 120mm Primary Weapon Assembly (XM360). Build of MCS Firing Fixture: Turret Integration of XM360 and Ammo Handling System Transfer Mechanism. Improve the following systems reliability through testing. Sympathetic Detonation Mitigation, Ammunition Data Link for use with BLOS Munitions,Dynamic Muzzle Reference Sensor, Advanced Fire Inhibit System, High Voltage Electric Gun Turret Drive, Ammunition Handling System. Begin Fabrication of Firing Test Rig (Drivable Common Chassis with Firing Fixture Integrated Turret) for full MCS System Integrated Testing of Firing on the Move. Continued Development of IV2 Subsystem Integration Capability. Develop initial fire control software for the firing fixture testing. Begin development of software for mobile testing. Start initial integration of the software and communications on the mobile firing test rig.	57413	69503		
NON-LINE OF SIGHT MORTAR (NLOS-M) FY06 In-Bore Round Retention Subsystem Component Maturation: Procured Surrogate Tube and Breech. Developed and Build Breech with incorporated IBARS. Developed and Start Fabrication of Firing Platform. Developed specification, SOW, release RFP and Award Contract for NLOS-M multimedia slip ring. Released Mortar Tube and Breech RFP, and Award Contract. Completed its system functional review in coordination with the rest of the FCS and MGV systems allocating system requirements and baselining a concept. Tube and breech vendor selected and preliminary design will start on the integrated vehicle. Component Maturation continuing with round retention ammunition handling and slip ring technology development and integration. Continuing the reliability investment program. Continuing the development and construction of an NLOS-M firing platform. FY07 Multimedia slip ring development and delivery of brassboard.Deliver Firing Platform,first round fired Feb 07. Perform Multivariable Testing for In-Bore Round Retention Subsystem Component Maturation. Procure, fabricate, and integrate hardware for Propellant Storage and Handling Component Maturation. Component maturation and integration continues on round retention, ammunition handling, and slip ring.Reliability Investment Program continued in FY07. Preliminary Design Efforts Continue in FY07. NLOS Mortar Firing Platform delivered. NLOS-M Firing Platform First Shot Down Range.	13977	19889		
CONTRACTOR COMMAND & CONTROL VEHICLE (C2V)- FY06-Completed C2V mock-up build (habitability study). Constructed C2V installed performance test bed. Initiated C2V installed performance and roof-top communications equipment de-confliction studies. Initiated preliminary design of the mission work station. Completed system level requirement allocations to subsystems and subsystem requirements development by IPDR. Continued C2V habitability study and Soldier-centric evaluations. Updated subsystem critical item development specifications (CIDs) and interface control documents (ICDs). FY07 C2V - Conduct communications lab integration testing	19494	17248		

in preparation for field testing. Conduct C2V installed performance component maturation testing at EPG. Continue User Jury evaluation process for Mission Work Stations. Develop preliminary design for C2V Mission Work Station and integrated platform. Conduct displays hardware R&D to address physical packaging and environmental challenges. C2V model (IV1) delivery to SoSIL. Begin SIL I&T of initial common/C4ISR equipment in C2V configuration. Integrate mission module and development efforts with C4ISR emulators into the system integration lab. Conduct software build efforts including common software integration. Continue to update subsystem critical item development specifications and interface control documents. Continue human factors engineering analysis and testing.				
CONTRACTOR RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV) - FY06-Completed RSV mock-up build (physical and MANPRINT). Began RSV installed performance and roof-top sensor de-confliction studies. Completed System Functional Review. Matured subsystem critical item development specifications and interface control documents. Updated best technical approach. FY07 RSV- Preliminary design activities for RSV mission work station and integrated platform. RSV System Integration Laboratory (SIL) Build-up. RSV Simulation Delivery to SoSIL (IV1). Continue installed performance and roof-top sensor de-confliction studies. Update subsystem critical item specifications (CIDS) and interface control documents (ICDS). Continue human factors engineering analysis and testing.	19048	18337		
CONTRACTOR FCS RECOVERY & MAINTENANCE VEHICLE (FRMV) FY06 - Conducted FRMV SFR & Initiated preliminary design and integration activities. Developed Subsystem draft CIDS. Developed BTA concepts. Updated Subsystem Interface Control Documents (ICDs). Initiated the development of FRMV Integrated System Model to evaluate alternate crane designs and towing concepts. Performed platform stability analysis for Tactical Crane System. FY07 FRMV - Release Mission Equipment RFPs, execute competitive source selections & award subcontracts for Crane and Winch subsystem/components. Concept maturation and fabrication of FRMV towing system brass board. Conduct Manned Ground Vehicles (MGV) Interim Program Review (IPR). Initiate Preliminary Design. Execute Concept Maturation and Fabrication of Tactical Crane System Brass Board. Update Architecture products. Update ICDs. Concept maturation and fabrication of FRMV towing system. Develop full scale FRMV mock-up. Evaluate man-print issues.	7920	15876		
CONTRACTOR MEDICAL VEHICLE (MV) - FY06- Updated full scale mock-up and designed and integrated a brassboard litter lift system. Demonstrated integration of MC4 Software with MV Rapid Automated Medical Processor System (RAMPS). Demonstrated and evaluated prototype shelter from Natick Soldier Center. Conducted MV SFR. Completed Weight IDA#1 & #2. Developed Subsystem draft CIDS. Developed BTA concepts.Completed AL1 Use Cases. Updated Subsystem Interface Control Documents (ICDs). FY07 MV - Initiate development of treatment table. Conduct Interim Program Review (IPR). Initiate preliminary design and integration activities. Evaluate COTS shelters and downselect. Complete system and subsystem level trade studies. Complete AL2 Use Cases. Update Architecture products. Update ICDs. Build prototype Litter Lift System.	5639	8022		
COMMON SUBSYSTEMS - Specify, Design, Procure and Begin Testing of Early Prototype Configuration (EPC) and Production Prototype Configuration (PPC) threshold Common Subsystems. Finalize SIL Development Plans and initiate testing. Baseline & initiate design of SW Build 1 Requirements. Complete system, functional, thermal and software architectures for MGV. Common Subsystem size, weight, power, cooling, reliability and cost allocations completed. Complete Common system and subsystem EPC/PPC best technical approach (BTA) with appropriate trade studies. Complete initial EPC ICDs for internal and external interfaces. Document Common risks and their associated mitigation plans. Begin Common Preliminary Design. Initiate Procurement of Inc 1 Subsystems. Common PPC ICDs baselined. Conduct NLOS-C Design Reviews. Major subsystem procurements to support NLOS-C EPC vehicles. Begin NLOS-C EPC Fabrication. Complete ATR Design and begin fabrication. Band Track Component Maturation. COMMON SUBSYSTEMS FY07 - Specify, design, procure and begin testing of EPC and PPC Threshold Common Subsystems. Finalize SIL Development Plans and initiate testing. SW Build 1 Requirements Baseline Design initiated. Complete system, functional, thermal and software architectures for MGV. Common Subsystem size, weight, power, cooling, reliability and cost allocations completed. Delivery and integration of propulsion	339110	372475		

assemblies (High Density Diesel Engine, Generator, Traction Drive System, etc). Complete Common system and subsystem EPC/PPC best technical approach (BTA) with appropriate trade studies. Complete initial EPC ICDs for internal and external interfaces. Document Common risks and their associated mitigation plans. Begin Common Preliminary Design. Initiate Prototype Procurement of PPC Subsystems. FY07 - fabricated 4 (EPC configuration)common chassis.				
GOVERNMENT GFX XM307 - FY06: Instituted contract modifications that incorporate FCS specific requirements for a remotely operable weapon. Conducted a revised System Functional Review against the updated requirements. Instituted a reliability improvement program to address the aggressive reliability requirements which were flowed down from the FCS program. The contractor had previously shown compliance to the contract 1500 mean round between stoppage (MRBS) value and appeared on the development path to attaining the incentivized 3500 MRBS value. Subsequently, the contractor made some design approach modifications that would simplify the mechanical action of the weapon and proved a point estimate MRBS value of 6500 (with analysis indicating a potential value at maturity of over 15000).FY07: Down-selected an electronic air bursting fuze approach between the assessed options of mechanical an electrical. The XM307 effort was terminated in Jan 07 due to Army funding constraints. This estimates includes estimated Termination cost.	30689	15252		
Small Business Innovative Research/Small Business Technology Transfer Programs		15870		
Total	499469	563946		

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772548	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing

0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F57

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
INFANTRY CARRIER VEHICLE (ICV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 2	39447	6179	1-3Q	11474	1-3Q						57100	
MOUNTED COMBAT SYSTEMS (MCS)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1	108237	57413	1-3Q	69503	1-3Q						235153	
NON-LINE OF SIGHT MORTAR (NLOS-M)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 3	23805	13977	4Q	19889	1-3Q						57671	
Contractor Common Component Vehicle Subs	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1,2,3	228860	339110	1-3Q	388600	1-3Q						956570	
COMMAND & CONTROL VEHICLE (C2V)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1	39426	19494	1-3Q	17248	1-3Q						76168	
RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1	39828	19048	1-3Q	18337	1-3Q						77213	
Medical Vehicle (MV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 2	4225	5639	1-3Q	7767	1-3Q						17631	
FCS RECOVERY & MAINT VEH (FRMV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 2	6602	7920	1-3Q	15876	1-3Q						30398	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F57**

GFX XM307 Prototypes	Direct	General Dynamics Arm. & Tech. Products, Charlotte, NC		30689	2-3Q	15252	1-3Q						45941	
Subtotal:			490430	499469		563946							1553845	

Remarks: Remark 1: Subcontractor: General Dynamics Land Systems - Sterling Heights, MI
Remark 2: Subcontractor: BAE - Ground Systems Division - Santa Clara, CA
Remark 3: Subcontractor: BAE - Armament Systems Division - Minneapolis,MN

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

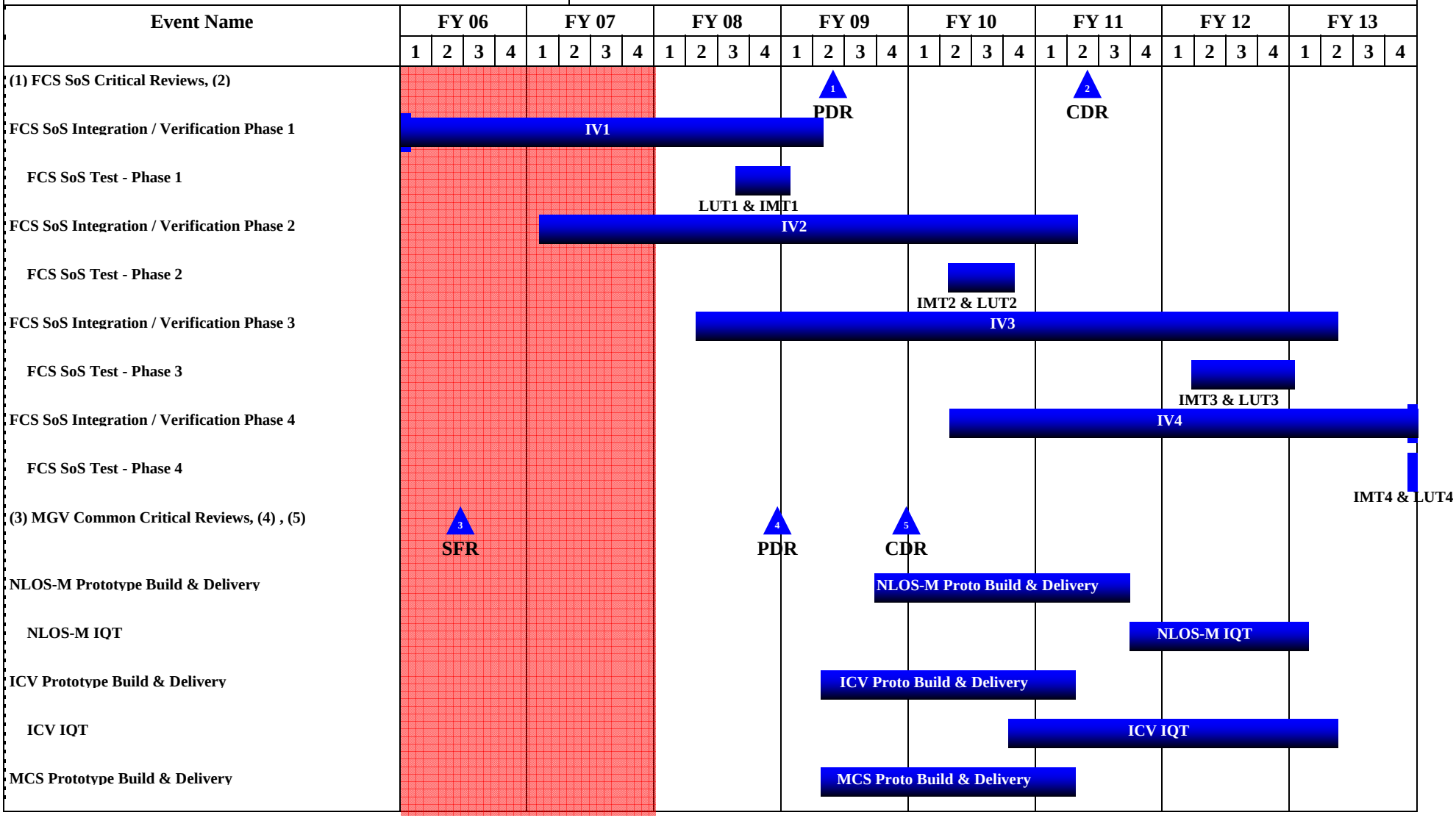
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:			**490430**	**499469**		**563946**							**1553845**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F57**



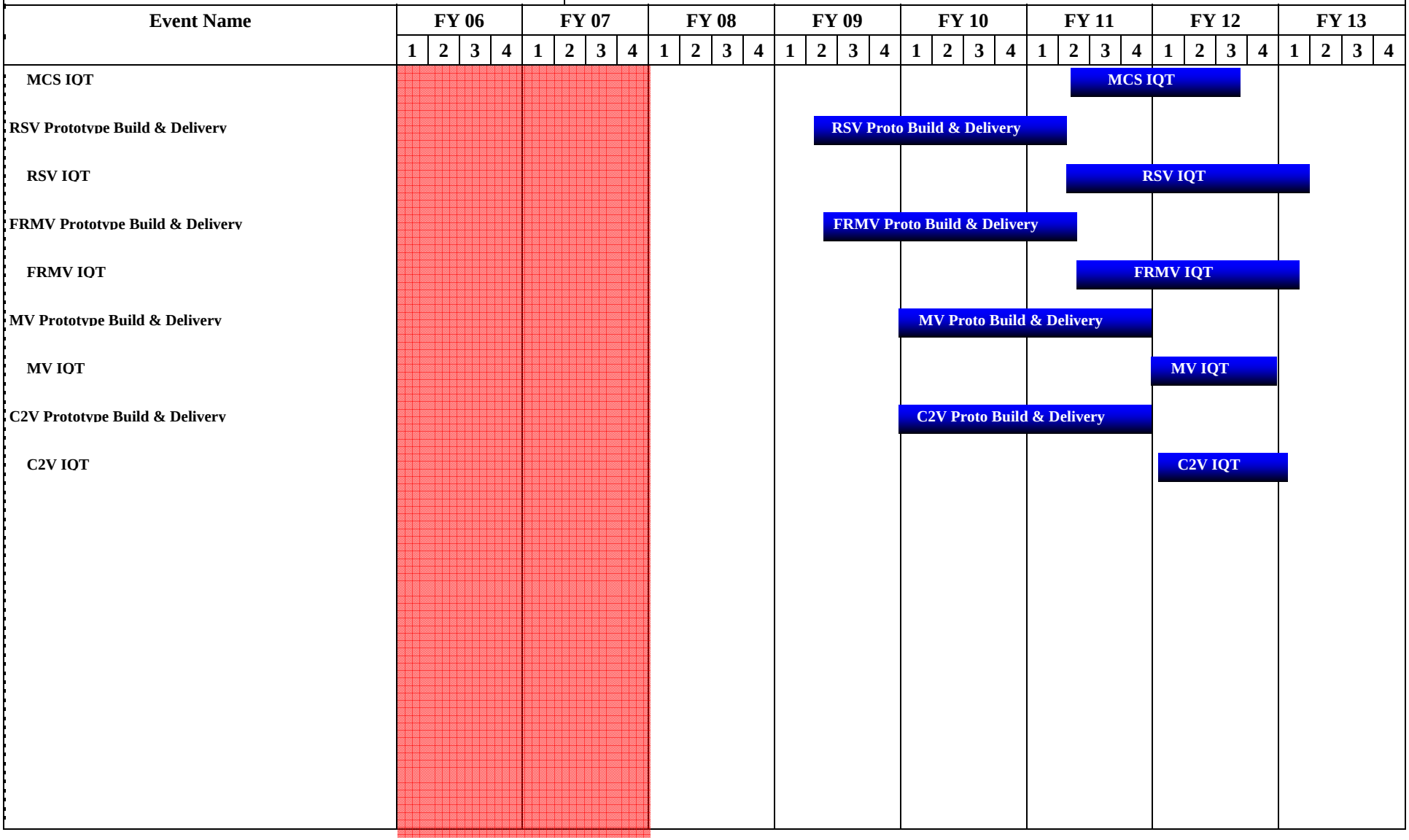
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F57



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F57

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
MGV Common Critical Reviews	2Q							
			4Q					
				4Q				
NLOS-M Prototype Build & Delivery				3Q - 4Q	1Q - 4Q	1Q - 3Q		
NLOS-M IQT						3Q - 4Q	1Q - 4Q	1Q
ICV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
ICV IQT					4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
MCS Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
MCS IQT						2Q - 4Q	1Q - 3Q	
RSV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
RSV IQT						2Q - 4Q	1Q - 4Q	1Q
FRMV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
FRMV IQT						2Q - 4Q	1Q - 4Q	1Q
MV Prototype Build & Delivery				4Q	1Q - 4Q	1Q - 4Q		
MV IQT						4Q	1Q - 4Q	

C2V Prototype Build & Delivery				4Q	1Q - 4Q	1Q - 4Q		
C2V IQT							1Q - 4Q	1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F61**

COST (In Thousands)	FY 2006 Actual	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
F61 S o S Engineering and Program Management	2027766	2142970							Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project includes System Development and Demonstration (SDD) contractor efforts associated with System of Systems (SoS) engineering, analysis and integration, Network Software and Hardware, SoS Test and evaluation and program management. In addition to these contractor efforts, this PE/project also includes all Government efforts (test,program management, analysis, contracting, Financial management and support to to other DOD agencies for joint programs and collaboration efforts with FCS.

The following summarizes what is included within the SOS Engineering and Program Management Project:

SoS Engineering - Conduct SoS reviews, top level trade studies, and architectural design of the SoS including requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness.

Program management - The development of processes, tools, meetings, Earned Value Management (EVM), risk management, software management, etc used to manage the total program (to include subcontractors/Partners) to achieve the SoS program goals within the available dollars and schedules.

NETWORK SOFTWARE - Includes development (design,code, and test) of network software required to implement the network and common software for the network or nodes on the network. Includes the SoS Common Operating Environment (SOSCOE) suite of network and security services, together with distributed network applications software for; battle command, data fusion, logistics decision support and mission readiness, as well as training applications.

COMMON NETWORK HARDWARE - Includes design, development and prototype procurement of common hardware required for implementation of the data network. This includes sensors, communications hardware and computer processing capabilities.

Because of the criticality of the Network (Hardware and Software) the Army has created a new PE (concurrent with the FY08 President's budget submission to Congress) to provide Congress more visibility for all Network hardware and software development efforts.

SoS Test and Evaluation - Includes contractor and Government test and analysis to ensure SoS and FoS performance is effectively and efficiently achieved to specific criteria. The results of the SoS test is validation/verification that the resulting specifications meet the ORD and O&O requirements

Government Support Costs - Includes funding for government personnel to include labor, travel, training, supplies, and other support costs (support contractors, Automated Data Processing (ADP), communications, supplies, and equipment). It includes support efforts for other services for Joint Programs, Multinational Project Arrangements, and collaborative efforts. Includes the procurement of Government Furnished Equipment/Items/Data (GFX) for the LSI. GFX is used when procurement through the government is less expensive than through the LSI.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
GOVERNMENT - SYSTEM ENGINEERING & PROGRAM MANAGEMENT (SEPM) SoS Engineering - Participate and ensure the government's best interest/value are considered in the following: SoS reviews, trade studies, architectural management, requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness, Software Management, Risk Management, Modeling and Simulation Management, Performance Assurance Management, Integration & Verification Management, Technology Management, Experimentation, and FCS Spin Out Development. PM - Provide integrated program management (i.e. planning, directing, tools and controlling functions, for all development activities, program control, procurement and contracts management, operations management, Congressional title 10 oversight, cost analysis and management, Budget development and justification, Earned Value Management, integrated master schedule development and management, Complementary Program management and operations management.	105298	128098		
GOVERNMENT - SYSTEM TEST & EVALUATION (STE) Defense Research Engineering Network (DREN) Connectivity: Funding for connectivity (point-of-service fees and hardware purchases) of SoSIL nodes to the (DREN). AMMUNITION: Procurements includes ammunition to support firing fixture testing and integration testing including with NLOS-C testing. ATEC Test Integration Network (ATIN): Development of the ATIN providing intra-range and inter-range connectivity between all ATEC test centers and the SoSIL distributed network. Threat Systems/Simulators and Test Targets: Funds PM-ITTS to develop and procure threat systems and simulators and test targets in support of FCS test. INFRASTRUCTURE: Development of the SoSIL nodes at the White Sands Missile Range and at the APG for local integration efforts of FCS variants. MODELING AND SIMULATION FOR TEST: The development of test tools to analyze results from Force-on-Force simulations, integrated spectral terrains for FCS applications, Digital Collection, Analysis and Review (DCARS), Test Conduct and Reporting System (TCARS), and Role Player Work Station (RPWS). FCS Unique Instrumentation: The development and implementation of FCS unique instrumentation (Advanced Passive Armor Test Capabilities, Precision Engagement Instrumentation, enhancements to meet E3 specification, and telemetry expansions) which will bridge critical instrumentation shortfalls at ATEC ranges. Test Range Support (Test Execution at Army Test Ranges): Specialty testing to include initial nuclear radiation (INR) survivability testing of MGV components and CBRN coupon material testing, MCS gun qualification and AHS compatibility testing, NLOS-C and NLOS-M compartmentation testing, NLOS-C cannon pre-fatigue testing, cannon breech cooling testing, and laser ignition testing, co-site and sensor performance testing, UGV ANS testing, co-site, and sensor performance, and NLOS-C and MCS lethality testing will be conducted.	110712	119779		
GOVERNMENT - MODELING AND SIMULATION (M&S) Funds are provided for enhancement of ATEC, RDECOM and TRADOC M&S capabilities essential to implement the FCS M&S strategy. This strategy is dependent on linking FCS based M&S requirements	11000	13699		

with existing Army M&S capabilities with a focus on minimum "built from scratch" program M&S and maximum reusable integration of Army M&S capabilities. PM FCS (BCT) will work with 3 Commands to create persistent, leave behind capabilities for the Army in the area of SoS M&S. 3CE will develop enhanced, more interoperable M&S tools, capabilities and processes that will increase the overall capabilities of M&S These improved capabilities will reduce the overall costs to the LSI in integration, lifecycle applicability and reduce cycle time from requirements to integration with FCS simulation environment, particularly in IP1 and beyond. Application will be developing reference implementations that move M&S from cold war capabilities to those of NW-centric M&S. 3CE will also provide a larger library of tools available for consideration, incorporation and breakdown of the funding based on integrated 3CE ongoing planning, M&S technical program management and integration with FCS program. M&S persistent network nodes that link all 3CE commands together and to the SoSIL network. M&S requirements, architecture and gap analysis for 3CE and integration with the same from FCS LSI. M&S capability identification and development of emerging technologies. Capability Integration and interoperability support. FCS IV&V support will continue throughout the program. IV&V Strategy and Master Plan. Multi Cell & Dismounted Command and Control (M&DC2). M&DC2 is being recommended by TRADOC for use by the Army and for a replacement for the MC2 Device at UAMBL (their current BC surrogate). M&DC2 needs to convert from OTB to OOs as its principal battle environment.				
GOVERNMENT SPIN OUT 1 - This effort provides for the integration of FCS technologies, the Integrated Computer System (ICS) and the Ground Platform Communication System (GPCS) into current force vehicles to include the Abrams M1A2SEP, the Bradley M2A3 and the High Mobility Multi Wheeled Vehicle (HMMWV). Efforts during the FY06-FY07 period include the design of integration kits, software integration, procurement of material to build prototypes, finalization of ICD/CDRs and initial contractor testing for the LUT configuration. Efforts also include procurement of long lead material for the different platform A-Kit designs. Preliminary Design Reviews (PDR) for the three current force platforms A Kit designs. Provide for Integrated program management to include the systems engineering, test, coordination, budget and cost development and justification, and the integrated master plan and schedule management.	7400	27900		
GOVERNMENT - OTHER and GFX - GFX supports the LSI contract. Dollars to fund GFX efforts came off the LSI contract as part of the definitization of the transition contract award. GFX requirements include the following: Government support to JEFX Experimentation, Multinational Interoperability support, C4ISR hardware to support Experiments 1 and 2, C4ISR End to End Network, hardware required to support Spin Out 1 assessment, TRADOC support including (TDY), Modeling and Simulation software updates, Mobility Shaker Support rent, support to NV labs. Government Other costs include ACE site licenses funding, SE/PM government labor, other non labor government costs and STEs from the base contract and transition.	79533	153775		
CONTRACTOR PROGRAM MANAGEMENT - Develop the processess, models, tools and management structure to integrate all subcontractor partners into one team, to meet cost, schedules,and technical performance requirements in the contract. This includes program overview, demonstration, Earned Value Management, briefings, Demos, reports, meetings to support Program, risk Management, subcontract Management, Small and Minority Business Integration, data management, operation Management, contract Management, CDRL Management, Procurement, Acquisition Management, SDD Affordability/CAIV/ Life Cycle Management, Development of program baseline and Integrated Master Schedule Development. FY06 accomplishments include: the SEPM plans for FY07 including upgrade to the Single Integrated Model V4.0, SoSADD release, Sos Operationsal Views update, Engineering Iteration 1 SoS Design, EA1 Readiness Anchor Point, EI1 Assesment Anchor Point. Integration Planning readiness assessment and Experiment 1.1 report to be released. BCT Single Integrated Model V4.0 Updated or Released. ARCH Single Integrated Model V3.y updated. ADP updated. SoSADD Release.SoS Operational Views updated. EI1 FCS UA SoS Design. EI1 Engineering Iteration Readiness Anchor Point (EI1RAP). EI1 Engineering Iteration Assessment & Assessment Anchor Point (EI1AAP). IV1 Planning readiness assessment. Experiment 1.1 report released.	163384	182700		
CONTRACTOR NETWORK SOFTWARE - Network Software FY06 Accomplishments; Complete Development & Test & Formal	354189	316841		

Qualification Test of Build 1.5 and 1.5.1 SOSCOE. Begin development of SOSCOE build 1.8. Design, Develop, Integrate and Test Spin Out 1 Engineering Release of Battle Command. Design, Develop, Integrate, and FQT Network management Software Build 1. Begin development of Platform Soldier-mission Readiness System (PS-MRS) (Build 1 Eng. Drop) and Logistics Decision Support System (LDSS) (Build 0.5). Conduct JEFX 06 Exercise with the US Air Force. Complete Design and Integration of Experiment 1.1 Hardware and Software. Conduct Experiment 1.1 Lab and Field ExperimentsFY07 Planned Accomplishments; Complete development and FQT SOSCOE Build 1.8SOSCOE (1.2.1.2.1.1). Begin development of SOSCOE Build 2.0. Complete development and FQT Battle Command build 1.0. Complete development and FQT Network Management Software Build 1.0 Engineering Release 2. Complete development of Platform Soldier-Mission Readiness System (PS-MRS) (Build 1 Eng. Drop) and Logistics Decision Support System (LDSS) (Build 0.5). Complete Experiment 1.1 Field Demonstration. Deliver Experiment 1.1 Final Report. Begin planning ativities to support Hardware and Software Requirements for JEFX 08. Complete Initial Objective Definition for Experiment. 2.1				
CONTRACTOR NETWORK - HARDWARE - Contractor Network Hardware FY 06 Accomplishments. Procure and Receive JTRS (Joint Tactical Radio System) pre-EDM GMR 1 radios (50) and surrogate HMS 5 radios (186). Conduct Design Reviews For Integrated Computer Systems. Develop and Deliver ICS 22 Simulators & 51 Emulators to Test Labs. Develop and Deliver EI1/IV1 Sensor Simulators. Complete Technical Maturation from TRL 4 to TRL 5 of Multi-Function RF System (to TRL 6 in FY07). Completed SFR for most UGS, Air, and Ground Sensors (Except for Sensors awarded in FY06). Execute Preliminary Design Review for MFRF/CID, R&SV, MREO, MR Mast, and AiTR Ground Sensors. FY07 Planned Accomplishments; Deliver 72 ICS Emulators 21 ICS Type VI Prototypes and 1 Brassboard. Deliver GPCS (Ground Platform Communication System) Type 20 for HMMWV and 12 payloads for Spin Out vehicles. Deliver Simulators and Emulators to C4 SILs. Execute PDR for Class I, Class IV EOIR Sensors. Deliver updates to ASI & GSI Sensor Simulations. Deliver Sensor Emulators for R&SV and FRMV Emulator. Conduct PDR for Short-range EOIR, Acoustic, Emitter Mapping, and SUGV EOIR Ground Sensors and CDR for the Balance of the Ground Sensors. Complete Tech Maturation effort moving MFRF and AiTR to TRL 6. Complete First MFRF Brass board Sensor	306540	355660		
CONTRACTOR SYSTEM REQUIREMENTS & INTEGRATION - FY06/07 SoS Engineering - Conduct architectural design, requirements decomposition and flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness. This includes: completing baseline system and software architectures, complete initial Interface Control Documents (ICDs) for internal and external interfaces, complete the baseline Prime Item Development Specifications (PIDS)-(1200 requirements). The Integrated concepts and requirements refinement for operational Systems engineering include; conducting FD/FA, develop and design the Design Reference Mission Profiles to insure FCS equipment meets Army requirements, conduct Force Trade assessment, O & O Refinement, and Operational Views for Architecture. Participate in Experiment 1.1, Develop/Plan/ and execute IV1, to include architecture development, and defining interfaces for systems entering preliminary design. Support JFEX Experimentation with A/B kit design and fabrication. Support Experiment 1.1 by modifying vehicles surrogates to integrate the JTRS cluster 1/Cluster 5 and WIN-T radios, FBCB2, AFATDS, DCGS-A. Develop Experiment detailed test procedures. Assembly of Test Consoles for Battle Command Suite Test and Integration, Integration of MGV, UGV, UAV electronic compartment Mock-ups, Initial Test of Laboratory Test equipment software, Initiate Network system Communication test event, Develop IV1 simulation requirements documentation, Develop IV1 simulation Test procedures, Integration and test of Ground and Air Sensor Simulations from "One Team Partners", Integrate SoSCOE into an integrated C4ISR software suite.	509696	418587		
CONTRACTOR SoS TEST - FY06 - Integration Phase 0 - Establish foundational ties between requirements, architecture, and interface products & the time-phased SoS-level H/W & S/W Capability/Functionality buildup planning products. Develop and execute test plans for the Integration Phase 0 Integrated Mission Test to include: stand-up SoS Integration and Verification, and Test Capabilities and Processes. FCS to perform the Networked Fires and Provide Force Health Protection Integrated Processes; initial interoperability with the	34365	36704		

AFATDS, FBCB2, and GCCS-A complementary programs; maturation of the test articles, environment, and infrastructure. Participate in JEFX 06. This experiment is a multi-service focused on network centric operations and ISR fusion as well as advanced command and control systems. FY07- Demonstrate initial capability to establish and control the FCS Network, manage selected sensors, display initial BCT level Common Operating Picture interface with selected external M-BCT assets, demonstrate selected Distributed Systems functions and provide test data to support Spin Out 1. Execute Experiment 1.1 with the following objectives: effect of quality of service implementations on network performance; assess maturity of distributed fusion management; assess interoperability and IA between selected assets; assess maturity of GMR and the WNW waveform, and HMS and the SRW waveform; demonstrate progress and maturity of selected FCS technologies; support selected KPP analysis and risk mitigation. Complete Development of Procedures, Documentation and Plans for IMT 1. Stand up the Test Data Management Capability. Complete Experiment 1.1 Phase II Field Event. Train Test Role Players. Test Support Engineers and Test Control Engineers for Exp 1.1 & IMT 1. IMT1 Test Planning and Preparation Start of IMT1. Spin Out 1 Planning, Preparation and Infrastructure Setup. Deliver Annual Update to ITEP.				
CONTRACTOR - FEE This includes both the LSI fixed and incentive fee.	345649	328921		
Small Business Innovative Research/Small Business Technology Transfer Programs		60306		
Total	2027766	2142970		

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing

0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F61

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CONTRACTOR- PROG MGT	OTA/FAR	The Boeing Company - ST. LOUIS, MO see remark 8	478788	146053	1-3Q	182169	1-3Q						807010	
CONTRACT FEE	OTA/FAR	The Boeing Company - ST. LOUIS, MO	276401	323878	1-3Q	326957	1-3Q						927236	
CONTRACTOR NETWORK SOFTWARE	OTA/FAR	The Boeing Company - ST. LOUIS, MO see remarks 1,4,5,6,7,11,12,13,14	414005	316615	1Q	315921	1-3Q						1046541	
CONTRACTOR NETWORK HARDWARE	OTA/FAR	The Boeing Company - ST. LOUIS, MO see remarks 2,3,9,10		274022	1Q	354626	1-3Q						628648	
CONTRACTOR SYSTEM REQUIREMENTS AND INTEGRATION	OTA/FAR	The Boeing Company - ST. LOUIS, MO remark 8	471713	455627	1-3Q	417370	1-3Q						1344710	
Subtotal:			1640907	1516195		1597043							4754145	

Remarks: 1: Subcontractor: Honeywell, Albuquerque, NM. (Platform Soldier mission readiness systems - Software),award date April 2006
2: Subcontractor: BAE Systems, Wayne NJ (Air Ground Communications Integration)
3: Subcontractor: General Dynamics Advanced Information Systems, Bloomington MN (Integrated Computer Systems)
4: Subcontractor: Northrop Grumman - Mission Systems, Carson, CA, (Logistics Decision support Systems - Software)
5: Subcontractor: Raytheon, Fort Wayne, IN, (Battle Command & Mission Execution - Software)
6: Subcontractor: Overwatch/Austin Info Systems, Austin, TX, (Situational Understanding - Software)
7: Subcontractor: General Dynamics C4 Systems, Scottsdale, AZ, (Sensor data arrangement & planning & preparation services - Software)
8. Subcontractor: SAIC, San Diego,CA
9. Subcontractor: Raytheon Network Centric Systems, Plano,TX (Ground Sensor Integration), award date Sep 2003
10. Subcontractor: Northrop Grumman Electronic Systems CMS - Belcamp,MD (Air Sensor Integration), award date Sep 2003
11. Subcontractor: LM Integrated Systems & Solutions - San Diego,CA (Level 1 Fusion - Software), award date Oct 2003
12. Subcontractor: Northrop Grumman Network Management Systems - Carson,CA (Network Management System- Software), award date Oct 2003
13. Subcontractor: Boeing Mesa - Mesa,AZ (Warfighter Machine Interface - Software), award date Sep 2003
14. Subcontractor: International Business Machines - Bethesda,MD (Logistics Management System- Software)

II. Support Costs	Contract	Performing Activity &	Total	FY 2006	FY 2006	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F61

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
GOVERNMENT SYS ENG PROGRAM MGT	DIRECT	PM FCS (BCT) - ST. Louis, MO	115991	105298	1-4Q	122959	1-4Q						344248	
GOVERNMENT OTHER	DIRECT	PM FCS (BCT) - ST. Louis, MO	34958	79534	1-3Q	148526	1-3Q						263018	
SPIN OUT	DIRECT	PM FCS(BCT) - ST. Louis, MO		7400	1-3Q	27900	1-3Q						35300	
Subtotal:			150949	192232		299385							642566	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CONTRACTOR - SoS Test	OTA/FAR	The Boeing Company - ST. LOUIS, MO.	29204	30720	1Q	36597	1-3Q						96521	
GOVERNMENT - STE	DIRECT	PM FCS-BCT - ST. Louis, MO , see remarks 1-6	68072	277619	1Q	196796	1-3Q						542487	
GOVERNMENT MODELING & SIMULATION	DIRECT	PM FCS-BCT - ST. Louis, MO	21355	11000	1Q	13149	1-3Q						45504	
Subtotal:			118631	319339		246542							684512	

Remarks: Remark 1:Subcontractor, Whitman, Requardt & Assoc, Baltimore, MD;
2: John C. Grimberg Co., Rockville, MD
3: ADT Corp, Baltimore, MD
4. Netversant Co., Baltimore, MD
5. 3D Research, Huntsville, AL
6. Jacobs/Sverdrup, Aberdeen, MD

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F61**

Remarks: .

Project Total Cost:	**1910487**	**2027766**		**2142970**							**6081223**	

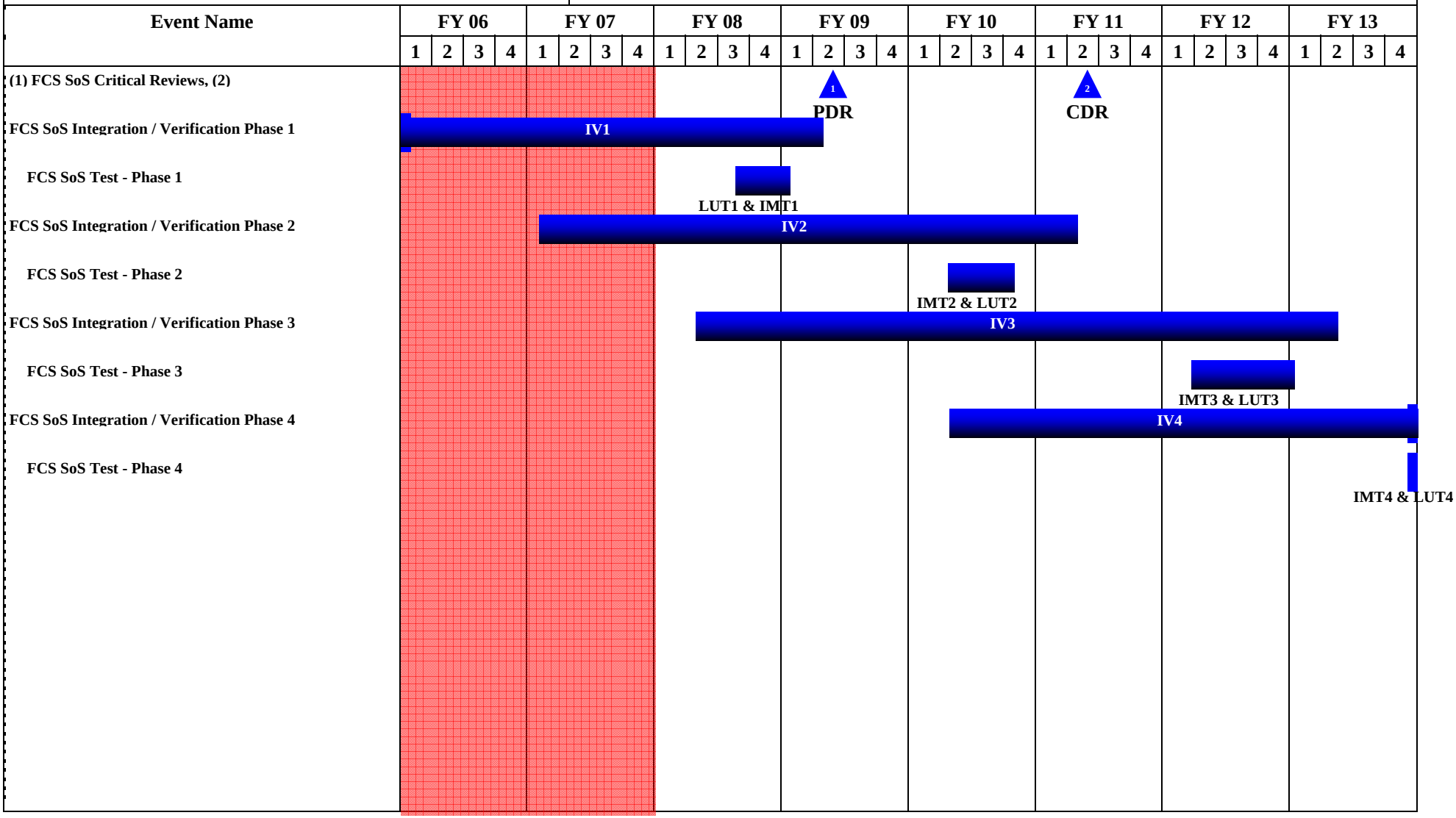
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

PROJECT
F61



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM)-Eng. Dev.**	**F61**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non Line of Sight Launch System**	**F72**

COST (In Thousands)		FY 2006 Actual	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
F72	NON LINE OF SIGHT LAUNCH SYSTEM	216668	320650	253410	199064	40329	6000				1036121

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development, and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project funds the System Development and Demonstration (SDD) for the Non-Line of Sight Launch System (NLOS-LS), which is a core system of the FCS.

This project focuses on the development of a materiel solution to meet the NLOS-LS operational need as delineated in the FCS Operational Requirements Document (ORD). NLOS-LS provides enabling lethality for the FCS (BCT). NLOS-LS consists of the Precision Attack Missile (PAM) and a highly deployable, platform-independent Container Launch Unit (CLU) with self-contained technical fire control, electronics, communications and software for remote, unmanned operations. The PAM will be vertically launched directly from the CLU based on fire missions received via the FCS network and will be capable of being updated in-flight via on-board radios by the network. The vertical launch capability permits a system that is highly deployable as well as the ability to engage a wide spectrum of targets in diverse environments and terrain. The PAM will have Automatic Target Acquisition (ATA) capability which can be upgraded in future versions.

In January 2006, the NLOS-LS Project Office became a Joint Project Office with the Army and Navy entering into a Memorandum of Agreement to pursue NLOS-LS as the Navy's material solution for small boat threat on its Littoral Combat Ships.

The FY 06-11 funding supports the NLOS-LS SDD program. Beginning in FY 05, the NLOS-LS (CLU and PAM) was realigned to meet the FCS Spin Out 1 requirements and to be evaluated by the Evaluation Brigade Combat Team (EBCT) for insertion in current forces using their communications capability in lieu of the FCS network.

The FY07 funding reflected in these R-Forms does not contain FY07 SBIR/STTR reduction of $9,024 million.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
PAM Accomplishments FY 06 - Completed PAM System Functional Review (SFR) and Preliminary Design Review (PDR), Insensitive Munitions (IM) screening tests on warhead and motor designs, Control Actuation System (CAS) breadboard integration with pintle rocket	113702	133945	111332	58208

motor, transitioned S&T 640x480 Focal Plane Array as PAM Baseline Seeker, Electro-Magnetic Interference testing on EPAM seekers and Captive Flight Tests (CFT) to validate EPAM Seeker and Moving Target Indicator software performances, CFT 9 (cold weather, Grayling, MI), CFT 10 (Tropical, Schofield Barracks, Hawaii), PAM Container Cover Live Fire Test, PAM Sub-system Detailed Design Reviews (DDR Software Engineering), Integration and Verification (IVO) simulations, PAM Integrated Flight Simulation (IFS), wind tunnel tests and developed Performance Baseline for PAM. --FY 06/07 ACTIVITY-- PAM IFS. --FY 07 ACTIVITY-- PAM detailed system design; software engineering; radio integration; Integration and Verification (IV1) simulations; PAM sub-system intermediate CDR; prototype manufacturing; component detailed design; component procurement; and qualification testing (engines, warheads, Electric Safe Arm Device (ESAD), etc.); CFT; air drop test; and wind tunnel tests. PAM IFS; support Live Fire activities with lethality analyses; and PAM Component Testing and Qualification. --FY 07/08 ACTIVITY-- Pilot line setup. --FY 08 ACTIVITY-- Continue Performance Based Logistics (PBL) Evaluations; support Development Test (DT) program through modeling, simulation, threat, and lethality analyses; and support evaluation against requirements for program. --FY 09 ACTIVITY-- Continued support for DT Guided Test Vehicle (GTV) Flight Tests with IFS and Hardware-in-the-Loop (HWIL), including pre-test predictions and post-test analysis; continued validation of the IFS (in support of ATEC Accreditation Package; PAM GTV flight tests, Flight Limited User Test (LUT), EW Test, Nuclear Test and E3 Tests.				
CLU Accomplishments FY 06 - CLU PDR, developed and received first CLU and battery prototypes, developed and fabricated first full scale CLU structure, CLU/System PDR, procure hardware components and design verification tests (DVT). --FY 06/07 ACTIVITY-- Prototype manufacturing. --FY 07 ACTIVITY-- Planned are CLU detailed system design; CLU support to FCS exp 1.1; software engineering; radio integration; current force interoperability; IV1 emulator; Procure components/build hardware and deliver EBCT CLUs; health hazard assessment; CLU Intermediate CDRs; CLU component level qualification testing; and subsystem hardware builds. --FY 07/08 ACTIVITY-- Pilot line setup; safety testing; establish PBL; support for the EBCT hardware. --FY 08 ACTIVITY-- Support technical field test-Ft. Bliss; follow-on DT and evaluation and limited user ground test-Ft. Bliss; software design analysis testing; and hardware testing. --FY 09 ACTIVITY-- Complete EBCT evaluations; prepare for Operational Test (OT); and continue preparations for First Unit Equipped (FUE).	52250	104590	59666	55116
System Accomplishments FY 06 - Completed development of a NLOS-LS Variable Message Format (VMF) Integrated Database (VID) and VMF Test Tool (VTT) based on the NLOS-LS ICD to support the FCS IV0 simulation exercise: Logistics Summit; commenced EBCT System Support Package preparation; participated in the Conduct of Pre-PBL Demo, updated Supportability Strategy and supported FCS IV0 & Integrated Mission Test 0 (IMT0). --FY 07 ACTIVITY-- Finalize Simulation Support Plan; draft Countermeasures Assessment Plan; and participate in Experiment 1.1 Phase 3. Planned System of System Common Operating Environment (SOSCOE) integration; develop interfaces for current force integration; support IV1 simulation exercises; common component detailed design; system level engineering and test and evaluation; FMTV modifications for EBCT; CLU/Advanced Field Artillery Tactical Data System (AFATDS)/SOSCOE interoperability testing; safety/hazard assessment testing; integration of hardware/software (HW/SW) into HWIL facility; updated Verification & Validation Plan to include countermeasures; HWIL; verification/validation of training support package (Operator, Instructor & Key Personnel, AFATDS Operator, Staff, and FMTV training); Sys Eng, Prog Mgmt, Test Support, and documentation preparation. --FY 07/08 ACTIVITY-- Start Type Classification, Basis of Issue Plan (BOIP), QQPRI process and develop and secure approval for Verification, Validation & Accreditation activities. --FY 08 ACTIVITY-- Support post EBCT Evaluation Hardware; support LOG contractor validation efforts; continue PBL Evaluation (PAM & CLU); EBCT Support; continue Software Design analysis and hardware testing; participate in FCS IMT1; support JEFX08 (Experiment 2). --FY 09 ACTIVITY-- EW Susceptibility Tests, Nuclear Effects Testing, Flight LUT, and Low Rate Initial Production (LRIP) Decision; post LUT updates to HW/SW based on test; and prepare for Initial Operational Test & Evaluation (IOT&E).	50716	73091	82412	85740

Small Business Innovative Research/Small Business Technology Transfer Programs		9024		
Total	216668	320650	253410	199064

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non Line of Sight Launch System**	**F72**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	231209	322880	274793	256283
Current BES/President's Budget (FY 2008/2009)	216668	320650	253410	199064
Total Adjustments	-14541	-2230	-21383	-57219
Congressional program reductions		-1226		
Congressional rescissions				
Congressional increases		1350		
Reprogrammings	-14541	-2354		
SBIR/STTR Transfer				
Adjustments to Budget Years			-21383	-57219

Change Summary Explanation: Funding - FY 07: The above reprogramming has not yet occurred, but is reflected in the Army_s budget database. At present, the Army does not intend to use actual appropriated funds in 0604646A as an offset for a reprogramming action, therefore, the program will be executing to a funding level of $313.9 million for the FY07 program year. The following R2s and R3s reflect the current database position.

FY 08 & 09: Funds realigned to support other FCS programs.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0603581N Navy	10200	14012	9959	9978					Continuing	Continuing
PE 0603313 A263 Msl & Rocket Adv Tech	39635	14277							Continuing	Continuing
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885		2940728
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307		9148447
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344		105014
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603		327092
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874				59918
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602		2382905
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000				1036121
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971			614620

0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000		272238
0603639A FCS MRM			44578	45733	71961	56698	107077	51079		377126
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429		2429
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292		9058393
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742			1903461
0604645 F52 UAV Recon & Sensors	50692	26360								77052
0604645 F53 UGV	121528	106516								228044
0604645 F54 UGS	31242	10612								41854
0604645 F55 SUSTAINMENT	139389	106517								245906
0604645 F57 MANNED GROUND VEHICLES	499469	563946								1063415
0604645 F61 SoS Engineering and Program Management	2027766	2142970								4170736

Comment: NLOS-LS is a joint program between the Army and Navy. The NLOS-LS Project Office and PMS 420 are the designated action offices for the respected services.

D. Acquisition Strategy The Army awarded the NLOS-LS SDD contract, on 19 March 2004, to Netfires Limited Liability Company (LLC), consisting of Lockheed Martin Corporation, doing business through its Missiles and Fire control and operating entity in Grand Prairie, TX; and the Raytheon Corporation, doing business through its Missile Systems Business Unit in Tuscon, AZ. The NLOS-LS SDD contract was definitized 20 August 2004. A series of Spin Out packages will begin in 2008 and continue through 2014 to insert NLOS-LS capability into Current Force Modular Brigade Combat Teams (M-BCTs).

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604646A - Non Line of Sight Launch System

PROJECT
F72

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
PAM	CPIF	Netfires, LLC - Grand Prairie, Texas		113702	1Q	133945	1-3Q	111332		58208			417187	
CLU	CPIF	Netfires, LLC - Grand Prairie ,Texas		52250	1Q	104590	1-3Q	59666		55116			271622	
NLOS-LS System Integration	MULTI	Netfires, LLC - Grand Prairie, Texas and Various Support		29197	1Q	50425	1-3Q	55206		47693			182521	
Subtotal:				195149		288960		226204		161017			871330	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Various	Multiple		1978		1744		1799		1853			7374	
Subtotal:				1978		1744		1799		1853			7374	

Remarks: .

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Various	Multiple		6611		8510		16172		26555			57848	
Subtotal:				6611		8510		16172		26555			57848	

Remarks: .

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non Line of Sight Launch System**	**F72**

Various	Various	Multiple		12930		21436		9235		9639			53240	
Subtotal:				12930		21436		9235		9639			53240	

Remarks: .

Project Total Cost:				**216668**		**320650**		**253410**		**199064**			**989792**	

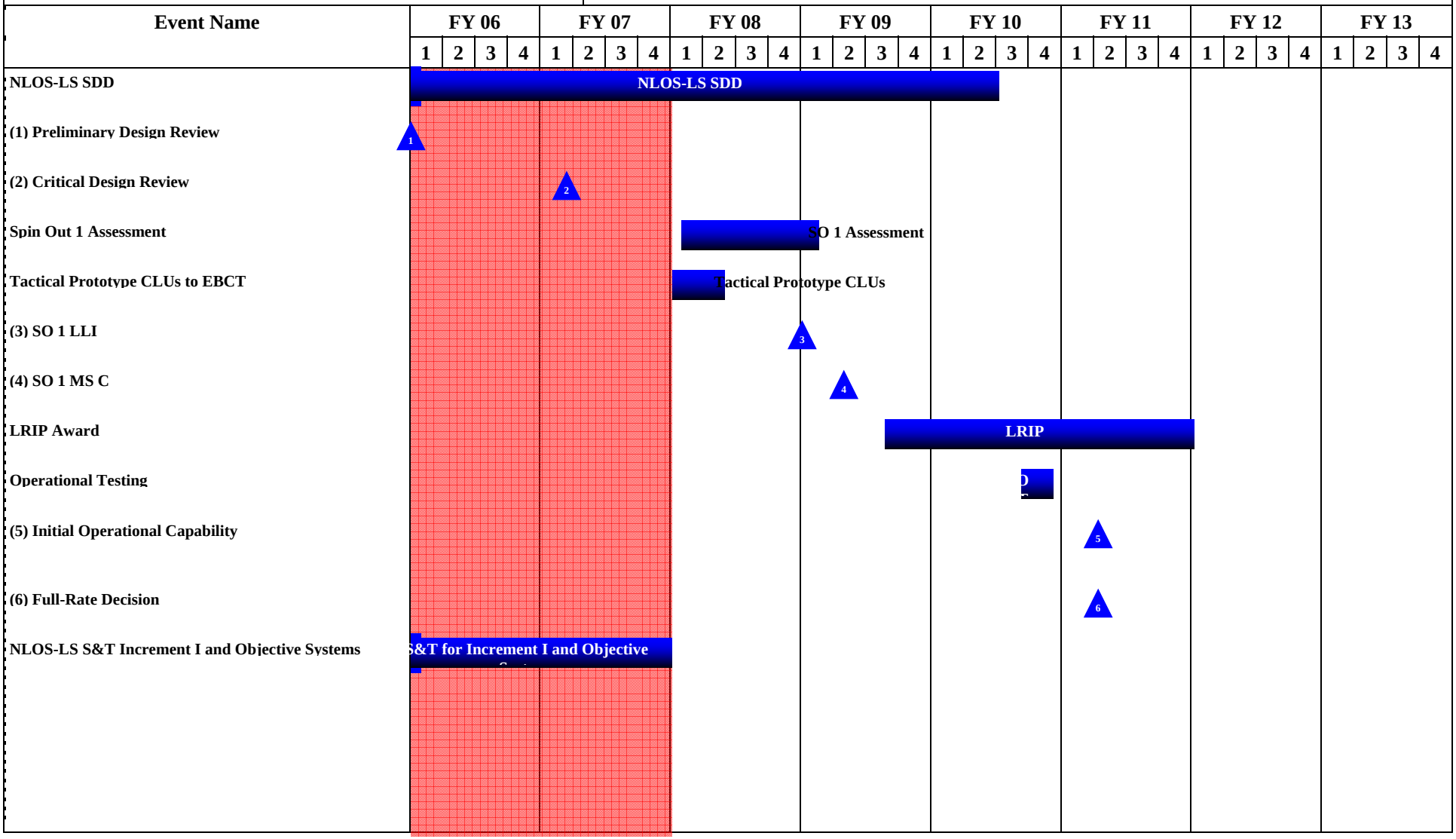
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604646A - Non Line of Sight Launch System

PROJECT
F72



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non Line of Sight Launch System**	**F72**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NLOS-LS SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q			
Preliminary Design Review	1Q							
Critical Design Review		1Q						
Spin Out 1 Assessment			1Q - 4Q	1Q				
Tactical Prototype CLUs to EBCT			1Q - 2Q					
SO 1 LLI			4Q					
SO 1 MS C				2Q				
LRIP Award				3Q - 4Q	1Q - 4Q	1Q - 4Q		
Operational Testing					3Q - 4Q			
Initial Operational Capability						2Q		
Full-Rate Decision						2Q		
NLOS-LS S&T Increment I and Objective Systems	1Q - 4Q	1Q - 4Q						

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604646A - Non Line of Sight Launch System**							PROJECT **F72**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
F72 NLOS Launch System	129614	172835	141293	118733	26370	1000		
Total Termination Liability Funding:	129614	172835	141293	118733	26370	1000		

Remarks:
The NLOS-LS prime contract incorporates the "Limitation of Funds" clause (DFARS 52.232-22) to limit the Government's liability. For the NLOS-LS Program, the "Limitation of Funds" clause limits the Government's financial liability per the contract to those funds placed on contract, plus any outstanding commitments, plus costs associated with the orderly termination of contractual actions.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non Line of Sight Cannon**	**F58**

COST (In Thousands)		FY 2006 Actual	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
F58	NON LINE OF SIGHT CANNON	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

For FY06-FY07, the FCS program was contained in three Program Elements (PEs): Non-Line of Sight - Cannon (NLOS-C), Non-Line of Sight - Launch Systems (NLOS-LS) and Armored Systems Modernization (ASM). PE NLOS-C contains the development effort associated with NLOS-C unique work, and in FY05 some of the MGV common components. To avoid confusion about common hardware being split between both MGV and NLOS-C, beginning in FY06 the common sub components for NLOS-C and MGV will be fully funded out of Manned Ground Vehicles (MGV) Program Element 0604645 Project F57. Beginning in FY08, the current ASM projects, to include MGV, will become Program Elements, based on the Authorization Act of 2006.

The Army established NLOS-C as the lead MGV of the FCS FoS. The Army plan was to deliver eight MGV (NLOS-Cannon) Early Prototypes configurations systems for limited user and developmental testing in 2008. The MGV First Production units are NLOS-Cs and will be fielded in CY 2010, with 18 delivered by CY 2012. The full FCS Capability for NLOS-C will be fielded in FY 2014.

Due to FCS requirements changing in the last 3 years, Common MGV/NLOS-C Hardware and software have been delayed, which will delay the first fielding of the NLOS-C pre-production prototypes. Thus 5 of the prototypes will still be delivered in CY08 with the remaining 3 to be delivered in CY09. Because of the funding driven delay in deliveries, the initial 5 prototypes will be in the 24 ton configuration as previously discussed with Congress. But, in taking advantage of this delay, the 3 CY09 prototypes will be updated to the 27 Ton threshold MGV configuration allowing for more pertinent valuable test data to be obtained which, ultimately could reduce final configuration prototype testing cost.

NLOS-C provides mid to long range indirect fire support to the FCS (BCT). The Non-Line of Sight Cannon (NLOS-C) provides networked, sustained, extended-range (33km) cannon fires for precision attack of point and area targets in support of the FCS. It fires a suite of munitions that include special purpose capabilities to provide a variety of effects on demand including precision guided munitions such as the XM982 Excalibur. The NLOS-C fires 155mm caliber rounds at a rate of 6 rounds per minute. It is equipped with an on board ballistic solution computation and has an automated fuze setting. The NLOS Cannon is multi-mode transportable and will be the US Army's first fully automated howitzer. Integration within the FCS program will create a cannon that is more lethal, survivable, and maintainable and provides the FCS BCT commander the ability to generate more firepower, faster, and more accurately than ever before. The NLOS Cannon features a fully automated 155-mm howitzer, 38 caliber cannon, that provides automated, 24/7,

all-weather, precision fire support to the FCS, BCT commander. It will be organic to and provide networked, extended-range, responsive and sustained precision attack of point and area targets in support of the FCS (BCT). The NLOS-C will provide close support and destructive fires for tactical standoff engagement during both offensive and defensive operations in concert with line-of-sight, beyond-line-of-sight and other NLOS, external and joint capabilities in combat scenarios spanning the spectrum of ground combat. The NLOS Cannon's fully automated ammunition handling system and real-time digital operating environment enables two soldiers to do the job of five. The cannon will be able to move rapidly, stop quickly, and deliver lethal first round effects on target in record time. The NLOS Cannon will have a multiple round simultaneous impact (MRSI) capability and unmatched sustained rate of fire to provide record effects on target from a smaller number of systems. The NLOS Cannon features transformational technologies that will be common to all FCS Manned Ground Vehicles, including hybrid-electric drive and drive-by-wire capabilities that enable the system to move rapidly, stop quickly and deliver lethal first round effects in record time. Integration with the FCS program allows us to provide maximum commonality between variants which impacts the maintainability and sustainability of the fleet. In fact, NLOS-Cannon will be 70 to 80 percent in common with the MGV fleet. The cannon, like all Manned Ground Vehicle (MGV) variants, can rapidly rearm and refuel, and its system weight makes it uniquely deployable. Fully automated handling, loading, and firing will be another centerpiece of the NLOS-C. The NLOS-C balances deployability and sustainability with responsiveness, lethality, survivability, agility, and versatility. The NLOS-C will be designed to minimize its logistic and maintenance footprint in the theater of operation and to employ advanced maintenance approaches to increase availability and to support sustainability.

The FY07 funding reflected in these R-Forms does not contain FY07 SBIR/STTR reduction of $3,124 million.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
INTEGRATED DESIGN - Early Prototypes will complete Design Review 2 and begin Design Review 3 which will wrap up the design of these prototype howitzers. Procurement, Integration and testing of Core Vetronics Environmental Control System, Suspension and Propulsion Cooling Subsystems. Integration of GPS/INS.	31731	20497	21013	10770
MISSION SOFTWARE - Software Build 1 Flight 1 delivered for use in the Firing Platform. Deliver Simulation Software to SoSIL (SW BLD 1).MGV/NLOS-C Software Build 1 Life Cycle Objective (LCO) Review Completed 1Q FY06. This review formalized the requirements allocation for MGV and NLOS-C Build 1 software and marks the beginning of software design.MGV/NLOS-C Software Life Cycle Assessment (LCA) Review Completed 3Q FY06.This review marked the completion of software design and the beginning of software coding and unit test for Build 1.Common Crew Station Software (CCS) LCO and LCA completed 3Q FY06.The portion of the Common Crew Station software that will be threshold path and developed IAW the Software Development Plan was subjected to LCO and LCA review in 3Q FY06. NLOS-C Build 1 Flight 1 Software Integration Testing (SIT) completed 4Q FY06. SIT is the final software test prior to delivery to the hardware system integration facility for the NLOS-C Firing Platform. FY07 -NLOS-C Build 1 Flight 1 software delivered as part of the NLOS-C Firing Platform 1Q FY07. MGV Common Software Build 1 enters Formal Qualification Testing in 3Q FY07. This is the final test event for software at the Configuration Item (CI) level for Build 1. MGV Common Software Build 1 enters Package Integration Testing (PIT) in 4Q FY07. PIT is the final software test for the common software as a package for Build 1.The MGV Software Build Definition Checkpoint (BDC) is performed for Build 2 in 4Q FY07. The BDC represents the start of requirements analysis for Build 2 and defines the incremental development goal for this software build. FY09 - Software: Build 2 initial drop for system integration, Build 3 LCO. Modeling and Simulation: Build 3 FSE available from MS&I.	10647	6347	7493	5213
PROTOTYPE VEHICLE - FY06-Fabrication of the NLOS-C Firing Platform completed. Procurement of NLOS-C Early Prototype Automotive Test Rig (ATR) begins. Prototype long lead procurement begins. Integrated Firing Platform loader and ammunition handling equipment. NLOS-C Firing Platform - Fire Mission functionality. Early Prototype - Common Subsystems, Procurement of NLOS-C Early Prototype Automotive Test Rig (ATR) (Prototype 2) Hull Structures. NLOS-C Early Prototypes - Mission Module, Installation, Assembly,	37407	50277	38981	43381

Test and Checkout of the Firing Platform (Mission Module for early Prototype 2) - Includes Optimized Muzzle Brake and Cannon Cooling/Cleaning Tests. Common NLOS-C Early Prototype Unique Activities, Specify, Design, Procure and Begin Testing of Inc 0 Threshold Common Subsystems:Baseline Inc 0 Critical Item Development Specs, Major subsystem procurements, System Integration Labs Development Plans. Conduct DR2 and DR3 Design Rev. FY07 Prototype 1 Mission Equipment integration begins March.Prototype Chassis integration begins August. Firing Platform Available to Test FY07. ATR Hull Fabrication Start. ATR Fabrication & Assembly Start. Instrumentation Chassis Fabrication and Assembly. Firing Platform Available to Test. Continued development of the NLOS-C, Early Prototype Common Physical Architecture, in particular resolution of any physical issues between common platform hardware. FY08 The Army plan is to deliver five early prototype NLOS-C systems for limited user and developmental testing in 2008, and three additional "27 ton" configurations in FY09. All eight of these will be tested in FY09.				
SYSTEM ENGINEERING & PROGRAM MANAGEMENT -FY06-07- Sub-contracts will be awarded for the design, procurement and integration of Traction Drive System, Generator Inverter, Environmental Control System, Suspension and Propulsion Cooling Subsystems. Increment 1- NLOS-C will complete its SFR in coordination with the rest of the FCS and MGV systems allocating system requirements and baselining a concept. NLOS-C Early prototype Design Review 2 (DR2),Completed Nov 05, Reviewed and approved preliminary design of mission equipment and four major common subsystems on the threshold path (Propulsion, Suspension, Vetronics and Architecture Environmental Control System) - Received approval to begin Early Prototype detailed design. NLOS-C Firing Platform Reviews 3 & 4 Completed. Obtained decision to proceed with hardware procurement and fabrication for the surrogate chassis. Provided high level summary of the firing platform capabilities, and design & fabrication. Review state of mission equipment HW/SW development and integration. Approve FP assembly and test plans. Completed NLOS-C System Functional Review to demonstrate convergence on and achievability of the system requirements and readiness to initiate system design. Completed baseline system and software architecture. Documented baseline software requirements. Initiated Initial Interface Control Documents (ICDs) for internal and external interfaces. Received design concept approval for NLOS-C and common systems. Started preliminary design for NLOS-C. NLOS-C Early Prototype Design Review 2 and Design Review 3 (DR3). Review and approve detailed design of mission equipment and four major common subsystems on the threshold path. Environmental Control System - Approval to begin Early prototype material procurement and start of IAT&C. FY09 - CDR is complete.	49792	26574	58066	24107
SYSTEM TECH ENGINEERING - FY06 - Started preliminary design for NLOS-C Increment 1. Applied Pit Stop Engineering process to NLOS-C Concept and Design and established Pit Stop philosophies for all MGV vehicles.Integrated Design Process centers on all aspects; uses small group teams to architect the implementation of Pit Stop functions and features: Applied to various areas of NLOS-C, Lower Mission module, Turret, Sponsons,Cannon and Mount,Crew Compartment. NLOS-C lead the way for all of MGV to embrace Pit Stop philosophies. Began preliminary design for NLOS-C. NLOS-C Early Prototype Design Review 2 and Design Review 3. FY07- NLOS-C Increment 1 Preliminary Design continues. NLOS-C Increment 1 /MGV PDR planned for FY08. Complete NLOS-C Integration in Program Integration, Validation and Test Lab (PIVOT). FY09 Primary Vehicle Technical Data Packages for Main FY09 NLOS-C Weapon, Ammunition Handling, Gun Mount. INC1,Mission Module, Structure, Main Weapon, Peripherals, Design B Development complete.	2646	4179	12249	5718
Small Business Innovative Research/Small Business Technology Transfer Programs		3124		
Total	132223	110998	137802	89189

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non Line of Sight Cannon**	**F58**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	146271	112237	117605	90647
Current BES/President's Budget (FY 2008/2009)	132223	110998	137802	89189
Total Adjustments	-14048	-1239	20197	-1458
Congressional Program Reductions		-424		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-14048	-815		
SBIR/STTR Transfer				
Adjustments to Budget Years			20197	-1458

Change Summary Explanation: Funding - FT 2007: The above reprogramming has not yet occurred, but is reflected in the Army_s budget database. At present, the Army does not intend to use actual appropriated funds in 0604647A as an offset for a reprogramming action, therefore, the program will be executing to a funding level of $108.7 million for the FY07 program year. The following R2s and R3s reflect the current database position.

FY 2008: Funds increased to support the NLOS Cannon program.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing

0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army's reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604647A - Non Line of Sight Cannon

PROJECT
F58

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Integration Design	OTA/FAR	THE BOEING COMPANY, ST. LOUIS, MO. - See Remarks 1, 2, 3	40012	31731	1Q	19625	1-3Q	20411	1-3Q	10345	1-3Q		122124	
Mission Software	OTA/FAR	THE BOEING COMPANY,ST. LOUIS, MO - See Remarks 1, 2, 3	27923	10647	1Q	6329	1-3Q	7289	1-3Q	5010	1-3Q		57198	
Prototype Vehicle	OTA/FAR	THE BOEING COMPANY, -ST. LOUIS, MO., See Remarks 1, 2, 3	93881	37407	1Q	54375	1-3Q	41702	1-3Q	45170	1-3Q		272535	
System Engineering & Program Management	OTA/FAR	THE BOEING COMPANY,ST. LOUIS, MO -See Remarks 1, 2, 3		49792	1Q	26501	1-3Q	56485	1-3Q	23169	1-3Q		155947	
System Tech Engineering	OTA/FAR	THE BOEING COMPANY, ST. LOUIS, MO - See Remarks 1, 2, 3		2646	1Q	4168	1-3Q	11915	1-3Q	5495	1-3Q		24224	
Subtotal:			161816	132223		110998		137802		89189			632028	

Remarks: Remark 1 - Subcontractor: BAE Armament Systems Division - Minneapolis, MN
Remark 2 - BAE Ground Systems Division, Santa Clara, CA
Remark 3 - General Dynamics Land Systems, Sterling Heights, MI

FY06 and beyond, all common hardware and software costs are accounted for in MGV.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604647A - Non Line of Sight Cannon

PROJECT
F58

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

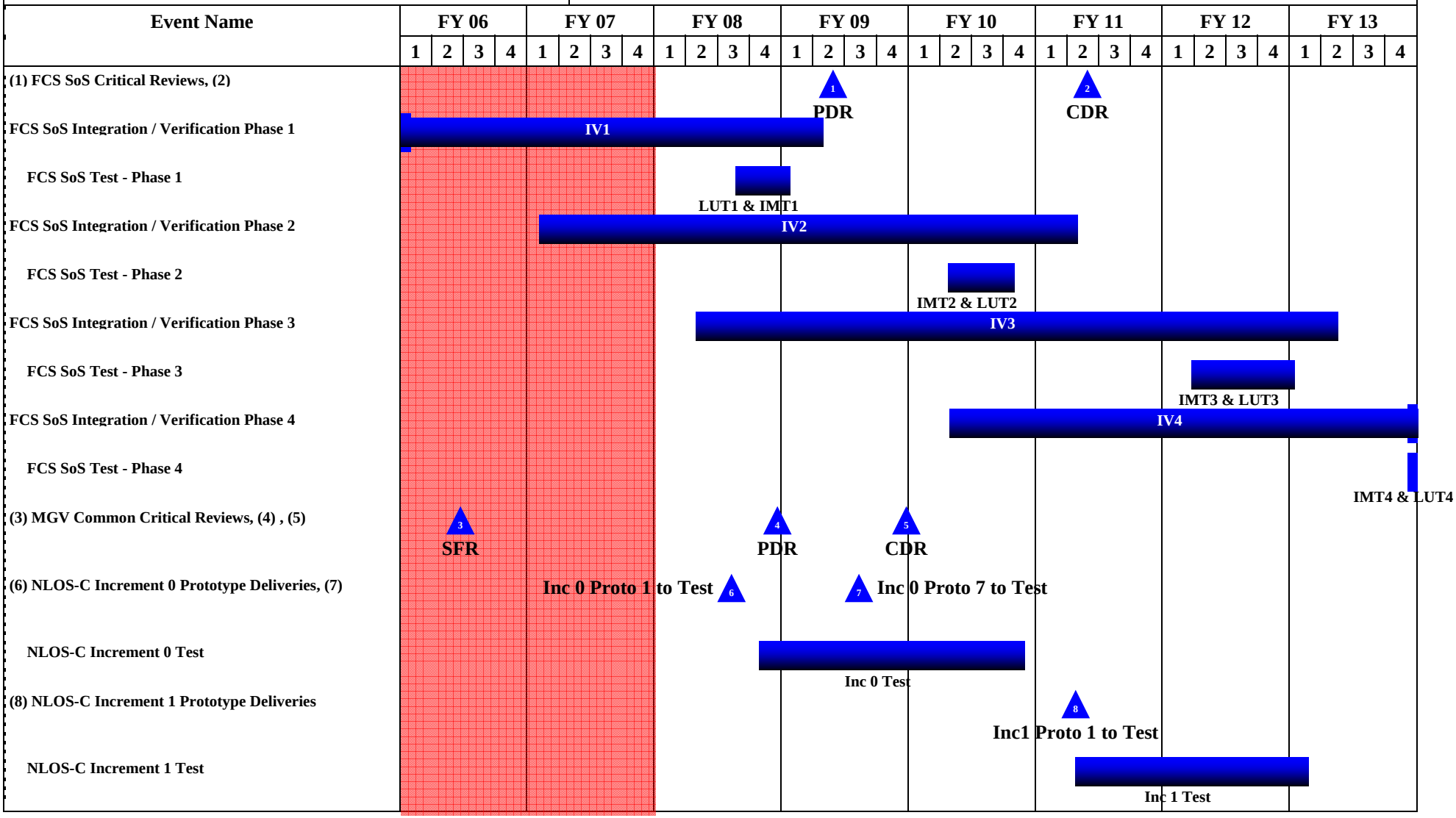
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:			**161816**	**132223**		**110998**		**137802**		**89189**			**632028**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non Line of Sight Cannon**	**F58**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604647A - Non Line of Sight Cannon

PROJECT
F58

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
MGV Common Critical Reviews	2Q							
			4Q					
				4Q				
NLOS-C Increment 0 Prototype Deliveries			3Q					
				3Q				
NLOS-C Increment 0 Test			4Q	1Q - 4Q	1Q - 4Q			
NLOS-C Increment 1 Prototype Deliveries						2Q		
NLOS-C Increment 1 Test						2Q - 4Q	1Q - 4Q	1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

COST (In Thousands)		FY 2006 Actual	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
FC1	FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE			696333	772458	791186	361201	215665	103885	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat Systems, Brigade Combat Team (FCS BCT) is a joint system of systems (SoS) consisting of an advanced network integrated within of a series of manned/unmanned systems that via electronic architecture enables unprecedented joint connectivity, situational awareness/understanding, and synchronized operations. It will enhance the Army's most formidable weapon - the Warfighter. FCS provides unprecedented capability to see first, understand first and decisively defeat the enemy on the 21st Century battlefield. This FCS BCT SoS Force will be adaptable - from traditional to irregular warfare - conducted in various complex environments (rural/urban). FCS is the Army's Modernization Strategy and as such, is the #1 acquisition program for the Army.

This project supports development for a variety of Manned Ground Vehicles (MGVs) (exclusive of Non-Line of Sight - Cannon (NLOS-C) specific mission equipment) and includes technology maturation, systems engineering, subsystem/variant unique mission equipment (i.e. armament/fire control), integration/assembly, and prototype build. Also includes following common MGV subsystem development, (to include NLOS-C subsystems): armor, suspension, structures, defensive armament system, signature management, NBC, vetronics, power and energy (includes hybrid electric drive), auxiliary systems and hit avoidance system. Project specified MGVs include: Infantry Carrier Vehicle (ICV), Mounted Combat System (MCS), Non-Line of Sight Mortar (NLOS-M), Command and Control Vehicle (C2V), Recon and Surveillance Vehicle (RSV), FCS Recovery and Maintenance Vehicle (FMRV), and Medical Vehicle (MV).

The ICV provides mobility for 11 personnel (two man crew and nine-man infantry squad) on the battlefield. Located within the infantry platoons and companies within the CA battalions. Delivers the dismounted force to the close battle and supports the squad by providing self defense and supporting fires. The ICV carries the majority of equipment freeing the individual Soldier from being burdened with equipment.

The MV provides advanced trauma life support within 1 hour to critically injured Soldiers. The MV serves as the primary medical system within the BCT and will have two mission modules (Evacuation and Treatment). The time-sensitive nature of treating critically injured soldiers requires an immediately responsive force health protection system with an expedient field evacuation system. The MV-Evacuation (MV-E) vehicle allows trauma specialists, maneuvering with combat forces, to be closer to the casualty's point-of-injury and is used for casualty evacuation. The MV-Treatment (MV-T) vehicle enhances the ability to provide Advanced Trauma Management (ATM)/Advanced Trauma Life Support (ATLS) treatments and procedures forward for more rapid casualty interventions and clearance of the battlespace. Both MVs will be capable of conducting medical procedures and treatments using installed networked telemedicine interfaces.

The FRMV is the recovery and maintenance system for employment in the FCS BCT. The Brigade Support Battalion (BSB) maintainers will be organized into Combat Repair Teams (CRT) supported by 10 FRMVs. These CRTs will perform in-depth BDAR and unscheduled field-level maintenance requirements beyond the capabilities of the crew to include lift, welding, cutting, and heating of materials.

The NLOS-M is the short-to-mid-range indirect fire support component within the FCS BCT. It will be organic to and provide networked, responsive and sustained indirect fire support to the Combined Arms Maneuver Battalion in the FCS BCT. It fires a suite of 120mm munitions that include special purpose capabilities to provide a variety of fires on

demand including precision guided munitions such as precision guided mortar munitions (PGMM). NLOS-M will provide close support and destructive fires for tactical standoff engagement during both offensive and defensive operations in concert with line-of-sight, beyond-line-of-sight, other NLOS, external and joint capabilities in combat scenarios spanning the spectrum of ground combat and threats.

The RSV features a suite of advanced sensors to detect, locate, track, classify and automatically identify targets from increased standoff ranges under all climatic conditions, day or night. Included in this suite are a mast-mounted, long-range electro-optic infrared sensor, an emitter mapping sensor for radio frequency intercept and direction finding, remote chemical detection, and a multifunction RF sensor. The RSV carries 6 Soldiers (2 common crew and 4 scouts).

The C2V provides the tools for commanders and staffs to command and control various elements of the FCS BCT. Via mission workstations and a common warfighter-machine interface, C2Vs contain the interfaces that allow commanders and their staffs to perform tasks such as fusing friendly, enemy, civilian, weather and terrain situations and distributing this information via a common operating picture. The C2V carries 6 Soldiers (2 common crew and 4 mission crew).

The MCS provides offensive maneuver to close with and destroy enemy forces. The MCS is capable of conducting mounted operations, mounted operations supported by dismounted infantry, and supporting dismounted infantry operations in all environments. The MCS delivers precision fires at a rapid rate to destroy multiple targets at standoff ranges quickly and complements the fires of other systems in the FCS BCT. It is highly mobile and maneuvers out of contact to positions of advantage. It is capable of providing direct support to the dismounted infantry in an assault, defeating bunkers, and breeching walls during the tactical assault. The MCS can engage targets from Beyond Line of Sight (BLOS). The BLOS capability allows the FBCT the ability to stand-off from the enemy's lethality envelope, allowing the MCS to be more lethal, at greater ranges.

The MGV Common Subsystems project includes developmental and engineering effort for the detailed design and integration of common components and sub-systems into a common chassis configuration applicable to the entire fleet of MGV combat vehicles. Major subsytems included in the Common Chassis design include a Hit Avoidance System (HAS), Propulsion (Hybrid Electric Drive with a High Power Density Diesel Engine), active dampening suspension with band track, Common Crew Station (CCS), Close Combat Armament System (CCAS), hull structure and armor, chassis auxiliary, Vehicle Electronics and Power Distribution (Vetronics). The focus of this effort is on a producible, reliable, sustainable, maintainable, and affordable common chassis design.

Government GFX Mobility Shaker Table Rent - To test the Mounted Combat System Mobility Firing Fixture on the TARDEC Shaker Table

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
CONTRACTOR INFANTRY CARRIER VEHICLE (ICV)-FY08-Conduct ICV Preliminary Design Review. Initiate Detailed Design. Testing of slip ring brass boards. Deliver Ammo Feed System. Deliver Medium Caliber Gun System. Deliver Turret Angular Position Sensor. FY09 Procurement: ICV Component Parts, Slip Ring, MK 44 Gun System, 30/40 mm Feed System, Turret Drive System. Conduct ICV CDR. Software: Build 2 ongoing, Build 3 LCO. Modeling and Simulation: Build 3 FSE available from MS&I.System Integration Lab: Fabricate Firing Turret Test Stand. Dry Fire in SIL, initial firing from Turret Test Stand at contractor test site. Receive ICS, sensors, WIN-T JTRS. Fabricate Hulls and begin assembly and integration.			26186	29735
CONTRACTOR MOUNTED COMBAT SYSTEMS (MCS) FY08-09 - Turret Based Motion Simulator Dynamic Testing of Firing Fixture Turret at TARDEC. Improve subsystem reliability by conducting Firing Fixture Testing, Firing Test Rig Testing, Sympathetic Detonation Mitigation, Ammunition Data Link for use with BLOS Munitions, Dynamic Muzzle Reference Sensor, Advanced Fire Inhibit			92815	101369

System (AFIS), High Voltage Electric Gun Turret Drive (EGTD),Ammunition Handling System (AHS). Preliminary Design Review (PDR) in the 3rd quarter of FY08. Complete MCS 120mm Firing Fixture (FF) and Firing Test Rig (FTR) testing. Critical Design Review (CDR) in the 3rd quarter of FY 09. Software: Build 2 ongoing, Build 3 LCO. Modeling and Simulation: Build 3 FSE available from MS&I. System Integration Lab: SW/HW Integration (Phase 1 - Software Emulator Drop, Phase 2 - FSE Build 3 available from MS&I). Prototype #1- #6: Common Hardware Available (PRP, VET, SUS, Aux, NBC, SGM, CCS, CMS, STR, ARM). Prototype #2 - #6: C4ISR Hardware Available (ANS-GPS/INS, ICS, ANS NAV, Sensor and Communication suites). Technical Data Package completion. Begin prototypes turret and hull fabrication & assembly.				
CONTRACTOR NLOS-M - FY08- Preliminary Design Review. Modeling & Simulation Build 2 IV2. Mortar Tube & Breech Incr 1 Configuration Available for Mortar Firing Platform Tests. Firing Platform Tests at Camp Ripley Complete. Ship Firing Platform to Yuma Proving Grounds, Yuma AZ. Slip Ring CMP Tests Complete. FY09 CDR Complete in FY09. Turret structure detail design complete. Primary Vehicle Ammunition Handling complete.Software: Build 2 ongoing, Build 3 LCO. NLOS-M FP first shot (YPG). Prototype #1 Common hardware available.			34854	46380
CONTRACTOR COMMAND & CONTROL VEHICLE (C2V) - FY08- Conduct C2V Preliminary Design Review. Conduct C2V installed performance component maturation Phase II Testing at EPG. Develop critical design for C2V Mission Work Station / Controls. C2V simulation delivery to SoSIL (IV2).Begin SIL I&T Phase I of common/C4ISR equipment in C2V. FY09 Conduct Critcal Design Review: MWS Hardware Development (MWS Brassboard and Prototype), Topdeck Integration CMP Phase II Test Report. Software Build 2 initial drop for system integration. Software Build 3 LCO. System Integration Lab Phase 1 SW/HW Integration. Latest Common/C4ISR HW/SW Release. Modeling and Simulation Build 3 FSE available from MS&I.Prototype #1 fabrication.			23109	42058
CONTRACTOR RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV) - FY08 - Conduct RSV Preliminary Design Review. Initiate RSV Detailed Design. RSV Simulation Delivery to SoSIL (IV2). Release RSV System/Subsystem Design Document. Complete RSV Hardware Schematic Models/Diagrams. Complete RSV Requirements Compliance Assessment. Document RSV Human Factors Engineering/MANPRINT Report. Complete RSV Installed Performance and Roof-Top Sensor De-Confliction Studies. Order all Long-Lead Materials.FY09 -Conduct RSV Critical Design Review. Complete RSV first prototype fabrication. Detail design requirement. Software Build 2 ongoing, Software Build 3 LCO.			23447	40065
CONTRACTOR FCS RECOVERY & MAINTENANCE VEHICLE(FRMV)- FY08- Conduct towing and crane subsystem maturation tests. Mission subsystem component deliveries. Conduct FRMV PDR. Initiate Detailed Design. FY09- CDR Complete. Fabricate Crane Test Fixture and Conduct Crane Testing. Software: Build 2 ongoing, Build 3 LCO. Procurement: Raw material procurement, Welder, cutter & Heating Equipment. Modeling and Simulation: Build 3 FSE from MS&I, begin ISM update. Integration Test Stand (Component and Subsystem Testing) - Crane Test at SIL. Begin prototype integration. Fabricate Hull for Prototype #1 and begin prototype #2.			19770	29147
CONTRACTOR MEDICAL VEHICLE (MV) - FY08-Install Litter Lift System in surrogate platform and test. Conduct MV Preliminary Design Review (PDR). Initiate detailed design activities.SOSIL SIM IV 2 Model updated. FY09- Conduct MV CDR. Software: Build 1 integration complete, Build 2 ongoing, Build 3 LCO. Modeling and Simulation: Build 3 ongoing. Plan MV-E & MV-T prototype fabrication.			12154	13581
CONTRACTOR COMMON SUBSYSTEMS - FY08 - Complete ATR Fabrication. All MGV Common subsystems will be ready to go into their detailed design following subsystem PDRs leading to a Common Chassis PDR. FY09 - All MGV Common subsystems completing their detailed design following subsystem CDRs leading to a Common Chassis CDR. Complete ATR Testing. Finalize Armor Recipes for Variants. Armor Component Maturation: Mine Blast / Add-on Armor complete. Armor PO issued. Software: Build 2 ongoing,			463000	469123

Build 3 RBR and LCO. Modeling & Simulation: Build 2 developed and tested, Build 3 initiated (FSE from MS&I). Integration and Verification: begin SEIT SIL integration and test. NBC SIL IV2 complete with NBC IV2 complete, begin SEIT SIL integration and test. Hull raw material available, procure appendages and first hull structure material available. Hit Avoidance System (HAS) detail design analysis and assessment complete. HAS Controller and Hit Avoidance Countermeasure Controller software Build 2 ongoing. MGV Active Protection System hardware/software Integration and verification begins. Short Range APS integration and verification completed and prototypes delivered. The common propulsion system hardware (High Density Diesel Engine, Generator, Traction Drive System, etc) is available for early prototypes. Fabricated and assembled 5 common chassis in FY08 and 3 common chassis in FY09.				
GOVERNMENT GFX - ACTIVE SYSTEM (APS) Consists of Government Support Subject Matter Experts (SMEs) to assist LSI in development of APS.			998	1000
Total			696333	772458

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			696333	772458
Total Adjustments			696333	772458
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			696333	772458

Change Summary Explanation: Funding - FY 2008/2009: Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604660A Project FC1) for Manned Ground Vehicles SDD efforts.

This budget request is a continuation of the previous SDD efforts funded in FY07 under Program Element 0604645A Project F57; therefore, this budget request should not be construed as a new start program nor should it be constrained by "new start" program requirements and funding allocation (i.e. CRA) restrictions.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight _ Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604661A Project FC2.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
INFANTRY CARRIER VEHICLE (ICV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2						25168	1-3Q	28667	1-3Q		53835	
MOUNTED COMBAT SYSTEMS (MCS)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1						89207	1-3Q	97729	1-3Q		186936	
NON-LINE OF SIGHT MORTAR (NLOS-M)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 3						33499	1-3Q	44714	1-3Q		78213	
Contractor Common Component Vehicle Subs	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2						444794	1-3Q	452227	1-3Q		897021	
COMMAND & CONTROL VEHICLE (C2V)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1						22211	1-3Q	40548	1-3Q		62759	
RECONNAISSANCE & SURVEILLANCE VEHICLE	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1						22535	1-3Q	38626	1-3Q		61161	
Medical Vehicle (MV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 3						11682	1-3Q	13094	1-3Q		24776	
FCS RECOVERY & MAINT VEH (FRMV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2						19001	1-3Q	28100	1-3Q		47101	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

GFX and other	Direct	PM FCS(BCT), St. Louis, MO						1000	1-3Q	1000	1-3Q		2000	
Subtotal:								669097		744705			1413802	

Remarks: Remark 1: Subcontractor: General Dynamics - Sterling Heights, MI, award date, Dec 2003
Remark 2: Subcontractor: BAE - Ground Systems Division - Santa Clara, CA, award date, June 2003
Remark 3: Subcontractor: BAE - Armament Systems Division - Minnepolis,MN, award date, Dec 2003

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government - Statutory Reductions	Direct	OSD					1Q	27236	1Q	27753	1Q		54989	
Subtotal:								27236		27753			54989	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Remarks: All Test and Evaluation costs for this project are included in 0604661 FC2 SoS Engineering and Program Management project.

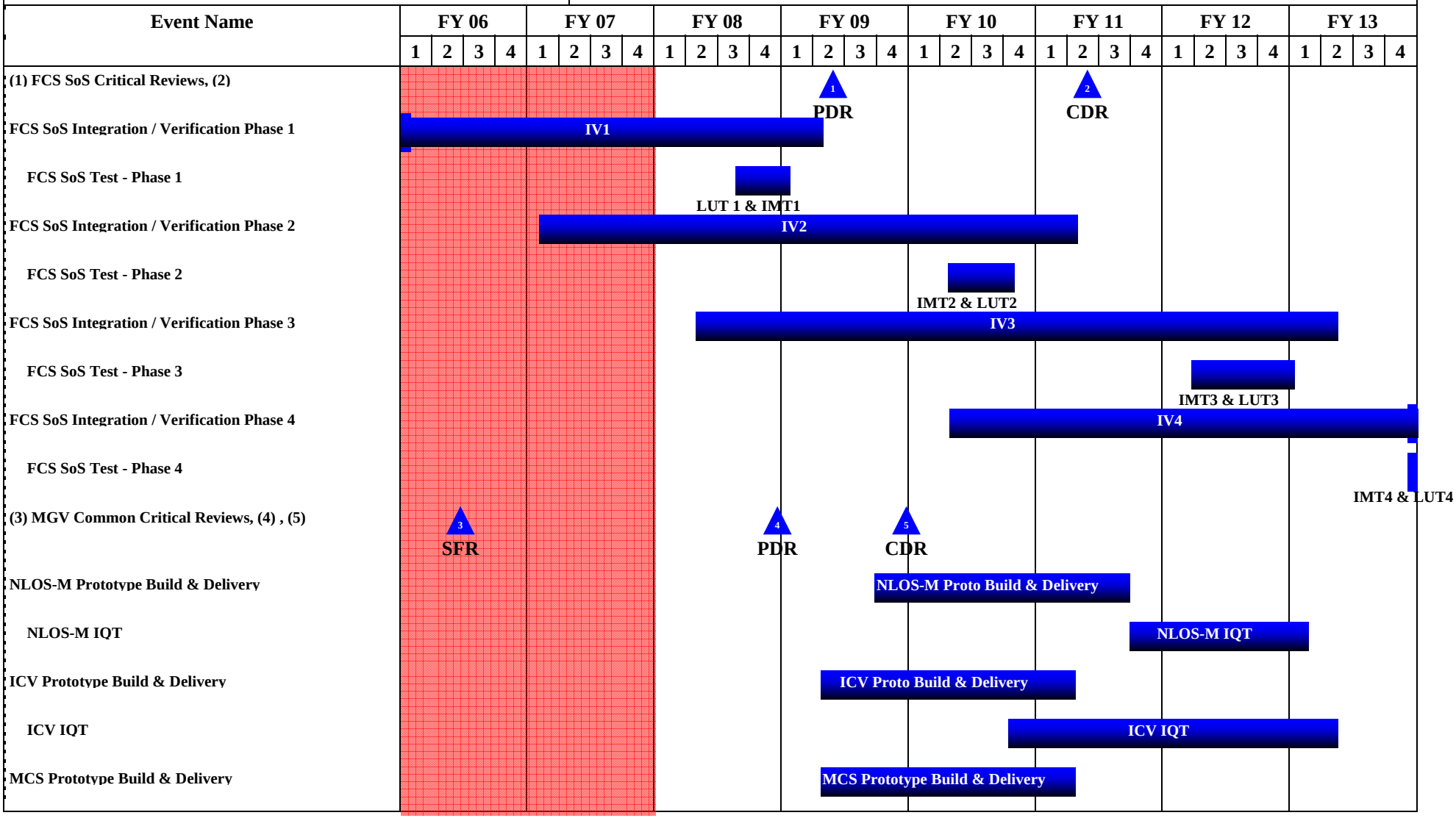
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:								**696333**		**772458**			**1468791**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**



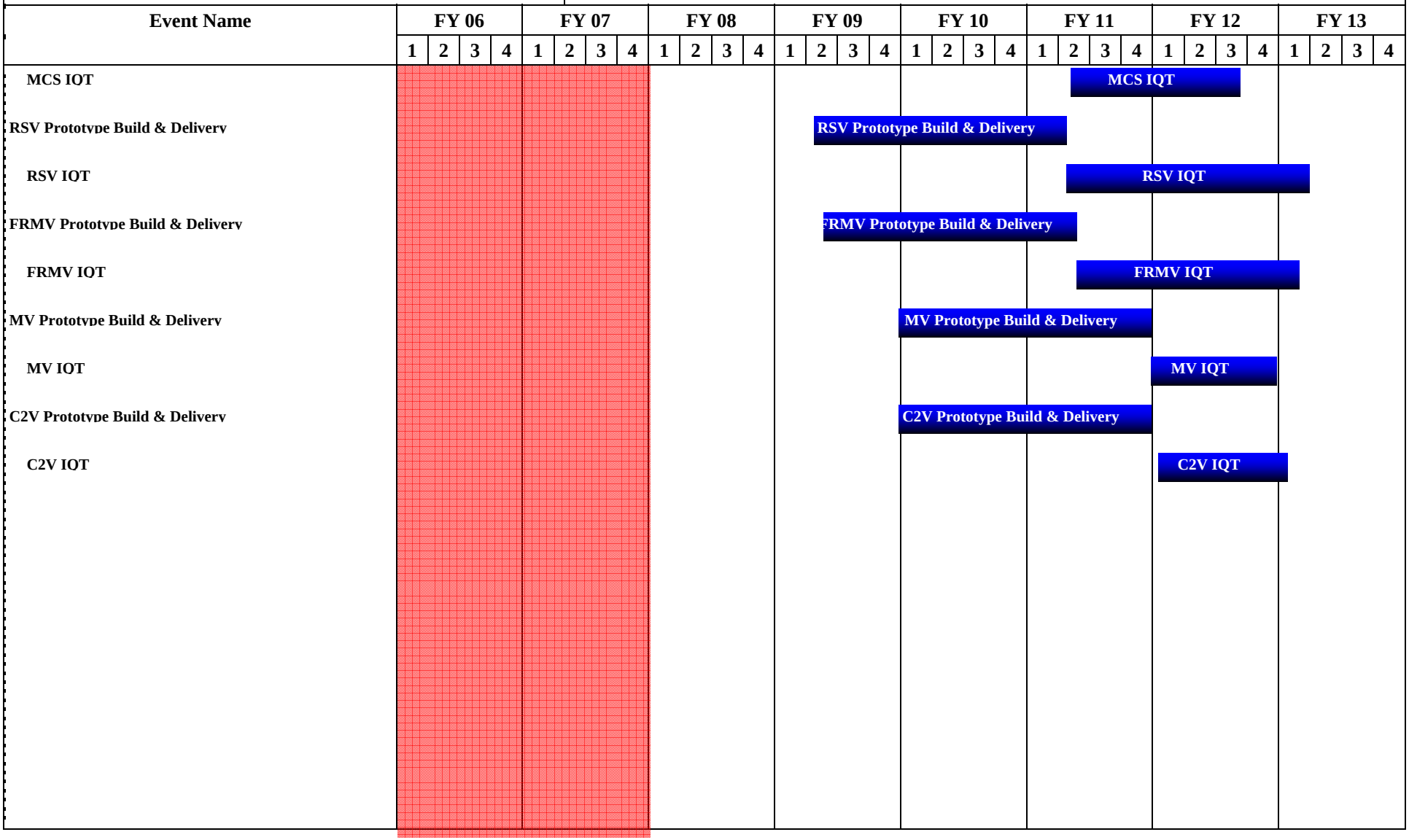
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
MGV Common Critical Reviews	2Q							
			4Q					
				4Q				
NLOS-M Prototype Build & Delivery				3Q - 4Q	1Q - 4Q	1Q - 3Q		
NLOS-M IQT						3Q - 4Q	1Q - 4Q	1Q
ICV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
ICV IQT					4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
MCS Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
MCS IQT						2Q - 4Q	1Q - 3Q	
RSV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
RSV IQT						2Q - 4Q	1Q - 4Q	1Q
FRMV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
FRMV IQT						2Q - 4Q	1Q - 4Q	1Q
MV Prototype Build & Delivery				4Q	1Q - 4Q	1Q - 4Q		
MV IQT						4Q	1Q - 4Q	

C2V Prototype Build & Delivery				4Q	1Q - 4Q	1Q - 4Q		
C2V IQT							1Q - 4Q	1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

COST (In Thousands)		FY 2006 Actual	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
FC2	FCS SYSTEM OF SYSTEMS ENGR & PROGRAM MGMT			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This PE includes government and contractor efforts and analysis associated with System of Systems (SoS) engineering analysis and integration, Contractor Logistics, Contractor Training, Government SoS test, evaluation and analysis, Contractor SoS Test, evaluation,and analysis and contractor and government program management. This project includes support to other DOD agencies for joint programs and collaboration efforts with Future Combat System (FCS) and associated Complementary Programs.

Major program milestones include the FCS Maturity Reviews and FCS Design Reviews. FCS Maturity Reviews provide program-level System of Systems (SoS) synchronization through the review of each system's critical requirements. These reviews, held approximately once per year, provide status of the phased Engineering, Integration and Verification progress. FCS Design Reviews monitor the design maturity of the FCS system leading to the FY13 Milestone C
decision. To address the overall FCS design impact to include Spin-Out technologies, an incremental design review approach based on DoD 5000 principles for Spin Out development has been adopted. The Incremental SoS level Design Reviews provide an early design assessment of the spin out FCS Systems and focus on the FCS design impacts associated with these systems. The Incremental SoS level Design Reviews are included in the FCS Maturity Review process. The following is a summarized list of these key program reviews:
The System of System (SoS) level Functional Reviews (SFR) was conducted in Aug 2005. This was followed by the System level SFRs for each platform, that reviewed the resulting SoSFR requirements to determine if all the requirements were met by the individual platform. The role up of these System level Functional Reviews will occur at the Engineering Maturity Review (Aug 07), where the SoS requirements will be once again reviewed for completeness. After the completion of this review, the development of the system level Preliminary Design Reviews (PDR) will begin, which will culminate in the SoSPDR scheduled for Feb 09. After the completion of the PDR, design work will continue with more detailed results to be exhibited in the SoS Concept Design Review (CDR), scheduled for Feb 2011.

The following summarizes the various subcomponents of SoS Engineering Program Management Project.

SoS Engineering - Conduct SoS reviews, top level trade studies, and architectural design of the SoS including requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness.

Program Management - The development of processes, tools, meetings, Earned Value Management (EVM), Risk, software, etc used to manage the total program (to include subcontractors/Partners) to achieve the SoS program goals within the available dollars and schedules.

SoS Test and Evaluation - Includes contractor and Government test and analysis to ensure SoS performance is achieved or exceeds system requirements. The results of the SoS test is validation of the SoS specifications and verifying that the specifications meet the Operations Requirement Document (ORD) and operational and organizational requirements.

Logistics and Sustainment. The logistics effort includes the development of the "factory to foxhole" products, and services required to design, develop, assemble, integrate, and test the supportability processes. Validate maneuver sustainment, Production Based Logistics (PBL), and other applicable logistics support concepts during SoS Test and SoSIL simulations. Assure that sensor collection of data for logistics decision support system software is adequate to support logistics modeling verification and validation efforts. Maximize commonality of hardware and software within the FCS program to reduce the Lifecycle costs and logistical footprint of the FCS. Logistics Management Product Integration - Provides integration of supportability products into the SoS elements, including diagnostics and prognostics functions and conducts logistics technical reviews at the system, vehicle, and component levels. Logistics Fielding includes development of the process for deploying vehicles to home base locations. Increased Reliability Availability Maintainability Test (RAM-T) goals and implementing a Performance Based Logistics (PBL) support concept through extensive up front systems engineering efforts will result in increased Operational Availability and significant decreases in both parts and maintenance personnel while generating increased combat power. The time required to execute a repair is significantly decreased through implementation of Pit-Stop Engineering designs for maintenance, easing both crew and maintainer burdens.

Training Support- Training includes contractor analysis to support training for the SoS. This effort includes the design and development, engineering, integration, embedded training, and testing of unique training devices, training systems engineering, training products, training support packages, and training integration. This mission assures that the training system is designed as an integral part of the overall SoS design to meet Increment 1 requirements and provides for future increment upgrades.

Government Support Costs - Includes funding for government personnel to include labor, travel, training, supplies, and other support costs (support contractors, Automated Data Processing (ADP), communications, supplies, and equipment). Supports other services for Joint Programs, Multinational Project Arrangements, and collaborative efforts. Includes the procurement of Government Furnished Equipment/Items/Data (GFX) for the LSI. GFX is used when procurement through the government is less expensive than through the LSI. GFX is used when procurement through the Government is less expensive than through the LSI.

Beginning in FY08, this PE now includes all engineering support efforts to include logistics and training to provide a complete System Engineering of the FCS program.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
GOVERNMENT - SYSTEM ENGINEERING & PROGRAM MANAGEMENT (SEPM) FY08 - 09 Objectives: SoS Engineering - Participate and ensure the government's best interest/value are considered in the following: SoS reviews, trade studies, architectural management, requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness, Software Management, Risk Management, Modeling and Simulation Management, Performance Assurance Management, Integration & Verification Management, Technology Management and Experimentation. PM - Provide integrated program management (i.e. planning, directing,			128331	135127

tools and controlling functions, for all development activities, including data and supplier management, program control, procurement and contracts management, operations management, Congressional title 10 oversight, cost analysis and management, Budget development, justification and tracking, Earned Value Management, integrated master schedule development and management, Complementary Program management and operations management associated with the LSI overarching management of the FAR				
GOVERNMENT - SYSTEM TEST & EVALUATION (STE)-FY08-09 Objectives:Defense Research Engineering Network (DREN) Connectivity: Funding for connectivity (point-of-service fees and hardware purchases) of SoSIL nodes to the (DREN). AMMUNITION: Procurements includes ammunition to support firing fixture testing and integration testing including with NLOS-C testing. ATEC Test Integration Network (ATIN): Development of the ATIN providing intra-range and inter-range connectivity between all ATEC test centers and the SoSIL distributed network. Threat Systems/Simulators and Test Targets: Funds PM-ITTS to develop and procure threat systems and simulators and test targets in support of FCS test. INFRASTRUCTURE: Development of the SoSIL nodes at the White Sands Missile Range and at the APG for local integration efforts of FCS variants. MODELING AND SIMULATION FOR TEST: The development of test tools to analyze results from Force-on-Force simulations, integrated spectral terrains for FCS applications, Digital Collection, Analysis and Review (DCARS), Test Conduct and Reporting System (TCARS), and Role Player Work Station (RPWS). FCS Unique Instrumentation: The development and implementation of FCS unique instrumentation (Advanced Passive Armor Test Capabilities, Precision Engagement Instrumentation, enhancements to meet E3 specification, and telemetry expansions) which will bridge critical instrumentation shortfalls at ATEC ranges. Test Range Support (Test Execution at Army Test Ranges): Specialty testing to include initial nuclear radiation (INR) survivability testing of MGV components and CBRN coupon material testing, MCS gun qualification and AHS compatibility testing, NLOS-C and NLOS-M compartmentation testing, NLOS-C cannon pre-fatigue testing, cannon breech cooling testing, and laser ignition testing, co-site and sensor performance testing, UGV ANS testing, co-site, and sensor performance, and NLOS-C and MCS lethality testing will be conducte			156365	156603
GOVERNMENT - MODELING & SIMULATION (M&S) FY08- Release Build 2.0 (FQT'd). Complete Build 2.5 RAR, ADR and ISM Reviews. Provide Engineering Release Build 2.5. Complete IV2 Lab Setup. Complete Test Harness for SO2. Complete IV2 & SO2 Test Documents. Detailed planning for JEFX 08. Integration facility design and build up. Software/hardware development and integration. Completion of JEFX 08 hardware/software integration. Complete build and check-out of JEFX 08 surrogate vehicles. Execution of JEFX 08 SpinOuts. Initial planning and proposal development for JEFX 10.			10213	11683
GOVERNMENT OTHER & GFX - Government support for the following: FY08/09 - FCS Training Common Components (TCC) - Continue Technical Management Integration support to the Training IPT throughout the development of the Training Common components (TCC) effort between PEO STRI and PM FCS (BCT).			151237	142612
CONTRACTOR SEPM - Implement the processess, models, tools and management structure to integrate all subcontractor partners into one team, to meet cost, schedules,and technical performance requirements in the contract. This includes program overview, demonstration, Earned Value Management, briefings, Demos, reports, meetings to support Program, risk management, subcontract management, Small and Minority Business Integration, data management, operation management, contract management, Procurement, Acquisition Management, SDD Affordability/CAIV/ Life Cycle Management, development of program baseline and Integrated Master Schedule Development. FY06 accomplishments include: SEPM plans for FY07 include upgrade to the Single Integrated Model V4.0, SoSADD release, SoS Operational Views update, Engineering Iteration 1 SoS Design, EA1 Readiness Anchor Point, EI1 Assesment Anchor Point. Integration Planning readiness assessment and Experiment 1.1 report to be released. BCT Single Integrated Model V4.0 Updated or Released. Architectural Single Integrated Model Version 3 updated. Automatic Data Processing updated. SoSADD Release. SoS Operational Views updated. EI1 FCS UA SoS Design. EI1 Engineering Iteration Readiness Anchor Point (EI1RAP). EI1 Engineering Iteration Assessment & Assessment Anchor Point (EI1AAP). IV1 Planning readiness assessment. Experiment 1.1 report released.			169866	109069

CONTRACTOR SYSTEM REQUIREMENTS & INTEGRATION - FY08-Execute the SoS Engineering Maturity Review #1, Integration Phase 1 Assessment Anchor Point, Integrated Phase 2 Engineering Integration Planning Anchor Point as well as the SW Build 2 Planning Checkpoint and the Integration Phase 3 Definition Anchor Point. In support of these review, continuing development and maturation of the SoS Architecture with a release of the Single Integrated Model v4.x. Update and maintain the program technical baseline consisting of releasing the next version of the SoS Specification and Prime Item Development Specifications. Manage the execution of the System Level Preliminary Design Reviews. Integration and Verification Phase 1 execution consisting of integrating SW build 2, SoSCOE and Prime Item models and simulations into the program SILs and executing the Integrated Mission Test. During the IV1 execution, data gathering, reduction and assessment will be conducted. Additionally, planning for IV Phase 2 begins in FY08 with the maintainence and update of the SoS Integration Plan. Experiment 2.1 execution occurs in 2008 culminating in the completion and publication of the Assessment Report. Planning and execution of Experiment 3.0 commences. Update the Integrated Analysis Plan and execute assessments in the areas of areas of KPP achievability, MANRPINT, Manpower Estimate, Human Systems Integration, Safety and force effectiveness for SoS PDR. Safety Assessment and MANPRINT analysis reports completed and released for SO1 (FDT&E, TFT, LUT), IMT1 and Experiment 2.1. An update of the Programmatice NEPA Assessment and a Programmatic ESOH Evaluation will be completed. Update, maintain and release the Design Concept Baseline and release the System of Systems/System Design Description (SSDD).			400035	332012
CONTRACTOR SYSTEM REQUIREMENTS & INTEGRATION -FY09- Execute the SoS Preliminary Design Review and Integrated Phase 2 Engineering Integration Readiness Anchor Point as well as the SW Build 2 Readiness Checkpoint. In support of these review, continuing development and maturation of the SoS Architecture with a release of the Single Integrated Models v5.0 and 5.x. Update and maintain the program technical baseline consisting of releasing the next version of the SoS Specification and Prime Item Development Specifications. Manage the execution of the System Level Preliminary Design Reviews. Integration and Verification Phase 1 completion via the conclusion of the Integrated Mission Test 1. IMT1 data gathering, reduction and assessment will be conducted as well as development and publication of the final report. Execution of Integration Phase 3 consisting of integrating SW build 2, SoSCOE and Prime Item models and simulations into the program SILs in preparation for executing the Integrated Mission Test 2 in FY10. Experiment 3.0 execution occurs in 2009 finishing in 2010. The SoS Integration Plan is updated for IP2 and IP3. Update the Integrated Analysis Plan and execute assessments in the areas of areas of KPP achievability, MANRPINT, Manpower Estimate, Human Systems Integration, Safety and force effectiveness for SoS PDR. Safety Assessment and MANPRINT analysis reports Experiment 3.0. An update of the Programmatice NEPA Assessment and a Programmatic ESOH Evaluation will be completed. Update, maintain and release the Design Concept Baseline and release the System of Systems/System Design Description (SSDD).				
CONTRACTOR TRAINING SPECS - FY08: Begin Delivery of individual and collective Training Support Plans (1,500+). Continue training inputs and support to FCS Systems PDRs & CDRs (18 +1+1 systems). Continue Key Performance Parameter (KPP) #6 (Training) trace, development, and execution. Continue integration of Training software with Warfighter Machine Interface (WMI). Complete Training Support to SO1 Tech Field Test/Limited User Test-April 2008. Complete Training Support to Integrated Mission Test 1 (IMT-1) - Sep 2008. Complete Training Support to SoS Preliminary Design Review - Sep 2008. Provide Training Support to prepare for SoS Capability Maturity Review 1/ ICDR - Nov 2008Training Systems Specs FY09: Continue training inputs and support to FCS Systems PDRs & CDRs (18 +1+1 systems). Continue Key Performance Parameter (KPP) #6 (Training) trace, development, and execution. Continue integration of Training software with Warfighter Machine Interface (WMI). Complete Training support to SoS Capability Maturity Review 1/ICDR - Nov 2008.			13087	18560
CONTRACTOR TRAINING PRODUCTS - FY08 - TRAINING PRODUCTS: Training (Instructional) Support Packages (TSPs). Interactive Multi-media Instruction (IMI). Training Aids and Devices, Simulations and Simulators (TADSSs). Update and Deliver: Training Management Plan, Training Data Products Report, Training Support Packages, Training Facilities Survey Report. Continue			101490	92820

Delivery of individual and collective Training Support Packages (1,500+). Training (Instructional) Support Packages (TSPs). Interactive Multi-media Instruction (IMI). Training Aids and Devices, Simulations and Simulators (TADSSs). Update and Deliver: Training Management Plan, Training Data Products Report, Training Support Packages, Training Facilities Survey Report				
CONTRACTOR LOGISTICS SYSTEM MANAGEMENT - Sustainment FY08. Continue to provide gap analysis for ORD items. Provide Life Cycle Cost Impacts Conduct and provide Logistics Footprint Analysis. Provide assessments for KPP4, KPP5 and KART input. Update the Material Fielding Plan, the PBL implementation plan, the Supportability Strategy, and the M&S models. Continue PDR quality maturation of platform Sustainment and Transportation specifications. Continue the maturation of the Sustainment Architecture and its integration with all FCS platforms.IETM Specification updated (DP049). Spin Out 1 Logistics Demonstration completed. Final delivery of FCS Spin Out 1 IETMs. Develop operability (I/O) Kit ICD's. Support test and spin out activities at Fort Bliss. Conduct ILS and KPP Assessments for platform PDR's and CDR's. Begin issuing of MGV Initial Production prototypes (NLOS-C) to the EBCT. Begin fielding of Spin Out 1 FCS core, FCS Complementary Programs and LRR Logistics Products (SoSCOE, ICS, UGS, IMS, NLOS-LS, HMMWV, FMTV) to the EBCT. FY09 LOGISTICS - EI2 - Supportability Plan Update Documented SO 3 Requirements Approved. SO 2 Specifications Baselined. Systems Architecture Documented. SoS Specification Updated. PIDS to CSCI Interfaces Documented. Complete IETM Spec Development (EI2), LDMS EI2 Milestones. Develop Supportability Strategy for SO 2. CP Assessments (KPP4, KPP5 - PDR/CDR). Analyze Unit Equipping Plans. IO Kit CDR. SO 2 FPSIM Validation. SO 1 Testing of PS-MRS/LDSS.			43445	41656
CONTRACTOR SoS TEST - FY08 SoS Test - IP1. SO 1. Complete Test Readiness Review for TFT. Conduct Technical Field Test. Support Force Development Testing/Experimentation. Support Limited User Test. Delivery TFT Final Report. IMT 1. Conduct Test Participant Training. Complete IMT Test Readiness Review. Complete Test Runs for Record Perform Assessment of Test Results. Complete IP2 IPTP. IV 2 TFT - Develop Draft IV2 TFT Detailed Test Plan. Deliver Test Resources Requirements Document. IV2 IMT. Develop IV2 IMT Detailed Test Plan. Deliver Test Resources Requirements Document. Complete LSI Input to FCS TEMP in prep for PM Update for FCS SoS PDR. Complete Interim Update to ITEP. FY09 TEST - FY 09 Planned Accomplishments (IS&T) SoS Test. IP2. IMT2. Complete IMT2 Detailed Test Plan. Develop IMT2 Master Procedures Set. Prepare the Test Infrastructure (HW, SW, Participants, Facilities). Integrate and Initiate Execution of IMT 2 TFT2. Complete TFT2 Detailed Test Plan. Develop TFT2 Master Test Procedures Set. Prepare the TFT2 Test Infrastructure (HW, SW, Participants, Facilities , Ranges). IP3 early planning to support SSEI development of IP3 IPP. Complete Update to ITEP supports CR changes to FCS program. Support CTO & T&E WIPT issues resolution resulting from FCS TEMP update approval end of FY08. Support JEFX 08 in conjuction with Experiment 2.			52442	43208
CONTRACTOR FEE - This includes both the LSI incentive and fixed fee.			362955	324060
Total			1589466	1407410

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			1589466	1407410
Total Adjustments			1589466	1407410
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			1589466	1407410

Change Summary Explanation: Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604661A Project FC3) for Sys Eng & Prog Mgt SDD efforts.

This budget request is a continuation of the previous SDD efforts funded in FY07 under Program Element 0604645A Project F61; therefore, this budget request should not be construed as a new start program nor should it be constrained by "new start" program requirements and funding allocation (i.e. CRA) restrictions.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS MGV Manned Ground Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	98189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCs MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 060461A Project FC2.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604661A - FCS Systems of Systems Engr & Program Mgmt

PROJECT
FC2

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Contractor SEPM	FAR	The Boeing Company-ST. LOUIS, MO, see remark 4						149665	1-3Q	94778	1-3Q		244443	
Contractor System Requirements and Integration	FAR	The Boeing Company-ST. LOUIS, MO, see remark 4						352461	1-3Q	288511	1-3Q		640972	
Contractor Training Specifications	FAR	The Boeing Company-ST. LOUIS, MO, see remarks 1-3						11530	1-3Q	16128	1-3Q		27658	
Contractor Training Products	FAR	The Boeing Company-ST. LOUIS, MO, see remarks 1-3						89420	1-3Q	80658	1-3Q		170078	
Contractor Logistics System Mgt.	FAR	The Boeing Company-ST. LOUIS, MO						38278	1-3Q	36198	1-3Q		74476	
Contract Fee	FAR	The Boeing Company-ST. LOUIS, MO						339435	1-3Q	302806	1-3Q		642241	
Subtotal:								980789		819079			1799868	

Remarks: Remark 1: Subcontractor: Computer Science Corp. Federal Sector Defense Group, Fslls Church,VA.
Remark 2: Subcontractor: Dynamics Research Corp. Systems Division, Andover, MD.
Remark 3: Subcontractor: Northrop Grumman, Info Tech, Def Enterprise Solutions Div, Mclean,VA.
Remark 4: Subcontractor: SAIC Corp., San Diego,CA

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government SEPM	Direct	PM FCS(BCT) - St Louis, MO						128331	1-3Q	135127	1-3Q		263458	
Government Other and GFX	Direct	PM FCS(BCT) - St Louis, MO						151238		142613			293851	
Government Statutory Reductions	Direct	OSD						116325	1Q	104758	1Q		221083	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

Subtotal:								395894		382498			778392	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Contractor - SoS Test	FAR	The Boeing Company - St. Louis,MO						46205	1-3Q	37547	1-3Q		83752	
Government STE, see remarks 1-6	Direct	PM FCS(BCT), St. Louis, MO						156365	1-3Q	156603	1-3Q		312968	
Government Modeling & Simulation	Direct	PM FCS(BCT), St. Louis, MO						10213	1-3Q	11683	1-3Q		21896	
Subtotal:								212783		205833			418616	

Remarks: Remark 1:Subcontractor, Whitman, Requardt & Assoc, Baltimore, MD;
2: John C. Grimberg Co., Rockville, MD
3: ADT Corp, Baltimore, MD
4. Netversant Co., Baltimore, MD
5. 3D Research, Huntsville, AL
6. Jacobs/Sverdrup, Aberdeen, MD

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:								**1589466**		**1407410**			**2996876**	

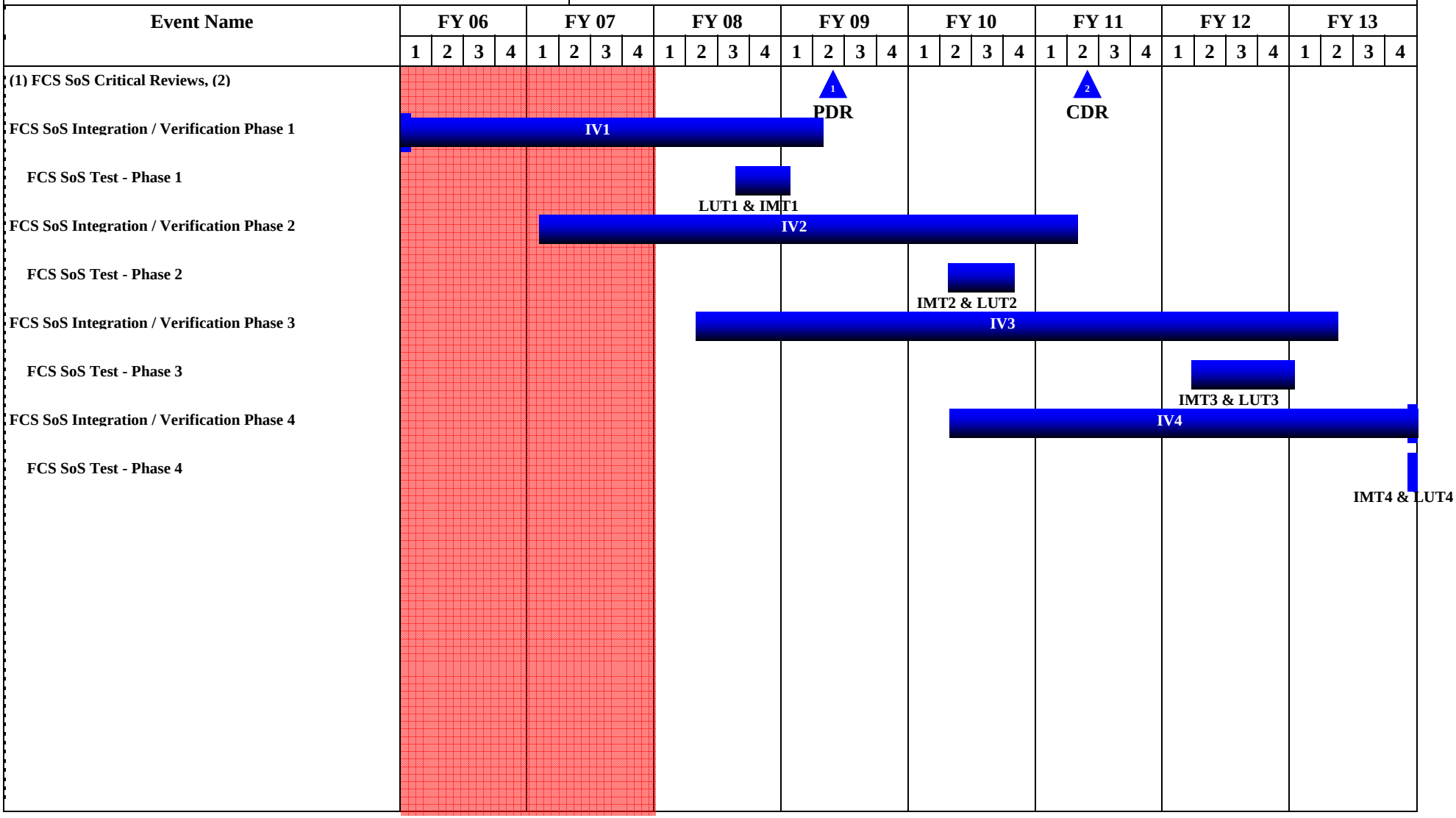
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604661A - FCS Systems of Systems Engr & Program Mgmt

PROJECT
FC2



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)		February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604661A - FCS Systems of Systems Engr & Program Mgmt**	PROJECT **FC2**

Funding in $000

Program	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Other Termination			499400	466200	449700	393000	267100	172300
Special Termination			427600	415800	387500	352700	272200	176400
Total Termination Liability Funding:			927000	882000	837200	745700	539300	348700

Remarks:

The SDD Contract contains FAR 52.232-22, Limitation of Funds, and FAR 52.249-6, Termination (Cost-Reimbursement) clauses to define allowable termination costs. The above costs are estimated to cover contract performance and termination liability incurred. Special Termination Cost (STC) clause is approved and included in LSI's FAR contract. STC are not included in the program budget. If the contract is terminated, the government will pay for the following prime and subcontractor costs:

- Severance Pay, as provided in FAR 31.205-6(g)
- Reasonable costs continuing after termination, as provided in FAR 31.205-42(b)
- Settlement of expenses, as provided in FAR 31.205-42(g), and
- Costs of return of field service personnel from sites, as provided in FAR 31.205-35 and FAR 31.205-46(c)

Other termination is currently not covered by the Government. Therefore, due to Limitation of Funds clause in the FAR, the LSI must retain funding to cover the full other termination costs in case of termination. Those costs governed by FAR part 31 include prime and subcontractor costs for:

- Allowable Fee
- Cost incurred, but not billed to the FAR contract
- Non-cancelable commitments
- Unexpired leases
- Alteration/restorations required by leases
- Loss of useful value of capital property

Full termination liability is a combination of the above Special Termination Cost and Other Termination Costs.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**

COST (In Thousands)		FY 2006 Actual	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
FC3	FCS RECONNAISSANCE (UAV) PLATFORMS			41164	34220	14398	9301	4587	1344	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This Future Combat System(FCS) Program Element covers the Class I and Class IV air platforms and includes contractor development, engineering, prototype procurement and integration, test, and assembly. The UAVs are the eyes, the ears and the gun sights of the BCT. The Class I Unmanned Aerial Vehicle (UAV) provides the dismounted soldier Reconnaissance, Surveillance, and Target Acquisition (RSTA). It has the ability to hover and stare at military operations on rural and urban terrain.

The Class I senses and provides imaging to recognize personnel, day and night. Provides targeting information to the FCS network during day and night operations and in adverse weather from 500 feet. Weighing less than 30 pounds, the air vehicle operates in complex urban and rural terrains with a vertical take-off and landing capability. It is carried in a standard MOLLE; is air droppable with soldier.

The Class IV Unmanned Aerial Vehicle (UAV) has a range and endurance appropriate for the brigade mission. It supports the Brigade Combat Team (BCT) Commander with communications relay, long endurance persistent stare, and wide area surveillance over 75km radius. Unique missions include dedicated manned and unmanned teaming (MUM) with manned aviation; Emitter Mapping; Wide Band Communications Relay across 150-175 km; and standoff Chemical Biological Radiological, Nuclear, and Energy (CBRNE) detection with on-board processing. Additionally, it has the payloads to enhance the RSTA capability by cross-cueing multiple sensors. It operates at survivable altitudes at standoff range at day and night and during adverse weather.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
UAV CLASS I - FY08 UAV Class I Planned Accomplishments. Integrate and fly 1st prototype Class I AV. Complete majority of hardware integration activities and prepare for 1st Qualification Flight in FY09. Continue Integration Phase 2 activities to include Engineering Iteration 2, Software Build 2, and Integration and Verification Phase 2. Begin activities associated with Software Build 3. Support System of System logistics and training demonstrations, and experimentation objectives. CLASS I LASER DESIGNATOR - A laser designation capability will be included in the Class I.FY 09 UAV Class I Planned Accomplishments.Final Integration/Test of			20153	13070

integrated prototypes. 12 Class I Prototypes delivered for flight test and flight training. SW Build 2 release to SoSIL. Development of Build 3 Operational and Sim Software. Development of Build 3 Operational and Sim Software. Participate in Integrated Qualifications Testing (IQT). MAV SIL V&V. Begin Integration and Ground Test.				
UAV CLASS IV - FY08 -1. Vendor level component and subsystem delta testing for E3 and Temperature will conclude. FY 08 UAV Class IV Planned Accomplishments. Conduct Class IV UAVS PDR in July 2008. Complete Phase 1 air vehicle assembly at Moss Point, MS for Air Vehicles #A3-A5, less FCS-unique avionics/payloads. Take delivery of Pre-EDM 2 Ch JTRS, Sensor, Communication, and ICS Emulators. Continue Integration Phase 2 activities to include Engineering Iteration 2, Integration and verification Phase 2, and Operational Flight Software Build 2. Support System of System logistics and training. FY 09 UAV Class IV Planned Accomplishments. Conduct Class IV UAVS CDR in July of 2009. Complete Phase I air vehicle assembly at Moss Point, MS for Air Vehicles #A6-A8, less FCS-unique avionics/payloads. Complete Phase I Prototype fabrication and assembly of all 8 air vehicles. Begin Phase II fabrication and assembly of prototypes which includes FCS-unique ICS/payloads on #A1. Development of Build 3 Operational and Simulation Software. Continued SIL Integration and tests of delivered emulators. FY09 - Class IV Component and subsystem testing in SILs.			21011	21150
Total			41164	34220

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			41164	34220
Total Adjustments			41164	34220
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			41164	34220

Change Summary Explanation: Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604662A Project FC3) for Unmanned Aerial Vehicle SDD efforts.

This budget request is a continuation of the previous SDD efforts funded in FY07 under Program Element 0604645A Project F52; therefore, this budget request should not be construed as a new start program nor should it be constrained by "new start" program requirements and funding allocation (i.e. CRA) restrictions.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS M060anned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight _ Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604661A Project FC2.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604662A - FCS Reconnaissance (UAV) Platforms

PROJECT
FC3

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Class I	FAR	Boeing Co., St. Louis, MO See Remark 1						19285	1-3Q	12529	1-3Q		31814	
Class IV	FAR	Boeing Co., St. Louis, MO See Remark 2						20092	1-3Q	20270	1-3Q		40362	
Subtotal:								39377		32799			72176	

Remarks: Remark 1: Subcontractor: Honeywell,- Albuquerque,New Mexico
Remark 2: Subcontractor: Northrop Grumman Systems Corp.- San Diego, CA

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government- Statutory Reductions	Direct	OSD						1787	1Q	1421	1Q		3208	
Subtotal:								1787		1421			3208	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

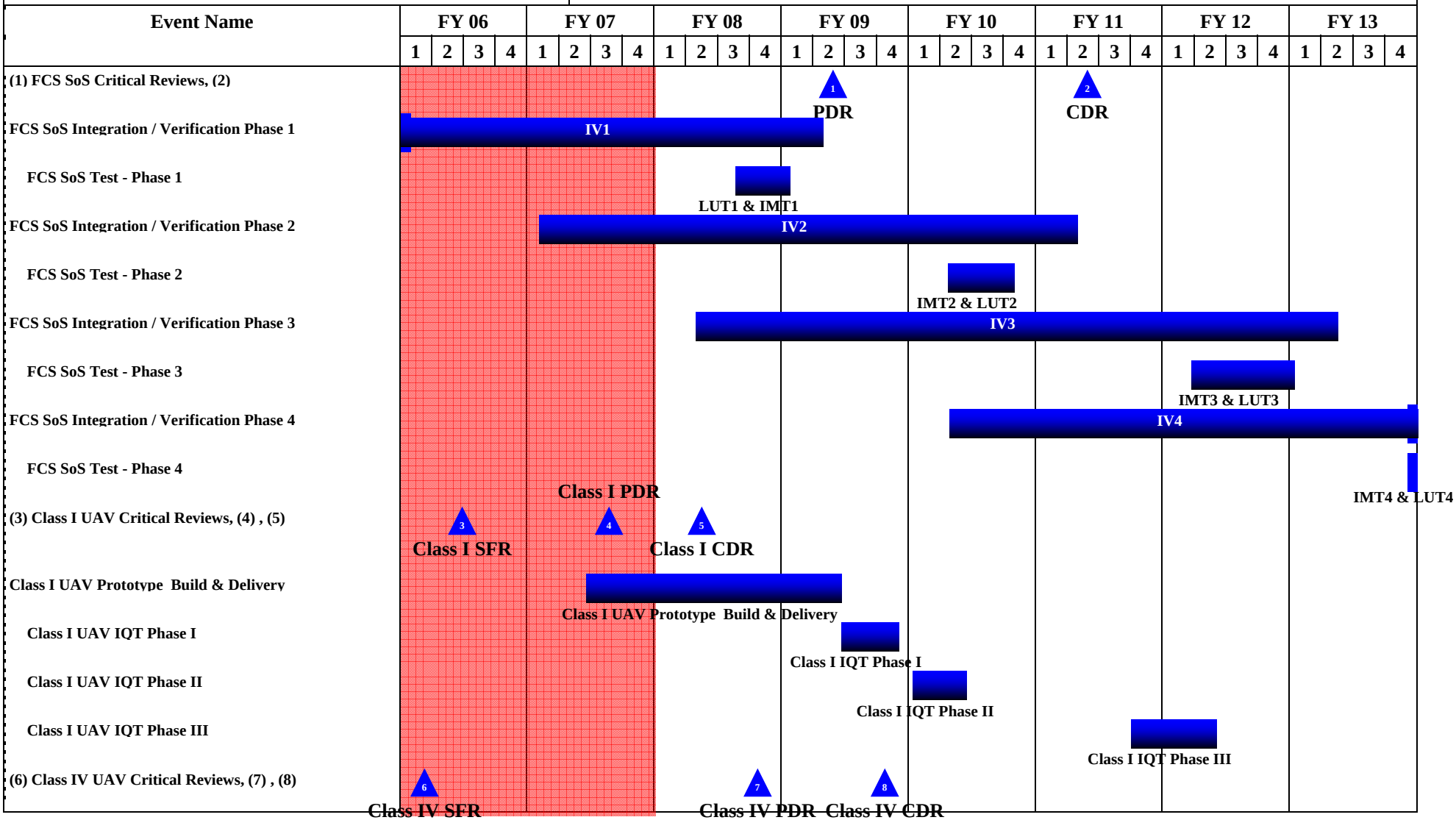
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:						**41164**		**34220**			**75384**		

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**



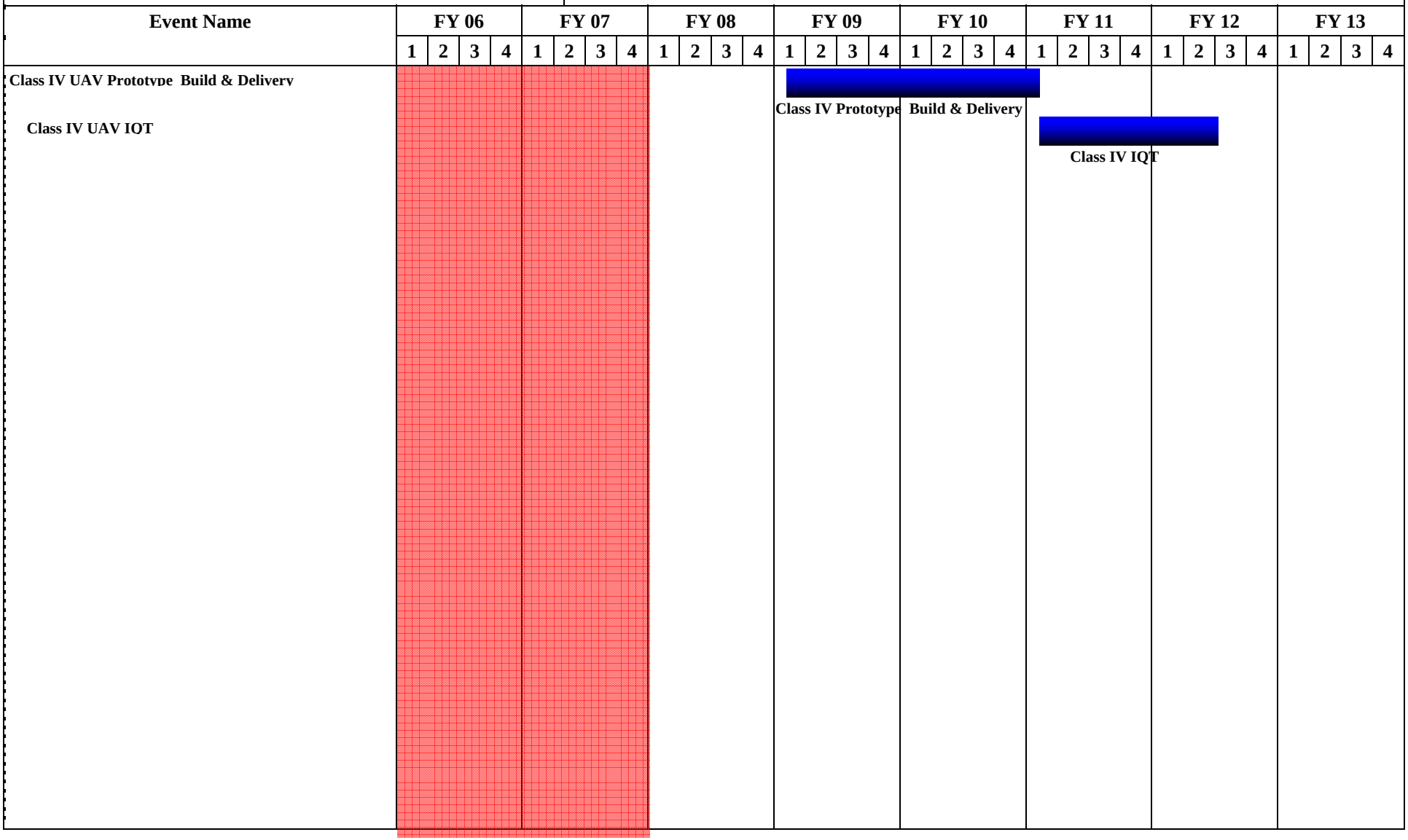
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604662A - FCS Reconnaissance (UAV) Platforms

PROJECT
FC3



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
Class I UAV Critical Reviews	2Q							
		3Q						
			2Q					
Class I UAV Prototype Build & Delivery		2Q - 4Q	1Q - 4Q	1Q - 2Q				
Class I UAV IQT Phase I				2Q - 4Q				
Class I UAV IQT Phase II					1Q - 2Q			
Class I UAV IQT Phase III						3Q - 4Q	1Q - 2Q	
Class IV UAV Critical Reviews	1Q							
			4Q					
				4Q				
Class IV UAV Prototype Build & Delivery				1Q - 4Q	1Q - 4Q	1Q		
Class IV UAV IQT						1Q - 4Q	1Q - 2Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**

COST (In Thousands)		FY 2006 Actual	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
FC4	FCS UNMANNED GROUND VEHICLES			90667	96666	65206	43912	27038	3603	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. FCS is the #1 priority acquisition program for the Army.

This FCS project includes contractor developmental and engineering efforts for requirement analysis, specification development, and detail design packages for integration of common and mission equipped Unmanned Ground Vehicles. Also included are subsystem prototypes, models, and/or simulations to support development, tests, and demonstrations. Unmanned platforms include: Armed Robotic Vehicles-Reconnaissance (ARV-RSTA) and ARV-Assault (ARV-A), Small Unmanned Ground Vehicle (SUGV), Multi-function Utility/Logistics Equipment-Transport (MULE-T), MULE-Countermine (CM), and ARV-Assault Light (ARV-A-L). In addition to the UGV platforms, this project includes the development of the hardware and software for the Autonomous Navigation System (ANS) required for operation of the UGVs and leader-follower capability for the Manned Ground Vehicles (MGV).

Small Unmanned Ground Vehicle (SUGV)
The Small Unmanned Ground Vehicle (SUGV) is a small, lightweight, manportable, DC powered UGV capable of conducting military operations in urban terrain tunnels, sewers, and caves. The SUGV enables the performance of manpower intensive or high-risk functions (i.e. urban Intelligence, Surveillance, and Reconnaissance (ISR) missions, chemical/Toxic Industrial Chemicals/Toxic Industrial Materials, reconnaissance, etc.) without exposing soldiers directly to the hazard. Weighing less than 30 pounds, it is capable of carrying up to six pounds of payload weight. The SUGV will have the following capabilities: tether payload, manipulator arm, CBRN capabilities and the potential for integrating future technologies for Sense Through the Wall and Mine/UXO/IED detection ability. The SUGV can operate up to six hours on a single charge.

Multifunctional Utility/Logistics and Equipment (MULE) Vehicle is a 2.5-ton Unmanned Ground Vehicle (UGV) that will support dismounted operations. It is comprised by the integration of four major components: Common Mobility platform, Autonomous Navigation System (ANS), Centralized Controller (CC) and three mission equipment packages/variants.

The MULE platform's centerpiece is the common mobility platform providing superior mobility built around an articulated suspension system to negotiate obstacles and gaps that a dismounted squad might encounter. The MULE has three variants sharing the common mobility chassis: Transport, Countermine and the Armed Robotic Vehicle (ARV)-Assault-Light (ARV-A-L). The Transport MULE (MULE-T) will carry 1,900-2,400 pounds of equipment and rucksacks for dismounted infantry squads with the mobility needed to follow squads in complex terrain. The Countermine MULE (MULE-CM) will provide the capability to detect, mark and neutralize individual anti-tank mines by integrating a mine detection mission equipment package from the Ground Standoff Mine Detection System (GSTAMIDS) program to support force mobility. The ARV-Assault-Light (ARV-A-L) is a mobility platform with an integrated weapons and target acquisition package to support the dismounted infantry's efforts to locate and destroy enemy platforms and positions. The ARV-A-L includes the M240 machine gun, JAVELIN missile and medium range EOIR sensors to engage and destroy the enemy in dismounted operations. The

MULE platforms are UH-60 transportable.

Autonomous Navigation System (ANS) is the mission payload package that will be integrated on both the MULE and ARVs to provide robotic semiautonomous capability. ANS provides Global Positioning System (GPS)/IPS core navigation, targeting support and timing. It also detects obstacles and provides alternate routes. The ANS primary system components are: the LADAR Imaging Perception Module (LIPM), the Imaging Perception Module (IPM), the Millimeter Wave Radar (MMWR), the Global Positioning System/Inertial Navigation System (GPS/INS) and the ANS Computer System (ACS). ANS provides for day and night capability in all weather and mobility control for on/off roads, cross country and complex terrain. MMWR provides tracking in rain, smoke or fog along with an early warning for approaching vehicles with high closing rates. ACS provides SoSCOE interface, path planning, video processing, hardware sensor processing object processing and speed and curvature commands. As part of the Army Budget Constraints contain in the 08-13 POM decision, the leader follower MGV mission is being deferred and made an objective requirement.

Armed Robotic Vehicle (ARV)
The Armed Robotic Vehicle (ARV) has two variants: the Assault variant (ARV-A) and the Reconnaissance, Surveillance and Target Acquisition variant (ARV-RSTA). The two variants share a common chassis. The ARV-A and ARV-RSTA will have different mission payloads mounted on a common chassis capable of staying with MGVs. These two variants are being deferred and made an objective requirement as part of the Army budget Constraints contained in the 08-13 POM.

The ARV-A will be utilized to maneuver forward of the mounted and dismounted elements in the attack or within the defense. The Assault variant will support the mounted and dismounted forces in the assault providing Line-of-Sight (LOS) and overwatching fires with direct fire and anti-tank (AT) weapons to destroy enemy platforms and fortified positions; remotely occupies key terrain providing ISR/TA reconnaissance capability in MOUT and other battlespace; remotely deploy sensors; locate or by-pass threat obstacles; remotely assess battle damage, employ non-lethal munitions; remotely provide limited reconnaissance capability and acts as a communications relay.

The ARV-RSTA accompanies mounted and reconnaissance units and fills the role of an additional "scout", gathering information forward of the MGVs. The ARV-RSTA consists of a common chassis platform with payloads that provide video capability, digital communications/audio relay modules (plug in/out), and advanced sensors/mission modules. The ARV-RSTA variant will provide Reconnaissance, Surveillance and Target Acquisition for the FCS (BCT). The ARV-RSTA will provide reconnaissance capability in Urban Military Operations in Urban Terrain and other battlespace; deploy sensors, highlight targets, locate or by-pass threat obstacles in buildings, bunkers, tunnels, and other urban areas and act as a communications relay and perform battle damage assessment.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
SUGV - FY08 - Conduct Technology and Integration Risk Reduction Activities. Develop Integrated UGV Platform Simulations. Update and deliver simulations for SUGV to SoSIL. Begin procurement of SUGV prototype hardware.FY09 SUGV - 1Q FY09: SUGV Build 2 Software to SIDB. 4Q FY09: First SUGV Prototype delivered. Conduct Technology and Integration Risk Reduction Activities			7390	5709
MULE - FY08 -Complete Preliminary Design Reviews MULE-Transport, MULE-Countermine, ARV-Assault-Light 1Q FY08: 1Q FY08: Update and deliver simulations for MULE to SoSIL. 3Q FY08: Update and deliver ANS simulation to MULE and MGV. 4Q FY08: Update and deliver simulations for MULE to SoSIL. Conduct Technology and Integration Risk Reduction Activities. FY09 MULE - 1Q FY09 MULE CDR. 1Q FY09: MULE Build 2 LCO & BPC. 2Q FY09: MULE Build 3 LCA & BRC. 4Q FY09: Finish Fabrication, Integration and Assembly of MULE Common Mobility Platform. Conduct Technology and Integration Risk Reduction Activities.			46716	50777

ANS FY08 - Prepare documentation and artifacts for upcoming CDR. Update and deliver ANS simulation to MULE, 3Q FY08.Conduct Technology and Integration Risk Reduction Activities. Complete Critical Design Reviews for Autonomous Navigation System in 4Q FY08. FY09 ANS - 1Q FY09 ANS Build 3 Life Cycle Objective (LCO). 3Q FY09 ANS Build 3 Life Cycle Architecture (LCA). 4Q FY09 ANS First Article Development. 4Q FY09 Initial ANS Prototype Fabrication (13 in FY09). Conduct increasingly difficult experiments and demonstrations of ANS capabilities. Conduct Technology and Integration Risk Reduction Activities. The CDR for ANS completed in 1Q FY09.			36561	40180
Total			90667	96666

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			90667	96666
Total Adjustments			90667	96666
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			90667	96666

Change Summary Explanation: Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604663A Project FC3) for Unmanned Ground Vehicles SDD efforts.

This budget request is a continuation of the previous SDD efforts funded in FY07 under Program Element 0604645A Project F53; therefore, this budget request should not be construed as a new start program nor should it be constrained by "new start" program requirements and funding allocation (i.e. CRA) restrictions.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS M060anned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

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Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604661A Project FC2.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604663A - FCS Unmanned Ground Vehicles

PROJECT
FC4

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Small Unmanned Ground Vehicle (SUGV)	FAR	The Boeing Company, St Louis, MO see remark 1						7091	1-3Q	5489	1-3Q		12580	
Autonomous Navigation System - Software	FAR	The Boeing Company, St Louis, MO see remark 3						35055	1-3Q	38631	1-3Q		73686	
MULE	FAR	The Boeing Company, St Louis, MO see remark 2						44827	1-3Q	48827	1-3Q		93654	
Subtotal:								86973		92947			179920	

Remarks: Remark 1: Subcontractor: iRobot Corp. - Burlington, MA
Remark 2: Subcontractor: Lockheed Martin Missile and Fire Control - Grand Prairie, TX
Remark 3: Subcontractor: General Dynamics Robotic Systems - Westminister, MD

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government Statutory Reductions	Direct	OSD						3694	1Q	3719	1Q		7413	
Subtotal:								3694		3719			7413	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Performing Activity &	Total	FY 2006	FY 2006	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2007

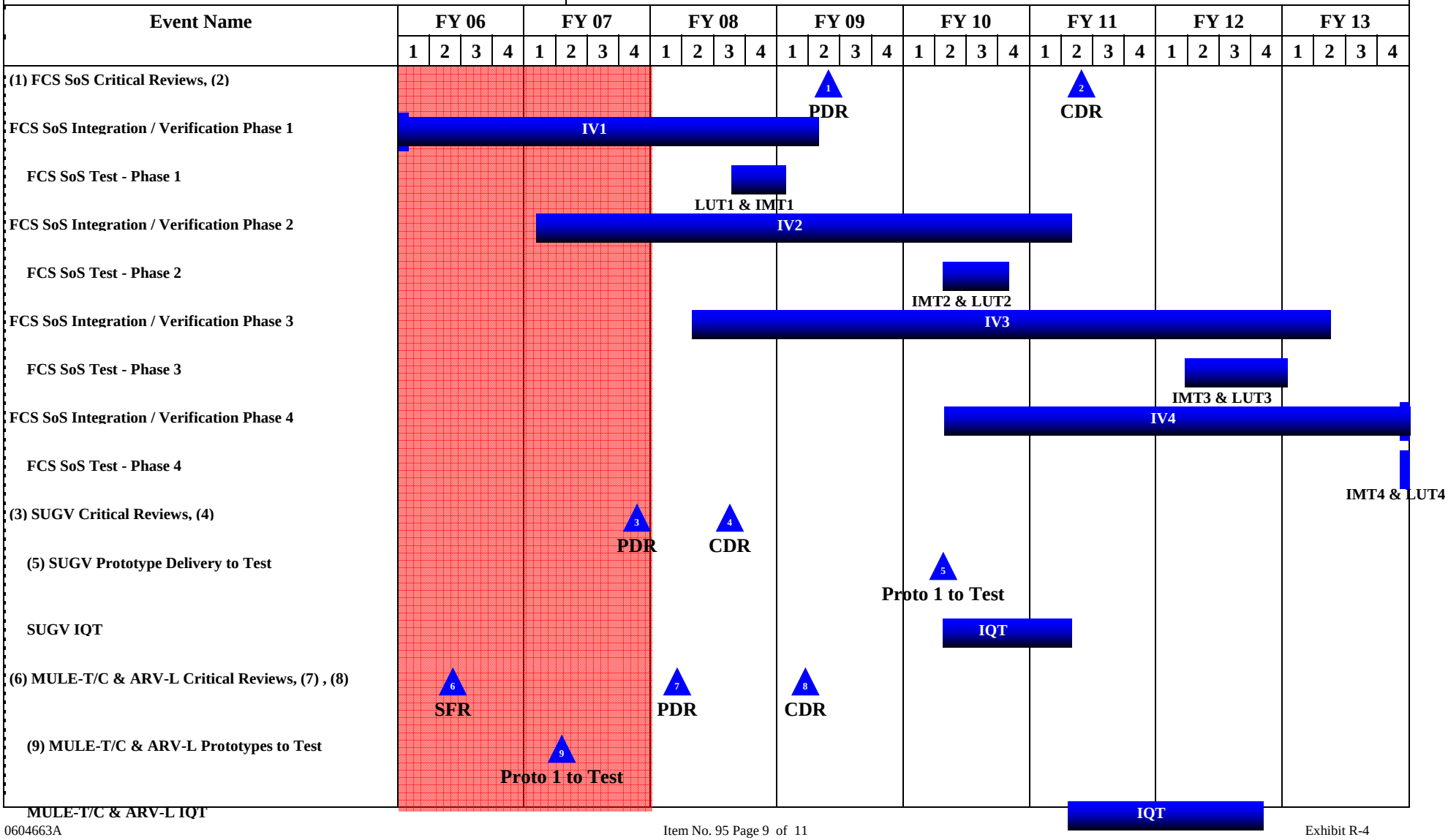
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
Subtotal:														
Project Total Cost:								**90667**		**96666**			**187333**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**



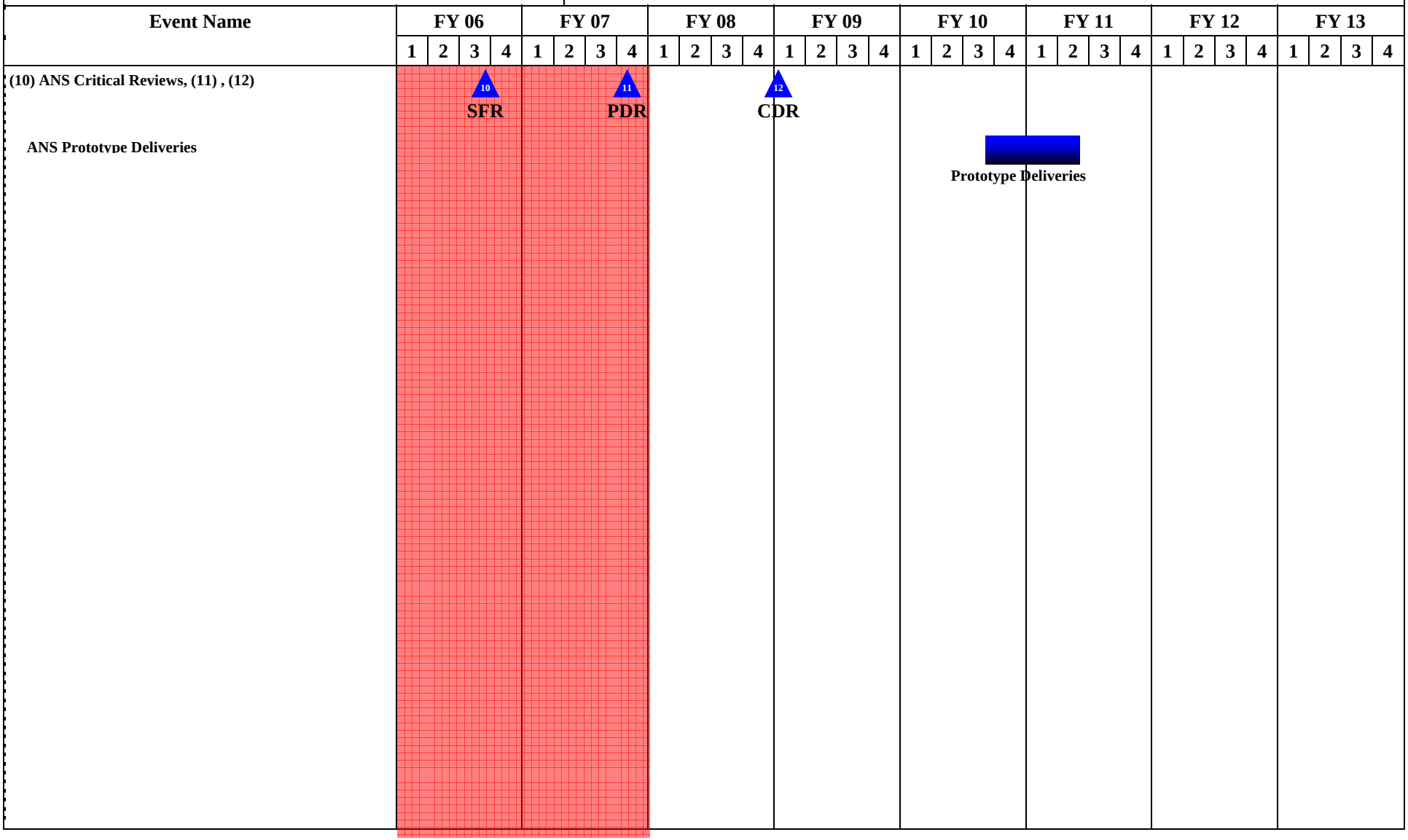
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604663A - FCS Unmanned Ground Vehicles

PROJECT
FC4



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604663A - FCS Unmanned Ground Vehicles

PROJECT
FC4

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
SUGV Critical Reviews		4Q						
			3Q					
SUGV Prototype Delivery to Test					2Q			
SUGV IQT					2Q - 4Q	1Q - 2Q		
MULE-T/C & ARV-L Critical Reviews	2Q							
			1Q					
				1Q				
MULE-T/C & ARV-L Prototypes to Test		2Q						
MULE-T/C & ARV-L IQT						2Q - 4Q	1Q - 4Q	
ANS Critical Reviews	3Q							
		4Q						
				1Q				
ANS Prototype Deliveries					3Q - 4Q	1Q - 2Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

COST (In Thousands)		FY 2006 Actual	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
FC5	FCS UNATTENDED GROUND SENSORS			10999	12942	19103	16874				59918

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

The FCS (BCT) Unattended Ground Sensors (UGS) program is divided into two major configurations of sensing systems:
URBAN-UGS (U-UGS), also known as Urban Military Operations in Urban Terrain (MOUT) Advanced Sensor System (UMASS):and
TACTICAL-UGS (T-UGS), which includes Intelligence, Surveillance and Reconnaissance (ISR)-UGS and Chemical, Biological, Radiological and Nuclear (CBRN)-UGS.

U-UGS - The Urban-Unattended Ground Sensors (U-UGS), also known as Urban Military Operations in Urban Terrain Advanced Sensor System, will provide a low cost, network-enabled reporting system for SA and force protection in an urban setting, as well as residual protection for cleared areas of Urban Military Operations in Urban Terrain (MOUT) environments. The (U-UGS) system can support BCT operations by monitoring urban choke points such as rooms, halls, attics, basements, sewers, culverts, tunnels, caves, and alleyways. They can be hand-employed by Soldiers or robotic vehicles either inside or outside buildings and structures. When a platoon or squad clears a building for example, U-UGS are left behind to perform surveillance that would otherwise require dedicated soldiers.
The U-UGS system provides a self-organizing wireless network that consists of three configuration items; personnel detect sensors, imaging sensors, and gateways.
1. Personnel Detect Sensors provide dual mode, passive infrared and RF microwave motion sensing for "trip-wire" detection of intruders.
2. Imaging Sensors provide electro-optical visual imaging with a near-infrared illuminator for operation in full darkness.
3. Gateways organize and manage the sensor network, and communicate sensor data to FCS C2 JTRS systems and to the local dismounts.

T-UGS - Tactical-UGS (T-UGS) includes Intelligence, Surveillance and Reconnaissance (ISR)-UGS and Chemical, Biological, Radiological and Nuclear (CBRN)-UGS. The UGS (T-UGS) are designed for remote tactical operations in open spaces, at road choke points, avenues of approach, etc, and are designed to be emplaced by hand or by remote deployment methods. T-UGS provides ISR and CBRN awareness to the FCS (BCT) of areas not covered by manned/unmanned ground/air vehicles. The common form factor enables simplified scalability and upgrade paths for future technology insertion, while the distributed sensing capability enhances mission flexibility and system versatility. The T-UGS system consists of five configuration items (nodes), each containing a unique set of sensing capabilities, and sharing a common hardware form factor.
1.The T-UGS ISR sensor node provides for vehicle and personnel detection capabilities via seismic, acoustic and magnetic sensors. Seismic sensors are the primary means of personnel detection. The principal means of vehicle detection and tracking are the acoustic bearing sensors. The ISR-UGS will be modular and composed of tailorable sensor

groups using multiple ground-sensing technologies. Multiple sensors support precision location and simultaneous tracking of multiple targets.
2. When confirmed as a valid target of interest, Electro Optical/Infrared (EO/IR) sensor nodes will autonomously capture multiple images of the target.
3. The CBRN node provides for chemical, biological, radiological, and nuclear sensing and reporting capability.
4. The Hazard/Clear Lane Marker (H/CLM) nodes are deployed to mark hazardous keep-out zones, or to define cleared lanes though hazardous areas such as minefields.
5. The final component of the T-UGS system is the Long-Haul gateway node that provides radio communications and integration into the FCS network.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
UNATTENDED GROUND SENSORS - FY08 / FY09 - Complete and release Threshold PIDS. Delivery of T-UGS prototype 1-10 to SoSIL. Deliver of U-UGS prototype 1-16 to SoSIL. Complete T-UGS and U-UGS systems Integration and Test Effort SO1. Participate in JEFX08.			10999	12942
Total			10999	12942

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			10999	12942
Total Adjustments			10999	12942
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			10999	12942

Change Summary Explanation: Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604664A Project FC3) for Unattended Ground Sensor SDD efforts.

This budget request is a continuation of the previous SDD efforts funded in FY07 under Program Element 0604645A Project F54; therefore, this budget request should not be construed as a new start program nor should it be constrained by "new start" program requirements and funding allocation (i.e. CRA) restrictions.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS M060anned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
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0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

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Termination Liability associated with this contract is included in PE 0604661A Project FC2.

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ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604664A - FCS Unattended Ground Sensors

PROJECT
FC5

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Unattended Ground Sensors (UGS)	OTA/FAR	The Boeing Company - St Louis, MO See Remark 1						10929	1Q	12418	1Q		23347	
Subtotal:								10929		12418			23347	

Remarks: Remarks 1: Subcontractor: Textron Systems,Intelligent Battlefield System Division - Willington, MA

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government - Statutory Reductions	Direct	OSD						70	1Q	524	1Q		594	
Subtotal:								70		524			594	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

ARMY RDT&E COST ANALYSIS (R3)

February 2007

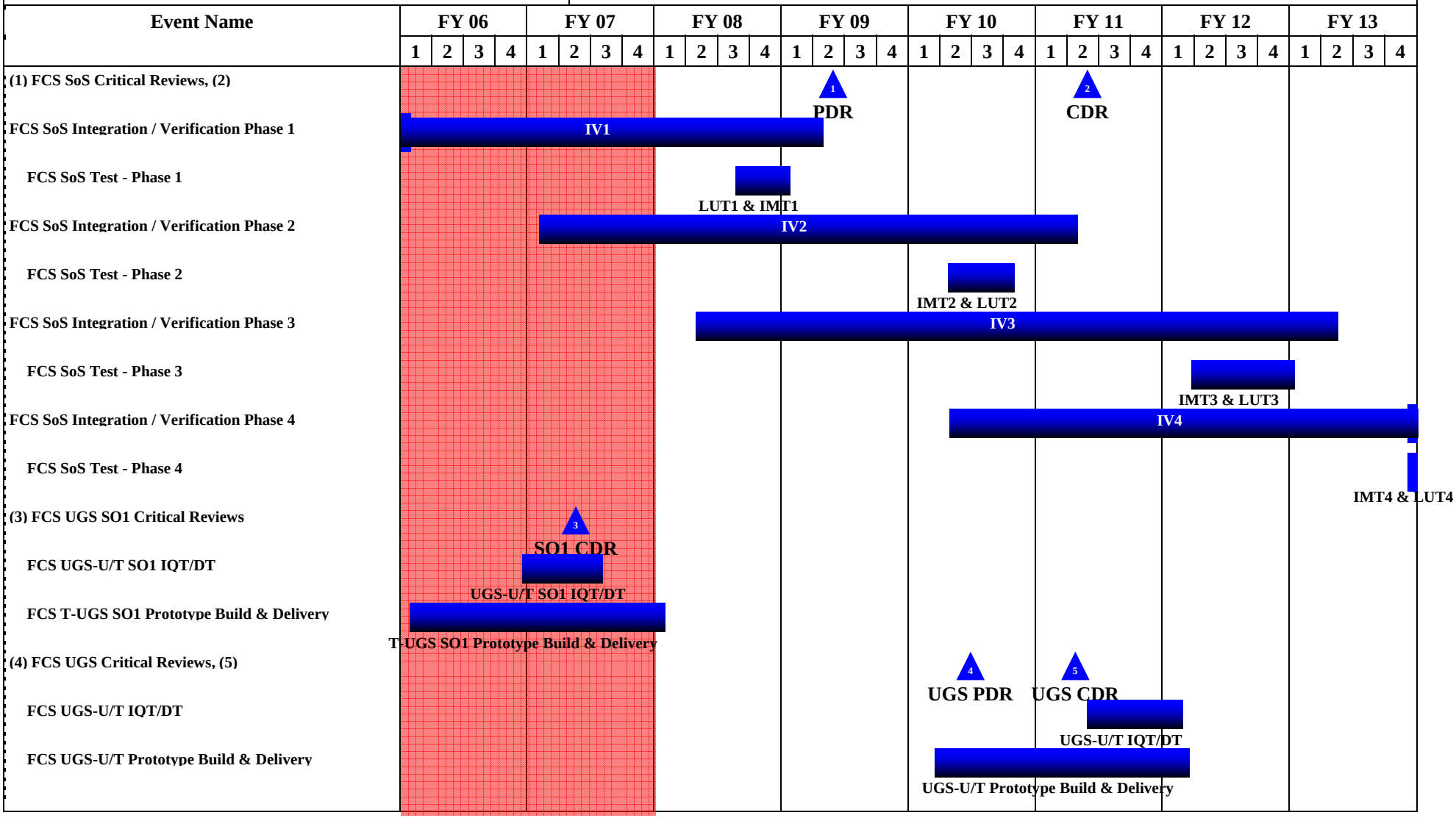
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

Project Total Cost:						**10999**		**12942**			**23941**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
FCS UGS SO1 Critical Reviews		2Q						
FCS UGS-U/T SO1 IQT/DT	4Q	1Q - 3Q						
FCS T-UGS SO1 Prototype Build & Delivery	1Q - 4Q	1Q - 4Q	1Q					
FCS UGS Critical Reviews					2Q			
						2Q		
FCS UGS-U/T IQT/DT						2Q - 4Q	1Q	
FCS UGS-U/T Prototype Build & Delivery					1Q - 4Q	1Q - 4Q	1Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**

COST (In Thousands)		FY 2006 Actual	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
FC6	FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

Network Software - Provides the SoS engineering effort to transform the FCS Operational Requirement Document (ORD) into a networked SoS architecture. Develop and Build/Test software codes for the FCS. It includes the conduct of system reviews, trade studies, and architectural design of the SoS network including requirements flow down, configuration management, SoS software requirements, functional & operational architecture, and design reviews to ensure network integration across all of the BCT Battlefield Functional Areas to meet FCS requirements and SoS integration. Network software management traces, cost, schedule, and performance throughout the program.

Network Software Analysis and Integration links definition, design, procurement, construction, integration, experimentation, and testing of the elements of the distributed network system across the FoS in accordance with the Software Development Plan (SDP), SoS specification, C4ISR, Spin Out, and applicable segment and subsystem specification.

The distributed network consists of the following elements: a distributed information management backbone, communications applications and interfaces, Intelligence, Surveillance and Reconnaissance (ISR) applications and interfaces, command and control applications and interfaces, and training and supportability applications.

Common Network Hardware - Includes design, development and prototype procurement of common hardware required for implementation of the data network. This includes sensors, communications hardware and computer processing capabilities.

Network Software Performance Management - This effort represents the contractors' management of this project's efforts and cost accounts.

Command and Control - Definition, development, integration, and testing of the distributed command and control application software, including soldier interfaces, mission planning, situational awareness and understanding, and battle command for the FCS (BCT).

Information Management - Definition and development of the information management backbone and application interface structure for implementation of the distributed network.

System of Systems Common Operating Environment (SoSCOE) - The SOSCOE is the common set of software tools and services that application and platform developers use as a foundation for their software development. It is the common middleware that exists between the domain applications and the operating system and underlying network.

This is different for other Operation Environments, in the past, in that it is not so much a common environment for software to execute within as much as a toolkit of software for use by software developers to ensure that the end solution is tightly integrated across the FCS Family of Systems. It takes common function and makes them available for use across the various components including, Battle Command, Supportability, Sensors, and the platforms themselves.

The operating system itself is not part of SOSCOE but instead is included in the Integrated Computer system. SOSCOE will exist in various editions to meet the needs of the diverse platforms and will include real and non-realtime functions, safety critical functionality, and must meet the needs of small and unmanned systems as well as the primary manned ground systems.

Fusion - Definition, development, integration, and testing of the distributed ISR application software, including soldier interfaces, common sensor interface, Level 1 fusion with organic and non-organic sensor feeds, and sensor data management for the FCS.

Communication system software - Definition, integration, development, coding, and qualification of the communications network. Includes: requirements development, traceability and management, functional flow analysis and update to the requirements database, technical trade studies and analyses.

Weapons management control software - Distributed control of network fires.

ACE applications - The ACE applications that reside with the soldier and on the platforms for reachback.

Embedded training integration software - Definition, development, integration, and testing of the common and unique training software applications that are distributed across the FCS FoS.

Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604665A Project FC6) for FCS Network Hardware & Software SDD efforts, commencing with the FY2008 President's Budget submission to Congress.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
SOSCOE Information Management Software (IMS)Development - FY08 Objectives: Complete Development & Test of Build 2.0. Complete Formal Qualification Test of Build 2.0. Deliver Formal Release of 2.0 Complete Build 2.5 Requirements and Architechure Review (RAR) and Architechure and Design review (ADR) Reviews. Complete Build 2.5 ISM Review Complete Requirements, Design, Code & Test of Build 2.5. Deliver Build 2.5 Engineering Release. Purchase And Maintain COTS License AgreementsSupport JEFX 08. FY09 Objectives: Complete Development & Test of Build 2.5. Complete Formal Qualification Test of Build 2.5. Deliver Formal Release of 2.5. Complete Build 3.0 RAR and ADR Reviews. Complete Build 3.0 IMS Review. Complete Requirements, Design, Code & Test of Build 3.0. Deliver Build 3.0 Engineering Release. Purchase And Maintain COTS License Agreements.			87528	79020

Communication Systems Software and Network Management Software - FY08 Objectives: Complete Development and Testing of Build 2.0. FY09 ObjectivesNetwork Management Software (NMS) Build 2 Engineering ReleaseNMS Build 2 Final			22627	16342
Battle Command Software FY08 Objectives:Complete Design, Build, and Test of Build 2.0 Early / Spin Out 2 Early. Complete Design, Build, and Test of Build 2.0 Engineering Iteration 2 Early 2Q 2008. Battle Command Software Build 2 Early. Engineering Release 3Q FY08. Build 2 Final Release. Battle Command Software Spec Build Planning Checkpoint 3Q FY08. Build 2 Final release. Battle Command Software Build Readiness Checkpoint 4Q FY08. FY09 Objectives: Battle Command Software Build 2 Test Readiness Review. Deliveries of Battle Command Software Final / Spin Out 2 Final / Engineering Iteration 2 Final. Begin Battle Command Software Build 3 Early Life Cycle Objective. Battle Command Software Build2 Engineering Release. Battle Command Software Specification Build3 Engineering Release rev A. Battle Command Software Life Cycle Architecture Build 3 Engineering Release. Battle Command Software Build Readiness Checkpoint Build3 Engineering Release.			70466	67345
Fusion Software - FY08 Objectives: Deliveries to Battle Command of Build 2 Early / Spin Out 2 Early /Engineering Iteration 2 Early, in 3Q FY08. ISR Fusion software Build 2 Final Life Cycle Objective, 3Q FY08. ISR Fusion software Build 2 Early Engineering Release 4Q FY08. ISR Fusion software Build 2 Final Spec Build Planning Checkpoint, 4Q FY08. ISR Fusion software Build 2 Final Build Readiness Checkpoint, 4Q FY08. FY09 Objectives: Build 2 Test Readiness Review - Deliveries of ISR Fusion software Build 2 Final / Engineering Iteration 2 Final. Build 3 Early Life Cycle Objective. ISR Fusion software Build2 final ReleaseISR Fusion software Build 3 Engineering release Spec Build Planning Checkpoint. ISR Fusion software Build 3 Engineering release Life Cycle Architecture. ISR Fusion software Build 3 Engineering release Build Readiness Checkpoint.			15875	19511
ACE Application Software - FY08 Objectives: Provide a soldier in the field with the ability to request a serialized Part, and receive data on its design, its alternate or substitution parts, and where the nearest depot to request replacement. Enable and Manage: Logistics Vision (Repair and Replace). As Planned Structures. As Designed Structures. As Mfg Structures. Enable addition DPD data domains. FY09 Objectives:Support Milestone C capabilties. Knowledge Management capabilities within DPD. Initial Reachback capabilities through SOSCOE Interoperability Services to ACE/DPD facilitating OEM information exchange.			1065	2738
Embedded Training Software FY08 - Planned Accomplishments.32 One Team Partners continue to develop Embedded Training capability and products for the FCS program, Experiment 2 & Spin Out 1: Training Aids and Devices, Simulations and Simulators (TADSSs), Embedded Training software. Deliver 3rd increment of Training Common Components software for FCS (ultimate reuse of 14.6 Million Govt. developed lines of code). Continue integration of Embedded Training software and products in the Training Systems Integration Lab (SIL). Continue integration of training software with Warfighter Machine Interface (WMI) leading to FCS Engineering Iteration 2 in FY09. Complete Training Common Component (Starter Kit (Early). 1.Live/Constructive interoperability. 2. TCC initialization & conduct iteration. 3.Vertical integration with SOSCOE Live/Constructive Interoperability Early). Environment support all Training Common Components (Early). L/C support (Early). Control of TCCs (Early). Support for initialization (Early). Training Support Package support, parsing, editing (Early). L/C data collection capability (Early). L/C After Action Review (Early)LT TES capability (Early).			18550	16557
Embedded Training Software FY09 - Planned Accomplishments. 32 One Team Partners continue to develop Embedded Training capability and products for the FCS program: Training Aids and Devices, Simulations and Simulators (TADSSs), Embedded Training software.Deliver 4th increment of Training Common Components for FCS (ultimate reuse of 14.6 Million Govt. developed lines of code). Continue integration of Embedded Training software and products in the Training Systems Integration Lab (SIL). Continue integration of Training software with Warfighter Machine Interface (WMI) for FCS Engineering Iteration 2 as initial Embedded Training functionalities. Complete TCC Starter Kit (Final). 1.Live/Constructive interoperability 2.TCC initialization & conduct3.Vertical integration with				

SOSCOELive/Constructive interoperability (Final). Environment support all TCCs (Final). L/C support (Final). Control of TCCs (Final). Support for initialization (Final). TSP support, parsing, editing (Final). L/C data collection capability (Final). L/C After Action Review (Final). LT TES capability (Final). Training Infrastructure (Basic). Support all Platform Training Modes (Live-Fire, Simulated-Fire, Ordnance-Free, and Virtual/Constructive). Support limited mix-mode training (Concurrent Operational and Training Modes). Prepare MGV Crew station for Computer Based Training. Prepare MGV Platform for a Simulation Based Training Exercise . Multiple Training Sessions. Single Platform (Live and Virtual Platforms). Control Exercise (Start/End, Pause/Resume, Events, Time Compression). Create Checkpoints. Restart Exercise from Checkpoints. Log Training Exercise Data. Complex Fault Management. Training Content. Conduct Computer Based Training. Conduct Basic Single Vehicle Live/Virtual Simulation Based Training. Basic Driver Training. Basic Gunnery Training. Initial simulation-based TSPs. Initial IMI-based TSPs. Initial IETM based TSPs. Initial Sound Generation.				
CONTRACTOR LOGISTICS PRODUCTS APPLICATION INTEGRATION - FY08/09 Acomplishments - Ensure the definition, development, procurement, fabrication, integration, and testing of a Logistics Decision Support System (LDSS), and a Platform Soldier-Mission Readiness System (PS-MRS) and a Logistics Data Management Service (LDMS) to support each Manned - Unmanned UPV system type. Define and recommend the interfaces necessary to incorporate appropriate in-lieu-of systems supportability requirements and information technology applications IAW the Supportability Strategy.			53440	34157
Ground Sensors Integrator Hardware - FY08-09 Planned Accomplishments: Conduct Prototype Readiness Reviews (PRR) for the following sensors: Common EO Sensor (CEOS). Multi-Function RF Sensor (MFRFS). Combat Identification Sensor (CIDS). Conduct CDR for CID Sensor. Conduct CDR for SUGV EO/IR Sensor. Conduct PDR for SREO Sensor. Conduct CDR for SREO Sensor. FY09 Planned Accomplishments. Conduct Prototype Readiness Reviews (PRR) for the following sensors:SUGV EO/IR Sensor Short Range EO Sensor (SREOS). Chemical Detection (CD) Sensor. SREO Sensor. Deliver the following Sensor prototype hardware to C4ISR SIL, UGV SILs and MGV SILs.			210810	147339
Air Sensor Hardware - FY08 Objectives: Continued PIDS to Air Sensor Segment Specification requirements flowdown, resolution and Gap analysis. Updated TPMs based on sensor PDRs, CDRs and verification testing (CL I & IV). CL I UAV: 12 Prototype Deliveries, prototype sensors integrated to SIL starting in 2QFY08, C4ISR SIL Integration effort start in 3QFY08. CL IV UAV:four prototype ASTAIMIDS (EOIR/LD/CM)delivered, Conduct Test Readiness Review - 1Q08, Continue Prototype Qual Tests, Deliver 1 ASTAIMIDS emulator to SIL, Conduct Contractor Field Test. SAR/GMTI: Continue Prototype development, Deliver 1 Emulator to support initial SIL integration. AiTR: Continue Hardware and Software development, Continue Software qualification tests, Delivery 3 Emulators with AiTR, Algorithms Embedded, C4ISR SIL Integration effort start in 1QFY08. FY09 Objectives:Deliver 3 EO/IR Class 1 Sensors. EOIR sensor Integration and Test onto the CL 1 UAV: Deliver 9 ASTAMIDS CL IV prototype sensors.C4ISR SIL integration effort start in 1Q09, SAR/GMTI Prototype Deliveries, C4ISR SIL integration effort start in 1Q09. AiTR: Delivery 1 AiTR prototype to C4ISr SIL.			17166	13225
Communication Hardware (Air and Ground) - FY08 Objectives: Deliver 2 Air Platform Communication Systems Payloads to C4 SIL. Deliver 8 Air Platform Communication Systems Payloads to UAV IV. Deliver 1 Ground Platform Communication Systems Payloads to BAE SIL. Air Platform Communication Systems Class IV CDR. Network Systems PDR 4Q08. Ground Platform Communication Systems Payloads MGV, CDR in FY08. Deliver 4 Ground Control Stations (GCS) to UAV. Deliver GMR and HMS EDMs Radios to SILs. Deliver 2 Ground Platform Communication Systems Payloads to C4IT. Deliver 4 Ground Platform Communication Systems Payloads to MGV. FY09 Objectives: Deliver type 8 HMS to UGV (SUGV1). Deliver Integrated Communication Suites to C4ISR, MGV, and UGV System Integration Laboratories (SILs).			70162	44788
ICS - Computer Processing, Hardware and Software - FY08 Objectives: Deliver 7 ICS Emulators (Types I, II, V, VIII). Deliver 12 ICS Type VI Prototypes and 15 Brass boards. Complete ICS CDRfor non Spin Out configurations. FY09 Objectives:Integrated			84897	66453

Communication Suites deliveries to C4ISR, MGV, and UGV System. ICS Emulator deliveries to Platform SILs. ICS Brassboard deliveries to C4ISR SIL. ICS Prototype deliveries to MGV, UGV, and UAV Platforms.				
CONTRACTOR C4ISR SYSTEM IAT&C - FY08/09 Accomplishments - Includes FoS level Integration, Test Planning, Test Execution, and Test results analysis for equipment that is integrated and tested at the FoS level for later incorporation as a unit to another product. An example is C4ISR suite for a vehicle platform. Integrating and testing the suite is essential before delivering it for integration into the vehicle. Includes management and integration of sensor, communication and computer hardware and software in the SIL and integration of network management, Battle Command and ISR Fusion software packages from partners into SOSCOE conducted in the SIL.			10787	11125
GFX - GFX supports the LSI contractor efforts. GFX funds came off the LSI contract as part of the definitization of the transition contract award. This Networks GFX includes, government support to C4ISR JEFX Experimentation, C4ISR Hardware to support Experimentats 2 - 4 and C4ISR End to End Network support.			15408	17787
Total			678781	536387

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			678781	536387
Total Adjustments			678781	536387
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			678781	536387

Change Summary Explanation: Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604665A Project FC6) for FCS Network Hardware and Software SDD efforts.

This budget request is a continuation of the previous SDD efforts funded in FY07 under Program Element 0604645A Project F61; therefore, this budget request should not be construed as a new start program nor should it be constrained by "new start" program requirements and funding allocation (i.e. CRA) restrictions.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight - Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604661A Project FC2.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SoSCOE / INFO MGT SYSTEM SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO,						68092	1-3Q	59520	1-3Q		127612	
COMMUNICATIONS SYSTEMS SOFTWARE & NETWORK MGT SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remark 2						37329	1-3Q	31894	1-3Q		69223	
BATTLE COMMAND SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 3,5,6,7						67575	1-3Q	64584	1-3Q		132159	
FUSION SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 1, 7						15224	1-3Q	18712	1-3Q		33936	
ACE APPLICATIONS SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO,						1021	1-3Q	2626	1-3Q		3647	
EMBEDDED TRAINING SOFTWARE FY08	FAR	THE BOEING COMPANY, ST LOUIS, MO, all tier one subcontractors						17789	1-3Q				17789	
EMBEDDED TRAINING SOFTWARE FY09	FAR	THE BOEING COMPANY, ST LOUIS, MO, all tier one subcontractors								15878	1-3Q		15878	
CONTRACTOR LOG PRODUCTS SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 4,12,13						51248	1-3Q	32757	1-3Q		84005	
GROUND SENSOR INTEGRATOR HARDWARE	FAR	THE BOEING COMPANY, ST						202163	1-3Q	141299	1-3Q		343462	

		LOUIS, MO, see remark 8												
AIR SENSOR INTEGRATOR SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 9						16462	1-3Q	12683	1-3Q		29145	
COMMUNICATION HARDWARE - AIR & GROUND	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remark 10						67284	1-3Q	42952	1-3Q		110236	
ICS COMPUTER PROCESSING HARDWARE AND SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remark 11						81414	1-3Q	63729	1-3Q		145143	
CONTRACTOR C4ISR SYSTEM IAT&C & MANAGEMENT	FAR	THE BOEING COMPANY, ST LOUIS, MO,						10345	1-3Q	10669	1-3Q		21014	
Subtotal:								635946		497303			1133249	

Remarks: 1: Subcontractor: LM Integrated Systems and Solutions, San Diego, CA, (ISR Level 1 Fusion).
2: Subcontractor: Northrop Grumman Network Management Systems, Carson, CA, (Network Mgt Sys).
3: Subcontractor: Boeing Mesa, Mesa, AZ, (Warfighter Machine Interface)
4: Subcontractor: Northrop Grumman Mission System, Carson, CA, (Logistics Decision Support Software)
5: Subcontractor: Raytheon, Fort Wayne, IN, (Battle Command & Mission Execution)
6: Subcontractor: Network Centric Systems/Austin Info Systems, Austin, TX, (Situational Understanding)
7: Subcontractor: General Dynamics C4 Systems, Scottsdale, AZ, (Sensor Data Mgt)(Planning & Preparation Services)
8. Subcontractor: Raytheon Network Centric Sys, Plano, TX, (Ground Sensor Integrator)
9. Subcontractor: Northrop Grumman Electronic Sys CMS, Belcamp, MD, (Air Sensor Integrator)
10. Subcontractor: BAE Systems, Wayne, NJ, (Air & Ground Communication Integration)
11. Subcontractor: General Dynamics Adv Info Sys, Bloomington, MN (Integrated Computer Systems)
12. Subcontractor: Honeywell Defense & Electronics System, Albuquerque, NM, (Platform Soldier Mission Readiness System)
13. Subcontractor: IBM, Bethesda, MD (Logistics Data Management Systems)

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GOVERNMENT - GFX	DIRECT	PM FCS(BCT), ST						15409	1Q	17787	1Q		33196	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**

		LOUIS,MO												
GOVERNMENT - Statutory Reductions	DIRECT	OSD						27426	1Q	21297	1Q		48723	
Subtotal:								42835		39084			81919	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

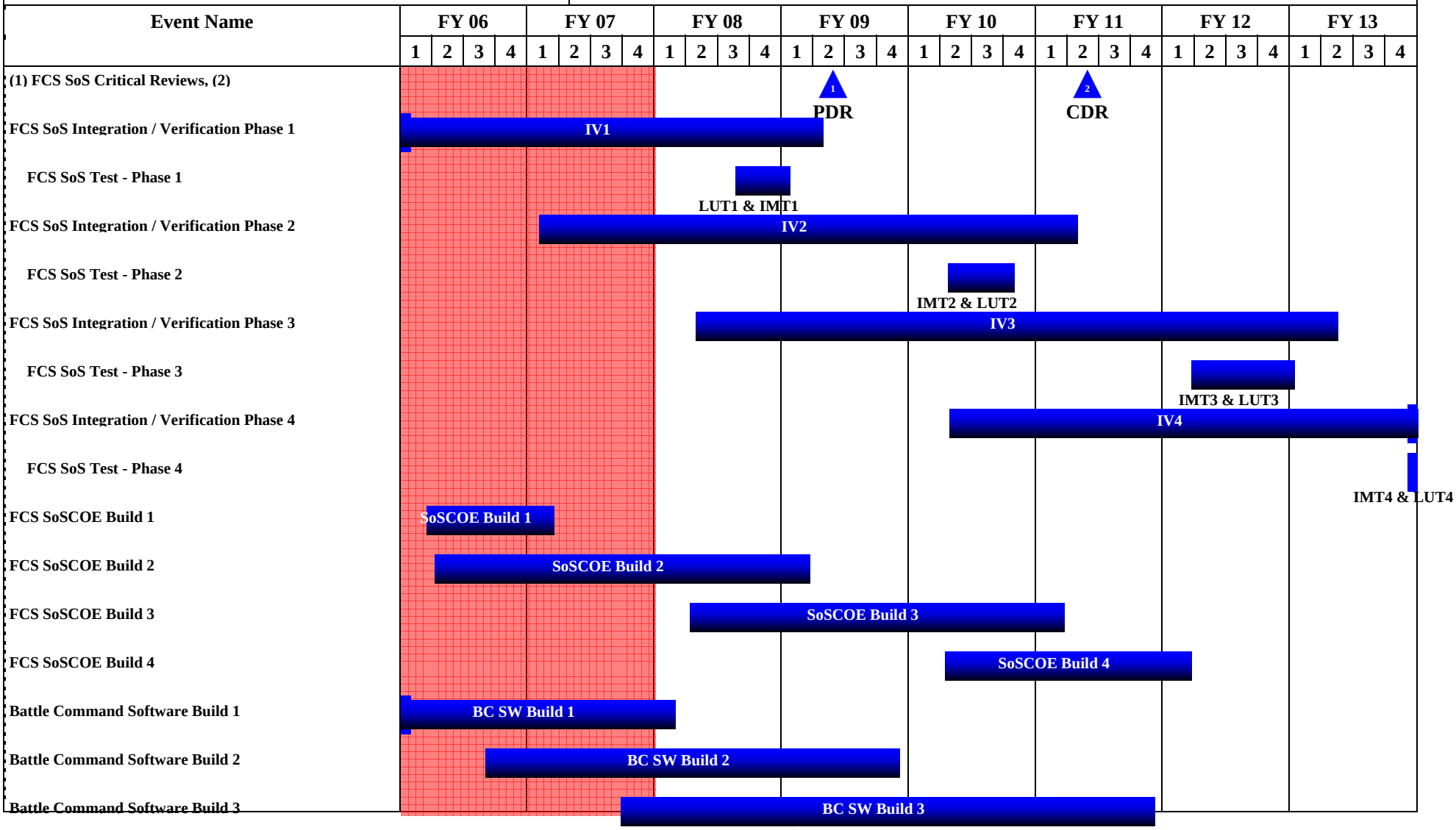
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:								**678781**		**536387**			**1215168**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**



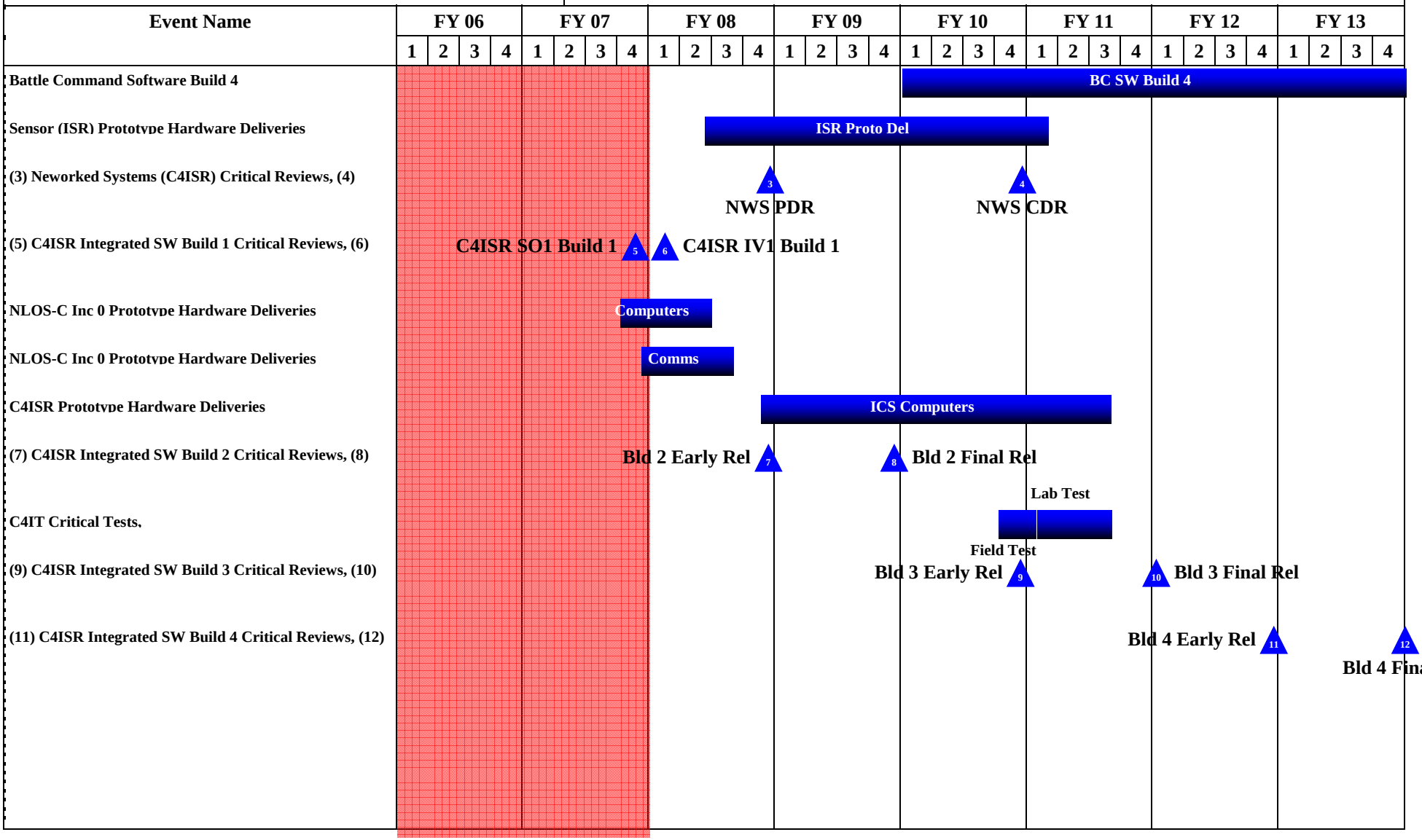
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
FCS SoSCOE Build 1	1Q - 4Q	1Q						
FCS SoSCOE Build 2	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q				
FCS SoSCOE Build 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		
FCS SoSCOE Build 4					2Q - 4Q	1Q - 4Q	1Q	
Battle Command Software Build 1	1Q - 4Q	1Q - 4Q	1Q					
Battle Command Software Build 2	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Battle Command Software Build 3		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Battle Command Software Build 4					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Sensor (ISR) Prototype Hardware Deliveries			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		
Neworked Systems (C4ISR) Critical Reviews			4Q					
					4Q			
C4ISR Integrated SW Build 1 Critical Reviews		4Q						
			1Q					
NLOS-C Inc 0 Prototype Hardware Deliveries		4Q	1Q - 2Q					
NLOS-C Inc 0 Prototype Hardware Deliveries		4Q	1Q - 3Q					

C4ISR Prototype Hardware Deliveries			4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q		
C4ISR Integrated SW Build 2 Critical Reviews			4Q					
				4Q				
C4IT Critical Tests					4Q	1Q		
						1Q - 3Q		
C4ISR Integrated SW Build 3 Critical Reviews					4Q			
							1Q	
C4ISR Integrated SW Build 4 Critical Reviews							4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**

COST (In Thousands)		FY 2006 Actual	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
FC7	FCS - Spin Out Technology/Capability Integration			64796	32442	65000	50000	50000	10000	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project funds all non FCS efforts required to develop and test the integration of Future Combat System technologies and capabilities into the current force "Spin Out" Programs. These Spin Out Programs will provide early capability in Force Protection, Networked Fires, Expanded Battle Space, and Battle Command to the current force.

The first Spin Out Program or Spin Out 1 will begin the process of providing interoperability of current force systems technologies (Force XXI Battle Command, Brigade and Below - FBCB2 and the Advanced Field Artillery Tactical Data System - AFATDS) with new FCS capabilities (Unattended Ground Sensors - UGS and the Non Line of Sight Launch System - NLOS-LS). This will be accomplished by integrating a common B-Kit consisting of the Joint Tactical Radio System (JTRS), the Integrated Computer System (ICS), and the Battle Command System (BCS) software, to include SOSCOE, into three current force platforms, the High Mobility Multipurpose Wheeled Vehicle (HMMWV), the Abrams SEP tank and the Bradley A3 Infantry Fighting Vehicle (IFV).

Future Spin-Outs will continue to provide additional FCS technologies and capabilities to the current force. Costs related to future spinouts begin in FY10. While a detailed definition of future spin-outs will depend on future Army needs and capability gaps, spin-outs 2 and 3 potentially include the following: SO2 - Integration of active protection and the FCS sensor mast into the Stryker: SO3 - addition of the FCS MULE, SUGV, Class I UAV, Class IV UAV and full up FCS Battle Command to current force formations.

This project was created IAW Section 214 of the FY06 National Defense Authorization Act which required the Secretary of Army to assign a separate, dedicated program element to the costs of integrating Future Combat Systems capabilities into current force programs. In Sept 2006 the Congress approved a reprogramming action that funded $7.4 million to begin the development of the Interface Control Documents (ICDs) and AKIT design. For FY07, the Army plans to submit a reprogramming action that will move 27.9 million from PE 0604645A Project F61 to this new Spin Out PE as directed by Congress. These funds will be used to conduct design activity for AKITs.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Contractor Integration - Provides for the design of the current force platform A-Kits (wiring harness, mounts, brackets etc.) needed for the			24000	9800

integration of FCS technologies that include the Integrated Computer System (ICS)and the Ground Platform Communication System (GPCS). Also provides for the administration of both the platform contract and any subcontract effort.				
Contractor Test - Provides for all testing performed by the current force prime contractors in support of the A-Kit design.			7400	3700
Contractor Prototype Build - Provides for the procurement of all material required for the current force platform A-Kits and the labor required for both the fabrication of the A-Kits as well as the installation of both A-Kits and FCS technologies and all associated material onto the current force platforms.			8300	2600
Contractor Software - Provides for the development and modification of any platform software needed for the integration of the ICS and GPCS into the current force platforms.			7600	2500
Contractor Logistics - Provides for the development of installation and maintenance procedures, logistics support analysis, development of any required diagnostics capabilities, technical manual changes and development of training procedures required for the A-Kit.			3500	1100
Government Test - Provides for the development and coordination along with the Army Test Command (ATC) of any plans for the testing required at Aberdeen Proving Ground (APG) and the Electronic Proving Ground (EPG) to support safety releases, reliability, environmental and any other required testing. It also provides support to the Enhanced Brigade Combat Team (EBCT) during the completion of the Technical Field Test (TFT), Force Development Test and Experimentation (FDTE), Limited User Test (LUT), Initial Operational Test and Evaluation (IOTE) as well as any other testing that utilizes the EBCT with current platforms.			9500	7900
Government Program Management - Provides integrated program management (ie planning, directing, tools and controlling functions), for all development activities, including data and supplier management, program control, procurement and contracts management, operations management, cost analysis and management, budget development and justification, integrated master plan and schedule development and management, as well as systems engineering support and fielding coordination for all Spin Out programs.			4496	4842
Total			64796	32442

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			64796	32442
Total Adjustments			64796	32442
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			64796	32442

Change Summary Explanation: Funding - FY 2008/2009: This Program Element was created IAW Section 214 of the FY06 National Defense Authorization Act which required the Army to assign a separate, dedicated program element to the costs of integrating Future Combat Systems capabilities into current force programs.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight _ Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing
0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing

0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy The FY2008 President's budget reflects the Army successfully achieving a balance between three competing priorities: legislation, the demands of war, and the need to modernize the force. The FCS program was adjusted to help strike the balance. Due to FCS requirements changing in the last 3 years, coupled with the challenge to meet all its reset and modernization requirements, the number of platforms that the Army plans to develop and buy within the FCS family of systems, as well as the timeline for buying and fielding these platforms and simultaneously improving the Current Force through early delivery of selected FCS capabilities has been adjusted. The adjustments maintained the Army focus on FCS-equipped Brigade Combat Team (BCT) development and substantially reduced program risk. The following are adjustments made to the FCS program which affected the Spin Out program:

1. Adjusting the development of the Core and Spin Out capabilities so that the Army can benefit from the economies realized with concurrent testing.
2. Increasing the rate of fielding of FCS technologies to the current force
3. Fund the Spin Out Technology Insertion program.

Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604666A Project FC7) for FCS SPIN OUT Technology/Capability Insertion SDD efforts, commencing with an approved reprogramming action in September 2006.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604666A - Modular Brigade Enhancement

PROJECT
FC7

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Integration of B-Kit into Abrams Tank	CPFF	General Dynamics - Sterling Heights ,MI						25500	1-2Q	9500	1-2Q	Cont.	Cont.	
Integration of B-Kit into Bradley Fighting Vehicle System	CPFF	BAE - Santa Clara, CA						23900	1-2Q	9500	1-2Q	Cont.	Cont.	
Integration of B-Kit into High Mobility Multi Wheeled Vehicle (HMMWV)	MIPR	TARDEC - Warren, MI						1400	1-2Q	700	1-2Q	Cont.	Cont.	
Subtotal:								50800		19700		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Support	MIPR	Various						4496	1-3Q	4842	1-3Q	Cont.	Cont.	
Subtotal:								4496		4842		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Testing of Current Force Platforms	MIPR	Various						9500	1-3Q	7900	1-3Q	Cont.	Cont.	
Subtotal:								9500		7900		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)													February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604666A - Modular Brigade Enhancement**												PROJECT **FC7**
Subtotal:													
Project Total Cost:						**64796**		**32442**		**Cont.**	**Cont.**		

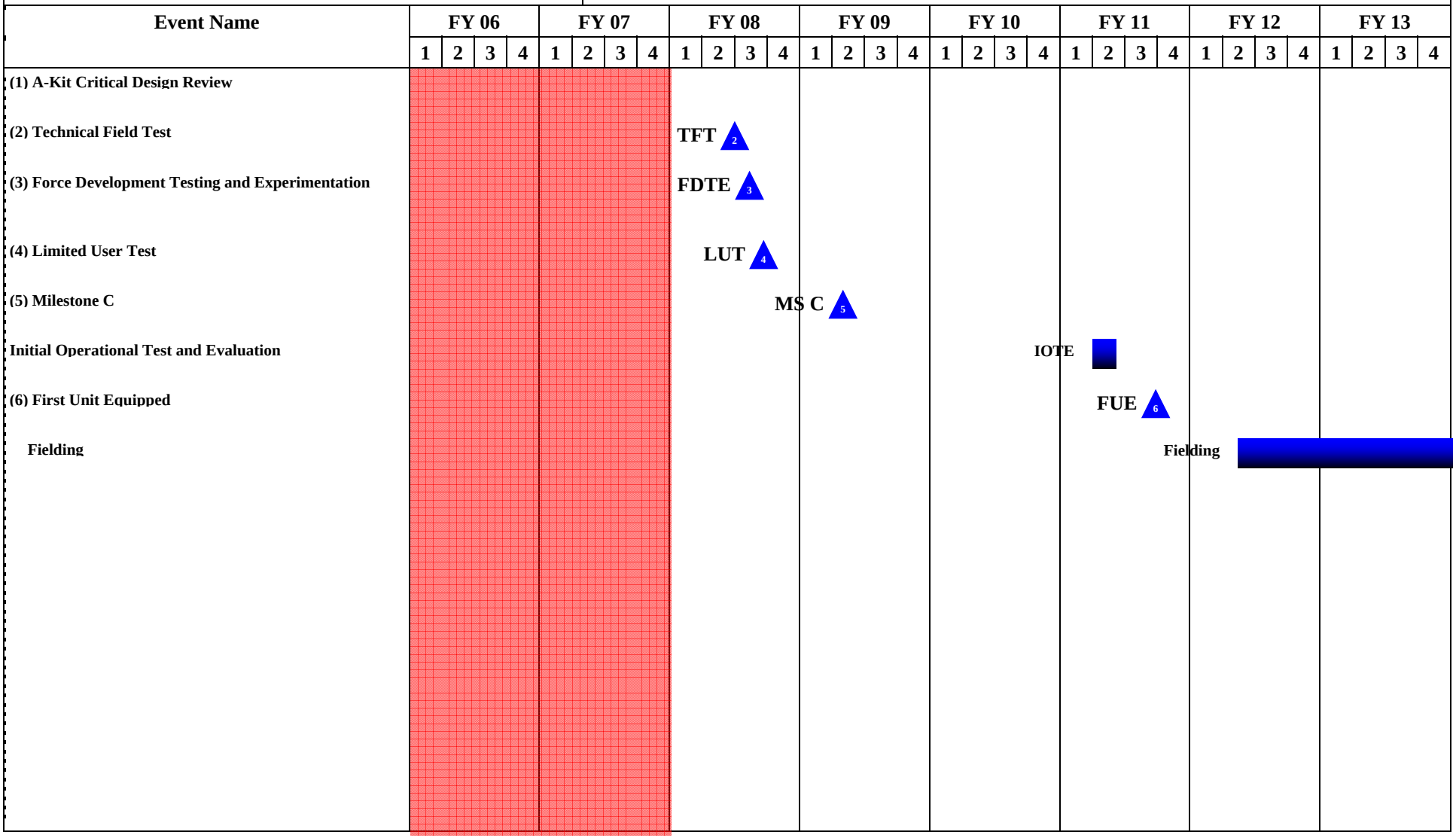
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604666A - Modular Brigade Enhancement

PROJECT
FC7



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
A-Kit PDR	4Q							
A-Kit Critical Design Review		1Q						
Technical Field Test			2Q					
Force Development Testing and Experimentation			3Q					
Limited User Test			3Q					
Milestone C				2Q				
Initial Operational Test and Evaluation						1Q - 2Q		
First Unit Equipped						3Q		
Fielding							2Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**

	COST (In Thousands)	FY 2006 Actual	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	27753	41161	44619	28795	38163	36954	34200	34700	Continuing	Continuing
L67	SOLDIER NIGHT VISION DEVICES	15090	19655	13302	11489	25347	24747	25200	20000	Continuing	Continuing
L70	NIGHT VISION DEV ED	12663	16908	12433	9041	12816	12207	9000	14700	Continuing	Continuing
L76	Dismounted Fire Support Laser Targeting Systems		4598	18884	8265						31747

A. Mission Description and Budget Item Justification: This program element provides night vision/reconnaissance, surveillance and target acquisition technologies required for U. S. defense forces to engage enemy forces twenty-four hours a day under conditions of degraded visibility due to darkness, adverse weather, battlefield obscurants, foliage and man-made structures. These developments and improvements to high performance night vision electro-optics, radar, laser, and thermal systems and integration of related multi-sensor suites will enable near to long range target acquisition, identification and engagement to include significant fratricide reduction, which will improve battlefield command and control in "around-the-clock" combat operations. Project L67 focuses on night vision electro-optical, laser, and other target identification and location equipment for a variety of Future Combat System of Systems (FCS) Units of Action/Employment and Future Force soldiers. This project includes the enhanced night vision goggle, modular HTI multi-function laser activities, and thermal upgrades to include an uncooled medium thermal weapon sight. Project L70 focuses on night vision, reconnaissance, surveillance and target acquisition (RSTA) sensors and suites of sensors to provide well-defined surveillance and targeting capabilities for a variety of Current, Modular, Future Combat System of Systems (FCS) and Future Force platforms. This project includes night vision sensor acquisition support of FCS core systems, Risk Reduction Demonstration (RRD) of standard uncooled thermal sensor packages, Sense Through The Wall programs, Unattended Ground Sensor systems, common sensor message set management for FCS and other applications, upgrades to existing ground surveillance radars, provides Persistent Surveillance and Dissemination System-of-Systems (PSDS2) enhancements and capability improvements, transitions the 3rd Generation Forward Looking Infrared from an Advanced Technology Objective (ATO), and developes the Driver's Vision Device (DVD). Project DL76 focuses on the engineering development of technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies developed under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), the Mark VII-E Laser Target Locator, and future programs based on emerging Army requirements. Advanced, cooled, InSb, infrared imaging focal plane arrays are now available in 1000 x 1000 pixel (mega-pixel) resolution which, when applied to LLDR, will provide much greater range performance in a package of similar size. With an associated optical redesign, greater LLDR imaging performance can be achieved with an overall reduction in weight. This project will also integrate the next generation uncooled, 17 micron pixel-pitch FLIRs being developed for the Thermal Weapon Sight program into the Mark VII-E, improving its imaging performance with no impact on its weight. New laser designator technology has been developed which will reduce laser designator weight by close to 50% and cut battery usage by a factor of 10. Further reductions can be gained by reducing laser designator output energy levels below currently accepted standards, which initial modeling and testing indicate will not compromise performance of laser guided munitions. A primary focus of this project will be to perform sufficient live-fire and captive-carry range tests over a wide variety of environmental conditions with all current and future laser guided munitions to build the necessary confidence that reduced designator energy levels will not adversely impact the mission. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as JDAM and Excalibur. Prior to FY 2006, the project focused on target acquisition common sensor system that will combine the long-range surveillance and targeting capabilities of the Army's Long Range Advanced Scout Surveillance System (LRAS3) with the laser designation capabilities of the Lightweight Laser Designator Rangefinder's Laser Designation Module (LDM).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	28980	38821	52227	28688
Current BES/President's Budget (FY 2008/2009)	27753	41161	44619	28795
Total Adjustments	-1227	2340	-7608	107
Congressional Program Reductions		-157		
Congressional Rescissions				
Congressional Increases		2800		
Reprogrammings	-1227	-303		
SBIR/STTR Transfer				
Adjustments to Budget Years			-7608	107

Change Summary Explanation: Funding - FY 2007 Congressional increase for $2.8 Million for DIG Enhancement and Night Vision Wearable Acoustic Targeting Sys. FY 2008 Adjustments for higher priority programs.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L67**

COST (In Thousands)		FY 2006 Actual	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
L67	SOLDIER NIGHT VISION DEVICES	15090	19655	13302	11489	25347	24747	25200	20000	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. It focuses on technology that can bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents. Digital Enhanced Night Vision Goggle (DENVG) will be a head/helmet mounted night vision system for the individual Soldier. The system will use both image intensifier and uncooled thermal technology to provide a multi-spectral image to the Soldier. Other efforts include a miniaturized laser designating system for ground Soldiers and the development of Sense Through The Wall (STTW) technology giving Soldiers the ability to detect threats through walls during Military Operations on Urban Terrain (MOUT), developing fused electro-optical sights and developing focal plane technology increasing product resolution and range.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue development of next generation Digital Enhanced Night Vision Goggles (DENVG). The Digital ENVG will provide Soldiers the ability to use both image intensifier and uncooled thermal technologies during day, night, and obscured battlefield conditions.	3921	5794	4802	5000
Completed development of the Small Tactical Optical Rifle Mounted (STORM) micro-Laser Range Finder (mLRF), which provided Soldiers the ability to perform target location while using individual weapons.	482			
Advanced technology to reduce target location error through the development of a non-magnetic compass for the Lightweight Laser Designator Rangefinder (LLDR) and an ultra lightweight designator(ULD) to reduce size and weight of the current laser designator module (LDM).	1920			
Continue development of Sense Through The Wall (STTW) technology, which provides dismounted Soldiers with the capability to detect, locate and identify threats through walls during Military Operations on Urban Terrain (MOUT).	159	2627	2500	2489
Initiate the development of the Fused Weapon Sight (FWS), which is a passive fused electro-optical sight for Special Operations Forces.			1000	2000
Continue the development, testing and evaluation of 17 Micron technology, Focal Plane Arrays (FPA), with improved sensitivity, clarity and range.	5246	5592	4000	
Completes the development of high accuracy Azimuth Vertical Angle Measurement (AVAM) devices for handheld, man-portable target location devices.	412	2627		
Continue the development of sniper fire detection and location technology, using portable sensors on Soldiers to locate gunfire.	2950	1676	1000	2000
Initiate the development of DARPA's MANTIS program developing a helmet-borne vision system and hand-held targeting system for the individual Soldier that combine imagery from multiple sensors using image fusion.		786		

SBIR/STTR		553		
Total	15090	19655	13302	11489

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Helmet Mounted Enhanced Vision Devices (K36400) OPA2	281404	228953	231419	321917	408063	435304	324054	108818	Continuing	Continuing
Thermal Weapon Sight (TWS) (K22900) OPA2	180756	208695	230607	209567	182178	186454	81600	70000	Continuing	Continuing
Sniper Night Sight (K41500)	8070	18174	14948	15893	14253	13147	25516	20484	Continuing	Continuing

Comment:

C. Acquisition Strategy The various developmental programs in this project will continue to exercise competitively awarded contracts using best value source selection procedures.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L67

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Enhanced Digital NVG Analysis and Design	MIPR	Various	9919	2643	2Q	4120	1-2Q	3578	1-2Q	4726	1-2Q	Cont.	Cont.	
STORM micro-Laser Range Finder Activity	MIPR	NVESD - Fort Belvoir, VA	1595	482	1Q								2077	
Focal Plane Arrays Activity	MIPR	DOI - Washington, DC	1500	5246	2Q	5568	1Q	3976	1-2Q			Cont.	Cont.	
Ultra Lightweight Designator Development Activity	MIPR	NVESD - Fort Belvoir, VA	3051	1920	2Q							Cont.	Cont.	
Sense Through The Wall (STTW) Activity	MIPR	CECOM - Fort Monmouth, NJ		103	2Q	503	1-2Q	1726	1-2Q	1221	1-2Q	Cont.	Cont.	
Fused Electro-Optical Weapon Sight Development	MIPR	TBD								976	1-2Q	Cont.	Cont.	
AVAM Development Activities	C/FP	EOIR - Fredericksburg, VA		412	2Q	1123	1-2Q					Cont.	Cont.	
Sniper Fire Detection and Location Technology Development	C/FP	EOIR - Fredericksburg, VA		2950	2Q	1652	2Q	476		976		Cont.	Cont.	
MANTIS Development Activities	MIPR	DARPA - Arlington, VA				786	3Q						786	
SBIR/STTR						553	1Q						553	
Subtotal:			16065	13756		14305		9756		7899		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	379	56	2Q	120	2Q	96	2Q	96	2Q	Cont.	Cont.	
Subtotal:			379	56		120		96		96		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L67

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government Test Support Activity	MIPR	Various	6897	1278	1-3Q	5230	1-2Q	3450	1-2Q	3494	1-2Q	Cont.	Cont.	
Subtotal:			6897	1278		5230		3450		3494		Cont.	Cont.	

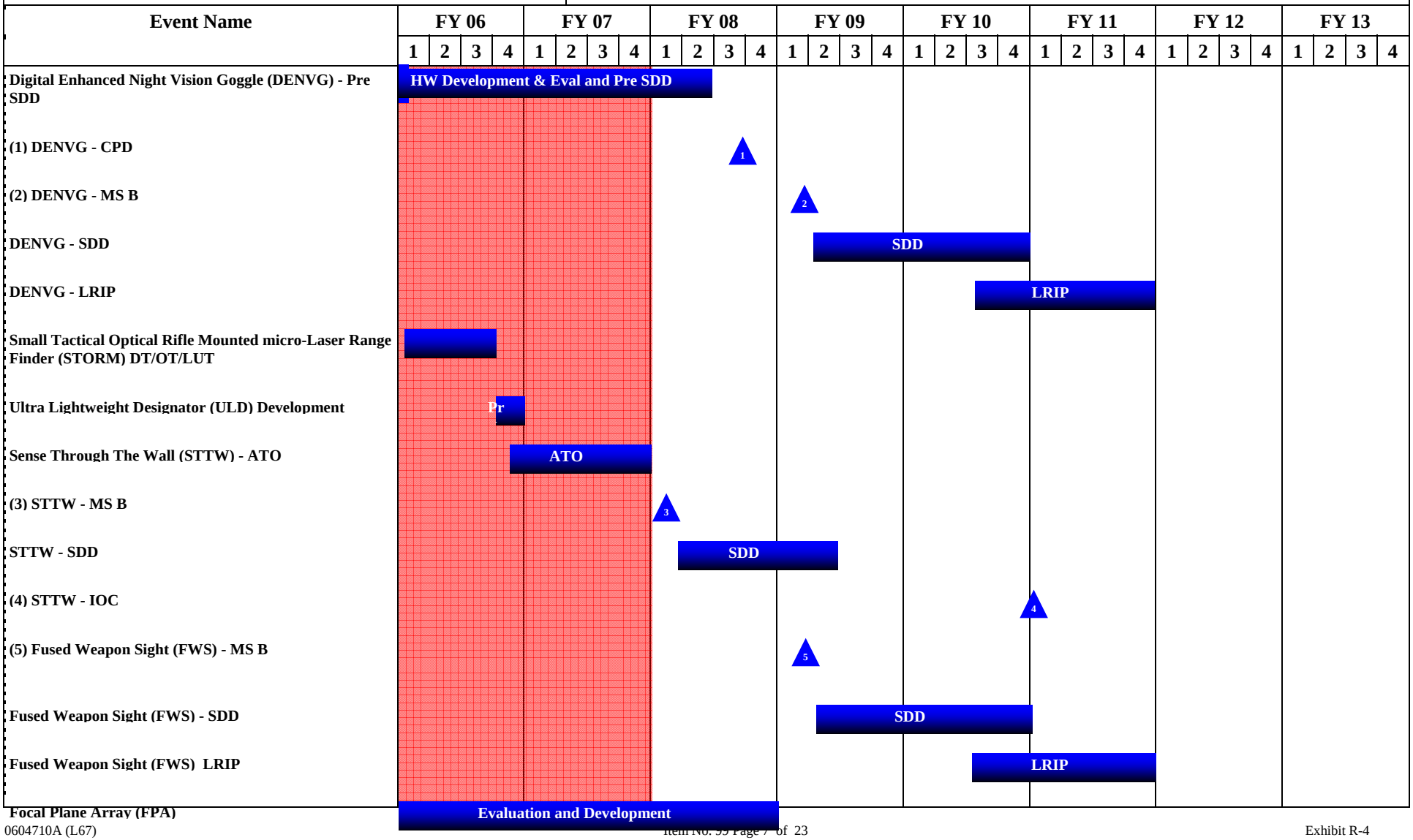
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management	MIPR	PM Sensors and Lasers	591		1-4Q		1-4Q					Cont.	Cont.	
Subtotal:			591									Cont.	Cont.	

Project Total Cost:			**23932**	**15090**		**19655**		**13302**		**11489**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L67**



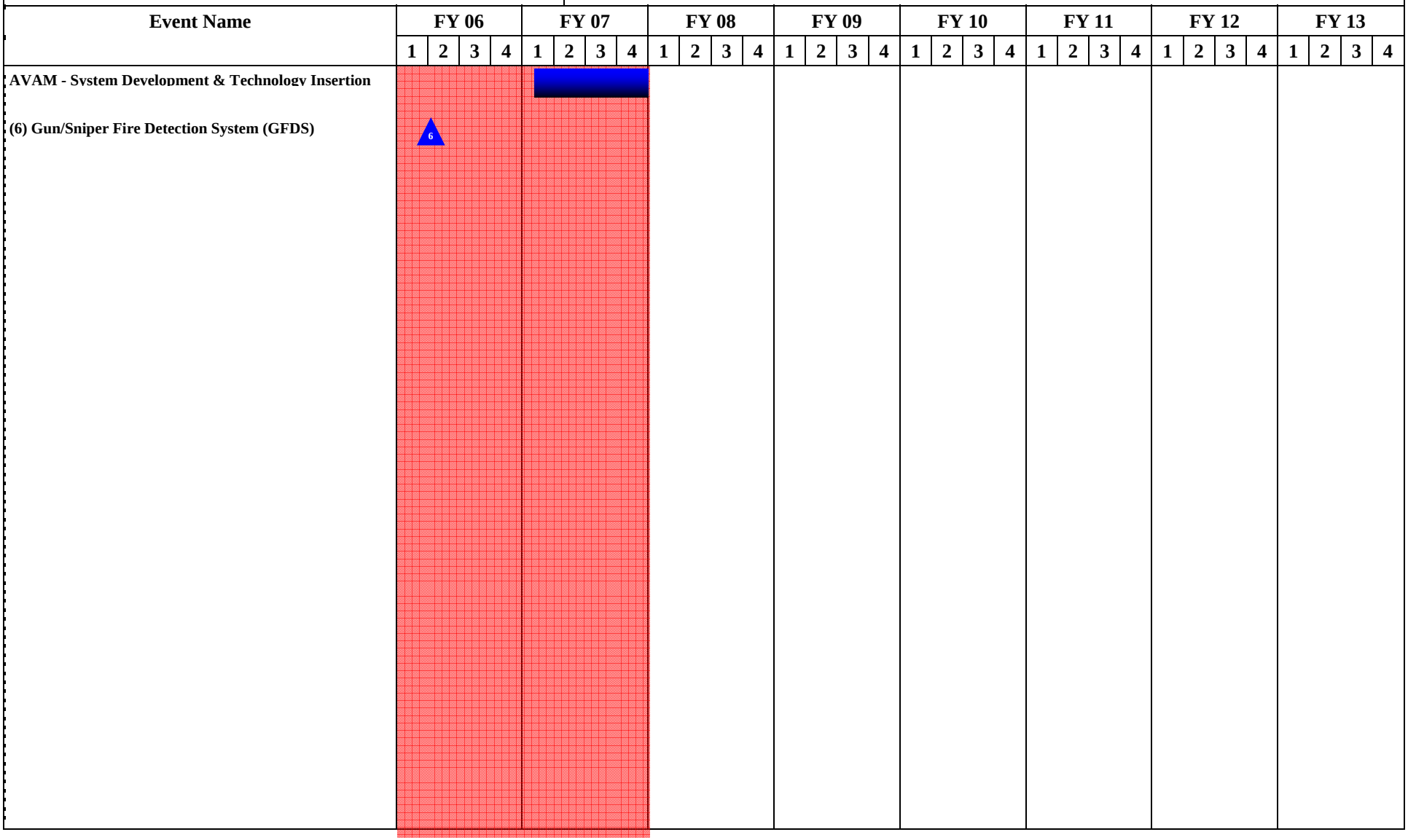
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L67



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L67**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Digital Enhanced Night Vision Goggle (DENVG) - Pre SDD	1Q - 4Q	1Q - 4Q	1Q - 2Q					
DENVG - CPD			3Q					
DENVG - MS B				1Q				
DENVG - SDD				2Q - 4Q	1Q - 4Q			
DENVG - LRIP					3Q - 4Q	1Q - 4Q		
Small Tactical Optical Rifle Mounted micro-Laser Range Finder (STORM) DT/OT/LUT	1Q - 4Q							
Ultra Lightweight Designator (ULD) Development	4Q							
Sense Through The Wall (STTW) - ATO	4Q	1Q - 4Q						
STTW - MS B			1Q					
STTW - SDD			1Q - 4Q	1Q - 2Q				
STTW - IOC						1Q		
Fused Weapon Sight (FWS) - MS B				1Q				
Fused Weapon Sight (FWS) - SDD				2Q - 4Q	1Q - 4Q			
Fused Weapon Sight (FWS) LRIP					3Q - 4Q	1Q - 4Q		
Focal Plane Array (FPA)	1Q - 4Q	1Q - 4Q	1Q - 4Q					
AVAM - System Development & Technology Insertion		1Q - 4Q						
Gun/Sniper Fire Detection System (GFDS)	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
TWS Size Weight and Power (SWR) Reduction						1Q - 4Q	1Q - 4Q	1Q - 4Q
FWS SWR Reduction						1Q - 4Q	1Q - 4Q	1Q - 4Q
DENVG SWR Reduction						1Q - 4Q	1Q - 4Q	1Q - 4Q
Soldier Hit Avoidance Development						1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L70**

COST (In Thousands)	FY 2006 Actual	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
L70 NIGHT VISION DEV ED	12663	16908	12433	9041	12816	12207	9000	14700	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project performs System Development and Demonstration (SDD) on high performance night vision, Reconnaissance, Surveillance, and Target Acquisition (RSTA) systems and other related systems that allow forces to locate and track enemy units in day, night, and all battlefield conditions, and through natural and man-made structures and obscurants. It also develops and integrates suites of these sensors to provide well-defined surveillance and targeting capabilities, as well as architectures for these sensors to communicate automatically. The focus is on meeting the requisite night vision and RSTA capabilities required for evolving Current Force, Modular Force, and Future Force systems. Efforts will continue to refine a standard architecture among sensors with the Sensor Link Protocol (evolving to a joint message set called Sensor Data Link) to allow these sensors to communicate in a plug and play manner for improved force level sensor data fusion, aided target recognition and target hand-off.

This project will also demonstrate the producibility of interchangeable uncooled thermal focal plane arrays, and develop an uncooled infrared imaging B-Kit sensor family that will result in standardized sensor modules for a variety of applications. By eliminating the requirement for cryogenic coolers, uncooled thermal imagers are inherently smaller, lighter, more reliable, use less power, and are less expensive. Uncooled B-Kits can be used for a variety of Current Force, Modular Force, Future Combat System (FCS), and Future Force systems such as weapon sights, driver's viewers/situational awareness aids, missile seeker sensors, unattended ground sensors/security sensors, and unmanned ground and aerial vehicle payloads.

This project transitions 3rd Gen Forward Looking Infrared (3rd Gen FLIR) technology from the 3rd Gen Infrared Advanced Technology Objective (ATO), developing a 3rd Gen FLIR engine for use in Current Force and Future Force systems. 3rd Gen FLIR provides a dual band, large format Infrared (IR) detector and image processor which enables high performance target detection algorithms and target identification at detection ranges.

This project continues Unattended Ground Sensors (UGS) hardware development, demonstration and test for a family of UGS systems for Intelligence, Surveillance and Reconnaissance (ISR). This will provide FCS and the Army a remotely employable Unattended Ground Sensor capability for ISR and physical security.

This project further developed the Persistent Surveillance and Dissemination System-of-Systems (PSDS2), a system-of-systems which linked numerous sensors (currently in theater) together, providing theater commanders with a single coordinated picture of the battlefield and the capability to quickly disseminate this "actionable information" to responders.

This project develops, integrates, and tests an upgrade to the long Range Advanced Scout Surveillance System (LRAS3) system, making it capable of digitizing, compressing and transmitting target information and imagery across the battlefield Network using Standard Army Radios. This enables the Current Force and Modular Force with the ability to cross-cue sensors that are linked to the network as well as share/exploit imagery and data from networked sensors on the battlefield.

This project develops the Driver's Vision Device (DVD) - leveraging Commercial Off-The-Shelf (COTS) available hardware to demonstrate and qualify a "Low Cost, lower Performance" configuration of the Driver's Vision Enhancer (DVE).

FY 2008 funding supports continuation of efforts for: Third Generation FLIR, Unattended Ground Sensor and Unmanned Air Vehicle (UAV) Electro-Optical/Infrared/Laser Designator (EO/IR/LD) Payloads developments; spirals in RSTA technologies from FCS into the Current Force; continues evolution of Sensor Link Protocol, and completes the LRAS3 Pre-Planned Product Improvement (P3I) effort.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue Sensor Link Protocol (SLP) as part of the DoD Joint Variable Message Format (JVMF) standard while maintaining configuration management and modifying application software tools. Sensor Link Protocol (SLP)/Sensor Architecture - A uniform and standard means of describing and coordinating the collection, preprocessing, communication, and fusion of RSTA functions for the Future Force and FCS. FY06 established control link for EO/IR and service based architecture for Sensor Data Link (SDL) interface to Distributed Common Ground Station - Army (DCGS-A). FY07 plan is to extend control to additional sensors and make available through DCGS-A.	434	478	787	787
Uncooled B-Kit (UBK)- Continues development of the uncooled thermal B-Kit for platform sensors, navigation systems and target acquisition devices. Funds the Risk Reduction Demonstration (RRD) for B-Kit development on the first UBK configuration. FY06 accepted delivery of two units for qualification and verification assessment. FY07 will accept delivery of four additional units to complete the RRD phase and qualify the UBK.	2085	913		
Unattended Ground Sensors (UGS) - Develop ISR, Chemical, Biological, Radiological, Nuclear (CBRN) and Urban UGS for FCS and other Army customers. Funds continue spiral integration efforts to include sensor systems remote employment capabilities. Demonstrate viability and technical feasibility of remotely employing a networked Unattended Ground Sensors (UGS) system from a UAV delivery platform. Supported successful Preliminary Design Review (PDR). Current focus is in support of the FCS Spin-Out 1. For FY07, support program Critical Design Review (CDR), test events and deliver initial UGS systems.	1294	825	866	910
Third Generation FLIR (3rd Gen FLIR) System Development and Demonstration (SDD) of 3rd Gen FLIR. FY07 initiates development and qualification of a 3rd Gen FLIR engine (or "B-Kit") for use in current and Future Force high performance RSTA systems for: the Long Range Advanced Scout Surveillance System (LRAS3), the Stryker Mast Mounted Sensor, the Armed Reconnaissance Helicopter (ARH), the FCS Medium and Long Range Sensors, and other RSTA applications.		4309	6110	6794
Development of payloads for the Army's UAV in accordance with TRADOC priorities and in support of FCS. This effort provides an EO/IR payload with an integrated laser designator for use in FCS Class III and IV UAVs. This effort is a joint program with PM Close Combat Support (CCS), expanding the capability of the Airborne Surveillance Target Acquisition and Minefield Detection System (ASTAMIDS) by adding the designator. Successfully completed PDR in FY06. FY07 plan to accept seven (7) prototype units.	908	1750	1250	550
Persistent Surveillance and Dissemination System-of-Systems (PSDS2) is operational in OIF. Efforts entailed integrating improvements: developed interoperability with DCGS and CRAM programs; improved architecture; improved dissemination of video and imagery; acquired Central Technical Support Facility (CTSF) validation; made multiple types of UAV data available to the warfighter; ensured Army Battlefield Command System (ABCS) 6.4 compliance; and, integrated Rapid Aerostat Initial Deployment (RAID) system high definition cameras. Efforts completed in FY06.	4603			
LRAS3 Netted Sensor - Development, integration, and testing of hardware and software that supports digital compression, transmission and display of imagery and data to/from the battlefield network. This provides the Current Force and Modular Force with the ability to	2889	7744	3420	

cross-cue sensors that are linked to the network as well as share/exploit imagery and data from networked sensors on the battlefield. FY06 awarded phase 1 developmental contract for initial prototyping (8 units). FY07/08 phase 2 full scale development and implementation of hardware and software, 8 units, for P3I to LRAS3.				
Driver's Vision Device (DVD) - The effort leverages Commercial Off-The-Shelf (COTS) available hardware to demonstrate a "Low Cost, lower Performance" configuration of the Driver's Vision Enhancer (DVE). FY06 conducted market surveys and requests for information and evaluated state of industry. Operational requirements were formulated and used to characterize COTS capabilities. FY07 effort will document DVD required capability.	450	434		
Small Business Innovative Research / Small Business Technology Transfer Program		455		
Total	12663	16908	12433	9041

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Night Vision DVE K31300 OPA2	27080	42868	3000						Continuing	Continuing
Future Combat System, G86100 WTCV			7948	155838	149367	683788	2194625	5795292	Continuing	Continuing
Advanced TUAV Payloads B00302 OPA2		33328	57915	67535	68617	59635	46244	38585	Continuing	Continuing

Comment:

C. Acquisition Strategy The development programs in this project are currently based on competitive awards and under cost reimbursement type contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L70

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
DVE Development	C/CPIF	Various	21831										21831	
Modular HTI Multifunction Laser Activities	C/CP	Insight Technologies, Londonderry, NH & DRS Technologies, Torrence, CA	3868										3868	
LLDR RAPT	C/CP	Various	4253										4253	
Light Forward Observer Optics	C/CP	Various	1258										1258	
Thermal Upgrades for DVE (Dual wavelength) and competition	C/CP	Kaiser Electric San Diego, CA, Various	3608										3608	
LLDR Advanced Demonstration System	C/CP	Litton Laser, Apopka, FL	2556										2556	
Sensor Architecture/Digital RSTA/SLP	C/CPIF & C/CP	Various	11188	434	2Q	340	1Q	340	1-2Q	340	1-2Q	Cont.	Cont.	
Various Prototypes and Studies	C/CPIF	Various	2947										2947	
Thermal Upgrades for TWS (target location)	C/CP	Raytheon, El Segundo, CA, Various	5811										5811	
HTI Laser Trade Studies	C/CP	Various	1020										1020	
Enhanced NVG Analysis & Design (TX to DL67)	C/CP	Various	4782										4782	
HTI Laser MFS3 design and prototype activities	C/CPIF	Raytheon, Dallas,TX	565										565	
MANTECH Focal Plane Array and optics	C/CP	Raytheon, Dallas, TX	1500										1500	
Digital MELIOS Design & Fabrication	C/FP	Litton Lasers, Inc.	1000										1000	
AN/TMQ-41 Trade Studies and related activities	C/CP	Various	1232										1232	
Image Fusion for DVE	C/CP	Raytheon, Dallas, TX	1274										1274	
Digital RSTA SDD	C/CP	Booz-Allen Hamilton,	2190										2190	

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BUDGET ACTIVITY
5 - System Development and Demonstration

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		Tysons Corner, VA											
CIRISS Efforts	C/CP	Various	1500									1500	
LLDR Vehicle applications	C/CP	Litton Laser, Apopka, FL Various	3487									3487	
FLIR develop/integrate	Various	Various	1731									1731	
Uncooled B-Kit	Various	Various	6744	1674	2Q	419	1Q				Cont.	Cont.	
EO/IR/LD UAV Payloads	C/CP	Lockheed Martin	1783	712	2Q	1505	1Q	1000	1Q	500	1Q	Cont.	Cont.	
LLDR EMD	C/CP	Litton Lasers, Apopka, FL	19873									19873	
GMTI Radar	C/FP & CP	General Atomics	2792									2792	
UGS	CP/FFP	Various	708									708	
FCS UGS / UGS	C/CP	FCS Boeing/Textron/Various /TBD	3707	690	2Q	702	2Q	766	2Q	810	2Q	Cont.	Cont.	
PSDS2 Efforts	C/CPFF	Various	8070	3681	2Q							11751	
LRAS 3	SS/CP	Network Centrics, McKinney Texas		2271	3Q	6444	2-3Q	3325	2Q			12040	
DVD (DVE Light)	C/CP	CACI		238	3Q	334	3Q				Cont.	572	
3rd Gen FLIR	C/CPFF	Various				3112	3Q	4423	1Q	5150	1Q	Cont.	Cont.	
SBIR/STTR						455						455	
Subtotal:			121278	9700		13311		9854		6800		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	15348	1803	1-2Q	2753	1-2Q	1814	1-2Q	1812	1-2Q	Cont.	Cont.	
Matrix Support	MIPR	NVESD	720										720	
Matrix Support	MIPR	TRADOC	400										400	
Matrix Support	MIPR	Various	231										231	
Subtotal:			16699	1803		2753		1814		1812		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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/IOT&E*	MIPR	ATEC	8769										8769	
Other Test Support*	MIPR	Various	5211	735	3Q	405	2Q	325	3Q			Cont.	6676	
Subtotal:			13980	735		405		325				Cont.	15445	

Remarks: * Includes PSDS2, UGS, STTW, 3GF and other sensor test and evaluation activities.
Includes PSDS2 and FCS UGS test and evaluation.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Management	In house support	PM, NV/RSTA, Fort Belvoir, VA & Ft. Monmouth, NJ	5495	425	1-4Q	439	1-4Q	440	1-4Q	429	1-4Q	Cont.	Cont.	
Subtotal:			5495	425		439		440		429		Cont.	Cont.	
Project Total Cost:			**157452**	**12663**		**16908**		**12433**		**9041**		**Cont.**	**Cont.**	

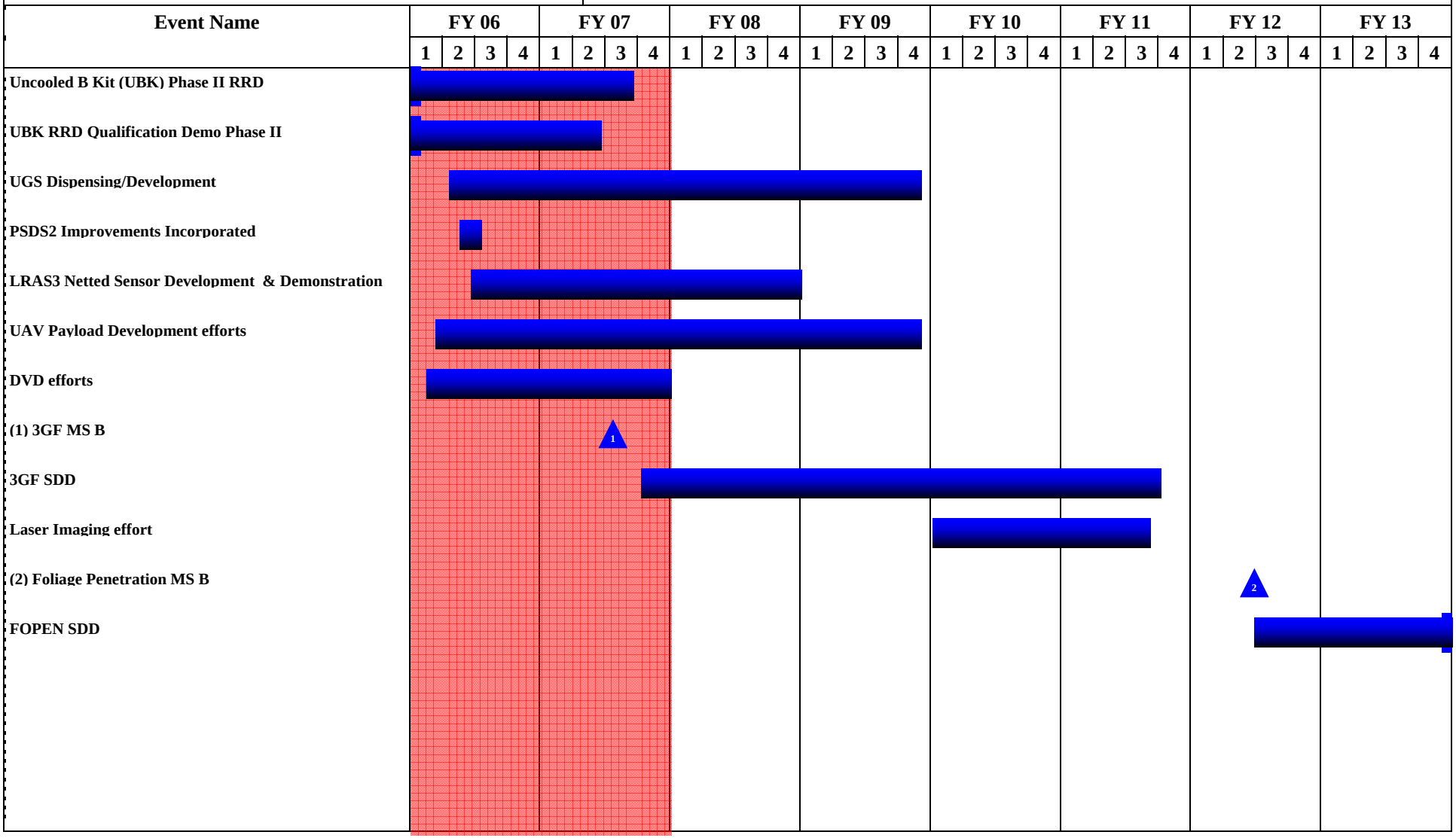
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L70



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L70

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Uncooled B Kit (UBK) Phase II RRD	1Q - 4Q	1Q - 3Q						
UBK RRD Qualification Demo Phase II	1Q - 4Q	1Q - 2Q						
UGS Dispensing/Development	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
PSDS2 Improvements Incorporated	3Q - 2Q							
LRAS3 Netted Sensor Development & Demonstration	2Q - 4Q	1Q - 4Q	1Q - 4Q					
UAV Payload Development efforts	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
DVD efforts	1Q - 4Q	1Q - 4Q						
3GF MS B		3Q						
3GF SDD		4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q		
Laser Imaging effort					1Q - 4Q	1Q - 3Q		
Foliage Penetration MS B							2Q	
FOPEN SDD							2Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L76**

COST (In Thousands)		FY 2006 Actual	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
L76	Dismounted Fire Support Laser Targeting Systems		4598	18884	8265						31747

A. Mission Description and Budget Item Justification: This project develops technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies developed under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), the Mark VII-E Laser Target Locator, and future programs based on emerging Army requirements. Advanced, cooled, InSb, infrared imaging focal plane arrays are now available in 1000 x 1000 pixel (mega-pixel) resolution which, when applied to LLDR, will provide much greater range performance in a package of similar size. With an associated optical redesign, greater LLDR imaging performance can be achieved with an overall reduction in weight. This project will also integrate the next generation uncooled, 17 micron pixel-pitch FLIRs being developed for the Thermal Weapon Sight program into the Mark VII-E, improving its imaging performance with no impact on its weight. New laser designator technology has been developed which will reduce laser designator weight by close to 50% and cut battery usage by a factor of 10. Further reductions can be gained by reducing laser designator output energy levels below currently accepted standards, which initial modeling and testing indicate will not compromise performance of laser guided munitions. A primary focus of this project will be to peform sufficient live-fire and captive-carry range tests over a wide variety of environmental conditions with all current and future laser guided munitions to build the necessary confidence that reduced designator energy levels will not adversely impact the mission. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as JDAM and Excalibur.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Initiate analysis of alternatives for laser targeting systems.		1340	340	340
Initiate design and development of cooled, mega-pixel Foward Looking Infra-Red (FLIR) and optics for FLIR.		410	4572	
Initiate MARK VII-E Advanced uncooled FLIR integration.			2818	4002
Initiate Ultra-lightweight Laser Designator development and testing.		2718	1500	
Initiate fabrication of 11 prototypes.			9654	3923
Small Business Innovative Research / Small Business Technology Transfer Program		130		
Total		4598	18884	8265

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Lightweight Laser Desingator Rangefinder (LLDR) (K31100) OPA2	106728	49959	93986	77414	80130	62086	63452	64848	Continuing	Continuing
Laser Target Locating System (LTLS) (B53800) OPA2	174346	3801							Continuing	Continuing

Comment:

C. Acquisition Strategy Development efforts targeted for LLDR and Mark VII-E are planned to be sole-source, cost plus fixed fee contracts with the prime vendors. Other efforts in this project will be perfomred through omnibus contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L76

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Analysis and Technical Evaluation	MIPR	Navy, Johns Hopkins University, MD				976	2-3Q	340	2Q	340	2Q		1656	
LLDR Mega-pixel FLIR	SS/CPFF	Northrop Grumman, Apopka, FL				410	2-3Q	4115	2Q				4525	
MARK VII-E Advanced Uncooling FLIR	MIPR	Night Vision Electro Sensor Directorate (NVESD), Ft. Belvoir, VA						2671	2Q	2911	2Q		5582	
Ultra Lightweight Designator	MIPR	Night Vision Electro Sensor Directorate, Ft. Belvoir VA				1941	2-3Q	1364	2Q				3305	
Target Location Accuracy Improvements	TBD	TBD					2Q	7470	2Q	2863	2Q	Cont.	Cont.	
SBIR/STTR						130							130	
Subtotal:						3457		15960		6114		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	NVESD, CECOM, Other				238	2-3Q	245	1-4Q	245	1-4Q		728	
Subtotal:						238		245		245			728	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L76**

Government Test Support Activity	MIPR	Various				777	2-4Q	2550	1-4Q	1773	1-4Q		5100	
Subtotal:						777		2550		1773			5100	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Management	In House	PM Soldier Sensors and Lasers, Ft. Belvoir, VA				126	2-4Q	129	1-4Q	133	1-4Q		388	
Subtotal:						126		129		133			388	
Project Total Cost:						**4598**		**18884**		**8265**		**Cont.**	**Cont.**	

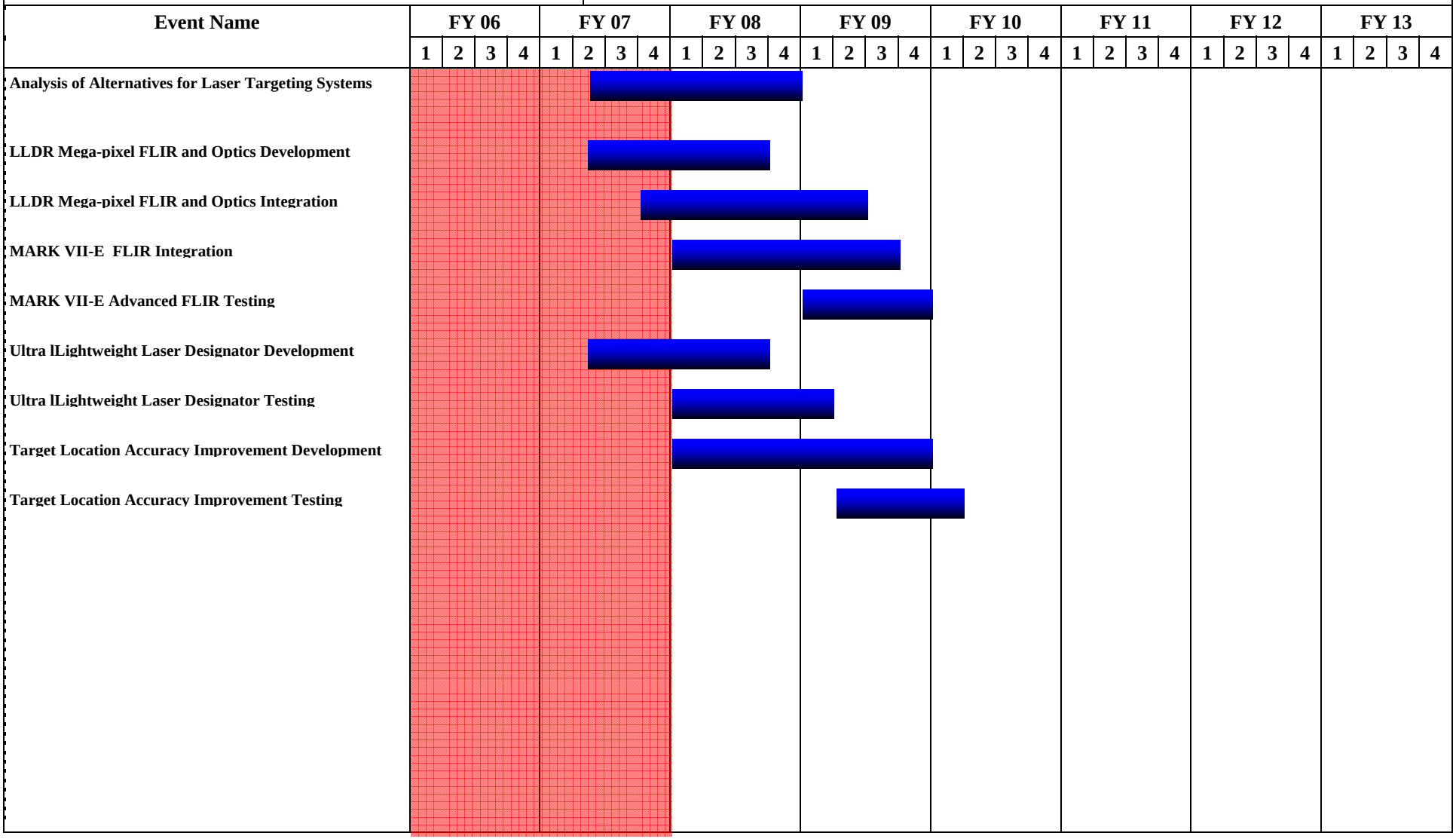
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L76



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L76**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Analysis of Alternatives for Laser Targeting Systems		2Q - 4Q	1Q - 4Q					
LLDR Mega-pixel FLIR and Optics Development		2Q - 4Q	1Q - 3Q					
LLDR Mega-pixel FLIR and Optics Integration		4Q	1Q - 4Q	1Q - 2Q				
MARK VII-E FLIR Integration			1Q - 4Q	1Q - 3Q				
MARK VII-E Advanced FLIR Testing				1Q - 4Q				
Ultra lLightweight Laser Designator Development		2Q - 4Q	1Q - 3Q					
Ultra lLightweight Laser Designator Testing			1Q - 4Q	1Q				
Target Location Accuracy Improvement Development			1Q - 4Q	1Q - 4Q				
Target Location Accuracy Improvement Testing				2Q - 4Q	1Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604713A - Combat Feeding, Clothing, and Equipment**	**548**

COST (In Thousands)	FY 2006 Actual	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
548 MIL SUBSISTENCE SYS	3224	2984	2501	2515	2154	2199	2174	2220		19971

A. Mission Description and Budget Item Justification: This project supports the development and demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance soldier efficiency and survivability, and to reduce food service logistics requirements for all four services. The project supports multi-fuel, rapidly deployable field food service equipment initiatives and engineering and manufacturing development to improve equipment, enhance safety in food service, and decrease fuel and water requirements. This project develops critical enablers that support the Joint Future Capabilities and Joint Expeditionary mindset, by maintaining readiness through fielding and integrating new equipment; by enhancing the field soldier's well-being; and providing soldier usable equipment. They also reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Completed a market survey to define how bottled water is purchased, received, stored, distributed, and consumed in the field. Multiple commercial 12/24 volt DC portable refrigerator/freezer prototypes were purchased and evaluated for suitability to provide chilled drinking water storage capability in military tactical vehicles. Documented test results in the market survey report.	68			
FY06: Identified grey water treatment options for the field food sanitation system. Designed, evaluated and refined the concept for mitigation of combustion by products. FY07: Conduct testing and evaluation of developmental prototypes of sink-exhaust fan assemblies to verify performance. Evaluate methods for reusing untreated rinse and sanitizing water as wash and rinse water, respectively. Analyze closed-loop treatment systems with regard to cost, ease of use, maintenance, and reliability. FY08: Prepare a solicitation and award a contract to build developmental prototypes of packaged, closed-loop water treatment systems. .FY09: Conduct testing and evaluation of closed loop-water treatment systems against the water quality standard and other requirements such as durability and reliability. Prepare Engineering Change Proposal (ECP) for transition to production.	243	393	250	200
FY09: Validate usage volume with CACCOM for pressure water design. Design and fabricate a prototype pressurized water system include all piping, pumps, freeze protection, and controls to provide pressurized water to meet all the demands of the field feeding site.				64
FY06: Completed the Multi-Temperature Refrigerated Container Systems Developmental and Operational testing. Prepared Milestone C package for transition to procurement.	301			
FY06: Conducted cost analysis and designed a system to effectively reduce the by products of combustion and improve thermal efficiency of the cooking equipment in the containerized Kitchen (CK). FY07: Fabricate improved CK prototype and conduct in house testing. FY08: Conduct Production Qualification testing (PQT). FY09: Conduct Production Verification Testing (PVT).	484	523	526	228
FY09: Leverage Market survey results obtained from the Water Cooling program conducted in 2006. Prepare a Performance Specification. Prepare a Request for Proposal/Statement of Work (SOW) to award a contract to design and fabricate prototype(s).				161
FY07: Receive technology transition from Science and Technology and SBIR based studies. Complete performance specification and award developmental contract for Future Combat Vehicle Crew Support. FY08: Complete testing and evaluation and prepare milestone package.		197	211	

FY06: Prepared Milestone C documentation and performance specification for AK and transitioned to procurement	90			
FY06: Awarded a contract to develop a co-generator that produces heat for cooking and sanitation and produces electricity for electrical appliances on the Mobile Kitchen Trailer, containerized Kitchen and other systems.	252			
FY09: Design and fabricate a prototype and conduct in house performance testing for CK Oven Upgrade.				150
FY09: Design and fabricate a prototype and conduct in house performance testing for CK scrubbing ventilation.				105
FY06: Completed procurement documents for highly acceptable Boil in Bag (BIB) egg (UGR H&S/A) and shelf stable Institutional Sized Pouch (ISP) (UGR H&S) bacon and transitioned to DSCP for procurement. Presented recommended changes for the MRE, UGR and MCW/LRPs based on field testing with warfighters to the Joint Service Operational Rations Forum (JSORF) 2Q06; 19 new items were approved for MRE (2008 date of pack (DOP)); 17 new items for UGR H&S (2007 DOP); 38 for UGRA (2007 DOP); and 16 for the MCW/LRP. Obtained OTSG approval for new MRE, UGR H&S/A, and MCW/LRP. Finalized all MRE/UGR procurement documents and initiated delivery to DSCP. Performed combat ration components cuttings for industry/OGA to ensure consistent ration component quality.FY07: Finalize all FSR and UGR-E procurement documents and transition to DSCP (1Q07). Complete delivery of MRE (2008 DOP), UGR H&S/A (2007 DOP) performance based contract requirements to DSCP for procurement (1Q07). Conduct field test of new ration components for MRE (2009 DOP) and UGR H&S/A (2008 DOP). Present recommendations to JSORF (2Q07) for continuous improvement of ration components of MRE (2009 DOP), and UGR H&S/A (2008 DOP). Finalize all procurement documents to include MCW/LRP and initiate delivery to DSCP. Obtain OTSG approval. Perform cuttings for industry/OGA to ensure consistent quality. Complete field testing for new ration components for MRE (2010 DOP) and UGR H&S/A (2009 DOP) to enhance quality and expand variety.	705	524		
FY08: Present recommendations to JSORF (2Q08) for MRE (2010 DOP) and UGR H&S/A (2009 DOP) for continued product improvement. Finalize MRE/UGR H&S procurement documents and initiate transition to DSCP. Obtain OTSG approval. Perform cuttings for industry/OGA to ensure consistent ration quality. Complete field testing of new ration components; MRE (2011 DOP), UGR H&S/A (2010 DOP), MCW/LRP, FSR (2), and UGR-E (2) to improve quality and expand variety.FY09: Based on field test results, present recommendations to JSORF (2Q09) for continuous transition to DSCP. Obtain OTSG approval. Perform cuttings for industry/OGA to ensure consistent ration quality. Complete field testing of new ration components; MRE (2011 DOP), UGR H&S/A (2010 DOP), MCW/LRP, FSR (2), and UGR-E (2) to improve quality and expand variety.FY09: Based on field test results, present recommendations to JSORF (2Q09) for continuous improvement of ration components/packaging/technologies for MRE (2011 DOP), UGR H&S/A (2010 DOP), MCW/LRP, FSR (2), and UGR-E (2). Obtain OTSG approval for new menus. Perform cuttings for industry/OGA to ensure consistent quality. Finalize procurement documents and transition to DSCP. Complete field testing of new ration components for MRE (2012 DOP), FSR (3), UGR H&S/A (2011 DOP) and UGR-E (3) to enhance quality and expand variety.			402	334
FY06: Tested and evaluated portable, pressurized, self-contained, automatic fresh water delivery system for field feeding sites at remote locations. System includes pump, automatic controls, and 100 gallon water tank for remote locations capable of autonomous and continuous operation for integration into Air Force field feeding sites for modernization and subsequent operational testing and evaluation during FY07. Designed, developed, fabricated and tested prototype QuadCold Marine Corps expeditionary field refrigeration system. QuadCold is a QuadCon sized refrigerator/freezer that has the capabilities to keep refrigerated rations at 33-40°F and frozen rations at -5°F to 32°F in ambient temperatures up to 122°F. QuadCold prototype passed all structural and thermal certification criteria including as a single unit, coupled, 10-foot ISO configuration and coupled, 20-foot ISO configuration. Integrated newly developed thermal control coating to reduce degrading effects of solar radiation. Prototypes provided to the Marines to support User Evaluations at Camp Lejeune to validate remote site feeding of the Marine Expeditionary Forces (MEF's). Developed draft Performance Specification and provided for	140	147	117	134

comment to Marines and industry.FY07: Transition performance based specification for fresh water delivery system to Air Force for procurement. Evaluate water heater to support Air Force field kitchen requirements. Conduct market survey and identify alternate exhaust fan for use with Air Force ventilation systems. FY08-09: Build prototype beverage water heater for use by the Sea Bees with the proposed water trailer. Continue to provide engineering support and services for product improvements for fielded food service equipment for joint services.				
FY06: Completed market survey to identify COTS items for an optimized Insulated Food Container (IFC) for group feeding applications that is mass and space efficient, less costly, holds both UGR-A and UGR-H&S rations. System design was optimized using inexpensive stereo-lithography rapid prototyping process for multiple design changes resulting in 20% reduced cube volume, 14-20% mass reduction, and tapered body for nesting providing 25% reduced storage space. Optimized IFCs successfully met requirements for hot and cold thermal performance, US Highway Truck Vibration Exposure (Mil-Std-810F, section 514.5C-1) and Vibration Impact Testing. IFCs user evaluated by 10th Mountain Division at Fort Drum and 3rd Brigade deployed overseas. Commercial Item Description A-A-52193E was be revised to incorporate the changes and then transitioned to the Services/DLA for procurement.	143			
FY06: Evaluated automated food production equipment to provide cost/labor saving through the use and application of new automated food service equipment on Navy ships. Conducted in-house evaluation of Campbells automatic soup/stew dispensing machine, Turbo Chef fast cooking oven, Rational Combination Oven, and Edys ice cream machine. Conducted in-house evaluation on four major pieces of food service equipment. Based on in-house testing, it is estimated that the equipment will reduce maintenance by 16 man-hours and operation by 10 man-hours combined per day. Received approval from the National Sanitation Foundation (NFS) to use clear non-stick dry film material that is PTFE (Teflon) free on food service pans. Provided NAVSUP with written report/cost benefits of utilizing precooked entrees. Benefits included a 50% reduction in preparation time, improved food safety, reduced waste and a reduction in case cube freezer storage requirements. FY07: Serve as certifying agent for all Navy Food Service Equipment to be used onboard Navy Vessels. Monitor commercial development in food service to accommodate reductions in shipboard labor, extend service life of equipment. Test and generate evaluation reports; down select items; list approved Galley equipment in Navy Food Service Equipment Catalog.	500	788		
FY06: Implemented technology insertion/ modernization of equipment and conducted user field tests to optimize and upgrade the Air Force Container Deployment Kitchen (CDK) to improve operational efficiency, extend the system service life, reduce maintenance, decrease operating labor and enhance reliability. Completed upgrade of CDK from Tyndal Air Force Base. Corrected identified deficiencies with older CDK design including electrical panel overheating, serving line problems, malfunctioning water heaters, plumbing system issues and power requirements. Replaced outdated food service equipment and integrated CDK system with latest technologies. Developed detailed equipment replacement list and an enhancement package which was successfully transitioned to Air Force to support procurement. The Air Force will use the information developed under this program to determine feasibility of entire CDK fleet upgrade.	298			
FY08: Identify, evaluate, and consolidate service requirements in conjunction with user community for TriCon Kitchen. Develop performance based SOW based on service comments.FY09: Award a contract to design and develop a prototype modular all electric kitchen within a TriCon container that could support all Services. Conduct Developmental Testing of the prototype TriCon kitchen. Begin User Testing with the Air Force.			166	165
FY-08: Participate in future naval vessel IPT meetings and gather updates on crew size, food service space and foot print allocations, weight restrictions/reductions and program costs. Evaluate information and design future galleys to meet the proposed naval requirements. Utilize modeling, simulation, animation, and prototyping to validate designs to support Navy requirements for reductions in total lifecycle costs in construction, design, and equipment arrangementFY09: A prototype of a future galley will be constructed utilizing automated			250	322

food service equipment, process controls, and ergonomic designs. The galley will be prototyped for initial operational testing and evaluation for potential inclusion into future galley designs onboard naval platforms. Develop galley designs with the capacity to integrate future technologies that will significantly reduce shipboard manning requirements through automated processes, equipment technological advancements, and equipment diagnostics/prognostics for total system integration. Program efforts will facilitate efficient utilization of the Navy requirements for reduced crew size and standardize equipment onboard all Navy platforms. Advanced technology will contribute significantly to the quality of life shipboard personnel, morale of food service personnel, alleviate labor-intensive functions, and support life cycle O&S cost reductions in the fleet.				
FY08: Test and evaluate; and complete operational shipboard testing of uniform baking oven. Novel oven will ensure substantial reduction in prep time, consistent quality and dramatic reduction in energy consumption. Modify oven prototype as required; conduct onboard testing to verify ovens capabilities for shipboard integration. Complete equipment design and prepare a commercial item description. Transition technical data package to Navy for procurement.			277	
FY07-08: Provided technical support for the development, modernization and implementation of the Air Force Basic Expeditionary Airfield Resources (BEAR) field kitchen concept, which consolidates existing Air Force Harvest Falcon, Harvest Eagle, 9-1 and 9-2 tent field kitchens. Kitchens reorganized and consolidated into the BEAR-(i) (Initial), which provides all food service requirements to support 550 airmen, and BEAR-(f) (Follow-on) platforms, which incrementally support food service requirements for 550 to 1100 personnel. Integrate and test food service equipment to support development, modernization and implementation of Air Force Basic Expeditionary Airfield Resources (BEAR) single kitchen system design. Effort supports replacement and consolidation of four separate aging field feeding systems with a single state-of-the-art solution. Conduct developmental testing and operational testing to support follow-on modernization packages and sustain feeding requirements as the force size increases with in-service application. Using an innovative modular approach the BEAR program provides an integrated system that will reduce labor, provide modern, efficient equipment, increase the food production yield, and reduce life cycle cost.FY09: Construct complete final BEAR-(i) and BEAR-(f) systems that include new Modular Shelter System, new Advanced Flooring System, and new equipment. Conduct Air Force User Evaluations at Tyndall and Dobbins AFBs. . Complete modifications and prepare performance specification and transition to AF for procurement.		328	302	196
FY-09: Evaluate beverage and self-service islands/lines for product quality, variety, ease of cleaning and maintenance. Identify specific automated self-serve equipment for crew mess deck applications to accommodate reduction in Food Service Attendants and Culinary Specialists. Recommend improvements to NAVSEA and NAVSUP and secure afloat test platform.				344
FY09: Upgrade/correct deficiencies with the kitchen identified based on results of the testing. Develop detailed equipment replacement list and an enhancement package and transition to the Navy to support potential future procurement. The Navy will use the information developed under this program to determine feasibility of entire COMMZ fleet upgrade.				112
SBIR/STTR		84		
Total	3224	2984	2501	2515

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604713A - Combat Feeding, Clothing, and Equipment**	**548**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	3334	3017	2520	2519
Current BES/President's Budget (FY 2008/2009)	3224	2984	2501	2515
Total Adjustments	-110	-33	-19	-4
Congressional Program Reductions		-11		
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years	-110	-22	-19	-4

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603747.610, Food Adv Dev	3233	2760	3795	3914	4315	4405	4359	4462	Continuing	Continuing
OPA 3, M65803, Kitchen, Containerized, Field	5273	9009	11478	17482	18027	17416	8052	7776	Continuing	Continuing
OPA 3, M65802, Sanitation Center, Field Feeding	11394	17614	4501						Continuing	Continuing

Comment:

D. Acquisition Strategy Complete System Development and Demonstration of food items and equipment for transition into competitive procurement contract.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604713A - Combat Feeding, Clothing, and Equipment

PROJECT
548

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 combat feeding equipment, multi-fuel and water equipment	In-House	RDECOM, NSC		1400	1-4Q	1260	1-4Q	1233	1-4Q	1243	1-4Q		5136	
DOD Field Feeding Equipment	Contracts	Various		575		514	1-4Q	335	1-4Q	328	1-4Q		1752	
Army Field Feeding Equipment Development	In-House	PM Force Sustainment Systems (FSS)		340		291	1-4Q	285	1-4Q	279	1-4Q		1195	
Subtotal:				2315		2065		1853		1850			8083	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	MIPR	TECOM/OEC/ATC		580		496		348		354			1778	
Subtotal:				580		496		348		354			1778	

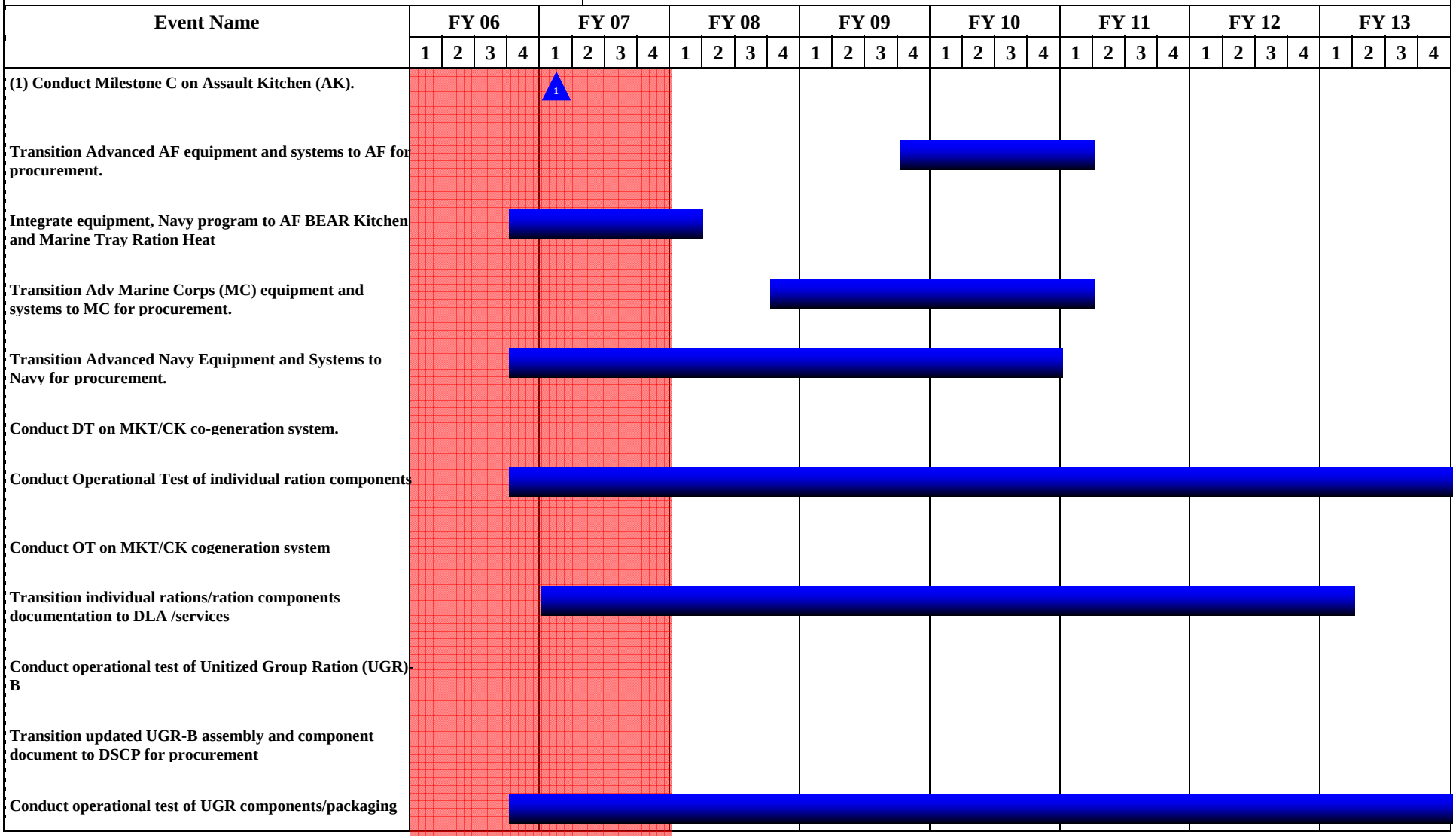
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CFP Management	In-House	RDECOM		329	1-4Q	339	1-4Q	300	1-4Q	311	1-4Q		1279	
SBIR/STTR						84							84	
Subtotal:				329		423		300		311			1363	

Project Total Cost:		**3224**		**2984**		**2501**		**2515**			**11224**	

Schedule Profile (R4 Exhibit)

February 2007

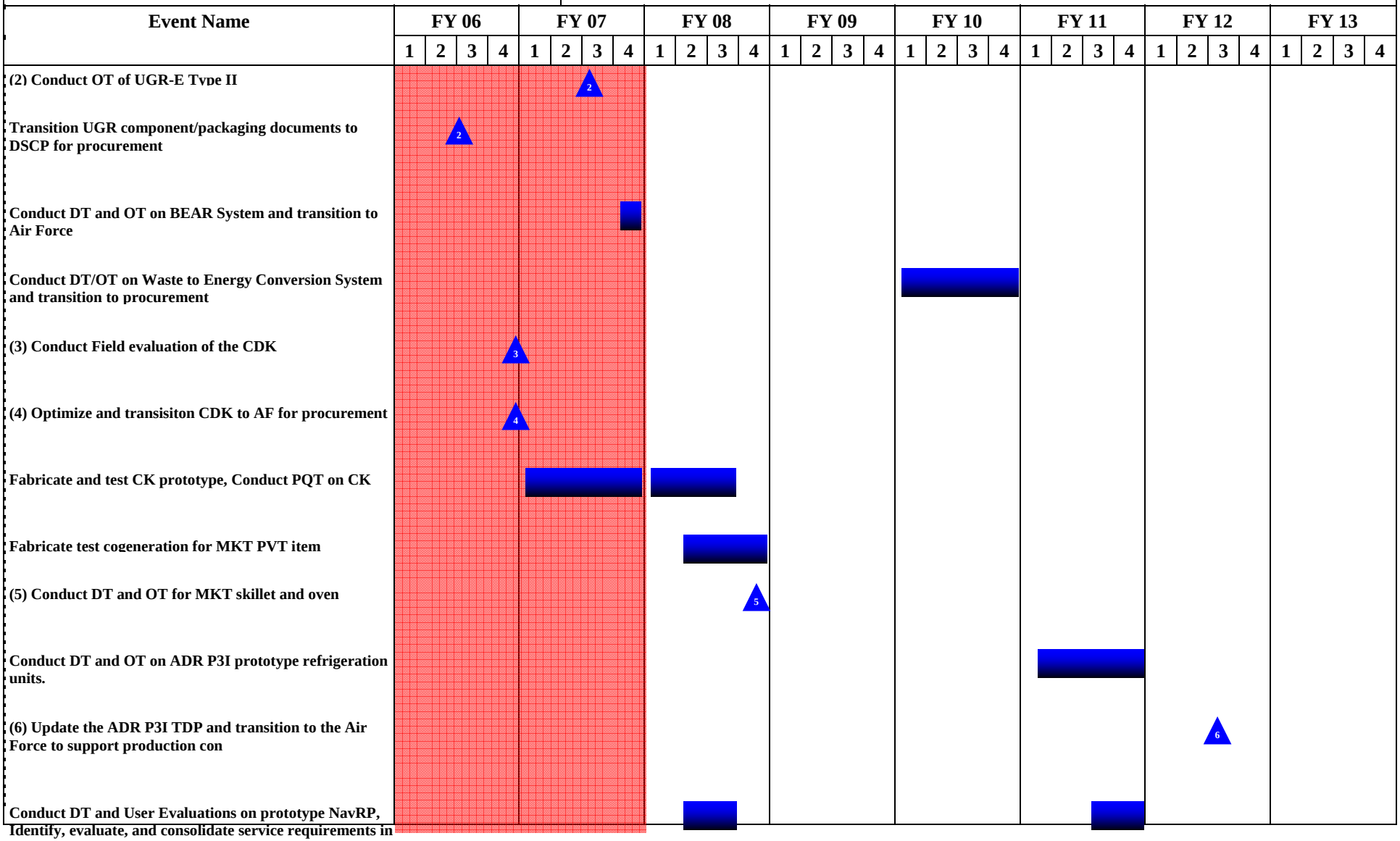
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604713A - Combat Feeding, Clothing, and Equipment**	**548**



Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604713A - Combat Feeding, Clothing, and Equipment**	**548**



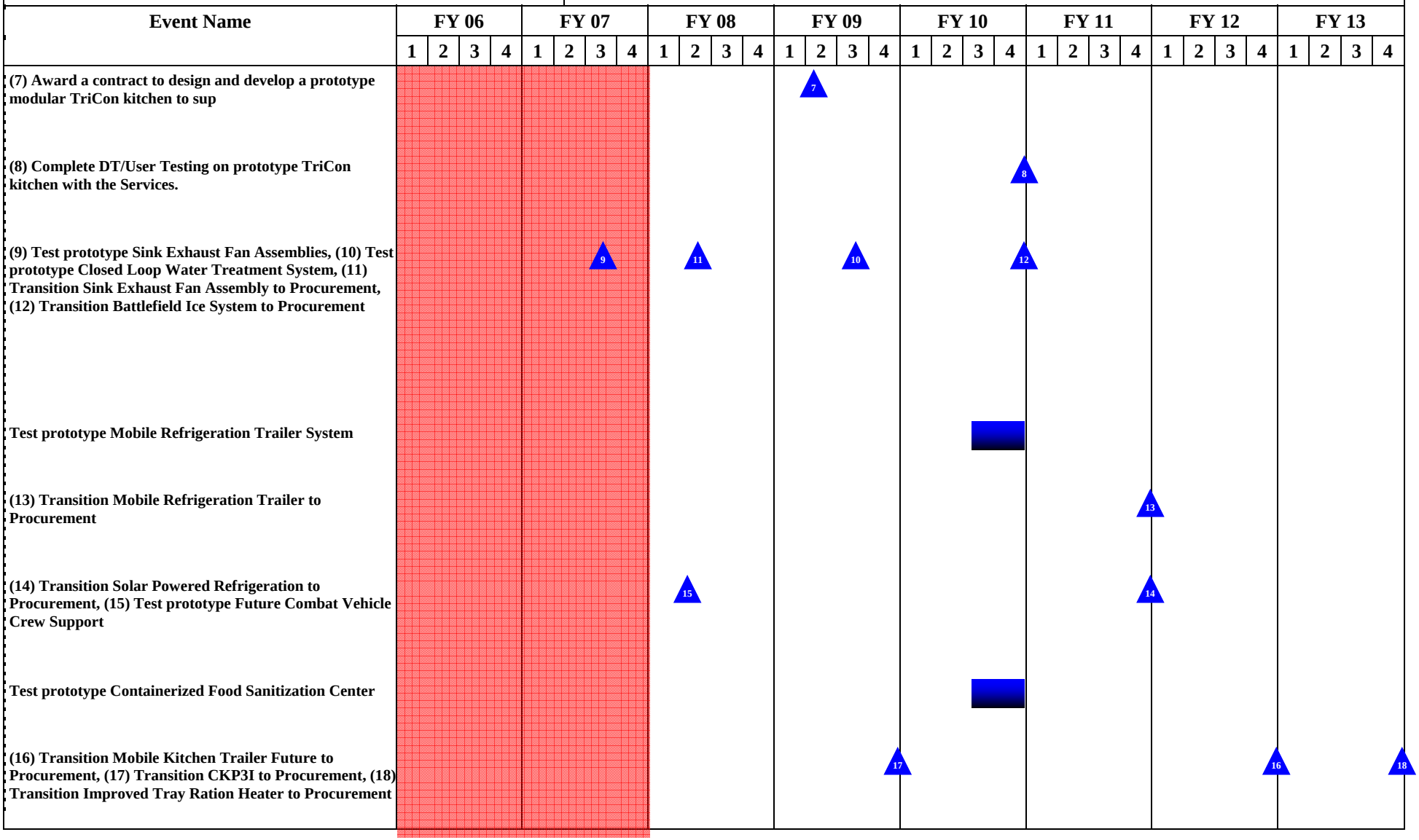
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604713A - Combat Feeding, Clothing, and Equipment

PROJECT
548



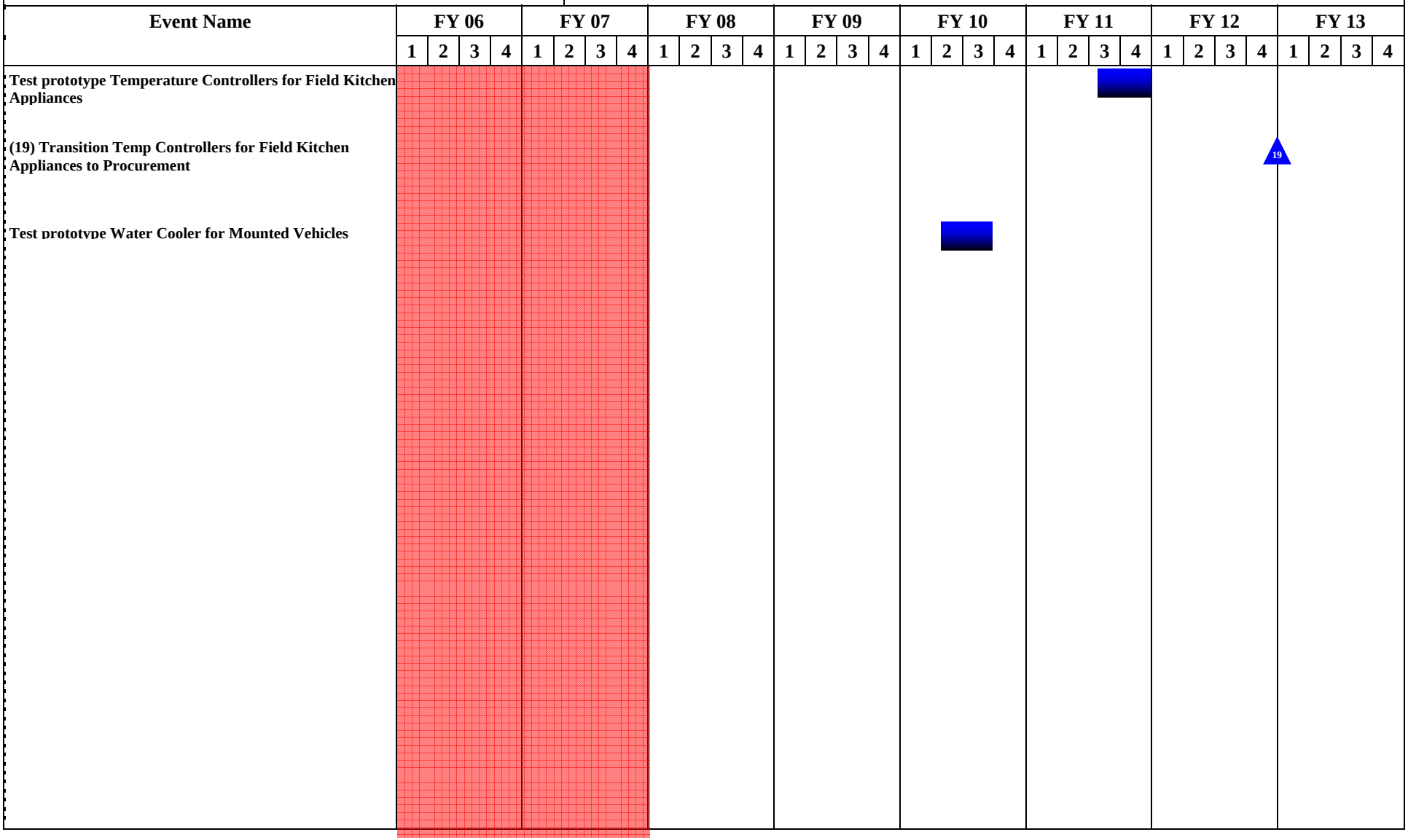
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604713A - Combat Feeding, Clothing, and Equipment

PROJECT
548



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604713A - Combat Feeding, Clothing, and Equipment

PROJECT
548

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Conduct Milestone C on Assault Kitchen (AK).		1Q						
Transition Advanced AF equipment and systems to AF for procurement.				4Q	1Q - 4Q	1Q		
Integrate equipment, Navy program to AF BEAR Kitchen and Marine Tray Ration Heat	4Q	1Q - 4Q	1Q					
Transition Adv Marine Corps (MC) equipment and systems to MC for procurement.			4Q	1Q - 4Q	1Q - 4Q	1Q		
Transition Advanced Navy Equipment and Systems to Navy for procurement.	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Conduct DT on MKT/CK co-generation system.			3Q					
Conduct Operational Test of individual ration components	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Conduct OT on MKT/CK cogeneration system				4Q				
Transition individual rations/ration components documentation to DLA /services		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q
Conduct operational test of Unitized Group Ration (UGR)-B	2Q							
Transition updated UGR-B assembly and component document to DSCP for procurement		3Q						
Conduct operational test of UGR components/packaging	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Conduct OT of UGR-E Type II		3Q						
Transition UGR component/packaging documents to DSCP for procurement	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
Conduct DT and OT on BEAR System and transition to Air Force		4Q						
Conduct DT/OT on Waste to Energy Conversion System and transition to procurement					1Q - 4Q			

Conduct Field evaluation of the CDK	4Q							
Optimize and transisiton CDK to AF for procurement	4Q							
Fabricate and test CK prototype		1Q - 4Q						
Conduct PQT on CK			1Q - 3Q					
Fabricate test cogeneration for MKT PVT item			2Q - 4Q					
Conduct DT and OT for MKT skillet and oven			4Q					
Conduct DT and OT on ADR P3I prototype refrigeration units.						1Q - 4Q		
Update the ADR P3I TDP and transition to the Air Force to support production con							3Q	
Conduct DT and User Evaluations on prototype NavRP						3Q - 4Q		
Identify, evaluate, and consolidate service requirements in conjunction with use			2Q - 3Q					
Award a contract to design and develop a prototype modular TriCon kitchen to sup				2Q				
Complete DT/User Testing on prototype TriCon kitchen with the Services.					4Q			
Test prototype Sink Exhaust Fan Assemblies		3Q						
Test prototype Closed Loop Water Treatment System				3Q				
Transition Sink Exhaust Fan Assembly to Procurement			2Q					
Transition Battlefield Ice System to Procurement					4Q			
Test prototype Mobile Refrigeration Trailer System					3Q - 4Q			
Transition Mobile Refrigeration Trailer to Procurement						4Q		
Transition Solar Powered Refrigeration to Procurement						4Q		
Test prototype Future Combat Vehicle Crew Support			2Q					
Test prototype Containerized Food Sanitization					3Q - 4Q			

Center								
Transition Mobile Kitchen Trailer Future to Procurement							4Q	
Transition CKP3I to Procurement				4Q				
Transition Improved Tray Ration Heater to Procurement								4Q
Test prototype Temperature Controllers for Field Kitchen Appliances						3Q - 4Q		
Transition Temp Controllers for Field Kitchen Appliances to Procurement							4Q	
Test prototype Water Cooler for Mounted Vehicles					2Q - 3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**

	COST (In Thousands)	FY 2006 Actual	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	53859	124068	35992	17493	16307	19208	101837	65478	Continuing	Continuing
241	NSTD COMBINED ARMS	52011	122076	33462	15040	13803	16660	99248	62833	Continuing	Continuing
573	STRICOM/NAWCTSD SUPPORT	1383	1493	2034	1954	2004	2048	2089	2145	Continuing	Continuing
587	ARMY DEVELOP CTIA/TENA CAPABILITY	465	499	496	499	500	500	500	500	Continuing	Continuing

A. Mission Description and Budget Item Justification: Program Element funds development of Non-System Training Devices to support force-on-force training at the Combat Training Centers (CTC), general military training, and training on more than one item/system, as compared with system devices which are developed in support of a specific item/weapon system. Training devices and training simulations contribute to the modernization of the forces by enabling and strengthening combat effectiveness through realistic training solutions for the Warfighter. Training devices maximize the transfer of knowledge, skills, and experience from the training situation to a combat situation. Force-on-force training at the National Training Center (NTC), Ft. Irwin, CA; Joint Readiness Training Center (JRTC), Ft. Polk, LA, and Joint Multinational Readiness Center (JMRC), formerly the Combat Maneuver Training Center (CMTC), Hohenfels, Germany; and battle staff training in Battle Command Training Program (BCTP) provide increased combat readiness through realistic collective training in low, mid, and high intensity scenarios. Project 241, Non-System Training Devices-Combined Arms, develops simulation training devices for Army-wide use, including the CTCs. Project 573 funds key organizational support to Army/DoD Transformation via innovative simulation and training device efforts. Program Executive Office (PEO) Simulation, Training and Instrumentation (STRI's) unique geographic colocation with other services facilitates joint training solutions in a common environment. FY08 funding supports a more active presence in this effort. Development update of Common Training Instrumentation Architecture (CTIA) services that are level 2 compliant with the DoD Test and Training Enabling Architecture (TENA).

In FY08/09, the Non-System Training Devices, 241 project line will develop prototype training devices to support Combined Arms (Infantry, Armor, Aviation, Air Defense, Artillery, Engineer, Chemical, and Support troops) training and multi-system training within the Army. There is an increased effort to replace the instrumentation system at the National Training Center (NTC), Ft. Irwin, CA and at the Joint Readiness Training Center (JRTC), Ft. Polk, LA with a system that meets the Army's existing and future, advanced collective training objectives. This is a complete modernization of these two systems, leveraging advanced technology using a modular concept. One Tactical Engagement Simulation System (OneTESS) development continues to provide realistic force-on-force training for weapon systems that are not direct fire and maximizes embedded training capability where possible. In FY08/09, PEO STRI/NAWCTSD SUPT, 573 project line will provide for minimum PEO STRI core operations supporting development of training devices and simulations by PEO STRI Project Managers (PM TRADE, PM ITTS, PM CATT, PM Future Force (S) and PM Constructive Simulation).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	60219	121553	72634	42144
Current BES/President's Budget (FY 2008/2009)	53859	124068	35992	17493
Total Adjustments	-6360	2515	-36642	-24651
Congressional Program Reductions		-474		
Congressional Rescissions				
Congressional Increases		3900		
Reprogrammings	-4805	-911		
SBIR/STTR Transfer	-1555			
Adjustments to Budget Years			-36642	-24651

FY 2008/2009: Funds realigned (FY08:$35,642/FY09:$23,651) to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**241**

COST (In Thousands)	FY 2006 Actual	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
241 NSTD COMBINED ARMS	52011	122076	33462	15040	13803	16660	99248	62833	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development of prototype training devices to support Combined Arms (Infantry, Armor, Aviation, Air Defense, Artillery, Engineer, Chemical, and Support troops) training and multi-system training within the Army, to include the Reserve Components.

Corps Battle Simulation (CBS) is the Army's current command and staff training simulation at the corps/division level. CBS is the cornerstone model of the Joint Training Transformation Initiative Plus(JTTI+) and the essential Brigade to Corps piece of the first three versions of the Joint Land Component Constructive Training Capability (JLCCTC). CBS supports the Joint Non-kinetic Effects Model (JNEM) which is the training tool that simulates asymmetric aspects of mission operations in WARFIGHTER exercises and Mission Rehearsal Exercises, and is a functional model in the JLCCTC. Tactical Simulation (TACSIM) is the Army's current primary tactical intelligence module for constructive simulation and the intelligence piece of the JLCCTC until the Warfighters' Simulation (WARSIM) Intelligence Module (WIM) replaces TACSIM. TACSIM also supports the JTTI+. The One Tactical Engagement Simulation System (One TESS) provides for an advanced, joint, collective, combined arms, live force on force training system using tactical weapon systems supported by a family of Training Aids, Devices, Simulations and Simulators (TADSS) that support up to brigade-level exercises, including all Battlefield Operating Systems, at Homestation, Maneuver Combat Training Centers (MCTC), and deployed sites. The Combat Training Center Objective Instrumentation System (CTC OIS), comprised of the prior National Training Center (NTC) and Joint Readiness Training Center (JRTC) OIS programs, provides a completely digital based system, and also provides the observer/controller, Training Analyst and Feedback analyst the ability to monitor unit approach, engagement, and departure maneuver activities and identify and isolate pertinent voice, data and video segments in a near real time manner for objective After Action Review (AAR) feedback to the unit based on approved Tactics, Techniques and Procedures (TTP) and Mission Training Plan (MTPs) for a Brigade-level training event. The NTC Military Operations in Urban Terrain (NTC MOUT) Instrumentation program provides Urban Operation sites the necessary instrumentation to support training data collection, data analysis and objective AAR feedback based on approved TTPs. The Common Training Instrumentation Architecture (CTIA) provides the common architecture framework for developing the Live Training Transformation (LT2) Product Line of live training systems supporting Army-wide Force-On-Force (FOF) and Force-On-Target (FOT) training requirements. CTIA is a spiral development, evolutionary acquisition program that continues to provide developmental support for the LT2 Product line in compliance with the DoD Test and Training Enabling Architecture (TENA). The Engagement Skills Trainer (EST) provides individual and crew weapon marksmanship at the squad level for collective training. Squad leaders are able to control and evaluate individual, team and squad performance. The Virtual Patient Simulators (VPS) are a component of the Medical Simulation Training Centers (MSTCs). These include the training devices such as bleed/breathe simulators, weighted mannequins, airway management mannequins, and IV arms. The MSTCs provide standardized Combat Medic Advanced Skills Training (CMAST) and Combat Lifesaver (CLS) training. The Homestation Instrumentation Training System (HITS) is a deployable Homestation Instrumentation Training System that will provide CTC-like instrumented capability to support platoon through battalion FOF training.

FY08/09 funds significant development efforts on Enagement Skills Trailer (EST), Virtual Patient Simulator (VPS), OneTESS, and further implementation of Live Training Transformation (LT2) through development of the Common Training Instrumentation Architecture (CTIA); enabling Joint training with the Joint Forces Command through modernization programs including the Objective Instrumentation Systems (OISs) for the Maneuver CTCs, Homestations, Integrated Military Operations in Urban Terrain (IMTS), and Digital Range Training System (DRTS). These systems provide integrated Live, Virtual, and Constructive training environments and tools in support of the Contemporary Operating Environment, funds Improvised Explosive Device Explosive Simulator (IEDES) to develop realistic detection and reaction training against IED threats through simulated, but realistic battlefield cues and effects. Additionally, in FY08 Homestation Instrumentation Training System (HITS) program will integrate and test LT2 products into

HITS design.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY08-FY09: Continues development, installation, integration and testing of CTC OIS Technology Capability Groupings (TCG) for support of Early Fielding at both the NTC and JRTC. The NTC MOUT will continue to design efforts and test in FY 07. Continue spiral development of CTIA to provide the common architecture capabilities that are essential for development and fielding of the CTC, IMTS, and DRTS training instrumentation programs.	32073	63167	7731	5325
FY06-FY07: Completes CBS enhancements and security accreditation, and provides support to JLCCTC functionality and integration.	5589	6781		
FY06-FY09: Continues development of One Tactical Engagement Simulation System (One TESS). Refine systems architecture, develop FCS/Joint, Live/Virtual and Constructive solutions and integrate operational testing that supports the training and testing communities into current combat systems under development.	11426	42691	23198	6357
FY06-FY07: Completes TACSIM limited enhancements to support JLCCTC and TACSIM security accreditation.	2166	2199		
FY06: Developed intra-Tactical Operations Center (TOC) ABCS Collection capability for the Digital AAR Tool (DAART) at the MCTC's.	757			
FY07: Jamming Effects Training Module (Congressional Add)		3872		
FY08-FY09: Improvised Explosive Device Explosive Simulator (IEDES) - Develops realistic detection and reaction training against IED threats through simulated, but realistic battlefield cues and effects.			319	217
FY09: Engagement Skills Trainer 2000(EST) Pre-Planned Product Improvements (P3I) for weapon enhancements including: the M145 machine gun optic, Call for and adjust indirect fires, Vehicle Ring and Pedestal mounts to include Leaders Hatch skate ring and family of AN/PAS-13 Thermal Weapons Sights.				1795
FY08-FY09: The Virtual Patient Simulator (VPS) will expand to include a simulation control center, to operate multiple, networked simulators; student performance tracking; additional scenario development; and integration into other virtual training devices, for combined/collective training.			480	480
FY08-FY09: The Homestation Instrumentation Training System (HITS) program will integrate and test LT2 products into HITS design.			1734	866
FY07: SBIR/STTR Reduction		3366		
Total	52011	122076	33462	15040

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0100 Training Devices, Non-System	221118	319475	201843	238232	192802	190921	203423	211347	Continuing	Continuing
OPA3, Appropriation MA6601 CTC Support	56044	45882	16337	16621	15169	4027	32761	92128	Continuing	Continuing

Comment:

C. Acquisition Strategy Competitive development efforts based on performance specifications.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604715A - Non-System Training Devices - Eng Dev

PROJECT
241

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CBS Development	C/FFP	JPL, Cal Tech, Pasadena, CA	43514	4545	1-3Q	5946	1-3Q						54005	54005
TACSIM Enhancement Development	C/CPFF	Northrop Grumman, Orlando, FL	1033	1840	1-3Q	1199	1-3Q						4072	4072
CTC OIS: NTC	CPAF	Lockheed Martin Simulation Training and Support, Orlando, FL	70893	15204	1-2Q	25274	1-2Q						111371	111371
CTC OIS: JRTC	CPAF	Lockheed Martin Simulation Training and Support, Orlando, FL		5676	1-2Q	29766	1-2Q						35442	35442
NTC MOUT	TBS	TBS		2279	2Q	1506	2Q						3785	3785
CTIA	C/FFP	Lockheed Martin Inc., Orlando, FL	34913	6297	1-2Q	5315	1-2Q	6231	1-2Q	3825	1-2Q	Cont.	Cont.	Cont.
One TESS	Various	Multiple	21876	9322	1-2Q	41633	1-2Q	20732	1-2Q	4429	1-2Q	Cont.	Cont.	Cont.
LVCIA	various	various	3632										3632	2067
AWSS	FFP	MDS, Fullerton,CA	6632										6632	6700
CBS Security	C/FFP	TITAN, Leavenworth, KS	230	240	1-3Q	230	1-3Q						700	700
TACSIM DEVELOPMENT	various	multiple		85	1-4Q	242	1-3Q						327	327
MCTC DAART	C/FFP	TBD		757	1-2Q								757	795
IEDES	TBS	TBS						319	2Q	217	2Q	Cont.	Cont.	Cont.
Jamming Effects Training Module	TBS	TBS				3872	2Q						3872	3872
EST 2000 P3I Weapon Enhancements	C/FFP	Cubic Simulation Systems Division, Orlando, Fl								1795	1Q	Cont.	Cont.	Cont.
Virtual Patient Simulator	C/FFP	Medical Education Technologies, Inc., Sarasota, Fl						480	2Q	480	2Q	Cont.	Cont.	Cont.
HITS	TBS	TBS						1434	2-3Q				1434	1434

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**241**

Subtotal:			182723	46245		114983		29196		10746		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CBS Engineering & Technical Support	Multiple	Multiple	1120	111	1-4Q	152	1-4Q						1383	1383
TACSIM Engineering, Technical and Administrative Support	Multiple	Multiple	169				1-4Q						169	169
CTC OIS: NTC	Various	Multiple	11345	700	1-4Q	1053	1-4Q						13098	13098
CTC OIS: JRTC	Various	Multiple		317	1-4Q	381	1-4Q						698	698
NTC MOUT	Various	Multiple		100	1-4Q	224	1-4Q						324	324
CTIA	Various	Various	6175	1500	1-4Q	1500	1-4Q	1500	1-4Q	1500	1-4Q	Cont.	Cont.	Cont.
OneTESS	Multiple	Various	3543	355	1-4Q	674	1-4Q	675	1-4Q	96	1-4Q	Cont.	Cont.	Cont.
HITS	TBS	TBS						300	1-4Q	100	1-4Q	Cont.	Cont.	Cont.
Subtotal:			22352	3083		3984		2475		1696		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CBS Test Support	Various	Multiple	139	93	1-4Q		1-4Q						232	232
TACSIM Accreditation Testing	Various	Multiple	81	32	1-4Q	57	1-4Q						170	170
OneTESS Development and Test	MIPR	Multiple	800	761	1Q	485	1-4Q	488	1-4Q	490	1-4Q	Cont.	Cont.	Cont.
HITS	TBS	TBS								766	1-2Q	Cont.	Cont.	Cont.
Subtotal:			1020	886		542		488		1256		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604715A - Non-System Training Devices - Eng Dev

PROJECT
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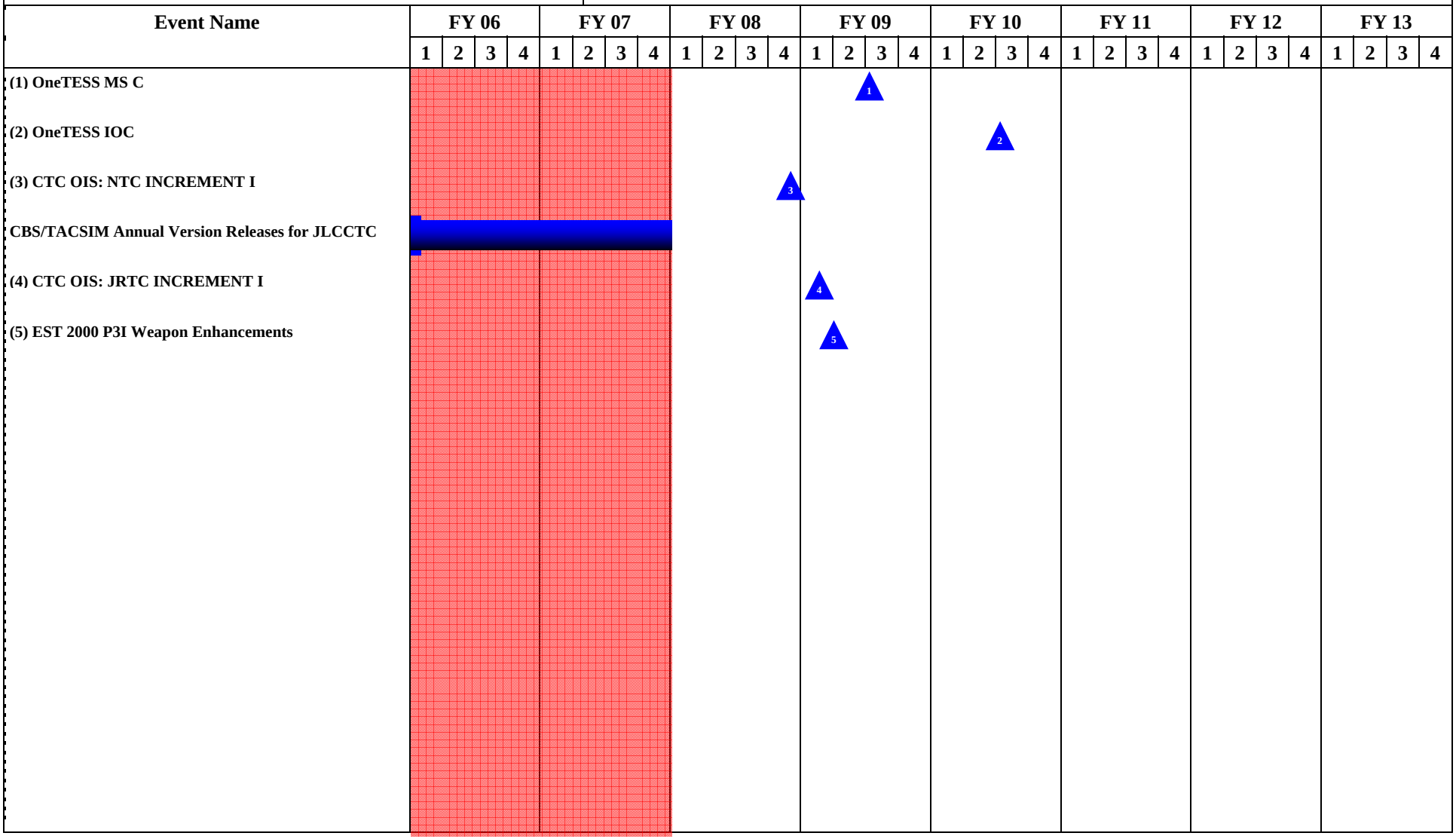
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CBS Program Management	Various	PEO STRI, Orlando, FL 32826	1723	600	1-4Q	651	1-4Q						2974	2974
TACSIM Program Management	Various	Multiple	159	209	1-4Q	766	1-4Q						1134	1134
OneTESS Program Management	Various	PEO STRI, Orlando, FL 32826	2019	988	1-4Q	1150	1-4Q	1303	1-4Q	1342	1-4Q	Cont.	Cont.	Cont.
Subtotal:			3901	1797		2567		1303		1342		Cont.	Cont.	Cont.
Project Total Cost:			**209996**	**52011**		**122076**		**33462**		**15040**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**241**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**241**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
OneTESS MS C				3Q				
OneTESS IOC					3Q			
CTC OIS: NTC INCREMENT I			4Q					
CBS/TACSIM Annual Version Releases for JLCCTC	1Q - 4Q	1Q - 4Q						
CTC OIS: JRTC INCREMENT I				1Q				
EST 2000 P3I Weapon Enhancements				1Q - 4Q	1Q			
CBS/TACSIM Annual Version Releases for JLCCTC	1Q - 3Q							
TACSIM Enhancement Development Contract Award	1Q - 4Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**573**

COST (In Thousands)	FY 2006 Actual	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
573 STRICOM/NAWCTSD SUPPORT	1383	1493	2034	1954	2004	2048	2089	2145	Continuing	Continuing

A. Mission Description and Budget Item Justification: In support of Non-System Training Devices (NSTD), this project funds the US Army Program Executive Officer Simulation, Training and Instrumentation (PEO STRI) core operations supporting development of training devices and simulations by PEO STRI project managers (PM TRADE, PM ITTS, PM CATT, PM Constructive Simulation and PM (Future Force) Simulation. FY08/09 project funds labor in support of PEO operations.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-FY09: Continues to support PEO STRI labor for project managers in PM TRADE, PM ITTS, PM CATT, PM Constructive Simulation and PM (Future Force)Simulation.	1383	1493	1653	1563
FY06 Public Law mandated the Army track FCS related work for accountability purposes. This funding represents salary dollars for three Department of the Army Civilians for the research and development of simulation systems to support the Army Future Combat System			381	391
Total	1383	1493	2034	1954

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

C. Acquisition Strategy Not Applicable.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**

	COST (In Thousands)	FY 2006 Actual	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	49264	21516	21513	22552	23426	23938	23000	23000	Continuing	Continuing
126	FAAD C2 ED	36663	10349	1340	2995	2895	3000	3000	3000	Continuing	Continuing
146	AIR & MSL DEFENSE PLANNING CONTROL SYS (AMC PCS)	12601	11167	10250	9575	10531	10938	10000	10000		85062
149	COUNTER-ROCKETS, ARTILLERY & MORTAR (C-RAM) DVPMT			9923	9982	10000	10000	10000	10000	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Air and Missile Defense Planning and Control System (AMDPCS) is an Army Objective Force System with Homeland Defense capabilities that allows for the integration of Air and Missile Defense (AMD)operations for Air Defense Artillery (ADA) Brigades at Corps and Echelons above Corps (EAC), the Army Air and Missile Defense Command (AAMDC) Headquarters, at Army, Joint, or Coalition level forces.

The Forward Area Air Defense Command, Control, and Intelligence (FAAD C2I) System provides continuously tailored situational awareness and situational understanding of the battlespace (including data on threat aircraft, cruise missiles and unmanned aerial vehicles (UAVs) to support the planning and decision process at various levels of command. The mission is to collect, digitally process and disseminate real time target cueing and tracking information, common tactical air picture, and C2I information to all Short Range Air Defense (SHORAD) weapons (Avenger, Bradley Linebacker, Manportable Air Defense System (MANPADS), joint and combined arms). Unique FAAD C2 software will provide this mission capability by integrating FAAD C2 engagement operations software with the Joint Digital Radio (JDR), Single Channel Ground and Airborne Radio System (SINCGARS), Enhanced Position Location Reporting System (EPLRS), Global Positioning System (GPS), Airborne Warning and Control System (AWACS), Sentinel and the Army Battle Command System (ABCS) architecture. Provides joint C2 interoperability and horizontal integration with PATRIOT, THAAD, MEADS, JLENS and SHORAD weapon systems by fusing sensor data to create a scalable and filterable single integrated air picture (SIAP) and common operating picture (COP) at Army divisions and below. System software will provide target data and engagement commands/status to the Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) air defense system. A small portion of RDTE funding is dedicated to SLAMRAAM C2 threshold requirements. FAAD C2 is the first system to digitize for Army Transformation in the First Digitized Division (FDD), III (Digitized) Corps, the Joint Contingency Force (JCF) and the STRYKER Brigade Combat Teams (SBCTs). The FAAD C2 netted and distributed system architecture has been briefed as the basis for a potential BM/C4I Future Combat Ssytem (FCS).

AMDPCS is the backbone of Army Air Defense, operating through the Battle Management/Command, Control, Communications, Computers, and Intelligence (BM/C4I), and the common tactical and operational air picture, (2) Air Defense System Integrator (ADSI), a communications data link processor and display system, provides real time joint airspace situational awareness and fire direction Command and Control (C2) for AMD, and (3) shelter configurations using computer hardware and tactical communications equipment (e.g., JTIDS 2M Terminals, Commanders Tactical Terminal). The AMDPCS enables Active, Passive and Attack Operations coordination and a correlated Single Integrated Air Picture (SIAP) to Army AMD and Joint Forces. The AMDPCS provides the Army Battle Command System (ABCS) architecture and the Army AMD Task Forces (AMDTF) with Joint BM/C4I capability and the Army component of interoperabile Joint Theater Air and Missile Defense (JTAMD) BM/C4I.

In addition, the Air Missile Defense Work Station (AMDWS) supports the Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) air defense system by

providing an automated defense planning capability for deployed units.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	41512	21757	21371	20648
Current BES/President's Budget (FY 2008/2009)	49264	21516	21513	22552
Total Adjustments	7752	-241	142	1904
Congressional Program Reductions		-151		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	7752	-90		
SBIR/STTR Transfer				
Adjustments to Budget Years			142	1904

Change Summary Explanation:
None

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**	**126**

COST (In Thousands)	FY 2006 Actual	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
126 FAAD C2 ED	36663	10349	1340	2995	2895	3000	3000	3000	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Forward Area Air Defense Command and Control (FAAD C2) system collects, digitally processes, and disseminates real-time target cueing and tracking information; the common tactical air picture; and command, control, and intelligence information to all Maneuver Air and Missile Defense (MAMD) weapon systems (Avenger and Man-Portable Air Defense System (MANPADS)), and joint and combined arms systems. The FAAD C2 system provides alerting data to air defense gunners, air space battle management, and up linking of mission operations, thereby enhancing force protection against air and missile attack. Situational awareness and targeting data is provided on threat aircraft, cruise missiles, and unmanned aerial vehicles (UAVs). The FAAD C2 system provides this mission capability by integrating dynamic FAAD C2 engagement operations software with the Multifunctional Information Distribution System (MIDS), Joint Tactical Terminal (JTT), Single Channel Ground and Airborne Radio System (SINCGARS), Enhanced Position Location System (EPLRS), Global Positioning System (GPS), Airborne Warning and Control Systems (AWACS), Sentinel radar, and the Army Battle Command System (ABCS) architecture. In addition, FAAD C2 provides interoperability with Joint C2 systems and horizontal integration with PATRIOT, Theater High-Altitude Area Defense (THAAD), Medium Extended Air Defense System (MEADS), and the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) by fusing sensor data to create a scalable and filterable Single Integrated Air Picture (SIAP) and common tactical picture. The system software is a key component of the Air Defense and Airspace Management (ADAM) Cell that is being fielded to Stryker Brigade Combat Teams (SBCTs), Brigade Combat Teams (BCTs), and Division Headquarters as part of the Army's modularity concept. The FAAD C2 software has been fielded to ADAM Cells in the 3rd Infantry Division, 101st Air Assault Division, 4th Infantry Division, 1st Cavalry Division, 25th Infantry Division, 10th Mountain Division and to the SBCTs. System software is able to provide target data and engagement commands/status to MAMD Battalions. FAAD C2 is also a principal air defense system within the Homeland Security Program. Soldiers from activated ARNG MAMD battalions operate the FAAD C2 systems in the National Capital Region and other locations.

In support of the Global War on Terrorism (GWOT), FAAD C2 systems are in MAMD units and ADAM Cells deployed to Iraq and Afghanistan. These FAAD systems are critical in providing the local air picture to supported units and higher headquarters. FAAD C2 is also the integrating software that provides target track data and weapon system control for the initial Counter-Rocket, Artillery and Mortar (C-RAM) capability being deployed to Iraq. The primary mission of the C-RAM program is to develop, procure, field and maintain a system that can detect rocket, artillery or mortar launches; warn the defended area with sufficient time for personnel to take cover; intercept rounds in flight, thus preventing damage to ground forces or facilities; and enhance response to and defeat of enemy forces. C-RAM utilizes a system of systems (SoS) approach, and is comprised of a combination of multi-service fielded and non-developmental item (NDI) sensors, C2 systems and a modified U.S. Navy intercept system, with a low cost commercial off-the-shelf (COTS) warning system and wireless local area network. The system will be fielded to various echelons, fixed or semi-fixed-site, providing them correlated air and ground pictures and linking them to the ABCS and the Joint Defense Network (JDN), via various forms of communications, to provide situational awareness and exchange of timely and accurate information to synchronize and optimize automated Shape, Sense, Warn, Intercept, Respond and Protect decisions.

The C-RAM Program Office has fielded equipment to nine (9) Forward Operating Bases (FOBs) (Sense, Warn and Intercept to one (1) FOB; Sense and Warn to eight (8) additional FOBs). The C-RAM SoS approach was validated by a Proof of Principle demonstration in December 2004 and Army Test and Evaluation Command (ATEC) tests in Feb 05, Apr 05, Nov-Dec 05, and Sep 06. C-RAM will be managed as an ACAT I program upon formal designation as a program of record.

FY08 and FY09 will fund the efforts listed in Accomplishments/Planned Program below.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue FAAD C2 Blk III software development/engineering, including external Beyond Line of Sight/Non-Line of Sight, SINCGARS Data Looping, Sentinel Identification Friend or Foe Mode 5/S development, and Single Integrated Air Picture Blk 0 & 1 implementation. Software is being fielded to active and reserve component Maneuver Air and Missile Defense Battalions, to units in support of Homeland Defense, and to ADAM Cells deployed in support modularity and Operation Iraqi Freedom/Operation Enduring Freedom.	14423	6152		
Support FAAD C2 software development for new Air and Missile Defense Composite Battalions, including unique software enhancements in support of Homeland Defense and security accreditation upgrades. As a complementary Future Combat System (FCS), continue FAAD C2 integration and interoperability with FCS Mission Applications. Consistent with DA and DoD guidance, migrate FAAD C2 Engagement Operations software modules to the Joint Command and Control Mission Capability Packages. Integrate Sentinel radar Enhanced Target, Range and Classification (ETRAC). Implement software modifications necessary for Internet Protocol version 6 (IPv6), continue integration of interfaces for the Joint Tactical Terminal (JTT), and design Joint Tactical Radio System (JTRS) interfaces. Incorporate IFF modes 1,2 and 3 (active decode) capabilities.	8840	980	1340	2995
Develop, test and integrate FAAD C2 software with new hardware versions of FBCB2 and FACT that are fielded. FAAD C2 software cohost/rehost includes the development , test and integration of FAAD C2 software on newer versions of CHS hardware.		1262		
Implement IFF Mode 5/S in order to enhance positive friendly identification and provide an associated robust civil aviation identification capability.		1677		
Development of C-RAM/FAAD C2 improvements/enhancements (lower cost interceptor capability and enhancement of Shape and Respond options by integrating existing stovepipe systems).	13400			
Small Business Innovative Research/Small Business Technology Transfer Programs		278		
Total	36663	10349	1340	2995

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 2, AD5050 - FAAD C2	228564	21010	9000	7500	9000	3800	5000	5000	Continuing	Continuing
Spares (BS9702) - FAAD C2	876	842							Continuing	Continuing

Comment:

C. Acquisition Strategy The FAAD C2 acquisition strategy relies on evolutionary software development to rapidly meet the demands of air defense battle management/command, control, communications, computers, and intelligence (BM/C4I) requirements, and to keep pace with automated information technologies. The concept of evolutionary software development is being followed and will be accomplished in Blocks I, II, and III. Blocks I and II have been completed. FAAD C2 Block III is currently being developed for both the Army's Active and Reserve components.

The C-RAM program is primarily an NDI integration effort, comprised of a combination of multi-service sensors, C2 systems, a modified U.S. Navy intercept system and two low-cost commercial systems - a warning system and a wireless LAN. All COTS hardware and software are purchased through the installation contractor. All other hardware and software are purchased from the applicable PM or other Government organization. FAAD C2 forms the backbone of C-RAM C2 and continued development is expected to support this new mission.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
126

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Northrop Grumman/TRW, BLK I	C/CPIF	Carson, CA	176461										176461	
Northrop Grumman/TRW, BLK II	SS/CPIF	Carson, CA	32206										32206	
Northrop Grumman/TRW, BLK III	SS/CPIF	Carson, CA	90510	7399	1Q	1052	1Q					Cont.	98961	
Northrop Grumman/TRW	SS/T&M	Carson, CA	7838	2508	1Q	713	1Q	92	1Q	205	1Q	Cont.	Cont.	
Northrop Grumman						978	1Q	262	1Q	601	1Q	Cont.	Cont.	
Program Management Administration	MIPR	Various	29520	3782	2Q	1075	2Q	139	2Q	310	2Q	Cont.	Cont.	
Sentinel GBS	MIPR	Huntsville, AL	3791										3791	
JTIDS	MIPR	Ft. Monmouth, NJ	6000									Cont.	6000	
ABCS SE&I	MIPR	Ft Monmouth, NJ	346										346	
Software Engineering	Various	Various	15093	2521	1-4Q	717	1-4Q	93	1-4Q	206	1-4Q	Cont.	Cont.	
C-RAM Sense, Warn & Intercept	Various	Various	45753	14735	1-4Q	4189	1-4Q	543	1-4Q	1206	1-4Q	Cont.	Cont.	
Subtotal:			407518	30945		8724		1129		2528		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ADATD	MIPR	Ft Bliss, TX	10257	1017	1-4Q	289	1-4Q	37	1-4Q	83	1-4Q	Cont.	Cont.	
RTTC	MIPR	WSMR, NM	2906	18	1-4Q	5	1-4Q					Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

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AATD	MIPR	Ft Eustis, VA		160	1-4Q	45	1-4Q	7	1-4Q	13	1-4Q	Cont.	Cont.	
ATEC	MIPR	Alexandria, VA		978	1-4Q	278	1-4Q	36	1-4Q	81	1-4Q	Cont.	Cont.	
Yuma Proving Ground	MIPR	Yuma, AZ		3545	1-4Q	1008	1-4Q	131	1-4Q	290	1-4Q	Cont.	Cont.	
Subtotal:			13163	5718		1625		211		467		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

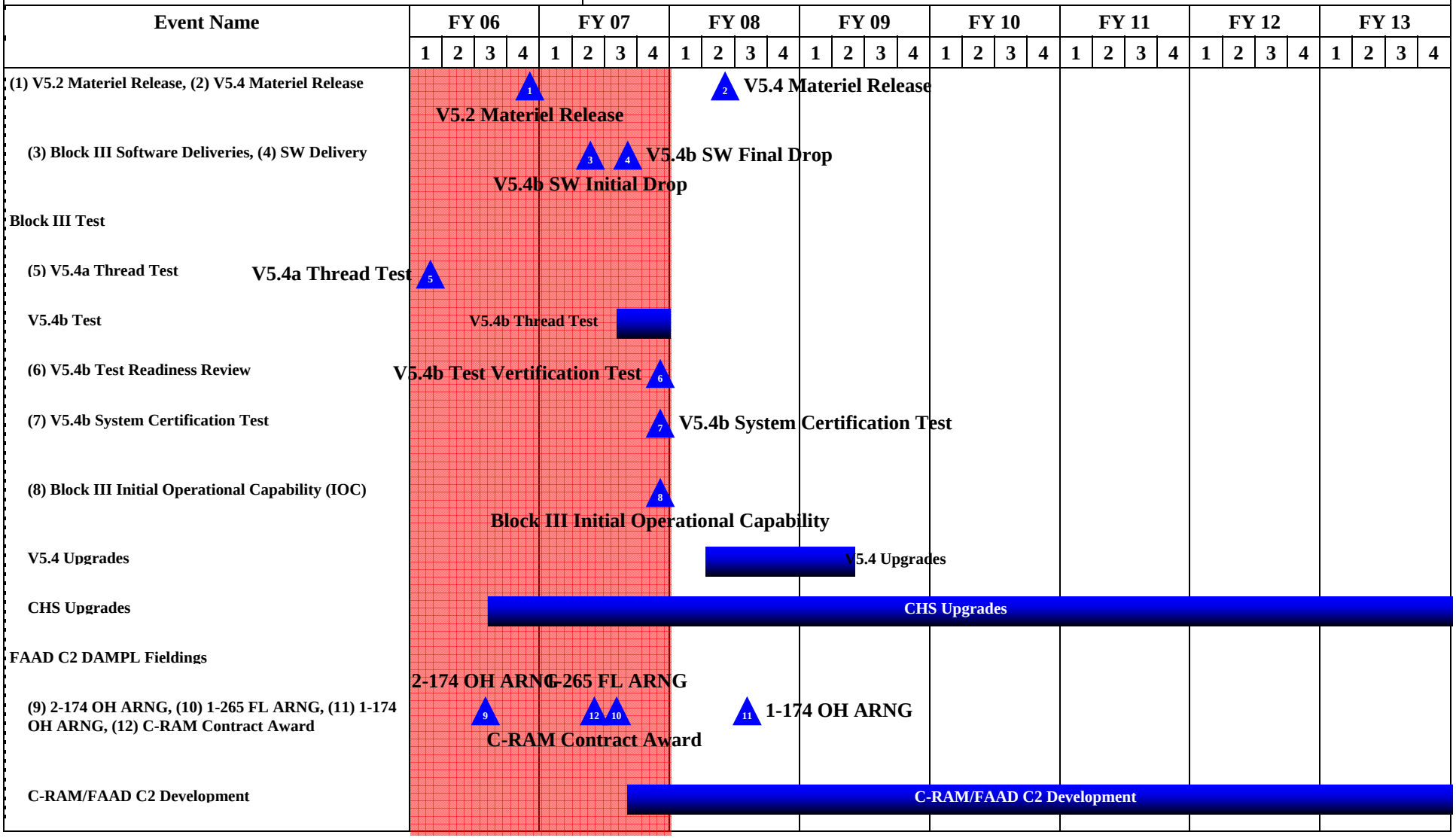
Remarks: Not Applicable

Project Total Cost:	**420681**	**36663**		**10349**		**1340**		**2995**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**	**126**



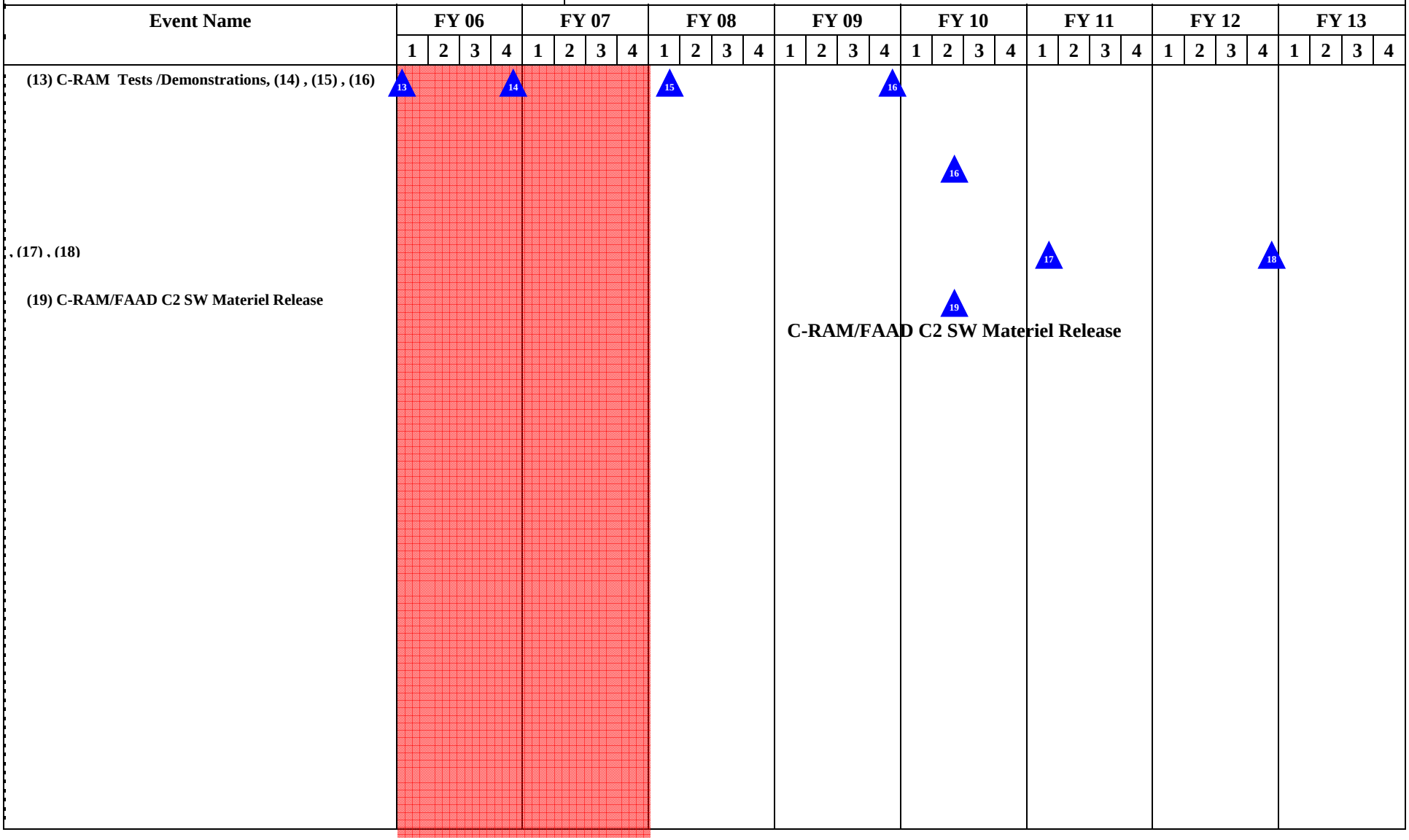
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
126



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
126

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Materiel Release								
V5.2 Materiel Release	4Q							
V5.4 Materiel Release			2Q					
Block III Software Deliveries		2Q						
SW Delivery		3Q						
Block III Test								
V5.4a Thread Test	1Q							
V5.4b Test		3Q - 4Q						
V5.4b Test Readiness Review		4Q						
V5.4b System Certification Test		4Q						
Block III Initial Operational Capability (IOC)		4Q						
V5.4 Upgrades			2Q - 4Q	1Q - 2Q				
CHS Upgrades	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FAAD C2 DAMPL Fieldings								
2-174 OH ARNG	3Q							
1-265 FL ARNG		3Q						
1-174 OH ARNG			3Q					
C-RAM Contract Award		2Q						
C-RAM/FAAD C2 Development		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
C-RAM Tests /Demonstrations	1Q							
	4Q							
			1Q					
				4Q				
					2Q			
						1Q		

							4Q	
C-RAM/FAAD C2 SW Materiel Release					2Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**	**146**

COST (In Thousands)		FY 2006 Actual	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
146	AIR & MSL DEFENSE PLANNING CONTROL SYS (AMC PCS)	12601	11167	10250	9575	10531	10938	10000	10000		85062

A. Mission Description and Budget Item Justification: The Air and Missile Defense Planning and Control System (AMDPCS) is an Army Objective Force System that provides integration of Air and Missile Defense (AMD) operations at all echelons. AMDPCS systems are deployed with Air Defense Artillery (ADA) brigades, Army Air and Missile Defense Commands (AAMDCs), and Air Defense and Airspace Management (ADAM) Cells at the Brigade Combat Teams (BCT's), Fires Brigades and Divisions. AMDPCS systems also provide air defense capabilities to Homeland Defense systems.
The development of ADAM Cells is essential in fulfilling the Army¿s Modularity requirement. ADAM Cells provide the Commander at BCTs, Brigades and Divisions with air defense situational awareness and airspace management capabilities. They also provide the interoperability link with Joint, multinational and coalition forces. AMDPCS components are vital in the transformation of ADA units and the activation of the Maneuver Air & Missile Defense (MAMD) Composite Battalions. AMDPCS has three major components:
(1) The Air and Missile Defense Workstation (AMDWS) is an automated defense and staff planning tool that displays the common tactical and operational air picture. AMDWS provides the Battle Command (BC) capabilities embedded within the Warfighter Mission area. AMDWS is also the Net-centric interface to BC for all components of the AMD force. AMDWS provides an interoperability link to multinational air defense forces IAW Annex C to a Joint US/NATO Air Defense Agreement;
(2) The Air Defense System Integrator (ADSI) is a communications data link processor and display system that provides near-real time joint airspace situational awareness and fire direction command and control for Air and Missile Defense forces;
(3) The Army Air Defense shelter configurations use automated data processing equipment, tactical communications, Common Hardware Systems, standard vehicles and tactical power to provide AMD unit commanders and staffs with the capabilities to plan missions, direct forces, and control the airspace.

In support of the Global War on Terrorism (GWOT), AMDWS and ADSIs are vital components of the AMDPCS shelter systems fielded to ADA units, the AAMDC and ADAM Cells that have deployed to Iraq and Afghanistan. In addition, these components have also been integrated into non-ADA higher headquarters such as the Coalition Forces Land Component Command (CFLCC). AMDWS is a critical component in the integration and fielding of a Counter-Rocket, Artillery and Mortar (C-RAM) capability to Operating Bases in Iraq and elsewhere. In support of Homeland Defense missions, the AMDWS has been integrated as the Force Operations component into the Joint Service/Air Force architecture. These AMDPCS systems provide the common tactical air picture, a major component of the Common Operating Picture (COP), and are critical to the development and planning of offensive and defensive operations.

FY08 and FY09 funds the development, software engineering and testing of the AMDWS, ADSI, and sheltered subsystem software as described below.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue AMDWS development and support of Software Blocking and Battle Command. Complete AMDWS software engineering and development consistent with Software Block 2, 2+ and 3 requirements, evolving the air and missile defense planning and control requirements to a net-centric environment, and fulfilling the air defense force operations capabilities identified in the AMD TRADOC	7294	6775	5802	5674

capabilities requirement list. Continue AMDWS software development and rehost onto emerging light/laptop common hardware systems. Complete integration of the PATRIOT Air Defense system Tactical Planner (PTP) and the Theater Battle Management Core Systems (TBMCS). Initiate development of the SLAMRAAM, JLENS, MEADS and Theater Battle Operations Net-Centric Enfironment (T-BONE) interfaces. Continue supporting the Air Force Joint Tactical Air and Missile Defense (JTAMD), and support the evolving development of the Force Operations portion of the Integrated Air and Missile Defense (IAMD) System of Systems. As a complimentary Future Combat System (FCS), initiate AMDWS integration and interoperability with FCS command and control system development. Begin migration of AMDWS software modules to the Net Enabled Command and Control Mission Capability Packages (MCPS).				
Continue ADSI software engineering and development in software version 12 upgrades and versions 14, 14.1, and 14.2 including development of capabilities for TAC View Situational Awareness, full TADIL-J, Joint Range Extension Application Protocols (JREAP) for link 16 messages, MIDS TADIL-J connectivity, and Windows XP Pro and LINUX Realtime.	1659	1356	1361	1166
Continue engineering, development, test and evaluation of the AMDPCS shelter subsystem Objective configurations; continue evaluation and definitization of the AMDPCS tactical communications, data processing and vehicle/shelter/power generation/environmental system block upgrade program for fielded systems.	2825	1841	2154	1854
Continue software system certification testing, accreditation, and approval of Authority-to-Operate for the various software systems; continue Army and Joint integration and interoperability assessments.	823	891	933	881
SBIR/STTR		304		
Total	12601	11167	10250	9575

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA, AD 5070 - AMDPCS	103622	69289	12654	33106	75504	9874	25000	24410	Continuing	Continuing

Comment:

C. Acquisition Strategy The acquisition strategy relies on non-development items (NDI) and evolutionary software development to rapidly meet the demands of air defense battle management command, control, communications, computers, and intelligence (BM/C4I) requirements and to keep pace with automated information technologies. The concept of evolutionary software development will be accomplished in a series of AMDWS and ADSI Block releases and upgrades. AMDPCS is being developed for both the Army's Active and Reserve components.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
146

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Northrop Grumman/TRW	SS/CPIF	Huntsville, AL	34269	7100	1Q	6612	1Q	5624		5251		Cont.	Cont.	
ULTRA Electronics, ADSI	SS/CPIF	Austin, TX	5005	361	1Q	158	1Q	159		148		Cont.	Cont.	
Program Management Administration	Various	Various	18833	3599	2Q	3556	2Q	3609		3443		Cont.	Cont.	
ABCS SE&I	MIPR	Ft Monmouth, NJ	619										619	
Software Engineering	Various	Various	4574	1284	2-3Q	779	2-3Q	793		675		Cont.	Cont.	
Subtotal:			63300	12344		11105		10185		9517		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Certification	MIPR	JITC, Ft Huachuca, AZ	517	81	1Q	39	3Q	40		37		Cont.	Cont.	
Interoperability Assessment	MIPR	CTSF, Ft. Hood, TX	796	176	1Q	23	3Q	25		21		Cont.	Cont.	
Subtotal:			1313	257		62		65		58		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**	**146**

Subtotal:												

Remarks: Not Applicable

Project Total Cost:	**64613**	**12601**		**11167**		**10250**		**9575**		**Cont.**	**Cont.**	

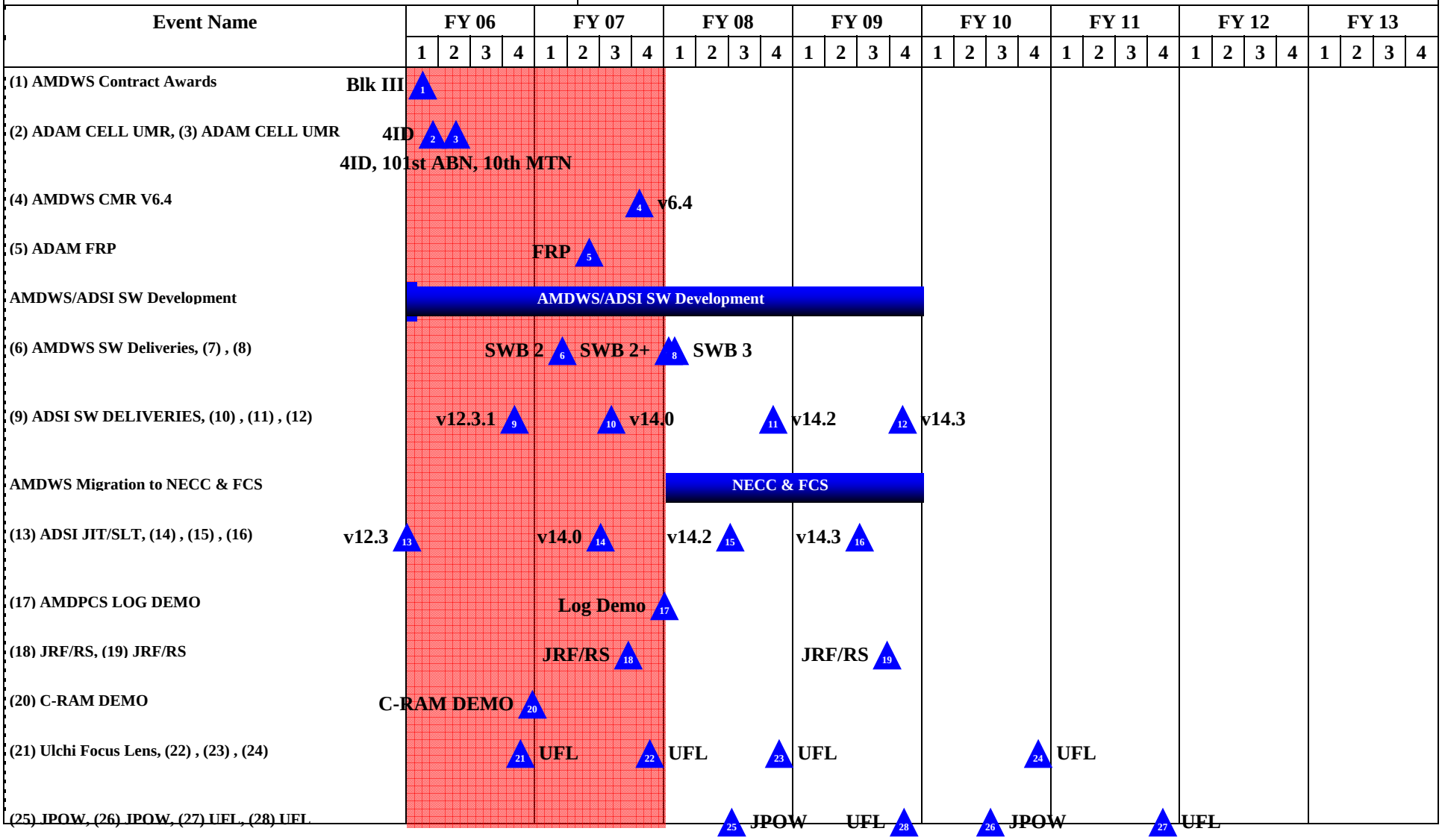
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
146



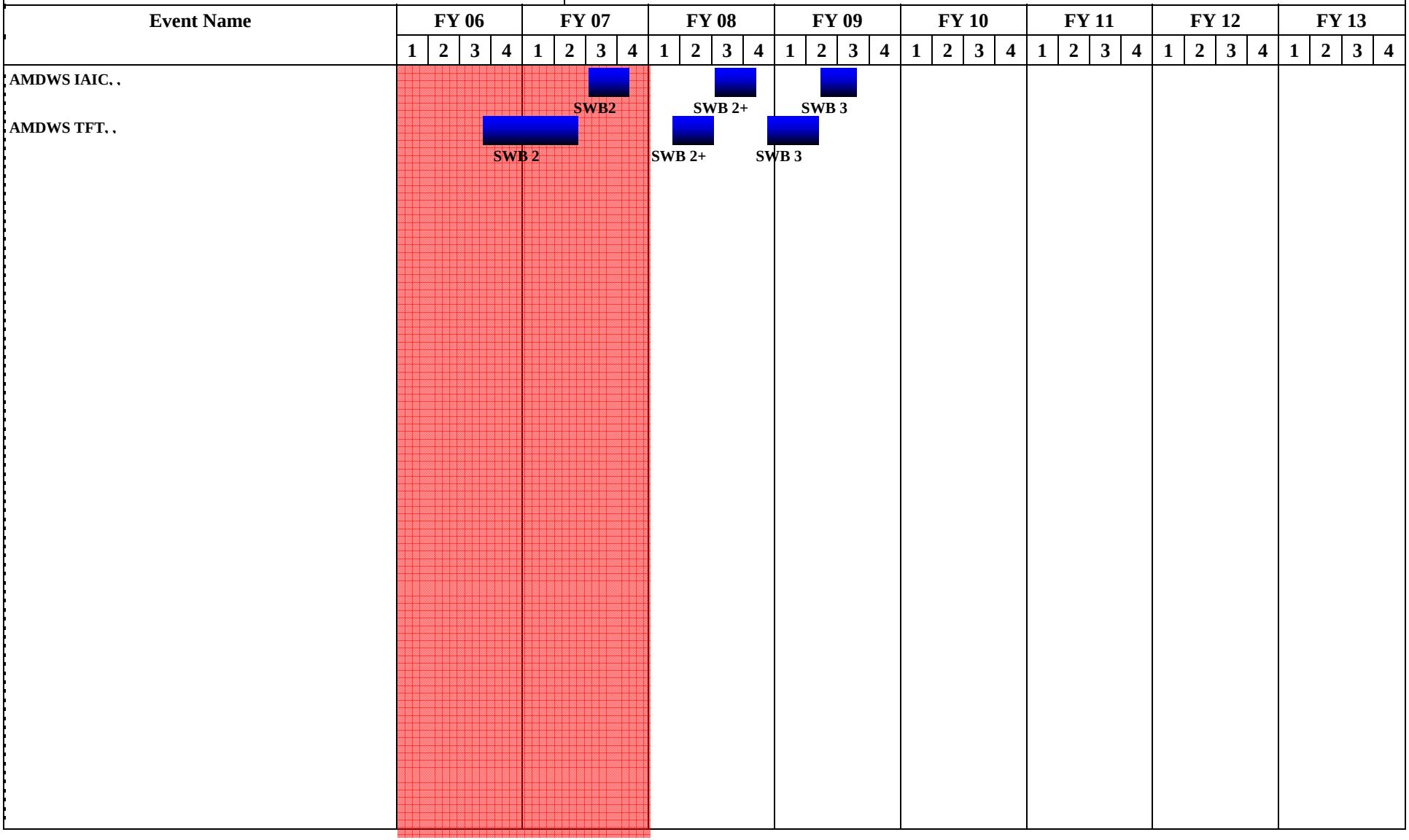
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
146



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
146

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
AMDWS Contract Awards	1Q							
ADAM CELL UMR	1Q							
ADAM CELL UMR	2Q							
AMDWS CMR V6.4		4Q						
ADAM FRP		2Q						
AMDWS/ADSI SW Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
AMDWS SW Deliveries		1Q						
			1Q					
			1Q					
ADSI SW DELIVERIES	4Q							
		3Q						
			4Q					
				4Q	1Q			
AMDWS Migration to NECC & FCS			1Q - 4Q	1Q - 4Q				
ADSI JIT/SLT	1Q							
		2Q						
			2Q					
				2Q				
AMDPCS LOG DEMO		4Q						
JRF/RS		3Q						
JRF/RS				3Q				
C-RAM DEMO	4Q							
Ulchi Focus Lens	4Q							
		4Q						
			4Q					

					4Q			
JPOW			3Q					
JPOW					3Q			
UFL						4Q		
UFL				4Q				
AMDWS IAIC		3Q - 4Q						
			3Q - 4Q					
				2Q - 3Q				
AMDWS TFT	3Q - 4Q	1Q - 2Q						
			1Q - 2Q					
			4Q	1Q - 2Q				
ADAM Cell Urgent Materiel Release (1CD, 82ABN, 25ID, 10MTN)								
AMDWS Migration to JC2v2			1Q - 4Q					
AMDWS Migration to JC2v3				1Q - 4Q				
ADSI Migration to CDLIM		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
AMDPCS Sheltered Systems Spiral Development		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
ADAM Cell Spiral Evolution				1Q - 4Q	1Q - 4Q			
AMDWS SW Block 2 Operational Eval	3Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**	**149**

COST (In Thousands)		FY 2006 Actual	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
149	COUNTER-ROCKETS, ARTILLERY & MORTAR (C-RAM) DVPMT			9923	9982	10000	10000	10000	10000	Continuing	Continuing

A. Mission Description and Budget Item Justification: Counter-Rockets, Artillery and Mortar (C-RAM) is a spiral Initiative Non Developmental program initiated by the Army Chief of Staff in response to Iraqi theatre threat and twice validated theater ONS. The primary mission of the C-RAM program is to develop, procure, field and maintain a system that can detect rocket, artillery or mortar launches; warn the defended area with sufficient time for personnel to take cover; intercept rounds in flight, thus preventing damage to ground forces or facilities; and enhance response to and defeat of enemy forces. C-RAM utilizes a system of systems (SoS) approach, and is comprised of a combination of multi-service fielded and non-developmental item (NDI) sensors, command and control (C2) systems and a modified U.S. Navy intercept system, with a low cost commercial off-the-shelf (COTS) warning system and wireless local area network. The system will be fielded to various echelons, fixed or semi-fixed-site, providing them correlated air and ground pictures and linking them to the Army Battle Command System (ABCS) and the Joint Defense Network (JDN), via various forms of communications to provide situational awareness and exchange of timely and accurate information to synchronize and optimize automated Shape, Sense, Warn, Intercept, Respond and Protect decisions.

The fielding of the C-RAM SoS will be accomplished through an incremental fielding approach that is driven by an urgent operational need, theater priorities and emerging capability requirements to provide counter-RAM capability to fielded forces. Increment I (FY05-FY13) delivers a partial C-RAM SoS capability for sites in theater. Increment II (FY14-FY23) delivers a full C-RAM SoS capability for fixed and semi-fixed sites. It encompasses protection for joint critical assets using next generation C4, sensors and interceptors in a structured joint organization. Increment III (FY23 and beyond), the objective capability, provides full integration with Future Combat System (FCS) and Protection SoS. It includes network-enabled operations and protection of mobile assets using advanced technologies, leading to a joint integrated Defeat-Rockets, Artillery and Mortars (D-RAM) capability. Increments II and III depend on the readiness of future technologies, value to the operational concept, enemy threat, affordability and integration considerations at the element and SoS level.

Current development efforts include the implementation of improvements and upgrades to C-RAM Increment I and the initial development of Increment II capabilities. C-RAM is transitioning from an IED Task Force Initiative to a Program of Record and is currently in the process of creating a formal acquisition strategy documentation support package. It will be managed as an ACAT I program upon formal designation as a program of record.

FY08 and FY09 will fund the efforts listed in Accomplishments/Planned Program below.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Develop advanced user interface/capabilities			4923	
Test/demonstration support for new C-RAM capabilities			5000	2000
Develop Threat Evaluation and Weapons Assignment (TEWA) capabilities				2782
Integrate with Rapid Digital "Clearance of Fires"				2000

Develop Advanaced Defense Design System Exerciser				2000
Support Joint, Interagency and Multi-national (JIM) interoperability (Common Link Integration Processing (CLIP) integration, communications improvement)				1200
Total			9923	9982

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 2 BZ0526- COUNTER-ROCKETS, ARTILLERY& MORTAR (C-RAM)									Continuing	Continuing

Comment:

C. Acquisition Strategy The C-RAM program is following an evolutionary acquisition strategy for rapid acquisition of mature technology to the user. The approach will deliver capabilities in increments, recognizing up front the need for future improvements. The objective of the strategy is to balance needs and available capability with resources and put a robust capability to engage rockets, artillery, and mortars into the hands of the user quickly. Success will depend on continuous user feedback, consistent definition of capability needs, maturation of technology, and allocation of required resources. To achieve the evolutionary acquisition of C-RAM, the program director will collaborate and coordinate with the user, combat developer, tester, logistician, PEO C3T, and resource provider (e.g., G8). The program will follow the _Spiral Development_ process (per DoDI 5000.2), where the desired capability is identified, but the end-state requirements are not fully known at program initiation. Those end-state C-RAM requirements will be refined through demonstration and risk management. Each fielded increment provides the user with the best possible capability over time. The requirements for future increments depend on feedback from users and technology maturation.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
149

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Northrop Grumman	ID/IQ CPFF	Carson, CA			4Q			2125		2125		Cont.	Cont.	70500
Nortrop Grumman	CPFF	Carson, CA					2Q	6298		6357		Cont.	Cont.	40000
Program Management Administration	MIPR	Various						1500	2Q	1500	2Q	Cont.	Cont.	
Subtotal:								9923		9982		Cont.	Cont.	110500

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:								**9923**		**9982**		**Cont.**	**Cont.**	**110500**

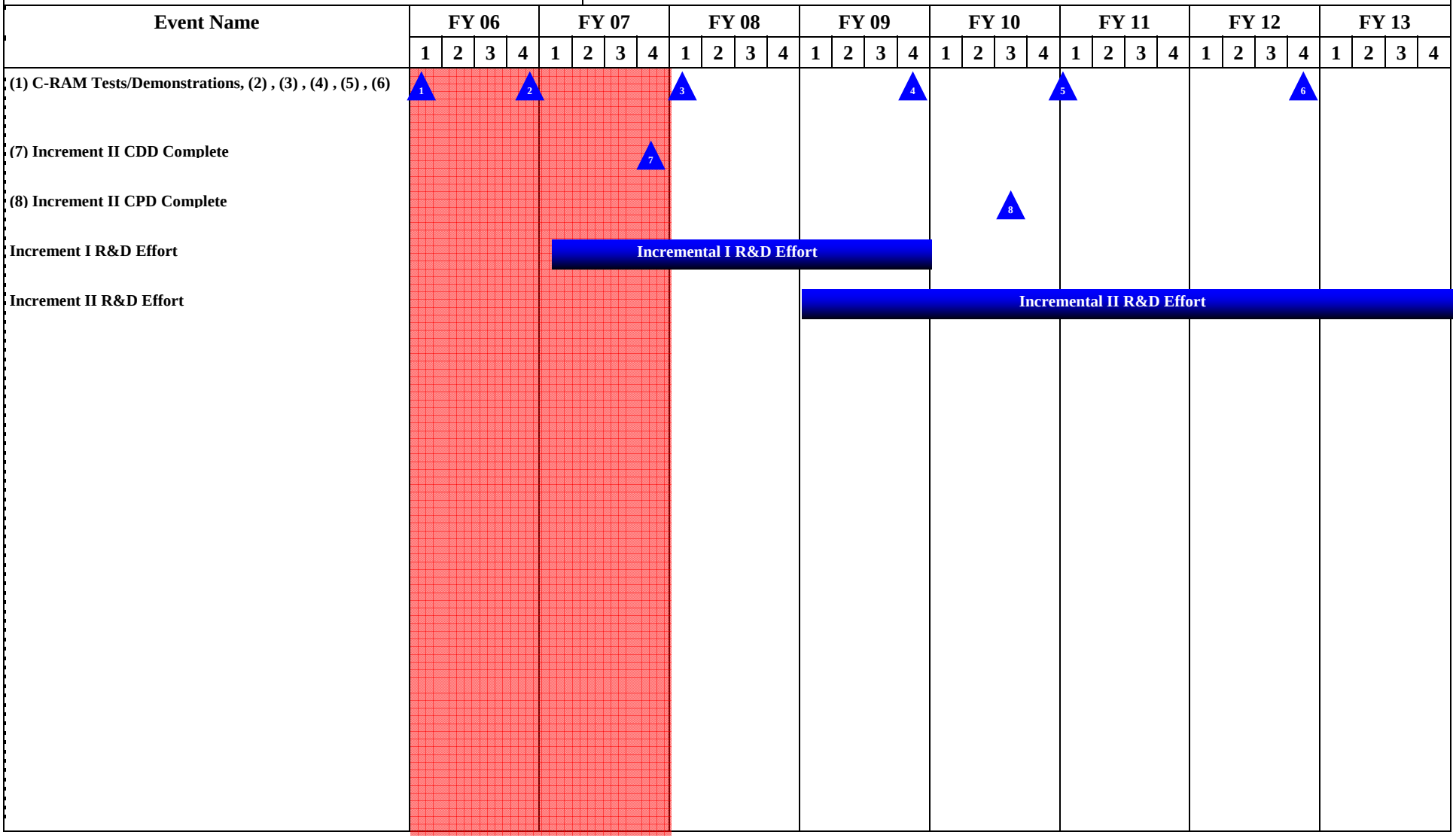
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
149



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intel - Eng

PROJECT
149

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
C-RAM Tests/Demonstrations	1Q - 2Q							
	4Q							
			1Q					
				4Q				
						1Q		
							4Q	
Increment II CDD Complete		4Q						
Increment II CPD Complete					3Q			
Increment I R&D Effort		1Q - 4Q	1Q - 4Q	1Q - 4Q				
Increment II R&D Effort				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**

	COST (In Thousands)	FY 2006 Actual	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	38576	39563	31962	26379	17070	17430	21970	21601	Continuing	Continuing
361	INTELLIGENCE SIMULATION SYSTEMS	5620	7081	4141	2827	535	547	557	573	Continuing	Continuing
362	Jnt Land Component Constructive Trng Capability	32956	32482	27821	23552	16535	16883	21413	21028	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element funds the development of constructive and wargame simulations used to realistically train commanders and their battle staffs on today's complex battlefield conditions. Project D361 funds the development of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) that provides Warfighting Commanders at all echelons the ability to train with Intelligence, Surveillance, and Reconnaissance (ISR) products based on realistic ISR assets, people (including the maneuver commander, G-2, G-3, collection manager, analyst/operator) and processes. IEWTPT provides embedded training capability for Future Combat Systems (FCS) ISR systems. IEWTPT will interface/stimulate ISR systems including Tactical Unmanned Aerial Vehicle (TUAV), Joint Surveillance Target Attack Radar System-Common Ground Station (JSTARS-CGS), Tactical Exploitation System/Distributed Tactical Exploitation System (TES/DTES), Guardrail, Counter Intelligence/Human Intelligence Management Systems (CHIMS), Prophet and Distributed Common Ground Station-Army (DCGS-A). IEWTPT is the only Army Simulation System supporting ISR training from the Warfighter to the Military ISR Analyst/System Operator. Project 362, Joint Land Component Constructive Training Capability (JLCCTC), develops the Army's premier wargame simulation for training leaders and Battle Staffs at Brigade, Division, Corps, and echelons above Corps. JLCCTC will provide functionality not currently available (digital, stability, support and information operations), link to unit organizational Command, Control, Communications, Computers and Integration (C4I) equipment, improve exercise generation and after-action reporting. WARSIM will interoperate with One Semi Automated Forces(OneSAF) and other simulations as an integral part of an Army simulation toolkit, so that a warfighter training exercise can represent in simulation all Army echelons and can also be represented in a Joint environment. JLCCTC pulls together current constructive simulation systems and future constructive simulations and uses a comprehensive strategy to ensure interoperability among all of those systems. This strategy will allow JLCCTC to meet current and future user needs. JLCCTC leverages the best pieces of current systems to meet current training needs and evolves to meet the training needs of the future.

FY08/09 funding continues product improvements with annual spiral releases of the IEWTPT and continues development of Joint Land Component Constructive Training Capability.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	39993	40006	31892	27148
Current BES/President's Budget (FY 2008/2009)	38576	39563	31962	26379
Total Adjustments	-1417	-443	70	-769
Congressional Program Reductions		-151		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-422	-292		
SBIR/STTR Transfer	-995			
Adjustments to Budget Years			70	-769

FY 2006: DA Withhold Reprogrammed ($422); SBIR/STTR Transfer ($995).
FY 2007: Section 8106 Economic Assumptions ($151); Funds reprogrammed ($292) to a higher priority.
FY 2008: Funding increase of $70 is for the JLCCTC program.
FY 2009: Funds realigned ($769) to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**361**

COST (In Thousands)	FY 2006 Actual	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
361 INTELLIGENCE SIMULATION SYSTEMS	5620	7081	4141	2827	535	547	557	573	Continuing	Continuing

A. Mission Description and Budget Item Justification: Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) provides Warfighting Commanders at all echelons the ability to train with Intelligence, Surveillance, and Reconnaissance (ISR) products based on realistic ISR assets, people (including the maneuver commander, G-2, G-3, collection manager, analyst/operator) and processes. IEWTPT provides training capability for Future Combat Systems (FCS) ISR systems. IEWTPT interoperates with the Army's constructive simulation training systems and actual operator level field equipment identified as Target Signature Arrays. IEWTPT will interface/stimulate ISR systems including Tactical Unmanned Aerial Vehicle (TUAV), Joint Surveillance Target Attack Radar System-Common Ground Station (JSTARS-CGS), Tactical Exploitation System/Distributed Tactical Exploitation System (TES/DTES), Guardrail, Counter Intelligence/Human Intelligence Management Systems (CHIMS), Prophet and Distributed Common Ground Station-Army (DCGS-A). IEWTPT is the only Army Simulation System supporting ISR training from the Warfighter to the Military ISR Analyst/System Operator.
The FY08/09 funding continues product improvements with annual spiral releases in the 4th Quarter of each year of the IEWTPT.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-Developed Service Oriented Architecture (SOA); developed initial Human Intelligence (HUMINT) capability; developed initial Signals Intelligence capability (SIGINT)	5620			
FY07-Maturing the Human intelligence (HUMINT) capability; developing additional Signals Intelligence (SIGINT) capability based on Top Secret/Special Compartmented Information (SCI) threat types.		6895		
FY08/09-Continue development of Human intelligence (HUMINT) capability; continue development of additional limited Signals Intelligence (SIGINT) capability.			4141	2827
SBIR/STTR Reduction		186		
Total	5620	7081	4141	2827

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0100, Training Devices, Nonsystem	221118	319475	201843	238232	192802	190921	203423	211347	Continuing	Continuing

Comment:

C. Acquisition Strategy Competitive development based on performance specifications.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
361

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IEWTPT System Dev & Demo	CPIF	Gen Dynamics C4 Systems, Orlando, FL	14426	4774	1-3Q	5724	1-3Q	2727	1-3Q	1645	1-3Q	Cont.	Cont.	Cont.
IEWTPT System Dev & Demo	multiple	various	330	407	1-4Q	283	1-4Q	292	1-4Q	301	1-4Q	Cont.	Cont.	Cont.
Subtotal:			14756	5181		6007		3019		1946		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IEWTPT Engineering & Technical Support	Multiple	Various	1943										1943	1943
Subtotal:			1943										1943	1943

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IEWTPT TEMP Support	Various	Multiple	319										319	319
IEWTPT Operational Test Event Support	Various	Multiple	359										359	359
Test Engineer Support	various	Multiple	324			355	1-3Q	750	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
Subtotal:			1002			355		750		500		Cont.	Cont.	Cont.

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**361**

	Type		Cost		Date		Date		Date		Date	e		Contract
IEWTPT Program Management	Various	Multiple	1048	439	1-4Q	719	1-4Q	372	1-4Q	381	1-4Q	Cont.	Cont.	Cont.
Subtotal:			1048	439		719		372		381		Cont.	Cont.	Cont.
Project Total Cost:			**18749**	**5620**		**7081**		**4141**		**2827**		**Cont.**	**Cont.**	**Cont.**

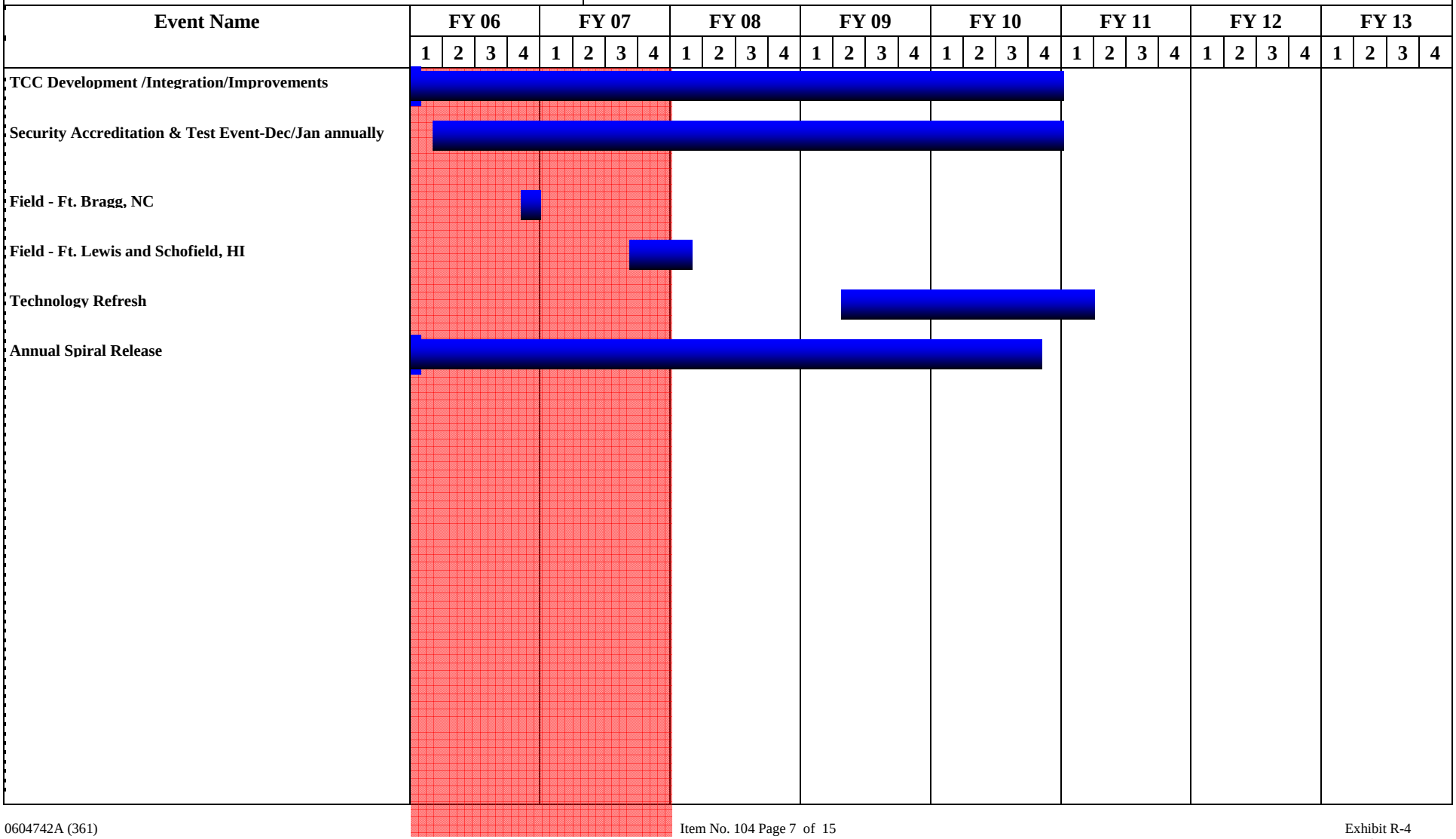
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
361



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**361**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
TCC Development /Integration/Improvements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Security Accreditation & Test Event-Dec/Jan annually	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Field - Ft. Bragg, NC	4Q							
Field - Ft. Lewis and Schofield, HI		3Q - 4Q	1Q					
Technology Refresh				2Q - 4Q	1Q - 4Q	1Q		
Annual Spiral Release	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**362**

COST (In Thousands)		FY 2006 Actual	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
362	Jnt Land Component Constructive Trng Capability	32956	32482	27821	23552	16535	16883	21413	21028	Continuing	Continuing

A. Mission Description and Budget Item Justification: This Project funds the development of the Joint Land Component Constructive Training Capability (JLCCTC), the Army¿s premier wargaming simulations for training leaders and Battle Staffs from Battalion through echelons above Corps. The JLCCTC initially includes a set of interoperable current systems and integrates WARSIM and OneSAF in an evolutionary manner. JLCCTC will provide functionality not currently available (digital operations, stability operations and support operations and information operations), link to organic Battle Commands equipment, and improve exercise generation and after-action reporting.

The FY 08/09 funding continues the development of the Army training system, integration and system evaluation. The JLCCTC leverages the best pieces of current systems to meet current training needs and evolves to meet the training needs of the future force.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-FY09: Verify and validate JLCCTC software models	2636	2552	2243	1888
FY06-FY09: Continue integration of JLCCTC components for interoperability	19774	19141	16822	14156
FY06-FY09: Develop and integrate user interface enhancements for Army training applications	6591	6141	5392	4677
FY06-FY09: Develop and evaluate system performance and conduct system test events	3955	3828	3364	2831
FY07: SBIR/STTR		820		
Total	32956	32482	27821	23552

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

C. Acquisition Strategy Competitive development based on performance specifications.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
WARSIM Development of Army Training System	C/CPAF	Lockheed Martin Info Systems, Orlando, FL	42174	15768	1-3Q	14700	1-3Q	12000	1-3Q	11000	1-3Q	Cont.	Cont.	Cont.
Integration of JCCTC	Multiple	Various	8380	9192	1Q	12504	1-2Q	9997	1-2Q	7073	1-2Q	Cont.	Cont.	Cont.
Subtotal:			50554	24960		27204		21997		18073		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Engineering & Tech Spt	Multiple	Various	5609	420	1-4Q	40	1-3Q	430	1-3Q	430	1-3Q	Cont.	Cont.	Cont.
Subtotal:			5609	420		40		430		430		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Verification, Validation and Accreditation	Multiple	Various	6133	1951	1-3Q	250	1-3Q	550	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
System Evaluation and Test	Multiple	Various	9436	1748	1-3Q	500	1-3Q	500	1-3Q	475	1-3Q	Cont.	Cont.	Cont.
Subtotal:			15569	3699		750		1050		975		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Multiple	Various	13204	3877	1-2Q	4488	1-2Q	4344		4074		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**362**

Cost Analysis Support	T&M	Northrup Grumman-TASC, Orlando FL	414										414	493
Subtotal:			13618	3877		4488		4344		4074		Cont.	Cont.	Cont.
Project Total Cost:			**85350**	**32956**		**32482**		**27821**		**23552**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
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Event Name	FY 06				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	2	3	4
(1) WARSIM integrated into JLCCTC Version 3			1																													
(2) Milestone C, (3) JLCCTC V3, (4) OneSAF integration into JLCCTC Version 4, (5) JLCCTC V4, (6) JLCCTC V5, (7) JLCCTC V6, (8) JLCCTC V7, (9) JLCCTC V8							3	2				4 5			6				7				8			9						

MS C

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**362**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
WARSIM integrated into JLCCTC Version 3	3Q							
Milestone C		1Q						
JLCCTC V3	4Q							
OneSAF integration into JLCCTC Version 4		3Q						
JLCCTC V4		3Q						
JLCCTC V5			3Q					
JLCCTC V6				3Q				
JLCCTC V7					3Q			
JLCCTC V8						3Q		
Award WARSIM System Development Contract	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**

COST (In Thousands)		FY 2006 Actual	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	2160	8046	18025	23728	15737	14686	15041	15447	Continuing	Continuing
L59	DIAGNOST/EXPERT SYS DE	2160	5390	14538	20126	12070	10943	11347	11675	Continuing	Continuing
L65	Test Equipment Development		2656	3487	3602	3667	3743	3694	3772	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element (PE) provides for development and testing of general-purpose test equipment; advanced technology test and measurement techniques, standards, and systems; and state-of-the-art diagnostics and prognostics technology, software, and systems to support the increasingly complex electronic components of the Army's new and upgraded weapon systems. It focuses on implementation of commercial test and diagnostic technologies across multiple weapon platforms to minimize the cost of troubleshooting and maintenance of Army equipment in the field.

This PE funds development and evolution of general-purpose automatic test and diagnostic equipment and the enhancements required to overcome deficiencies and voids in organic test and diagnostic capabilities and to ensure the operational readiness, accuracy, effectiveness, and safety of Army combat and combat support systems. Modular, reconfigurable automatic and semi-automatic systems are developed under this program to satisfy weapon system test and diagnostics requirements. The Next Generation Automatic Test System (NGATS), also known as the Base Shop Test Facility (BSTF) (V)6, currently under development will provide state-of-the-art test and diagnostic capabilities to support current and future weapon systems. The NGATS will replace several aging automatic test systems which are becoming prohibitively expensive to operate and maintain. This program also provides for continued development and improvement of measurement equipment with emphasis on incorporation of digital electronics and tailoring of configurations to improve deployability, mobility, and survivability of the support equipment and to reduce the logistics burdens associated with maintaining Army combat systems in wartime and contingency operations. Artificial intelligence and anticipatory maintenance applications are being developed to support the integration of self-diagnostic capabilities in Army weapons and support systems. The goal of these efforts is to reduce logistics burdens and improve readiness by minimizing the need for external testers and improving the troubleshooting abilities of soldiers in the field.

The Army's participation in the Agile Rapid Global Combat Support (ARGCS) Advanced Concept Technology Demonstration (ACTD) is being funded under this PE. The ARGCS ACTD is developing a common automatic test systems architecture that will enhance portability of all Services' test program sets and reduce Defense expenditures for test equipment and personnel.

FY2008/2009 funding for this program continues to support development in accordance with DoD and Army policies of the Army Standard Next Generation Automatic Test System which will improve deployability and mobility of test and diagnostic equipment and replace automated equipment currently supporting the Abrams and Bradley. It will also develop or significantly modify test equipment to satisfy modular force and homeland security support requirements that cannot be accommodated with test equipment currently available in the commercial marketplace.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	2221	8136	4986	11792
Current BES/President's Budget (FY 2008/2009)	2160	8046	18025	23728
Total Adjustments	-61	-90	13039	11936
Congressional Program Reductions		-90		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-61			
SBIR/STTR Transfer				
Adjustments to Budget Years			13039	11936

FY2008/2009: Funding increased to avoid delays in evolutionary development of the Next Generation Automatic Test System.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L59**

COST (In Thousands)	FY 2006 Actual	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
L59 DIAGNOST/EXPERT SYS DE	2160	5390	14538	20126	12070	10943	11347	11675	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds development of and system enhancements for the Next Generation Automatic Test System (NGATS). The NGATS, also known as the Base Shop Test Facility (BSTF) (V)6, is a general-purpose automatic test system that will provide test and diagnostic capabilities required to support current and future weapons and combat support systems and will facilitate retirement of aging and obsolete test equipment that is imposing increasing logistics and operations and support cost burdens. This project provides for continuing efforts to upgrade and improve general-purpose automatic test equipment to satisfy test and diagnostic requirements of the Army's new and upgraded weapon systems; development and adaptation of automatic test equipment required to overcome existing deficiencies and voids in organic test and diagnostic capabilities; development and testing of common procedures utilizing existing test program sets and software applications; and market surveys of commercially available test equipment, methods, and procedures to determine applicability to Army requirements. The test and diagnostic systems and procedures developed under this project are essential for ensuring the operational readiness, accuracy, and effectiveness of the Army's warfighting systems. This project also funds the Army's participation in the Agile Rapid Global Combat Support (ARGCS) Advanced Concept Technology Demonstration (ACTD) which is developing a common automatic test systems architecture that will enhance portability of all Services' test program sets and reduce Defense expenditures for test equipment and personnel.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-FY09: Develop and test a Joint Services compliant, rapidly deployable, general-purpose automatic test system (ATS)	2160	4756	5000	1500
FY07-FY09: Further develop and test system to implement planned spiral development and increase supported weapons platforms		500	5000	9500
FY08-FY09: Develop and test new hardware and software required to consolidate all ATS support requirements in this single test system			3000	5000
FY08-FY09: Develop and evaluate new software applications to increase Integrated Family of Test Equipment capability			1538	4126
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs		134		
Total	2160	5390	14538	20126

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MB4000, Integrated Family of Test Equipment (IFTE)	20619	55197	36516	46449	101890	109591	90665	53945	Continuing	Continuing

Comment:

C. Acquisition Strategy This developmental project consists of cooperative in-house and competitive and sole-source contractual actions. When the necessary expertise and

capability are available within the Department of Defense, services required for the individual development projects are ordered from the government source; otherwise commercial contracts are used. Equipment required for developmental projects is obtained by contract from the commercial supplier. Developmental efforts for the Next Generation Automatic Test System (NGATS) are being completed under a sole-source contract awarded to the prime contractor for the Integrated Family of Test Equipment off-platform testers. NGATS will follow an evolutionary acquisition strategy using spiral development. The NGATS Increment 1 will replace the Direct Support Electrical Systems Test Set (DSESTS). Increments 2 and 3 will replace the Base Shop Test Facility (BSTF) (V)3 and BSTF (V)5 systems respectively.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L59

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Prototype Development	SS/CPFF	Northrop Grumman, Rolling Meadows, IL	11512	1960	2Q	1604	2Q						15076	15116
Hardware Development	Various	Various	47000			901	2Q	4299	2-3Q	6654	2-3Q	Cont.	Cont.	Cont.
Software Development/ Verification/Validation	Various	Various	4239			861	2Q	8414	2-3Q	11982	2-3Q	Cont.	Cont.	Cont.
Subtotal:			62751	1960		3366		12713		18636		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Management		Various	43390	200	1-4Q	465	1-4Q	525	1-4Q	600	1-4Q	Cont.	Cont.	Cont.
Other Direct		Various	1390			446	1-4Q	500	1-4Q	500	1-4Q	Cont.	Cont.	Cont.
Subtotal:			44780	200		911		1025		1100		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Operational Testing	Various	Various	2814			579	2Q	800	1-3Q			Cont.	Cont.	Cont.
Developmental Testing	Various	Various	597			400	2Q			390	2Q	Cont.	Cont.	Cont.
Subtotal:			3411			979		800		390		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L59**

SBIR/STTR						134	2Q							134	
Subtotal:						134								134	
Project Total Cost:			**110942**	**2160**		**5390**		**14538**		**20126**		**Cont.**	**Cont.**	**Cont.**	

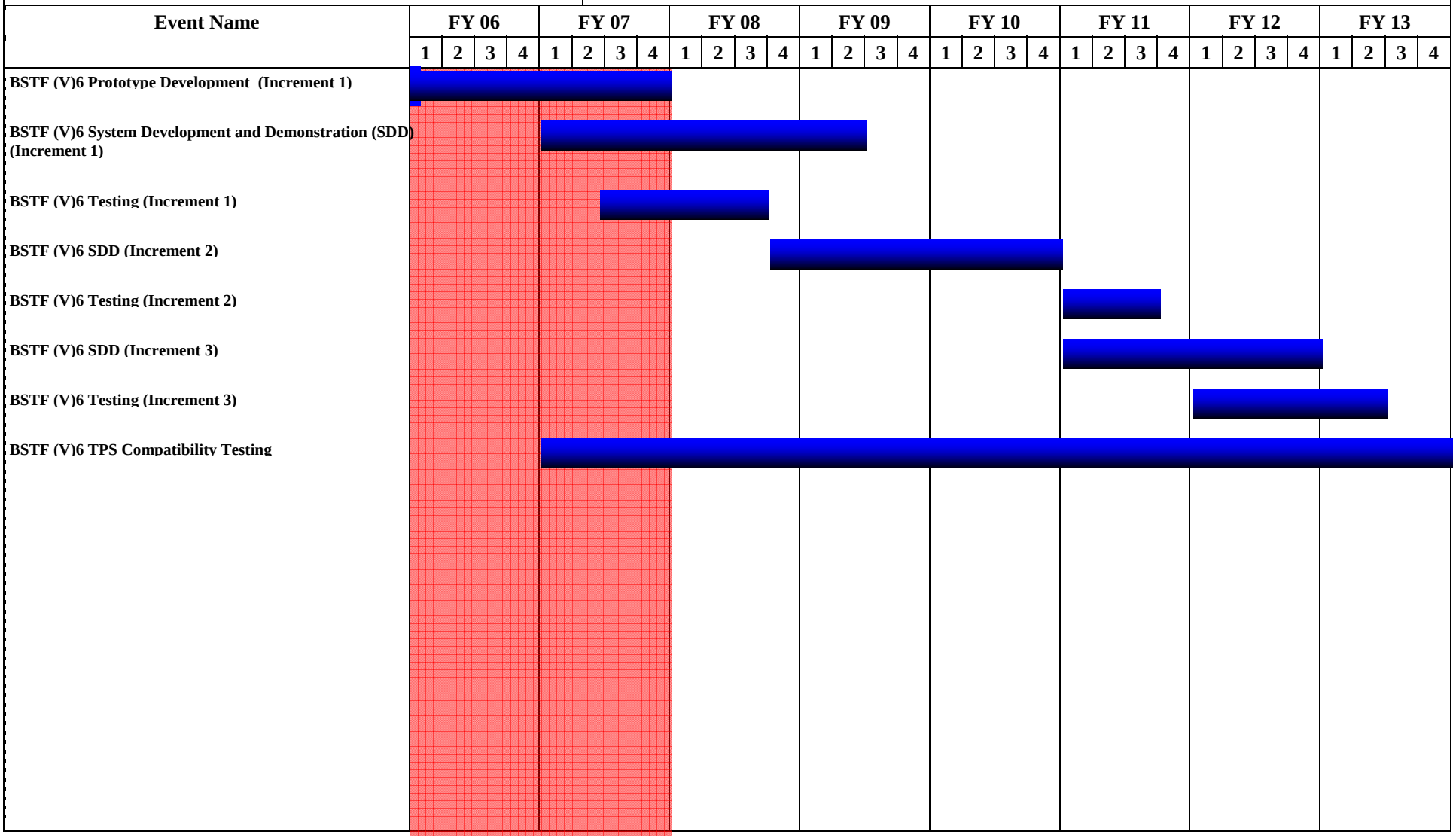
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L59



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L59

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BSTF (V)6 Prototype Development (Increment 1)	1Q - 4Q	1Q - 4Q						
BSTF (V)6 System Development and Demonstration (SDD) (Increment 1)		1Q - 4Q	1Q - 4Q	1Q - 2Q				
BSTF (V)6 Testing (Increment 1)		2Q - 4Q	1Q - 3Q					
BSTF (V)6 SDD (Increment 2)			4Q	1Q - 4Q	1Q - 4Q			
BSTF (V)6 Testing (Increment 2)						1Q - 3Q		
BSTF (V)6 SDD (Increment 3)						1Q - 4Q	1Q - 4Q	
BSTF (V)6 Testing (Increment 3)							1Q - 4Q	1Q - 2Q
BSTF (V)6 TPS Compatibility Testing		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L65**

COST (In Thousands)	FY 2006 Actual	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
L65 Test Equipment Development		2656	3487	3602	3667	3743	3694	3772	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development and demonstration of state-of-the-art general-purpose test, measurement, and diagnostic equipment (TMDE), and it provides for feasibility studies, market research, inventory analyses, bid sample testing, and prototyping to support TMDE acquisitions. Primary efforts under this project include improvement of test and measurement equipment performance envelopes via preplanned product improvements (P3I), development and validation of test procedures, evaluation of commercial and nondevelopmental TMDE with potential to meet weapon system maintenance requirements, and development and evaluation of advanced technology and higher reliability electronic test equipment. Preplanned product improvements are underway to current test and measurement systems to overcome deficiencies and voids in existing organic capabilities and to ensure the operational readiness, accuracy, effectiveness, and safety of Army weapons and combat support systems. These improvements will employ reconfigurable open electronics architecture and computer-based instrumentation wherever feasible and will be focused on reducing test equipment footprints to improve deployability and mobility in the area of operations.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY07-FY09: Develop hardware via preplanned product improvements to enhance TMDE systems' performance capabilities		560	580	600
FY07-FY09: Test and integrate hardware developed for preplanned product improvements		730	775	827
FY07-FY09: Develop, evaluate, and integrate test and measurement equipment		900	1067	1100
FY07-FY09: Continue development and evaluation of test and calibration procedures		190	200	210
FY07-FY09: Perform market research and evaluation of commercial equipment, and develop performance specifications for acquisitions		201	865	865
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs		75		
Total		2656	3487	3602

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, N10000, Calibration Sets Equipment		2018	10644	9755	10647	12646	12475	20350	Continuing	Continuing
OPA3, N11000, Test Equipment Modernization	6164	11768	19302	22530	22607	19230	13160	5855	Continuing	Continuing

Comment:

C. Acquisition Strategy Projects are focused on use of commercial and nondevelopmental item technologies. When programmatic and engineering expertise and capability are

available within the Department of Defense, services required for the individual development projects are acquired from the government source; otherwise, commercial services contracts are used to provide these capabilities. Equipment required for development projects is obtained from the commercial supplier. Candidate commercial equipment and nondevelopmental items are identified and evaluated through market research and government testing and evaluation.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L65

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Systems Engineering	Various	Various	5948			915	1-2Q	1525	1-2Q	1595	1-2Q	Cont.	Cont.	Cont.
Procedures Development and Evaluation	Various	Various	1918			190	1-3Q	200	1-3Q	210	1-3Q	Cont.	Cont.	Cont.
Government Engineering		Various	1340			330	1-4Q	515	1-4Q	515	1-4Q	Cont.	Cont.	Cont.
Subtotal:			9206			1435		2240		2320		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Technical Support Services	Various	Various	738			229	2Q	300	2Q	310	2Q	Cont.	Cont.	Cont.
Subtotal:			738			229		300		310		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Testing	Various	Various	1052			579	1-2Q	597	1-2Q	612	1-2Q	Cont.	Cont.	Cont.
Subtotal:			1052			579		597		612		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Personnel		Various	544			338	1-4Q	350	1-4Q	360	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						75	2Q						75	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L65**

Subtotal:	544			413		350		360		Cont.	Cont.	Cont.
Project Total Cost:	**11540**			**2656**		**3487**		**3602**		**Cont.**	**Cont.**	**Cont.**

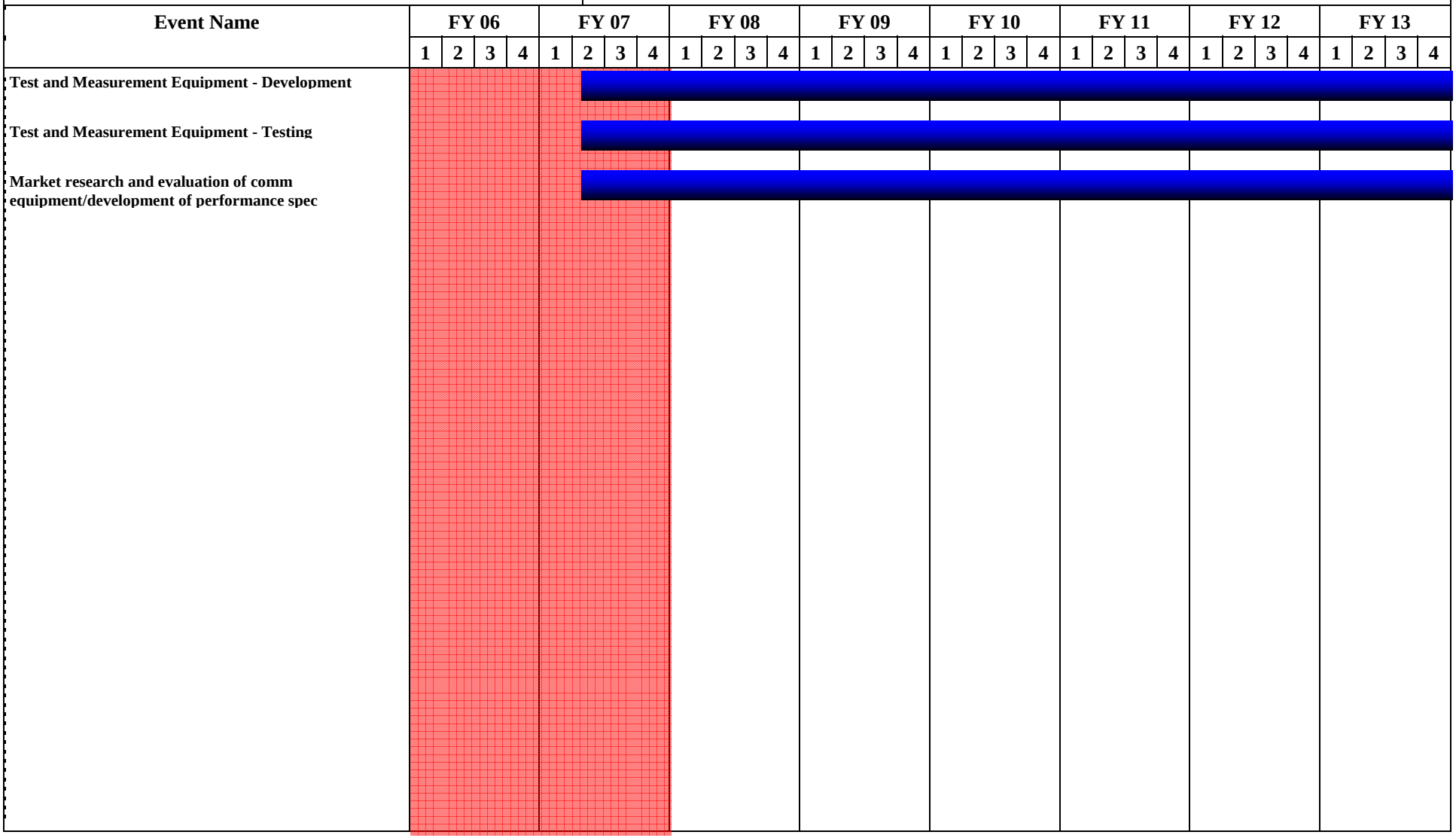
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L65



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L65**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Test and Measurement Equipment - Development		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test and Measurement Equipment - Testing		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Market research and evaluation of comm equipment/development of performance spec		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**

	COST (In Thousands)	FY 2006 Actual	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	28192	20418	16594	16181	15714	16155	16786	17150	Continuing	Continuing
C69	REPRESENTATION OF SPACE CAPABILITIES	6710									6787
C73	SYNTHETIC THEATER OF WAR	1781	1980								5235
C74	DEVEL SIMULATION TECH	1761	1688	3621	3718	3803	3611	3965	4048	Continuing	Continuing
C77	Army Geospatial Data Master Plan	1001	191	64	679		504	515	526	Continuing	Continuing
C78	One Semi-Automated Forces (OneSAF)	15980	15521	12909	11784	11911	12040	12306	12576		105027
C81	Joint Training Integration & Evaluation Center	959	1038								1997

A. Mission Description and Budget Item Justification: This program element supports the Army's Advanced Simulation Program which enables operational readiness and supports the development of concepts and systems for Stryker and Future Force through the application of new simulation technology and techniques. This development and application of simulation technology will provide the tools to electronically link all subcomponents together in a manner that is transparent to the user. The synthetic environment is used to verify the scenarios, tactics/techniques and procedures, train testers on new hardware/software and conduct trial test runs before costly live field tests. The tools developed are available for reuse by developers and users of simulations throughout the Army. Project C73, Synthetic Theater of War-Army (STOW-A), provides innovative applications of current systems (live, virtual and constructive, Command, Control, Communications, Computers and Integration (C4I) Surveillance and Reconnaissance) to meet the urgent training requirements until availability of the next generation systems. STOW-A provides direct support to the Training, Exercises and Military Operations (TEMO) domain and the Advanced Concepts Requirements (ACR) domain. TEMO support derives from the demonstrated, low cost training capabilities that are provided by the toolkit. ACR support derives from the demonstrated capability of the kit to support battle lab and Army Warfighting Experiments (AWE) exercises and the development of Tactics, Techniques and Procedures (TTP) to support digital operations. Project C74 provides the resources necessary to perform the formally chartered mission of the Army's Simulation to C4ISR Interoperability Overarching Integrated Product Team (SIMCI OIPT). Project C77, Army Geospatial Data Master Plan, focuses on activities starting with data acquisition from multiple sources and culminating with accurate, robust and timely geospatial data and data management, integration and verversion tools that support multiple battle command, training and mission rehearsal applications. This program will benefit the Army and DOD by providing standards for interoperability and software. The project also develops and enhances reconfigurable simulators which are used as Advanced Concepts Research Tools (ACRT) that will allow the battlelabs to accomplish their mission in support of the ACR, Research, Development and Acquisition (RDA), and TEMO domains. Project C78 develops the One Semi-Automated Forces (OneSAF) program that will combine and improve the functionality and improve behaviors of several current semi-automated forces to provide a single SAF for Army use in simulations.

The FY08/09, C74 Project line provides for Simulation-to-C4I interoperability (SIMCI) effort between the models and simulations and tactical C4I Systems. The FY08/09, C77 project line develops a geospatial process and policy for data management. The FY08/09, C78 Project funding will continue development of the software to provide OneSAF initial operational capability functionality for Army evaluation and test.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	29628	19596	19814	20123
Current BES/President's Budget (FY 2008/2009)	28192	20418	16594	16181
Total Adjustments	-1436	822	-3220	-3942
Congressional Program Reductions		-78		
Congressional Rescissions				
Congressional Increases		1050		
Reprogrammings	-676	-150		
SBIR/STTR Transfer	-760			
Adjustments to Budget Years			-3220	-3942

FY 2008/2009: Funds realigned (FY08:$3,220/FY09:$3,942) to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**	**C74**

COST (In Thousands)	FY 2006 Actual	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
C74 DEVEL SIMULATION TECH	1761	1688	3621	3718	3803	3611	3965	4048	Continuing	Continuing

A. Mission Description and Budget Item Justification: The funding in this project line supports the HQDA-chartered mission of the Simulation to Command, Control, Communications, Computers and Intelligence (C4I) Interoperability (SIMCI) Overarching Integrated Product Team (OIPT). The SIMCI OIPT mission is to provide recommendations to Army senior leadership regarding Army policy, organization and processes to improve Battle Command (BC) and Modeling & Simulation (M&S) systems interoperability. BC systems capabilities encompass not only command and control functions, but also "decision and planning support capabilities that cover all functions including deployment, mission rehearsal, sustainment, ISR, etc., en route as well as from fixed locations." (TRADOC Pamphlet 525-66) The PEO STRI-led SIMCI OIPT uses collaborative processes among its approximately 30 Army organizations (including HQDA staff, combat developers and material developers) to identify key interoperability shortfalls and material solutions to them.

The functions of the SIMCI OIPT are: (1) Change Agent: Serve as a catalyst for change to achieve interoperable systems of systems; (2) Facilitator: Facilitate the integration of Army interoperability initiatives with Service and Joint, Interagency, and Multinational (JIM) programs; (3) Advisor to Army Leadership: Recommend and influence BC and M&S interoperability programs, policies, resourcing and procedures; (4) Technical Investment: Sponsor/support solution initiatives for BC and M&S systems' interoperability issues, including targeted, technical investments for projects to develop and (where applicable) implement BC and M&S interoperability architectures, standards, and interface products; (5) Research: Promote cooperative research and coordination among existing and emerging BC and M&S programs; and (6) Outreach: Conduct & participate in interoperability outreach activities such as conferences and publications.

SIMCI investments are comprised primarily of cost sharing opportunities, leveraging partial solutions in programs of record to enhance the interoperability of multiple systems in the joint operational environment. Key programs that will benefit from the cross-domain vision and practices of SIMCI include ABCS, Future Combat System (FCS) System of Systems Common Operating Environment (SOSCOE), FBCB2 Joint Capabilities Release (JCR), Joint Land Component Constructive Training Capability (JLCCTC), Live/Virtual/Constructive Integrating Architecture (LVC-IA), Software Blocking (SWB), Objective Initialization Capability (OIC), Joint Forces Command's Joint National Training Capability (JNTC), and DISA's Net Enabled Command Capability (NECC).

SIMCI investment will accelerate the implementation, within BC and M&S systems, of a common Joint Consultation, Command and Control Information Exchange Data Model (JC3IEDM) that is used by other Services and Coalition nations, thus enhancing the inherent ability of Army systems to seamlessly interoperate in a JIM environment. The SIMCI-sponsored Army C4I and Simulation Initialization System (ACSIS) capability will be expanded to the Objective Initialization Capability (OIC) to address key training and operational data initialization gaps, providing timely, flexible, and common data updates to BC and M&S systems, thus reducing data latency and inter-system ambiguity. SIMCI's direct involvement with FCS will increase the visibility of that program's needs and capabilities, providing the various OIPT organizations with opportunities to leverage their systems fundamental capabilities to meet the needs of FCS, and vice versa. SIMCI investments will cement those relationships through co-development of common use products.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009

FY06-FY09: Continues management of the SIMCI efforts in support of the SIMCI OIPT_s collaborative, Army-wide interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Objectives are: Identify and articulate to HQDA Senior Leadership specific standards that require Army-wide implementation (such as C2IEDM in 2005); co-develop data standards, architecture standards, implementation specifications and joint initialization / scenario generation products; co-develop common JC3IEDM integration/translation capability for BC/M&S applications; and co-develop BC/M&S products to meet the first FCS Spin Out in FY08. Continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint Programs of Record. Based on HQDA G3 and ASA(ALT) guidance, create an Initialization IPT that oversees the activities of the lead Combat and Material Development Integrators for Army Initialization capabilities/requirements and material solutions, respectively. The Initialization IPT reports through the Warfighting Mission Area (WMA) Integrating Working Group (IWG) to the BC GOSC and other Army leadership forums, as required, to facilitate development and implementation of cross-functional Intialization solutions.	1761	1665	3621	3718
Small Business Innovative Research/Small Business Technology Transfer Programs		23		
Total	1761	1688	3621	3718

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

C. Acquisition Strategy SIMCI OIPT resources are allocated to multiple organizations and contracts to procure and execute approved functions and projects to support the SIMCI and components-based architecture alignment efforts.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Engin

PROJECT
C74

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
C2 Information Exchange Data Model (C2IEDM) Data Translator	T&M	COLSA Corporation, Huntsville, AL	904	93	1-3Q							Cont.	997	997
Enhanced Army C4I & Simulation Initialization System (ACSIS) for Objective Initialization Capability	T&M	COLSA Corporation, Huntsville, AL		36	2-3Q							Cont.	36	36
Common C4I Adapter Integration/Configuration Mgmt Tool Implementation	In-House	PEO STRI, Orlando, FL		232	1-4Q							Cont.	232	232
JC3IEDM Migration/Implementation	CPFF	Alion Science & Technology, Tysons Corner, VA				96	2-4Q	198	2-4Q	203	2-4Q	Cont.	Cont.	Cont.
Implementation of Initialization Products	CPFF	Alion Science & technology, Tysons Corner, Va				187	2-4Q	382	2-4Q	392	2-4Q	Cont.	Cont.	Cont.
Transition of ACSIS simulation initialization capability	MIPR	NAVSEA, Pax River, MD				240	2-3Q	525	2-3Q	539	2-3Q	Cont.	Cont.	Cont.
Expanding Modified Table of Equipment System Architecture (SA) data	T&M	General Dynamics, Orlando, FL				175	2-3Q	388	2-3Q	398	2-3Q	Cont.	Cont.	Cont.
Adding JC3IEDM to the Common C4I adapter	In-House	PEO STRI, Orlando, Fl				290	1-2Q	590	1-2Q	605	1-2Q	Cont.	Cont.	Cont.
Adding JC3IEDM to C2 systems data mediation	T&M	Viecore FSD, Ft. Monmouth, NJ				110	1-2Q	225	1-2Q	231	1-2Q	Cont.	Cont.	Cont.
JC3IEDM sample application and reference implementation	T&M	CSC, Ft. Monmouth, NJ				288	1-2Q	579	1-3Q	594	1-3Q	Cont.	Cont.	Cont.
Initialization Scope Study	T&M	IDA, Alexandria, VA				50	2-3Q					Cont.	50	50
Initialization Study Implementation	T&M	IDA, Alexandria, VA						210	1-2Q	216	1-2Q	Cont.	Cont.	Cont.
Subtotal:			904	361		1436		3097		3178		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Engin

PROJECT
C74

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Technical Exchange/Value Methodology Workshop	T&M	Lambert Consulting Group, Dublin, OH		33	2-3Q							Cont.	33	33
HQDA/G3 Project Support	T&M	Alion Science & Technology		97	1-4Q							Cont.	97	97
MATRIX/Support Service Contractor support	In-House	PEO STRI, Orlando, FL		92	1-4Q							Cont.	92	92
DIL Software Development Support	T&M	COLSA Corporation, Huntsville, AL		141	2-3Q							Cont.	141	141
Facility Support for Digital Integration Lab (DIL)	In-House	PEO STRI (formerly STRICOM), Orlando, FL	410	245	1-4Q							Cont.	655	655
SIMCI Program Support	CPFF	Alion Science & Technology				95	2-3Q	105	2-3Q	108	2-3Q	Cont.	Cont.	Cont.
Army Initialization Program	CPFF	Alion Science & Tecnology						183	2-3Q	188	2-3Q	Cont.	Cont.	Cont.
Subtotal:			410	608		95		288		296		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Software Certification Testing	T&M			280	1-4Q							Cont.	280	280
Subtotal:				280								Cont.	280	280

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

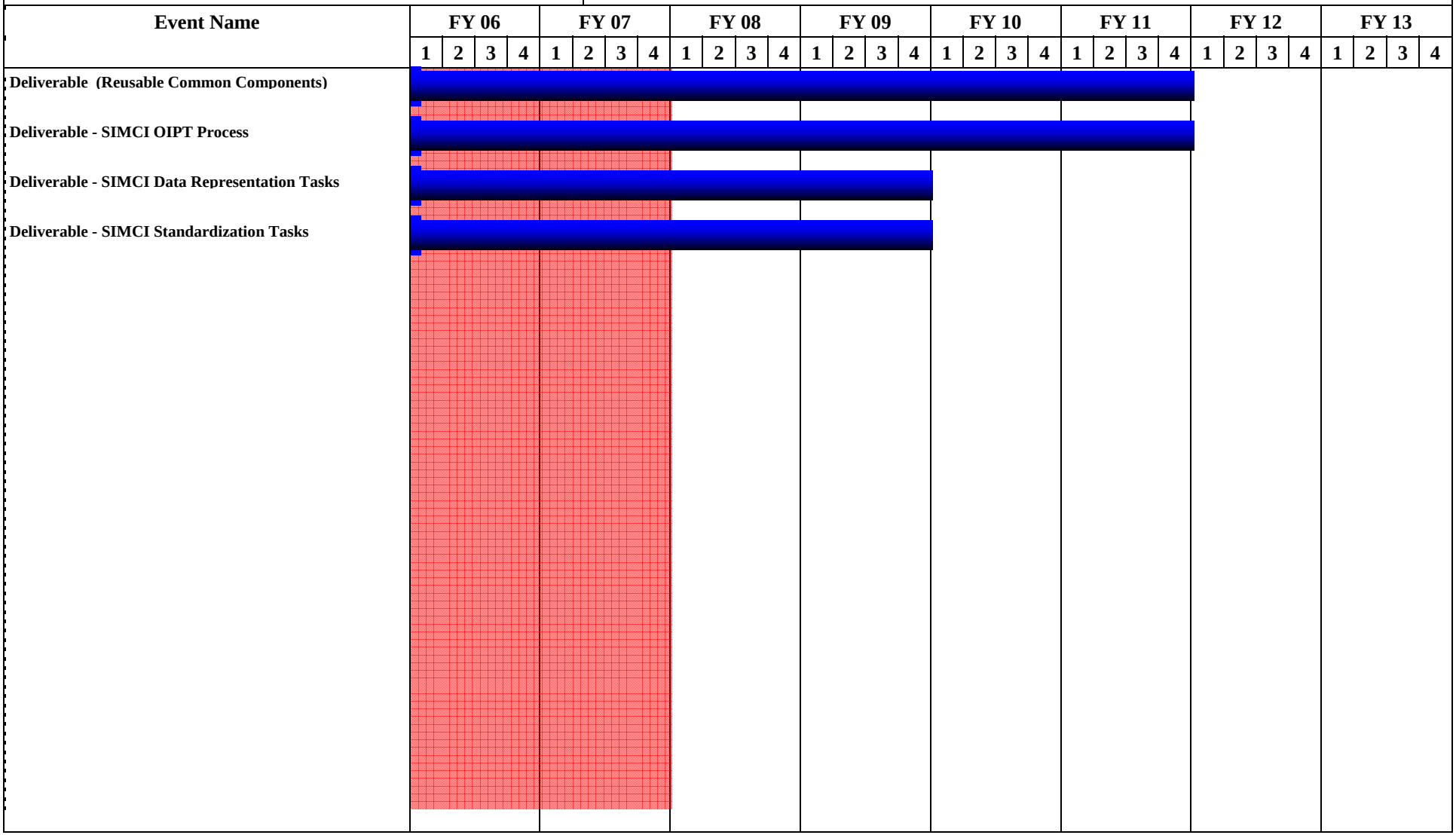
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**	**C74**

Program Management	Multiple	Various	7351	512	1-4Q	157	1-2Q	236	1-4Q	244	1-4Q	Cont.	Cont.	Cont.
Subtotal:			7351	512		157		236		244		Cont.	Cont.	Cont.
Project Total Cost:			**8665**	**1761**		**1688**		**3621**		**3718**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**	**C74**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**	**C74**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Deliverable (Reusable Common Components)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Deliverable - SIMCI OIPT Process	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Deliverable - SIMCI Data Representation Tasks	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Deliverable - SIMCI Standardization Tasks	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
C2 Information Exchange Data Model (C2IEDM) Data Translation	1Q - 4Q							
Enhanced Army C4I and Simulation Initialization System (ACSIS) for Obj. Initial.	1Q - 4Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**	**C77**

COST (In Thousands)		FY 2006 Actual	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
C77	Army Geospatial Data Master Plan	1001	191	64	679		504	515	526	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the development and maintenance of the Army Geospatial Data Integrated Master Plan (AGDIMP) approved by the Chief of Staff, Army in April 2005. This document provides the framework for future decisions and direction to generate, manage, analyze, and distribute geospatial data for battle management operations, training, and mission rehearsal. The AGDIMP also provides the processes and procedures to identify and refine Army geospatial resource requirements. Geospatial Information and Services provide the basis for situational awareness on the battlefield, actionable intelligence, and the common operational picture. Geospatial data provides Soldiers with the framework and background for displaying the location of friendly and enemy forces, and the location of critical features on the battlefield. Geospatial data, used in Army command and control systems, course of action analysis and mission rehearsal tools, simulators, and simulations provides insights on how the physical environment will impact combat operations. The Army's Future Force will include unmanned aerial and ground vehicles that require a greater degree of resolution in both terrain and enhanced feature data to navigate and move on the battlefield. This will minimize exposure of Soldiers to hostile environments and enemy forces. The Army will depend on a common set of geospatial data that is continually upgraded and made available through a network-centric enterprise of information that is accessible to all involved. The purpose of the AGDIMP is twofold. First, this plan describes a concept of operations for a complete, integrated, network-centric enterprise for collecting, managing, distributing, and updating geospatial data in the Army's Future Force. Although this plan encompasses most of the issues of an enterprise solution for geospatial needs and concerns, it does not contain the total level of detail or complexity to be considered complete. It does, however, contain a foundation of issues necessary to develop a concept of operations for a complete, integrated, enterprise, network-centric process for collecting, managing, distributing, and updating geospatial data. Second, this plan identifies activities and funding needed to execute the basic concept of operations described in the AGDIMP. The scope of the AGDIMP includes all activities starting with data acquisition from multiple sources, to include raw sensor feeds from national sensors to soldier/platform level, and culminating with accurate, robust, and timely geospatial (terrain-related) data and data management, integration, and conversion tools that support multiple battle command, training, and mission-rehearsal applications. The AGDIMP does not include the algorithms and functions used by the applications themselves to produce finished battle command or intelligence products. The AGDIMP will become part of a much larger effort to integrate geospatial activities across all Services, while documenting the complex framework for a "net ready" geospatial information and services architecture, an environment in which the Army's current and future forces must operate to achieve information dominance within the total battle space. This larger effort is currently being developed in conjunction with the Joint Forces Command and the other Services, including Special Operations Command.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Developed policy, procedures, and standards for geospatial data management, including fusion/integration (e.g., fusion and conflation), transformation, filtering, and dissemination of data across all echelons of command. This includes the timely distribution of appropriate data from the Top Secret network - the Joint Worldwide Intelligence Communications System, as well as the SIPRNET and NIPRNET.	1001			
FY07: Will develop common, analytical, geospatial services among the Battle Command (BC), topographic engineering, and training elements. Establish an Army geospatial data dictionary. Establish an Army geospatial data model. Develop common analytical, geospatial services between BC and M&S. Define the requirements for metadata standards to determine the fitness of use (FoU) of existing and planned services and applications as a function of varying quality geospatial data. Provide the data to the user as part of the analysis		185		

product metadata. Establish a distributed, Army Geospatial Enterprise Testbed to support the experimentation; evaluation; and verification, validation, and accreditation (VV&A) of geospatial services and applications., by supporting continued development of the Joint Geospatial Enterprise Service / Science and Technology program (J-GES (S&T)				
FY08: Will convene two Councils of Colonels among the key Army Geospatial Data programs and assist in defining the requirements for a comprehensive Initial Capabilities Document.			64	
FY09: Will continue to develop data standards and to integrate geospatial data into the Army Battle Command Systems.				679
Small Business Innovative Research/Small Business Technology Transfer		6		
Total	1001	191	64	679

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

C. Acquisition Strategy The Army's G-2 and G-3/5/7 will establish authority, for research development, test, and evaluation (RDT&E) including Operation and maintenance policies and requirements for Army geospatial data enhancements and/or augmentation and associated geospatial data warehouse(s), facilities, nodes, and staffing. Resources will be allocated to multiple organizations and contracts to obtain and execute approval functions and projects to support the AGDIMP.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**	**C78**

COST (In Thousands)		FY 2006 Actual	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
C78	One Semi-Automated Forces (OneSAF)	15980	15521	12909	11784	11911	12040	12306	12576		105027

A. Mission Description and Budget Item Justification: This project develops and delivers software systems to realistically represent activities of units and forces in simulation. This representation is used to support the concept evaluation, experimentation, materiel acquisition and training communities. Initiatives include the systems engineering and design for development and evolution of the architecture and software tools for a universal Army computer generated forces system, One Semi-Automated Forces (OneSAF). OneSAF is a next generation higher fidelity Brigade and below SAF that will represent a full range of operations, systems and control processes in support of stand alone and embedded training and research, development and acquisition simulation applications. OneSAF will be fully interoperable with the Army's emerging virtual, live, and division and above constructive simulations and will provide next generation simulation products. OneSAF will replace a variety of simulations currently used within the Army to support analytic and training simulation activities. This project is a component of the Joint Land Component Constructive Training Capability.

The FY08/09 program will continue the development of the software required to provide OneSAF final operational capability for Army evaluation and test.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-FY09: Continues development of functionality to provide architectural services, components, synthetic environment and infrastructure capable of supporting initial model development.	5527	3348	3100	2742
FY06-FY09: Continues to develop functionality to represent behaviors, physical models, and communication models for OneSAF.	6564	6548	5609	5225
FY06-FY09: Continues verification & Validation of newly developed and integrated software.	1889	2485	2200	2026
FY06-FY07: Initiates Software Distribution and New Equipment Training Team	2000	2738		
FY08-09 Continues Software Distribution and Equipment Training			2000	1791
Small Business Innovative Research/Small Business Technology Transfer		402		
Total	15980	15521	12909	11784

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OMA, 121014	5616	5450	6146	5892	5718	5860			Continuing	34682

Comment: OMA funding provides for OneSAF life cycle software maintenance of existing software.

C. Acquisition Strategy Development based on performance specifications via multiple Task Orders on competitively selected contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Engin

PROJECT
C78

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Architecture Dev & System Integration	CPFF	Science Applications International Corp, Orlando, FL	37495	3370	1-2Q	3383	1-2Q	3000	1-2Q	3000	1-2Q	Cont.	Cont.	Cont.
Integrated Environment Dev	CPFF	Advanced Systems Technology, Inc., Orlando FL	6087	1365	1-2Q	1200	1-2Q	1000	1Q	1000	1Q	Cont.	Cont.	Cont.
Synthetic Environment Dev	CPFF	Science Applications International Corp, Orlando, FL	5235	830	1-2Q	525	1-2Q	400	1Q	400	1Q	Cont.	Cont.	Cont.
Knowledge Acquisition/Knowledge Engineering	CPFF	Aegis Technologies Group, Huntsville, AL	4834	328	1-2Q							Cont.	5162	5162
OneSAF System Development	CPFF	Various	7019	1463	1-2Q	416	1-2Q	350	1-2Q	200	1-2Q	Cont.	Cont.	Cont.
Model Development	CPFF	Acusoft/Various	13512	2899	1-3Q	2727	1-2Q	3858	1-2Q	3000	1-2Q	Cont.	Cont.	Cont.
NETT	CPFF	To be determined				2400	1-3Q					Cont.	2400	2400
Commander's Rock Drill			1930									1930	1930	1930
Subtotal:			76112	10255		10651		8608		7600		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Analysis	Various	Multiple	3027	600	1-2Q	600	1-2Q	550	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
Domain Analysis	Various	Multiple	2837	600	1-2Q	600	1-2Q	350	1-3Q	294	1-3Q	Cont.	Cont.	Cont.
Architecture Engr & Tech Spt	C/CPFF	MITRE FFRDC	1876	260	1-2Q	270	1-2Q	290	2Q	290	2Q	Cont.	Cont.	Cont.
Subtotal:			7740	1460		1470		1190		1084		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Engin

PROJECT
C78

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
OneSAF integration, evaluation and test	C/CPAF	Ft Rucker, AL/Multiple	1654	1300	1-3Q	1000	1-3Q	750	1-3Q	750	1-3Q	Cont.	Cont.	Cont.
OneSAF Verification, Validation & Accreditation	Various	Ft. Rucker, AL/Multiple	1975	1500	1-3Q	1000	1-3Q	500	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
Distributed Integration Lab (DIL)	VARIOUS							250	2-3Q	250	2-3Q		500	
Subtotal:			3629	2800		2000		1500		1500		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	Various	Multiple	5880	1465	1-4Q	1400	1-4Q	1611	1-4Q	1600	1-4Q	Cont.	Cont.	Cont.
Subtotal:			5880	1465		1400		1611		1600		Cont.	Cont.	Cont.
Project Total Cost:			**93361**	**15980**		**15521**		**12909**		**11784**		**Cont.**	**Cont.**	**Cont.**

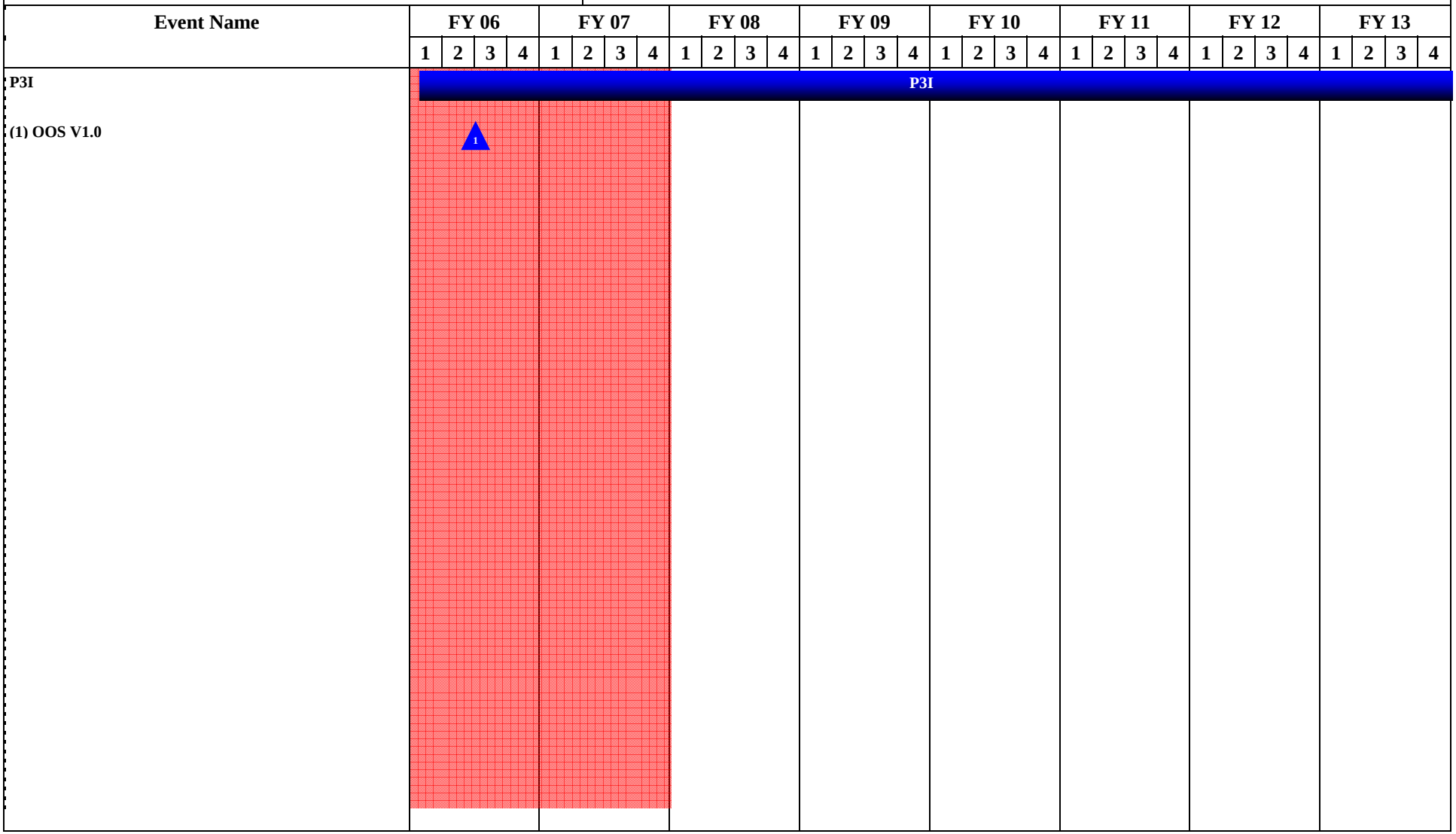
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Engin

PROJECT
C78



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Engin**	**C78**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
P3I	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
OOS V1.0	2Q							
Award OneSAF Development Task Orders for individual components	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)**

	COST (In Thousands)	FY 2006 Actual	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	41139	38471	37035	29652	21069	23804	15929	15121	Continuing	Continuing
571	CLOSE CBT TACT TRAINER	5829	3163	1603	1691	1348	1372	1397	1422	Continuing	Continuing
577	SOLDIER - COMBINED ARMS TACTICAL TRAINER	2875	2511							Continuing	Continuing
582	SYNTHETIC ENVIR CORE	19744	19282	23745	26588	18348	21064	14532	13699	Continuing	Continuing
585	AVIATION COMBINED ARMS TACTICAL TRAINER	12691	13515	11687	1373	1373	1368				42007

A. Mission Description and Budget Item Justification: The Combined Arms Tactical Trainer (CATT) is a family of combined arms simulation systems designed to support the Army's simulation-based Combined Arms Training Strategy. CATT enables units, from crew to the battalion task force level, to conduct a wide variety of combat tasks on a realistic, interactive synthetic battlefield. CATT's combination of manned simulators and staff officer workstations enables units to train as a combined arms team in a cost effective manner. CATT reinforces the successes and corrects the shortcomings of the Simulator Network (SIMNET) and Aviation Network (AIRNET) Demonstration Programs executed by the Defense Advanced Research Projects Agency (DARPA). The initial CATT system is the Close Combat Tactical Trainer (CCTT), which provides the underlying baseline (architecture, terrain databases, After Action Review [AAR], Semi-Automated Forces [SAF], and models/algorithms) for future CATT expansions, pre-planned product improvements and system enhancements. Reconfigurable Vehicle Simulator (RVS) variants will support the level of readiness required by the user at CCTT fixed sites in support of convoy operations. Synthetic Environment (SE) Core provides for the expansion of the Synthetic Environment baseline to include enhanced interoperability and the products and infrastructure to support current and future combat operations and Mission Rehearsal for operations currently required by the contempory Operating Environment (COE). The first synthetic environments to be expanded are the Aviation Combined Arms Tactical Trainer (AVCATT) and the CCTT for both Active and Reserve components. Soldier CATT is a dismount-centric collective virtual training system designed to train dismounted soldiers, leaders and units (platoon through battalion). Soldier-CATT provides light infantry, Stryker Brigade Combat Team (SBCT), Ranger, SOF and Land Warrior equipped Brigade Combat Team (BCT) commanders a highly tolerable, deployable, collective combined arms training and mission rehearsal system with an AAR capability. It provides the soldier/leader a virtual link into the Live, Virtual, and Constructive training environment and provides the core architecture that will enable dismounted infantry for Future Combat System (FCS) equipped Unit of Action units. By practicing skills in CATT, units are able to make more effective use of scarce resources and costly live fire and maneuver exercises as well as train tasks deemed too hazardous to conduct in the field. Fielded in both fixed site and mobile/transportable versions, CATT enables both Active and Reserve component units to prepare for real world contingency missions. By being able to process a wide array of terrain databases and modify the behavior of the computer generated opposing forces, CATT offers a virtually unlimited array of training options to support the Army's many regional contingency missions. The combination of tough field and live fire training and realistic simulation training in CATT is the catalyst to prepare soldiers and their leaders for the uncertainties they will face in an unpredictable world of current and future combat operations, especially in support of GWOT operations.

FY2008/FY2009 funding for CCTT will provide the U.S. Army with additional variants for Reconfigurable Vehicle Simulator (RVS) in support of convoy operations and reconnaisance. FY2008/FY2009 funds for SE Core will provide the U.S. Army with continued development of a series of interoperable software and hardware components that will enable an Army Common Virtual Environment to train with integrated virtual simulations. SE Core will provide standardized, rapid terrain generation process, a master

terrain database facility, Objective OneSAF Integration and Common Virtual Components (CVCs). FY2008/FY2009 funding will develop refinements to the AVCATT system to include but not limited to: Armed Reconnaissance Helicopter capabilities and SE Core Ingegration. Funding will also support interoperability with other combined arms simulators, life cycle baseline enhancements to the AVCATT infrastructure and technology obsolescence. These refinements will improve readiness by providing more realistic collective training in support of current and future combat operations, GWOT and the flexibility to support Army modularity.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	43344	39901	45486	32587
Current BES/President's Budget (FY 2008/2009)	41139	38471	37035	29652
Total Adjustments	-2205	-1430	-8451	-2935
Congressional Program Reductions		-3147		
Congressional Rescissions				
Congressional Increases		2000		
Reprogrammings	-1020	-283		
SBIR/STTR Transfer	-1185			
Adjustments to Budget Years			-8451	-2935

FY 2008/2009: Funds realigned (FY08:$8,451/FY09:$2,935) to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)**	**571**

COST (In Thousands)	FY 2006 Actual	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
571 CLOSE CBT TACT TRAINER	5829	3163	1603	1691	1348	1372	1397	1422	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program provides for System Development and Demonstration (SDD), Pre-Planned Product Improvements (P3I), and Reconfigurable Vehicle Simulator (RVS) variants for the Close Combat Tactical Trainer (CCTT), which will enhance readiness for both Active and Reserve component forces to support execution of current and future combat operations including the Global War on Terror (GWOT). The program develops a networked system of interactive computer driven simulators, emulators and semi-automated forces that replicate combat vehicles and weapon systems, combat support systems, combat service support systems, and command and control systems to create a fully integrated real-time collective task training environment. This trainer will allow soldiers to practice, repetitively, tactics, techniques and procedures that, if performed on real equipment, would be too hazardous, time-consuming and expensive. These trainers enhance realism and allow soldiers and units to learn tactical combat lessons on maneuver, command and control, convoy operations, and improved teamwork for increased survivability. The pre-planned product improvements enhance CCTT capabilities as a tactical trainer and maintain concurrency with the structural changes the current battle force is experiencing. These improvements will provide the interoperability with Aviation Combined Arms Tactical Trainer, Army Battle Command System (ABCS)[including Force XXI Battle Command Brigade and Below (FBCB2) and Army Tactical Command and Control System (ATCCS)], and other simulation systems needed to execute training for current and future combat operations and for GWOT.

FY2008/FY2009 funding for CCTT will provide the U.S. Army with additional variants for Reconfigurable Vehicle Simulator (RVS) in support of convoy operations and reconnaisance training.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Developed and completed the base CCTT RVS module design with additional capabilities.	5612			
FY06-FY09: Supports government program management, engineering, technical contract, and continue operational evaluation support.	217	221	224	228
FY07-FY09: Continue development of RVS variants and design for obsolescence items.		2867	1379	1463
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs.		75		
Total	5829	3163	1603	1691

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0170 SIMNET/CCTT	82421	16852	67123	61091	40775	12187	6829	6979	Continuing	Continuing

Comment:

C. Acquisition Strategy FY05 award was CPFF competitively awarded to LM STS for development of CCTT Reconfigurable Vehicle Simulator (RVS) with FY06 incremental funding for continued performance and incorporation of additional capabilities to CCTT RVS.

FY07 is a Small Business 8A Set Aside Award for development of RVS variants.

FY08/09 will be an Engineering Change Proposal (ECP) to a new competitively awarded CCTT RVS Production Contract.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
571

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CCTT SDD and Pre Planned Product Improvements (P3I)	Various	Various	245042										245042	245042
P3I and Development of RVS variants	C/CPFF	Lockheed Martin Corporation, Orlando, FL	4566	5612	1Q								10178	10178
Development of RVS Variants	SS/FP	DEI Services Corp., Winter Park, FL				2942	2Q						2942	2965
Continued Development of RVS Variants and Obsolescence Items	C/CPFF	TBS						1379	1-4Q	1463	1-4Q	4539	7381	7396
Subtotal:			249608	5612		2942		1379		1463		4539	265543	265581

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Engineering and Technical Support	MIPRs/T&M	Various activities	32062										32062	
Subtotal:			32062										32062	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
571

	Type		Cost		Date		Date		Date		Date	e		Contract
Project Office Support	MIPR	PEO STRI/NAVAIR, Orlando, FL	15693	217	1-4Q	221	1-4Q	224	1-4Q	228	1-4Q	1000	17583	17583
Subtotal:			15693	217		221		224		228		1000	17583	17583
Project Total Cost:			**297363**	**5829**		**3163**		**1603**		**1691**		**5539**	**315188**	**283164**

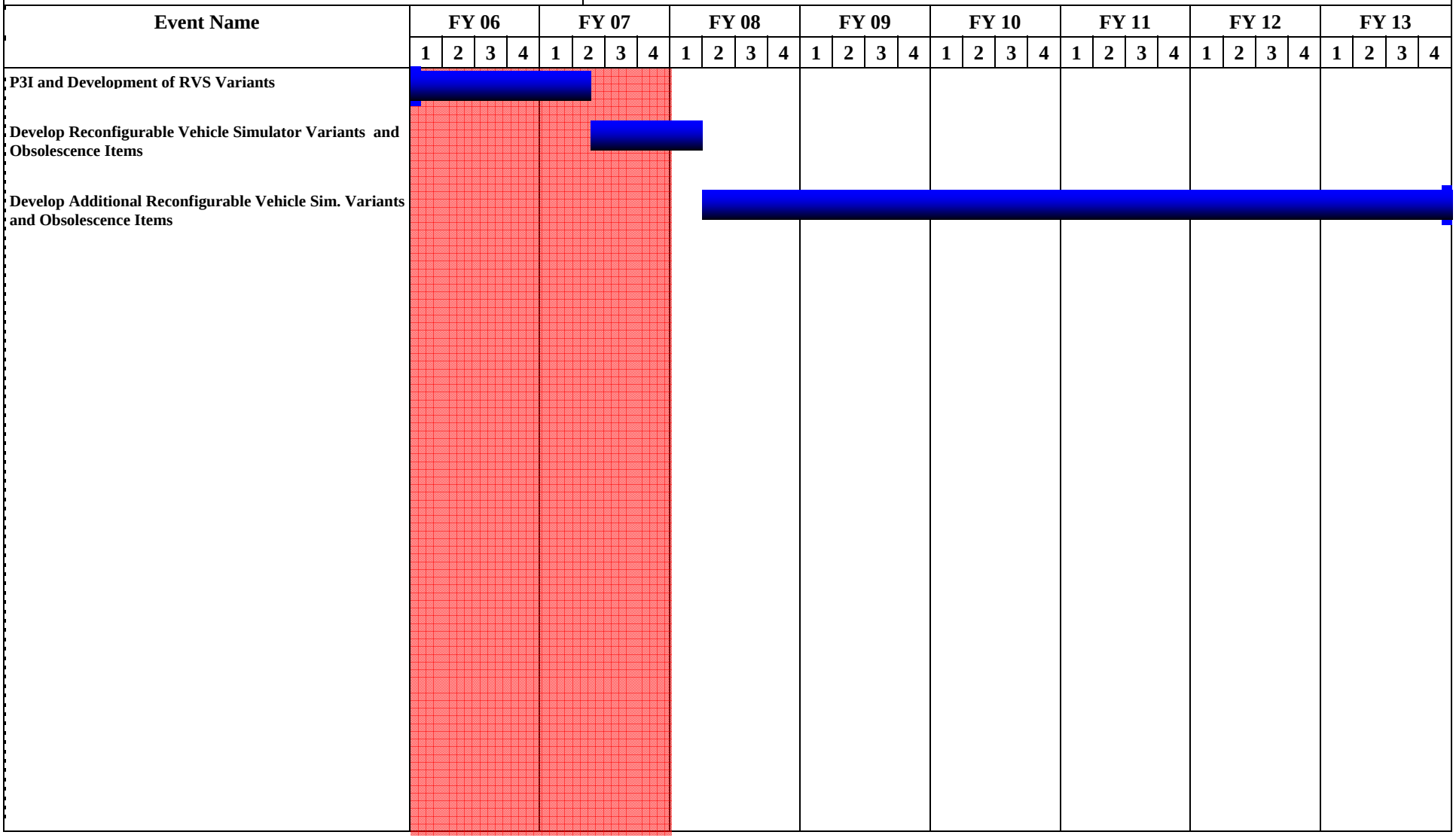
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
571



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
571

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
P3I and Development of RVS Variants	1Q - 4Q	1Q - 2Q						
Develop Reconfigurable Vehicle Simulator Variants and Obsolescence Items		2Q - 4Q	1Q					
Develop Additional Reconfigurable Vehicle Sim. Variants and Obsolescence Items			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)**	**582**

COST (In Thousands)	FY 2006 Actual	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
582 SYNTHETIC ENVIR CORE	19744	19282	23745	26588	18348	21064	14532	13699	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the Synthetic Environment Core (SE Core) and is the Army's Common Virtual Environment (CVE) answer for linking virtual training simulations into an integrated and interoperable training system with fair fight capability that is sufficient for current and future combat operations, Mission Rehearsal, and Contemporary Operating Environment (COE) training. This CVE will link to the live and constructive environments for an integrated Live/Virtual/Constructive LVC capability to support Army Transformation and the Combined Arms Training Strategy. SE Core is a key element in the Army's Training Transformation Plan to link the Future Combat Systems (FCS) embedded multi-mode LVC training capability with Current and Stryker Forces and Joint Interagency Intergovernmental Multinational (JIIM) simulations.

Under SE Core, current and future virtual training devices will enable the Army to execute combined arms and joint training, mission planning and rehearsals at home station, en route and deployed locations critical to training for COE operations. SE Core consists of a series of interoperable software components that will be integrated into virtual simulations, enabling the Army's CVE and facilitating interoperability in a LVC Training Environment (TE). The components are Objective OneSAF (OOS) integration, Standard Rapid Terrain Database Generation process, master Terrain Database, open format, standard visual models, dynamic terrain, atmospheric effects, Chemical, Biological, Radiological, Nuclear and High Explosive (CBRNE) effects, common After Action Review (AAR), a long haul networking capability, Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR) interfaces, training support packages and exercise management tools. The standard Terrain Database (TDB) generation process uses automated tools, processes and standard source data to create a Master Database (MDB). The MDB provides open format data that can be translated into correlated runtime databases to support the LVC TE and for mission planning/ rehearsal/execution in an operational environment. Once developed, SE Core's Common Virtual Components (CVCs) will reduce redundancy, increase realism and facilitate an integrated LVC TE.

FY2008/FY2009 funds for SE Core will provide common terrain databases from the Central Terrain Database Center and the establishment of one CONUS and one OCONUS Terrain Database Center. FY2008/FY2009 funds will also continue the integration of One Semi-Automated Forces (OneSAF) into the SE Core Architecture. OneSAF will replace the SAFs currently supporting CCTT and AVCATT and is the proposed SAF for Soldier CATT. Integration of OOS as the SAF for virtual simulations enables interoperability with the LVC TE. The SE Core Long Haul Network will continue with upgrades in integration and common visual models will continue development.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: The Standard Terrain Database Generation Capability (STDGC) was developed. The architectural backbone for SE Core was established. SE Core successfully tested and demonstrated OneSAF integration into the CCTT and AVCATT. Terrain and visual entities where correlated and on the same terrain. Initial set of visual models were developed.	17674			
FY06-FY09: Provides program management, engineering, technical, contract, and test support for development of SE Core.	2070	2157	2683	2734
FY07-FY09: SE Core will provide common terrain databases from the Central Terrain Database Center and the establishment of CONUS and OCONUS Terrain Database Centers. Refinement of the STDGC will be made with the incorporation of advanced automated processing tools. Planned enhancements to OneSAF will continue to be integrated into the SE Core Architecture. Six Common Virtual		16582	21062	23854

Components will be added - CBNRE, Net Ready capability, Atmospheric Effects, Dynamic Terrain, Exercise Management Tools, and Training Support Packages. Common Model development will continue.				
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs		543		
Total	19744	19282	23745	26588

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0173 Aviation Combined Arms Tactical Trainer	53262	80231	67386	23264	10294	10521	10369	8094	Continuing	Continuing
OPA3, Appropriation NA0170 Close Combat Tactical Trainer (CCTT)	82421	16852	67123	61091	40775	12187	6829	6979	Continuing	Continuing

Comment:

C. Acquisition Strategy A competitive CPFF type contract for the development of SE Core Architecture & Integration (A&I) project was awarded in FY05. A follow-on A&I contract will be awarded in 1 QTR FY08. A competitive CPFF type contract for the development of SE Core Database Virtual Environment Development project was awarded in FY06.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
582

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Architecture and Integration	C/CPFF	Science Applications International Corporation, Orlando, FL	3953	8737	1Q	9004	1Q					Cont.	Cont.	Cont.
Architecture and Integration Follow-On	C/CPFF	Unknown						9919	1Q	8960	1Q		18879	
Master Database (MDB) Study	C/CPFF	Various	2011										2011	2011
Database Virtual Environment Development	C/CPFF	CAE, USA, Tampa, FL		8937	2Q	7301	1Q	11143	1Q	14894	1Q	Cont.	Cont.	Cont.
Subtotal:			5964	17674		16305		21062		23854		Cont.	Cont.	Cont.

Remarks: Raytheon Systems Co. has sold this part of their company to L-3Com.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Engineering Services & Technical Support	C/FFP/T&M	Morgan Research Corporation, Orlando, FL	172	367	1Q	923	1Q	943	1Q	963	1Q	Cont.	Cont.	Cont.
Subtotal:			172	367		923		943		963		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test Support	MIPR	Test Community				125	3Q						125	
Subtotal:						125							125	

Remarks: Not Applicable

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
582

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Office Support	MIPR	PEO STRI/NAVAIR Orlando	1660	1703	1-4Q	1929	1-4Q	1740	1-4Q	1771	1-4Q	Cont.	Cont.	Cont.
Subtotal:			1660	1703		1929		1740		1771		Cont.	Cont.	Cont.
Project Total Cost:			**7796**	**19744**		**19282**		**23745**		**26588**		**Cont.**	**Cont.**	**Cont.**

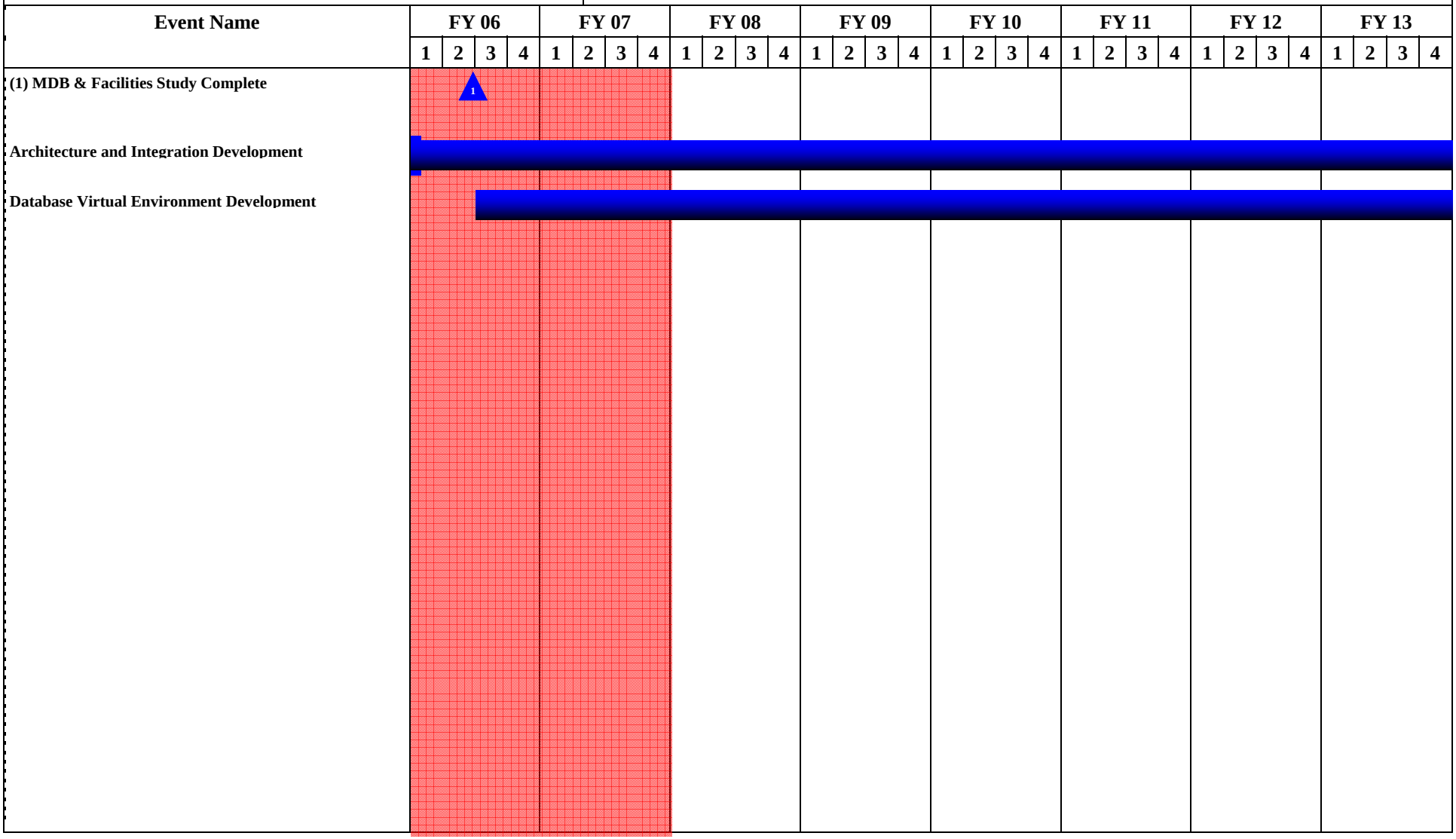
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
582



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
582

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MDB & Facilities Study Complete	2Q							
Architecture and Integration Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Database Virtual Environment Development	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Architecture and Integration Components & P3I	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
OneSAF Integration (KPP #1)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
Standard Terrain Process Capability Complete (KPP #2)		4Q						
Database Centers (KPP #2 Follow-On)		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Dynamic Terrain Complete (KPP#3)				2Q				
Atmospheric Effects Complete (KPP #4)				1Q				
Net Ready (KPP #5)				3Q				
C4ISR Complete (KPP #6)				4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)**	**585**

	COST (In Thousands)	FY 2006 Actual	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
585	AVIATION COMBINED ARMS TACTICAL TRAINER	12691	13515	11687	1373	1373	1368				42007

A. Mission Description and Budget Item Justification: This project supports the Aviation Combined Arms Tactical Trainer (AVCATT) which is an Army aviation training system for both the Active and Reserve Component to provide mission rehearsal and training in support of the Global War on Terrorism (GWOT). AVCATT completed Initial Operational Test & Evaluation (IOT&E) on 1 August 2003 and received Full Rate Production Decision on 19 December 2003. A single suite of equipment consists of two (2) mobile trailers housing six (6) reconfigurable networked simulators that support the AH-64A/D, UH-60A/L, CH-47D, and OH-58D. In the future the Armed Reconnaissance Helicopter platform and an enhanced software engineering environment (SEE) will be added. Supporting roleplayer, semi-automated forces (SAF), and after action review (AAR) workstations are also provided as part of each suite. AVCATT is a fully mobile system, capable of utilizing shore and generator power and is transportable worldwide. AVCATT fully supports Army modularity. The AVCATT system will permit various aviation units to conduct collective task training on a real-time, computerized battlefield in a combined arms scenario by leveraging Synthetic Environment (SE) Core capabilities. Other required elements that are present on the modern, high intensity battlefield, such as the combat support and combat service support elements are an integral part of the simulation database. AVCATT is designed to provide realistic, high intensity collective and combined arms training to aviation units as well as the full spectrum of operations in support of current and future combat operations including GWOT. AVCATT supports the Aviation Transformation Plan and the Aviation Combined Arms Training Strategy. AVCATT also Supports Aviation Functional Area Assessment (FAA), providing collective, combined arms training. This system is designated a complementary program for the Future Combat System (FCS).

FY2008/FY2009 funding will develop refinements to the AVCATT system to include but not limited to: Armed Reconnaissance Helicopter capabilities and SE Core Ingegration. Funding will also support interoperability with other combined arms simulators, life cycle baseline enhancements to the AVCATT infrastructure and technology obsolescence.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Intitiated the AVCATT software engineering environment (SEE) enhancement, initiated information technology classified operations capabilities, initiated completed implementation of version 1.0 Objective OneSAF, and completed Phase I system development of the new Image Generator for AVCATT suites.	12500			
FY07-FY09: Continues enhancement efforts on the SEE and classified operations capabilities. Initiates Phase II to integrate into AVCATT and SEE the first article development of the new Image Generator. Continue refinements to the system to include: Armed Reconnaissance Helicopter development, support to interoperability with other combined arms simulators through implementation of Synthetic Environment (SE) Core common products such as Objective One SAF, Common Virtual Components (CVC) and common data bases. In addition, provide improved interoperability and improved interaction between live and virtual systems.		10972	11518	1325
FY07 Congressional adds for AVCATT Gunner Chief Crew Station (GCCS) and Longbow Block III.		2000		
FY06-FY09: Provides government program management, engineering, technical, contract, and test support for AVCATT refinements.	191	162	169	48
Small Business Innovative Research (SBIR)/Small Business Tachnology Transfer Programs (STTR)		381		

Total	12691	13515	11687	1373

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0173 Aviation Combined Arms Tactical Trainer	53262	80231	67386	23264	10294	10521	10369	8094	Continuing	Continuing

Comment:

C. Acquisition Strategy System Development and Demonstration (SDD) competitive contract against performance specification.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
585

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AVCATT	C/CPAF/FPIF/ FFP	L3 Communications Corporation, Arlington, Texas	3008	12500	2Q	13353	2Q	11518	2Q	1325	2Q	Cont.	Cont.	Cont.
Subtotal:			3008	12500		13353		11518		1325		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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
Project Office Support		PEO STRI, Orlando, Florida	153	191	1-4Q	162	1-4Q	169	1-4Q	48	1-4Q	Cont.	Cont.	Cont.
Subtotal:			153	191		162		169		48		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)**	**585**

Project Total Cost:	**3161**	**12691**		**13515**		**11687**		**1373**		**Cont.**	**Cont.**	**Cont.**

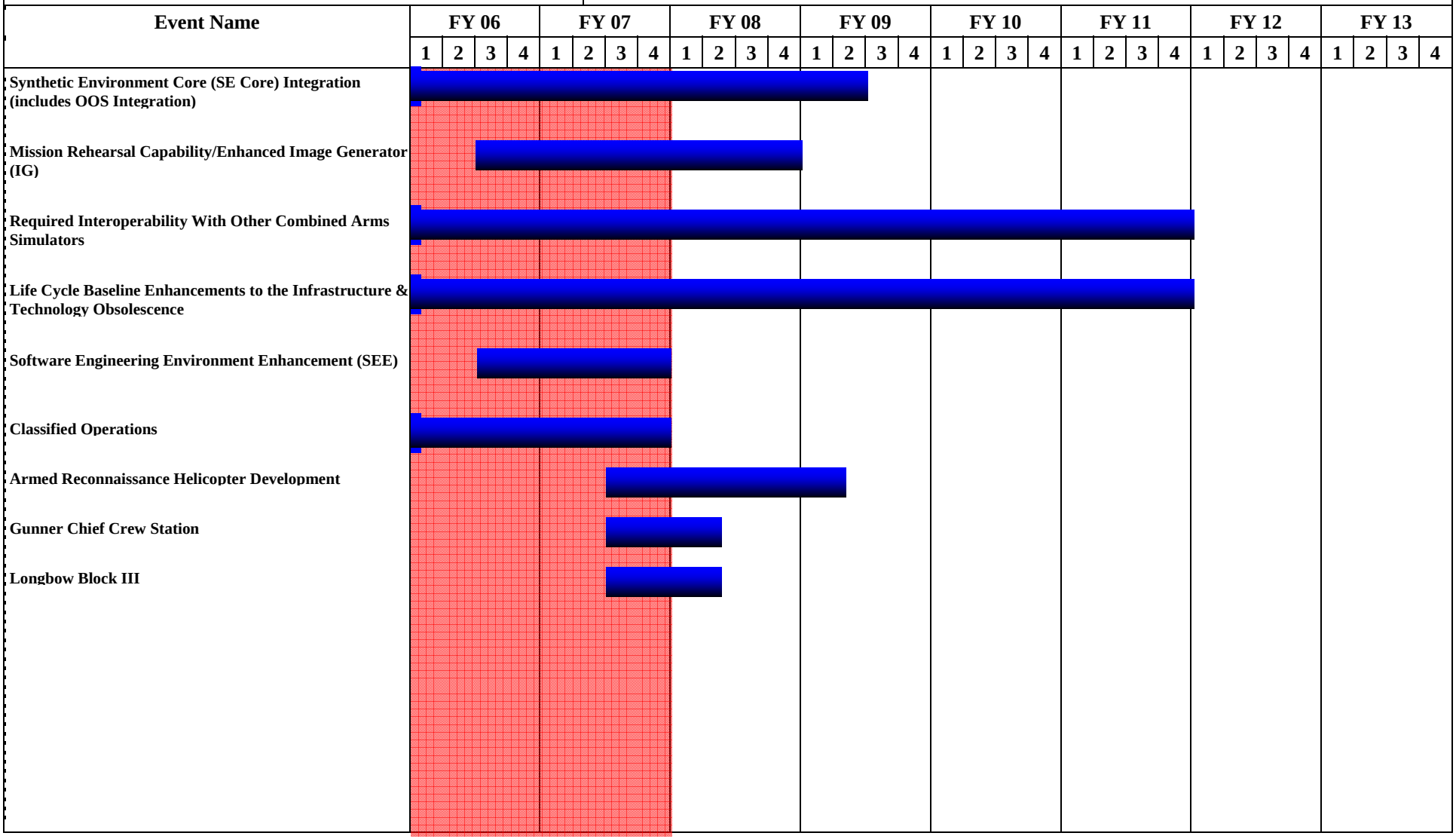
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
585



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - COMBINED ARMS TACTICAL TRAINER (CATT)

PROJECT
585

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Synthetic Environment Core (SE Core) Integration (includes OOS Integration)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
Mission Rehearsal Capability/Enhanced Image Generator (IG)	2Q - 4Q	1Q - 4Q	1Q - 4Q					
Required Interoperability With Other Combined Arms Simulators	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Life Cycle Baseline Enhancements to the Infrastructure & Technology Obsolescence	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Software Engineering Environment Enhancement (SEE)	3Q - 4Q	1Q - 4Q						
Classified Operations	1Q - 4Q	1Q - 4Q						
Armed Reconnaissance Helicopter Development		2Q - 4Q	1Q - 4Q	1Q - 2Q				
Gunner Chief Crew Station		2Q - 4Q	1Q - 2Q					
Longbow Block III		2Q - 4Q	1Q - 2Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604783A - JOINT NETWORK MANAGEMENT SYSTEM**	**363**

COST (In Thousands)		FY 2006 Actual	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
363	JOINT NETWORK MANAGEMENT SYSTEM	4695	5129	2786	679						13289

A. Mission Description and Budget Item Justification: This program element supports the Joint Network Management System (JNMS) RDTE development effort. The JNMS is a Combatant Commander and Commander, Joint Task Forces (CJTF), joint communications planning and management tool. JNMS is an automated software system. It will provide communication planners with a common set of tools to conduct high level planning (war planning), detailed planning and engineering, monitoring, control and reconfiguration, spectrum planning and management, and security of communications and data systems used to support a Joint Task Force (JTF). These systems include circuit switches, data switches, message switches, single channel networks, transmission systems and satellite systems. It will promote force level situational awareness; provide enhanced flexibility to support the commander's intent; improve management of scarce spectrum resources; and provide increased security of these critical systems and networks. This development effort entails development of the JNMS architecture, software development and integration of Government-Off-the-Shelf and Commercial-Off-the Shelf software, functional and operational testing, and development of Integrated Logistics Support data and documentation. Multiple software baselines are to be developed with the first increment to provide base capability to the user, with subsequent baselines each providing additional functionality and capability.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Software Development (System Design, Software Integration, and Functional Qualification Testing) for Baseline Build 1.4/1.5	4695	450		
Software Development (System Design, Software Integration, and Functional Qualification Testing) for Baseline 1.5		4679	2786	679
Total	4695	5129	2786	679

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	5019	5187	2892	829
Current BES/President's Budget (FY 2008/2009)	4695	5129	2786	679
Total Adjustments	-324	-58	-106	-150
Congressional Program Reductions		-20		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-324	-38		
SBIR/STTR Transfer				
Adjustments to Budget Years			-106	-150

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
B95700 JOINT NETWORK MGT SYSTEM	10885	8246	10745	11132	10007				Continuing	Continuing

Comment:

D. Acquisition Strategy TRADOC approved Revision 2 to the JNMS Operational Requirements Document (ORD)on 16 May 00. Milestone A/B approval led to two contract awards to SAIC on 14 May 2001. The first contract, a cost-plus-fixed-fee (CPFF) and firm fixed price (FFP) contract, is for software integration/development, non-recurring engineering efforts, and optional hardware and software procurement for limited and full rate production quantities. This development contract provides the vehicle for the phased development of the JNMS operational baselines, combined build Key Performance Parameter (KPP) Threshold Baselines and subsequent Baselines. The second contract, a time-and-materials contract, covers tasks such as fielding, training, technical assistance, and an option for Post Deployment/Post Production Software Support (PD/PPSS). The SAIC contracts were awarded based on a competitive, best value source selection process. The Initial Operational Test and Evaluation (IOT&E) was conducted in 2QFY04. The Milestone C decision review with the Milestone Decision Authority (MDA), the Program Executive Officer, Command, Control, and Communications - Tactical (PEO C3T) was held in 3QFY04 resulting in Low Rate Initial Production (LRIP) approval. After successful development testing and a satisfactory Government Assessment, a subsequent Milestone decision review was held 2QFY05 with the MDA approving an increase in the LRIP to 35%. In the 4QFY05, a Limited User Test (LUT) was successfully conducted which supported the approval of the Full Rate Production Decision (FRPD) on 8 Dec 05 signaling entry into full production and fielding. Fieldings began 2QFY06.

The SAIC contract option for the development of software Build 2 awarded 3QFY05 has now been scheduled into several incremental releases (1.4/1.5) due to a re-prioritization of the software development based on recent Joint Staff J6 guidance. The J6 desired smaller software increments to expedite releases to enable the field to utilize the additional

capabilities sooner. Functional enhancements were added to builds 1.4 and 1.5 in order to meet the J6 guidance.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604783A - JOINT NETWORK MANAGEMENT SYSTEM

PROJECT
363

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
JNMS Software Development	CPFF	SAIC - San Diego, CA	28474	2592	2-3Q	3064	2-3Q	1193	2-3Q			Cont.	Cont.	
Hardware/Software Suites	FFP	SAIC - San Diego, CA	1972										1972	
Subtotal:			30446	2592		3064		1193				Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Integrated Logistics Support	Various	Misc	225	81	2Q	154	2Q	155	2Q			Cont.	Cont.	
Software Development Support	Various	Misc	1578	453	2Q	481	2Q	250	2Q			Cont.	Cont.	
Contractor Engineering	MIPR	Various	1713	158	1-2Q	214	1-2Q	150	2Q	150	2Q	Cont.	Cont.	
Government Engineering	MIPR	Various	4080	273	2Q	242	2Q	100	2Q	100	2Q	Cont.	Cont.	
Subtotal:			7596	965		1091		655		250		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Developmental Test Support	T&M	SAIC - San Diego, CA	1629	100	2Q	100	2Q	50	2Q			Cont.	Cont.	
Operational Test Support	T&M	Misc	5368									Cont.	Cont.	
Initial Operational Test & Evaluation (IOTE)	T&M	SAIC, San Diego CA & Piscataway,NJ	478									478	478	
Other Test Support (Cert, GA, etc)	Various	Misc		350	1-2Q	255	1-2Q	250	1-2Q	79	1-2Q	Cont.	Cont.	
Subtotal:			7475	450		355		300		79		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604783A - JOINT NETWORK MANAGEMENT SYSTEM

PROJECT
363

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	Various	Ft Monmouth, NJ	2101	545	1-4Q	476	1-4Q	485	1-4Q	350	1-4Q	Cont.	Cont.	
JNMS MITRE Support	PWD	Eatontown, NJ	612	143	2Q	143	2Q	153	2Q			Cont.	Cont.	
Subtotal:			2713	688		619		638		350		Cont.	Cont.	
Project Total Cost:			**48230**	**4695**		**5129**		**2786**		**679**		**Cont.**	**Cont.**	

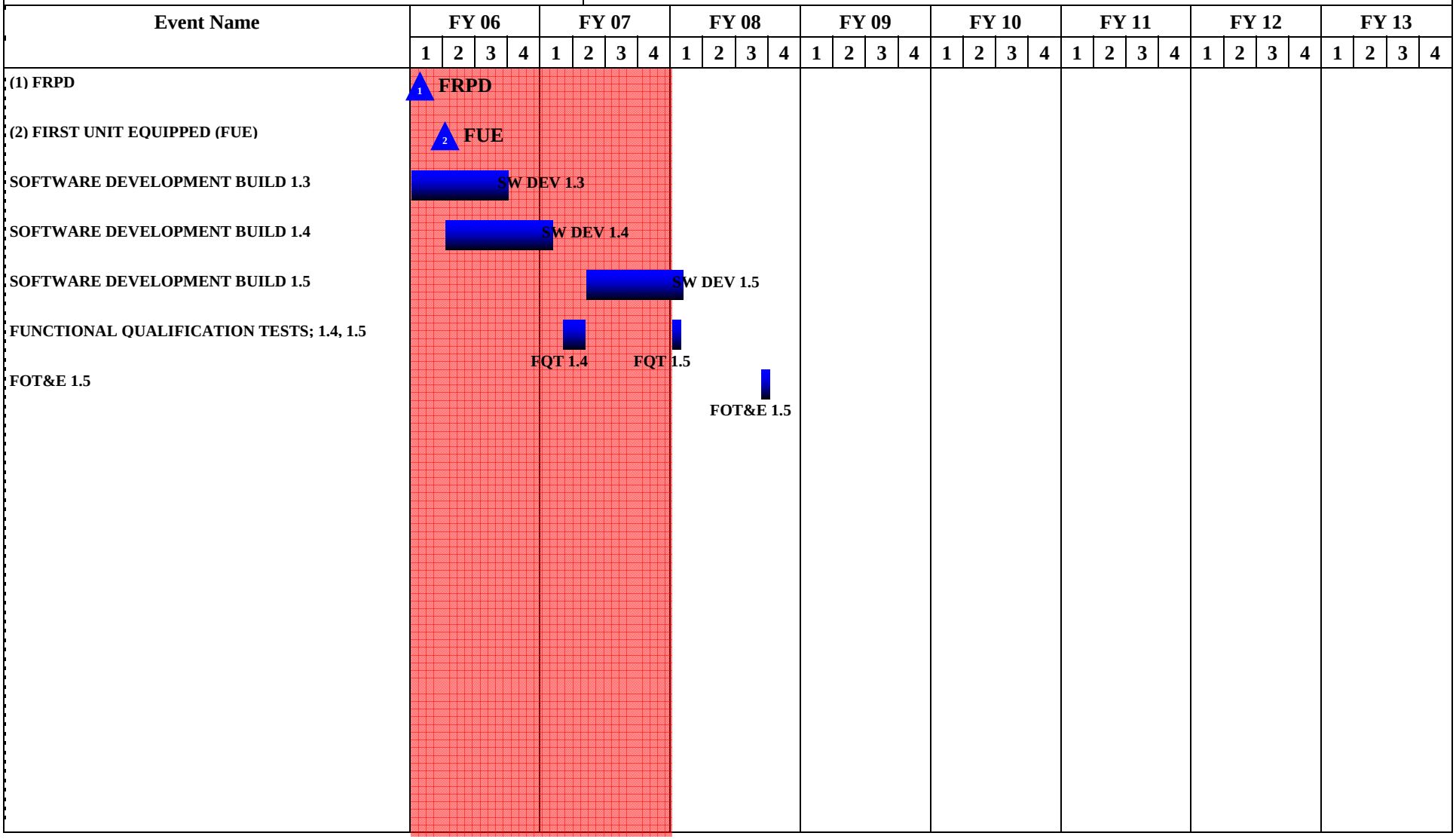
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604783A - JOINT NETWORK MANAGEMENT SYSTEM

PROJECT
363



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604783A - JOINT NETWORK MANAGEMENT SYSTEM**	**363**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FRPD	1Q							
FIRST UNIT EQUIPPED (FUE)	2Q							
SOFTWARE DEVELOPMENT BUILD 1.3	1Q - 3Q							
SOFTWARE DEVELOPMENT BUILD 1.4	2Q - 4Q	1Q						
SOFTWARE DEVELOPMENT BUILD 1.5		2Q - 4Q	1Q					
FUNCTIONAL QUALIFICATION TESTS; 1.4		1Q - 2Q						
1.5			1Q					
FOT&E 1.5			3Q					
SW Dev Build 1.3	1Q - 3Q							
Material Release 1.3	4Q							
Build 1.4 Release		3Q						
Build 1.5 Release			4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**

	COST (In Thousands)	FY 2006 Actual	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	110817	121427	55368	32344	23697	25137	10140			432559
613	MORTAR SYSTEMS	3017	1118								27430
705	Adv Precision Kill Weapon System (APKWS) - SD&ED	10736	34359								60384
AS5	Artillery Munitions Engineering Development	19207	3165								37417
AS8	XM395 PRECISION GUIDED MORTAR MUNITION (PGMM)	26933	47947								74880
S23	SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)	34034	26663	34762	11979						107438
S36	COURSE CORRECTING FUZE (CCF)	16890	8175	20606	20365	23697	25137	10140			125010

A. Mission Description and Budget Item Justification: This program element funds multiple efforts for engineering development of weapons and munitions systems.

Project 613 funds completed the RDTE effort for the Mortar Fire Control System (MFCS), a revolutionary improvement in mortar capability seamlessly linking mortar fires in the future digital battlefield in FY06. FY07 funds are for the XM932 120mm Mortar - Short Range Practice Cartridge.

Project 705, the Advanced Precision Kill Weapon System (APKWS), is a highly accurate weapon that will complement the HELLFIRE missile in precision strikes against soft point targets and provide improved accuracy over the current 2.75-inch munition used on the AH-64 Apache, the OH-58 Kiowa Warrior, and armed reconnaissance helicopters (AHRs). FY08 and all future funding was realigned to other higher priority requirements.

Project AS5 funded through FY06 the Advanced Cannon Artillery Ammunition Program (ACAAP), a product improvement program for 105mm and 155mm families of extended range artillery munitions using common airframes for various payloads. ACAAP munitions have ballistic similitude intended to meet FCS and Force Entry range and ballistic requirements. FY07 funds the Hybrid Propellant program for the Future Combat System (FCS). Hybrid Propellant is a unique propellant under development for future application in small, medium and large caliber munitions. Hybrid propellant releases energy more efficiently than conventional propellants and provides FCS munitions with the highest possible muzzle velocity for extended ranges/lethality, the prospect of lighter barrels with less recoil, extended wear characteristics and the ability to use heavier projectiles at standard muzzle velocities for greater lethality.

Project AS8 funds Increment 1 Precision Guided Mortar Munition (PGMM). PGMM is a precision strike round with advanced sensors, guidance systems and enhanced lethal mechanism technology. It will be capable of a first round defeat of high-value, hard-point targets such as bunkers, command and control centers and stationary lightly armored vehicles. FY08 and all future funding was realigned to other higher priority requirements.

Project S23, the Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM), is the initial kinetic energy component of Integrated Air & Missile Defense (IAMD), an Air and Missile Defense (AMD) Future Force system. SLAMRAAM's force protection mission is to engage the low-altitude aerial threats out to 18km.

Project S36 funds the design, development, assembly and test of the Course Correcting Fuze (CCF). CCF is currently being pursued as a solution to meet the Precision Guidance Kit (PGK) Capability Development Document requirement. The PGK corrects the ballistic trajectory of the projectile to reduce delivery errors and thus improves projectile accuracy. The PGK will effectively reduce target delivery error of conventional artillery munitions and reduce the number of projectiles required to execute a fire mission.

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	104029	130581	114850	85215
Current BES/President's Budget (FY 2008/2009)	110817	121427	55368	32344
Total Adjustments	6788	-9154	-59482	-52871
Congressional Program Reductions		-12463		
Congressional Rescissions				
Congressional Increases		4200		
Reprogrammings	6788	-891		
SBIR/STTR Transfer				
Adjustments to Budget Years			-59482	-52871

Change Summary Explanation: Funding:

FY 2007: Congressional increases for Hybrid Propellant - +$2.2M (Project AS5), 30mm Airburst Ammunition - +$1.0M (Project AS5), and XM932 120mm Mortar - Short Range Practice Cartridge (SRPC) - +$1.0M (Project 613). Congressional reductions for Course Correcting Fuze (CCF) - -$2.0M (Project S36) and Advanced Precision Kill Weapon System (APKWS) - -$10.0M (Project 705).

FY 2008: Funds realigned (-$59.5M) to higher priority requirements.

FY 2009: Funds realigned (-$52.9M) to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S23**

COST (In Thousands)		FY 2006 Actual	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
S23	SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)	34034	26663	34762	11979						107438

A. Mission Description and Budget Item Justification: Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is a critical component of the Army's future Cruise Missile Defense capability. It will be resident within Integrated Air & Missile Defense (IAMD) Task Forces and Composite Battalions. SLAMRAAM is part of the Missiles and Space (MS) System of Systems concept, consisting of a launcher platform, AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAMs), a common Army vehicle, launch rails, launcher electronics, on-board command, control, communications, and computer (C4) components, Sentinel (Enhanced Target Range and Classification) Sensor, other external Sensors, and an Integrated Fire Control Station (IFCS). SLAMRAAM is a lightweight, day or night, adverse weather, non-line-of-sight (NLOS) system for countering cruise missile (CM), fixed wing (FW), unmanned aerial vehicle (UAV), and reconnaissance, surveillance, and target acquisition (RSTA) platforms. SLAMRAAM's mission is to engage the low-altitude aerial threats in excess of 18km. It is highly mobile and able to operate in close combat areas to protect maneuver forces and critical stationary units, as well as provide cruise missile defense protection for operational and strategic-level critical assets.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Product Development	15565	11632	12532	
Contractor Support Cost	4785	3576	3852	
Test and Evaluation	1724	1288	7712	8919
Project Management	11960	10167	10666	3060
Total	34034	26663	34762	11979

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0604839A, Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)	274339	325945	372146	408182	589779	427981	436415	77399	Continuing	Continuing
SSN C50001, PATRIOT/MEADS CAP					403735	674386	1042010	1317190	Continuing	Continuing
PE 0102419A, Proj E55, JLENS	99851	242781	481251	353983	337464	320787	182528		Continuing	Continuing
SSN BZ0525, JLENS Production						445850	223550	395200	Continuing	Continuing
SSN C81001, SLAMRAAM Production	18825			65506	118124	76747	61850	61850	Continuing	Continuing
PE 0604820A, Proj E10, SENTINEL	4775	2499	7067						Continuing	Continuing
PE 0603327A, Proj E88, Integrated Fire Control AMD	23662	41249							Continuing	Continuing

PE 0303327A, Proj S34, AMD System of System Engineering and Integration	2684		138399	114587	81636	37876	5238		Continuing	Continuing

Comment: This PE is an integral part of the Missile and Space Integrated Air and Missile Defense (IAMD) Program including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy System Development and Demonstration (SDD) contract award in 2nd Quarter FY04. SDD is an ongoing effort that will result in completion of IOT&E, followed by a First Unit Equipped (FUE).

ARMY RDT&E COST ANALYSIS (R3)

February 2007

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 2006 Cost	FY 2006 Award Date	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
Contractor Hardware/Software Development	CPIF	Raytheon, Tewksbury, MA	67087	15565	1-3Q	11632	1-3Q	12532	1-3Q			Cont.	Cont.	Cont.
Government Prototype Manufacturing (GFE)	N/A	SFAE-MSLS-CMDS	3625									Cont.	Cont.	Cont.
Subtotal:			70712	15565		11632		12532				Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Contractor Support Costs	CPIF	Raytheon, Tewksbury, MA	1777	4785	1Q	3576	1Q	3852	1Q			Cont.	Cont.	Cont.
Subtotal:			1777	4785		3576		3852				Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government Modeling & Simulation	N/A	CMDS (SFAE-MSLS-CMDS) Redstone Arsenal, AL	6600		1-2Q		1-2Q					Cont.	Cont.	Cont.
Government System Test & Evaluation	N/A	CMDS (SFAE-MSLS-CMDS) Redstone Arsenal, AL	5136		1-2Q		1-2Q	6324	1-2Q	8919	1-2Q	Cont.	Cont.	Cont.
Contractor System Test & Evaluation	CPIF	Raytheon, Tewksbury, MA	2731	1724	1Q	1288	1Q	1388	1Q			Cont.	Cont.	Cont.
Subtotal:			14467	1724		1288		7712		8919		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

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 2006 Cost	FY 2006 Award Date	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
Contractor SE/PM	CPIF	Raytheon, Tewksbury, MA	7413	9474	1Q	7080	1Q	7628	1Q			Cont.	Cont.	Cont.
Government SE/PM	N/A	CMDS (SFAE-MSLS-CMDS) Redstone Arsenal, AL	6493	2486	1-2Q	3087	1-2Q	3038	1-2Q	3060	1-2Q	Cont.	Cont.	Cont.
Subtotal:			13906	11960		10167		10666		3060		Cont.	Cont.	Cont.
Remarks: Government Modeling & Simulation included in Test & Evaluation.														
Project Total Cost:			**100862**	**34034**		**26663**		**34762**		**11979**		**Cont.**	**Cont.**	**Cont.**

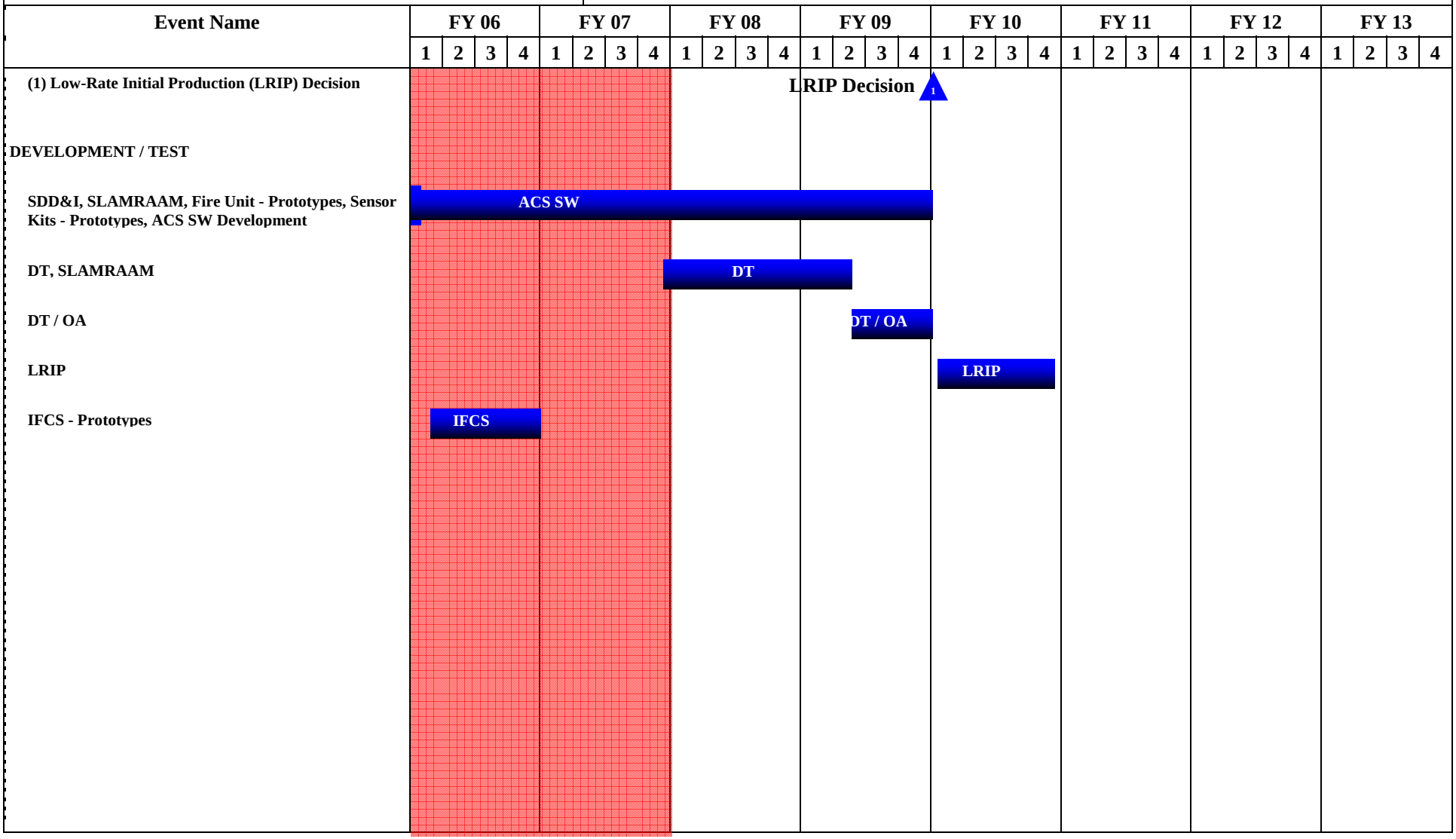
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
S23



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S23**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MAJOR MILESTONES	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Low-Rate Initial Production (LRIP) Decision					1Q			
DEVELOPMENT / TEST								
SDD&I, SLAMRAAM	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Fire Unit - Prototypes	1Q - 4Q	1Q - 2Q						
Sensor Kits - Prototypes	3Q - 4Q	1Q - 3Q						
ACS SW Development	1Q - 4Q	1Q - 4Q	1Q - 2Q					
DT, SLAMRAAM		4Q	1Q - 4Q	1Q - 2Q				
DT / OA				2Q - 4Q				
LRIP					1Q - 4Q			
IFCS - Prototypes	1Q - 4Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**

COST (In Thousands)		FY 2006 Actual	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
S36	COURSE CORRECTING FUZE (CCF)	16890	8175	20606	20365	23697	25137	10140			125010

A. Mission Description and Budget Item Justification: The Course Correcting Fuze is currently being pursued as a solution to meet the Precision Guidance Kit (PGK) Capability Development Document requirement. The PGK is adaptable to existing stockpile and future conventional cannon artillery projectiles. The PGK corrects the ballistic trajectory of the projectile to reduce delivery errors and thus improves projectile accuracy. The PGK will effectively reduce target delivery error of conventional artillery munitions and reduce the number of projectiles required to execute a fire mission. The PGK will benefit 155mm projectiles as well as the family of 105mm projectiles. The increase in effectiveness offered by the PGK gives commanders the operational capability to defeat more targets with the same basic load, while reducing the logistical burden associated with current mission requirements.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Executed Milestone A	200			
Execute Milestone B Requirements and initiate MS B Increment 2	125	125		401
Conducted Technology Development and Demonstration	9460			
Conduct Systems Development and Demonstration - Increment 1 and Increment 2		4335	16250	14000
Engineering Support	5785	2965	3356	3964
Testing	1320	520	1000	2000
Small Business Innovative Research/Small Business Technology Transfer Programs		230		
Total	16890	8175	20606	20365

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
E99250 Course Correcting Fuze (CCF)				15765	20274	29769	35719	36013	Continuing	Continuing

Comment:

C. Acquisition Strategy Acquisition Strategy/Acquisition Plan was approved by Milestone Decision Authority (MDA) on 20 October 2005. The Army approved Milestone A (MS A) and awarded Technology Development (TD) contracts to ATK and BAE in FY06; each TD contract included options for Systems Development and Demonstration (SD&D) and 3 years of production. A Technology Development demonstration will be conducted in 2QFY07 to satisfy the MS A Exit Criteria. A down select to one contractor

will occur after the conclusion of the TD Demonstration.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
S36

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
PGK TD Contract	CPIF	ATK, Minneapolis, MN		3978	3Q								3978	
PGK TD Contract	CPIF	BAE, Minneapolis, MN		2978	3Q								2978	
PGK SDD Contract	CPIF/Option	TBS				4285	2Q	16200		14000		Cont.	Cont.	
Subtotal:				6956		4285		16200		14000		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Product Manager's Office	In House	PM CAS, Picatinny NJ		320	1-4Q	400	1-4Q	500	1-4Q	600	1-4Q	Cont.	Cont.	
Government IPT Support	MIPR	ARDEC, Picatinny NJ		5715	1-3Q	2690	1-3Q	2856	1-3Q	3364	1-3Q	Cont.	Cont.	
Miscellaneous Support	Various	Various		2504	1-4Q					351	1-3Q	Cont.	Cont.	
Subtotal:				8539		3090		3356		4315		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Component Air Gun/Railgun Testing	MIPR	ARDEC, Picatinny, NJ		150	2-3Q	100	2-3Q					Cont.	Cont.	
System Demonstration	MIPR	Yuma Proving Ground, Yuma, AZ		1170	4Q	295	2Q	1000	2Q	2000	2Q	Cont.	Cont.	
Safety Testing	MIPR	Yuma Proving Ground, Yuma, AZ				125	4Q					Cont.	Cont.	
Subtotal:				1320		520		1000		2000		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

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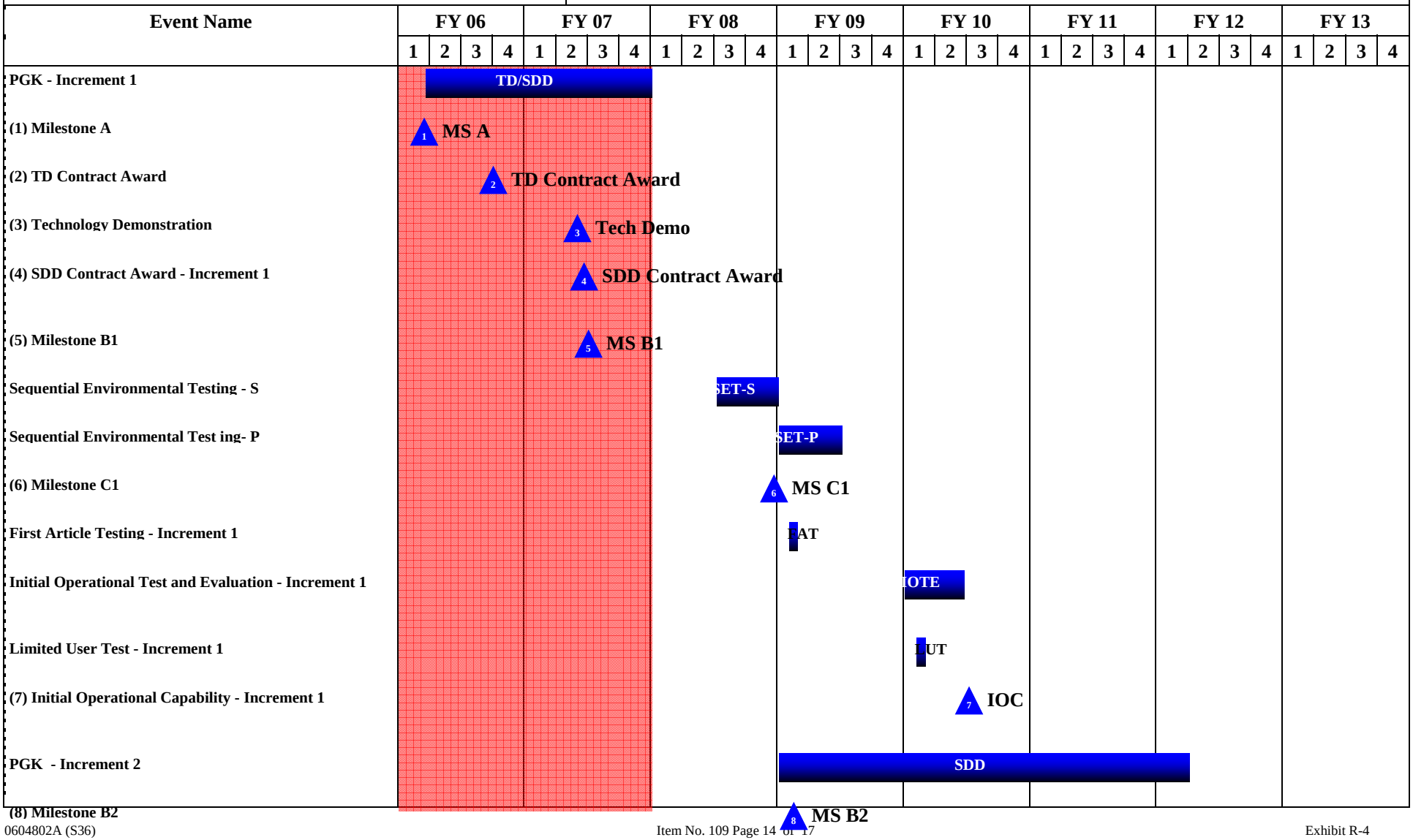
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PGK Management Support Contract	FFP	Alion, Rome, NY		75	2Q	50	2Q	50	2Q	50	2Q	Cont.	Cont.	
SBIR/STTR						230							230	
Subtotal:				75		280		50		50		Cont.	Cont.	
Project Total Cost:				**16890**		**8175**		**20606**		**20365**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**



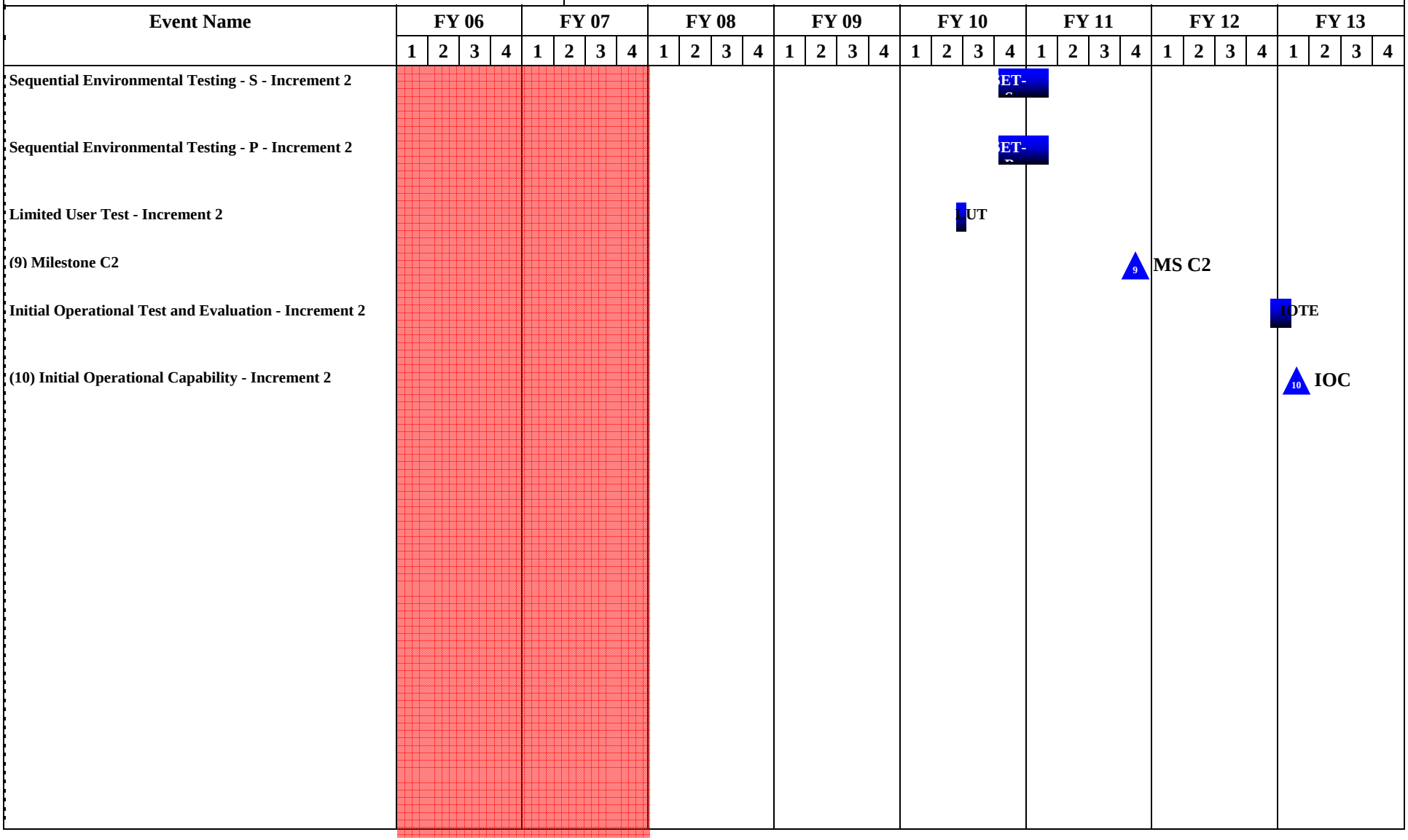
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
S36



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PGK - Increment 1	1Q - 4Q	1Q - 4Q						
Milestone A	1Q							
TD Contract Award	3Q							
Technology Demonstration		2Q						
SDD Contract Award - Increment 1		2Q						
Milestone B1		2Q						
Sequential Environmental Testing - S			3Q - 4Q					
Sequential Environmental Test ing- P				1Q - 2Q				
Milestone C1			4Q					
First Article Testing - Increment 1				1Q				
Initial Operational Test and Evaluation - Increment 1				4Q	1Q - 2Q			
Limited User Test - Increment 1					1Q			
Initial Operational Capability - Increment 1					2Q			
PGK - Increment 2				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Milestone B2				1Q				
Sequential Environmental Testing - S - Increment 2					4Q	1Q		
Sequential Environmental Testing - P - Increment 2					4Q	1Q		
Limited User Test - Increment 2					2Q			
Milestone C2						4Q		
Initial Operational Test and Evaluation - Increment 2							4Q	1Q
Initial Operational Capability - Increment 2								1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**

	COST (In Thousands)	FY 2006 Actual	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	14790	42330	45009	35971	47967	51896	57894	49424	Continuing	Continuing
194	ENGINE DRIVEN GEN ED	3900	16826	8696	4402	1399	1400	2375	1552	Continuing	Continuing
H01	COMBAT ENGINEER EQ ED	4956	4831	3386	3298	10722	10742	9844	8037		55816
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	956	2871	9331	12337	12237	12616	15044	17037		82429
H14	MATERIALS HANDLING EQUIPMENT - ED	479	511	414	457	517	992	1106	1257		6202
L39	Field Sustainment Support ED	1848	8357	7489	2107	4664	6690	6619	6776		44550
L41	WATER AND PETROLEUM DISTRIBUTION - ED	2651	7218	9012	5091	3359	3383	2049	3965		44746
L42	CAMOUFLAGE SYSTEM ED			248	250	1584	1375	2600	1700		9293
L43	ENGINEER SUPPORT EQUIPMENT - ED		307	513	517	6622	4967	10000	5100		28026
L46	Maintenance Support Equipment		1409	1455	1523	3363	8231	8257	4000		28238
L47	IMPROVED ENVIRONMENTAL CONTROL UNITS ED			4465	5989	3500	1500				15454

A. Mission Description and Budget Item Justification: This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	14150	40301	36791	44482
Current BES/President's Budget (FY 2008/2009)	14790	42330	45009	35971
Total Adjustments	640	2029	8218	-8511
Congressional Program Reductions	-217	-162		
Congressional Rescissions	-143			
Congressional Increases	1000	2500		
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years		-309	8218	-8511

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**194**

COST (In Thousands)	FY 2006 Actual	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
194 ENGINE DRIVEN GEN ED	3900	16826	8696	4402	1399	1400	2375	1552	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the Mobile Electric Power (MEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for All Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kW to 920 kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY08 and FY09 will fund completion of Advanced Medium Mobile Power Sources (AMMPS) pre-production tests, development tests and operational tests. Complete type classification, materiel release and other actions required for Milestone C production award.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Initiated a downselect to 1 contractor to award Phase II for Advanced Medium Mobile Power Sources (AMMPS).	3900			
FY07: Award Phase II System Development and Demonstration (SDD) contract to build 120 pre-production sets for operational testing and developmental testing in FY08 for AMMPS and continue engineering and logistics data deliverables		13874		
FY07: Conduct product enhancement efforts to extend service life and minimize operator maintenance requirements for the 2 kW Military Tactical Generator (MTG).		1500		
FY07: Conduct market research analysis and user requirements study to better define acquisition strategy for the 9, 18, 36K Improved Environmental Control Unit (IECU)		1000		
FY07: Small Business Innovative Research (SBIR)		404		
FY07: Small Business Technology Transfer Research (STTR)		48		
FY08: Complete AMMPS pre-production test sets and begin Developmental Test (DT). Continue engineering and logistics data deliverables.			8696	
FY09: Complete DT and begin Operational Test (OT) for AMMPS. Complete Type Classification (TC), Materiel Release (MR) and other actions required for Milestone C Production Award, e.g.,TM's, sustainment test, fielding plans.				4402
Total	3900	16826	8696	4402

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0603804A - Logistics and Engineer Equipment - Adv	1763	2030	3171	3390	2926	2942	1642	740	Continuing	Continuing

Dev G11										
0604804A - Logistics and Engineer Equipment - Eng Dev L47			4465	5989	3500	1500				15454
OPA3, MA9800, Generators and Associated Equipment	65816	90789	92863	159816	142716	131504	131767	23601	Continuing	Continuing

Comment:

C. Acquisition Strategy Perform Developmental Testing (DT)/Operational Testing (OT) for the AMMPS family; perform phase II contract award through a down select. Developmental test and evaluation of technologies that transition into procurement after Milestone C.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
194

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AMMPS(5-60kW)	CPFF	Various	12928	3564	2Q	13524	3-4Q	3494	2Q	700	2Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	CPFF	Various	1800			1500	2Q						3300	
IECU	CPFF	Various				613	2-4Q					Cont.	Cont.	
Subtotal:			14728	3564		15637		3494		700		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	2175	100	1Q			400	1Q	400	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	In-house	CECOM, Ft Belvoir, VA	65										65	
IECU		CECOM, Ft Belvoir, VA/				372	2-4Q					Cont.	Cont.	
Subtotal:			2240	100		372		400		400		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AMMPS(5-60kW)	MIPR	Various	1878			500	2Q	4500	1Q	3000	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	MIPR	CECOM, Ft Beloir, VA	216										216	
IECU														
Subtotal:			2094			500		4500		3000		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
194

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	1733	236	1-4Q	302	1-4Q	302	1-4Q	302	1-4Q	Cont.	Cont.	
Follow-on 2kW Improvement Program														
IECU		CECOM, Ft Belvoir, VA				15	1-4Q					Cont.	Cont.	
Subtotal:			1733	236		317		302		302		Cont.	Cont.	
Project Total Cost:			**20795**	**3900**		**16826**		**8696**		**4402**		**Cont.**	**Cont.**	

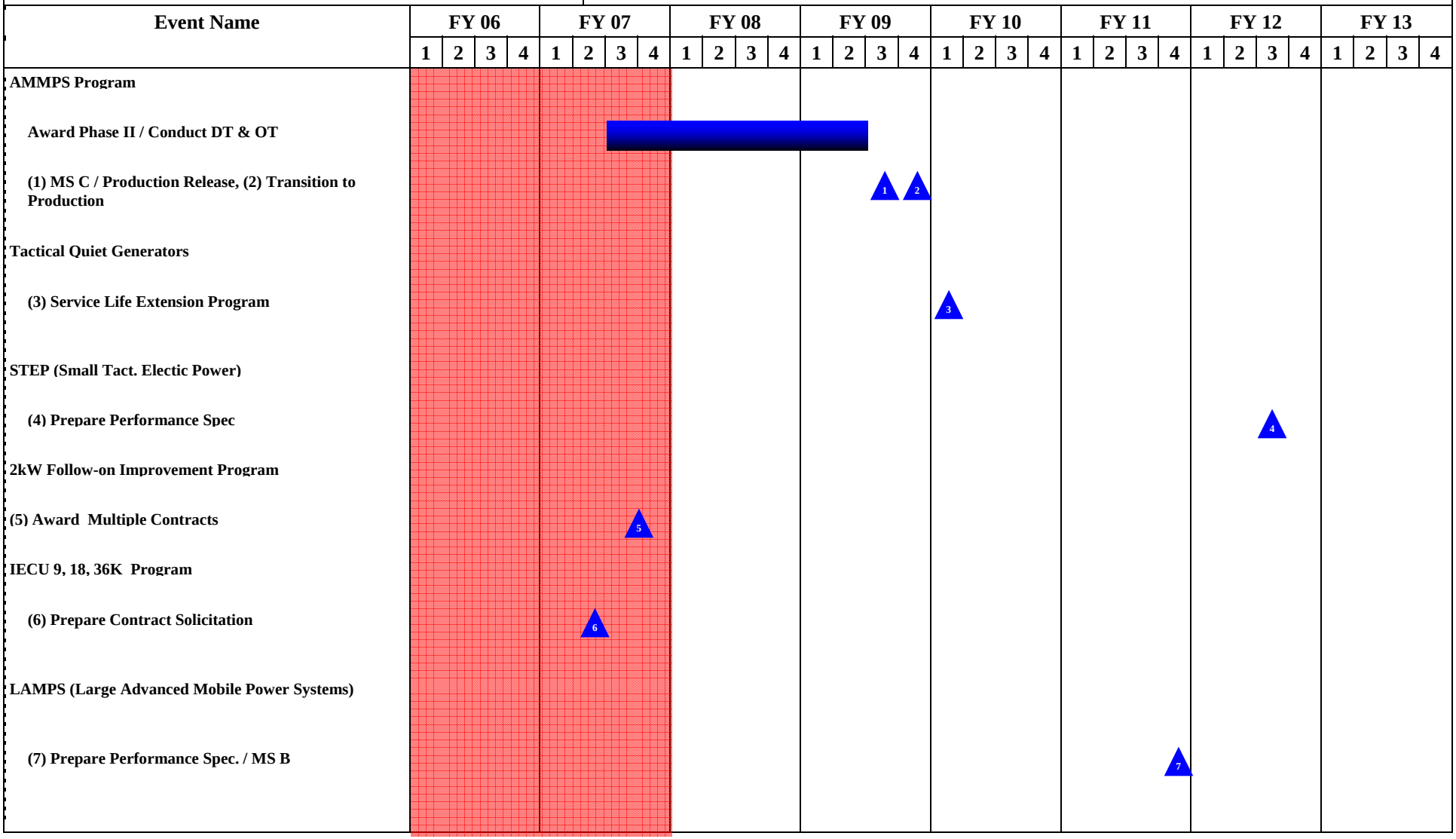
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
194



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**194**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
AMMPS Program	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Award Phase II / Conduct DT & OT		2Q - 4Q	1Q - 4Q	1Q - 2Q				
MS C / Production Release			1Q - 3Q	4Q				
Transition to Production				4Q				
Tactical Quiet Generators								
Service Life Extension Program					1Q - 4Q	1Q - 4Q		
STEP (Small Tact. Electic Power)								
Prepare Performance Spec							3Q - 4Q	1Q - 3Q
2kW Follow-on Improvement Program								
Award Multiple Contracts		3Q - 4Q	1Q - 3Q					
IECU 9, 18, 36K Program								
Prepare Contract Solicitation		2Q - 4Q						
LAMPS (Large Advanced Mobile Power Systems)	1Q							
Prepare Performance Spec. / MS B						4Q	1Q - 4Q	1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H01**

COST (In Thousands)	FY 2006 Actual	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
H01 COMBAT ENGINEER EQ ED	4956	4831	3386	3298	10722	10742	9844	8037		55816

A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration of military Construction Equipment used in support of horizontal and vertical engineer construction tasks; required in order to develop a variety of enabling systems that will support and improve mobility for Engineers in the Brigade Combat Teams (BCT) and Combat Support Brigades (CSB) modularity forces. This project also supports the SDD of enabling systems to meet critical capabilities of joint interdependence through Air and Ground (A/G) Line of Communication (LOC) and Rapid Tactical Earthmoving (RTE) repair and construction which increase the operational reach of modularity forces. The BCT and CSB systems include: High Mobility Engineer Excavators (HMEE, Types I and III); Scrapers, Scoop Loaders, Skid Steer Loaders, Deployable Universal Combat Earthmover (DEUCE), Hydraulic Excavators (HYEX), Dozers and Graders.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-FY09: Conducts market research and update specs for future engineer transformation.	20	50	20	20
FY06-FY09: Continues development of engineer and acquisition documents required for Milestone Decisions.	20	475	20	20
FY06-FY09: Conducts Test and Evaluation of future engineer equipment.	135	460		150
FY06-FY07: Design armor kits for Construction Equipment.	566	1200	1686	
FY06: Conducts feasibility studies for armor on Construction Equipment.	100			
FY06-FY08: Conducts Armor Test and Evaluation for Construction Equipment Systems	4115	1400	1660	
FY07: Initiates SDD of systems enabling A/G LOC Repair and Construction capabilities				
FY07: Productivity analysis of commercial tactic, techniques and procedures (TTP) for load and haul.		1110		
FY09: Development of Robotics Research				3108
FY07: SBIR/STTR		136		
Total	4956	4831	3386	3298

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, R05900, High Mobility Engineer Excavator I	5310	40815	23760	24475	25210	25965			Continuing	Continuing
OPA3, R05910, High Mobility Engineer Excavator III	5257	8239	14040	14465	14250	500				56751
OPA3, R03801, Grader, Mtzd, Hvy		13886	1170	15550	23646	25897			Continuing	Continuing
OPA3, R14200, Scraper, Elevating SP 11 CY Min Sec		10407	19440	19797	15643					65287

OPA3, M06400, Loader, Scoop Type, 2 1/2 CU YD			6070	6479	6528	6633	6761	6815		39286
OPA3, R03900, Loader, Scoop Type, 4 - 5 CU YD	13058	17971	12772	12826	10240	500	250	250		67867
OPA3, X01500, Hydraulic Excavator		5065	3371	5896	6059	6486				26877
OPA3, R03300, Roller, Vibratory, Self-Propelled (CCE)										
OPA3, M08100, Plant, Asphalt Mixing				7960	14400	14828				37188
OPA3, M06100, Tractor Full Tracked, Med T-9	4656	4780	6000	6180	6365	6560	17000	24700		76241

Comment:

C. Acquisition Strategy Conduct research, development, and investigations on future Construction Equipment (CE) and identify the pathforward for programs to be transitioned for PEO program management. Identify technical advancements that can improve reliablity, availability, and maintainability and reduce the logistical footprints for future CE equipment.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H01

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Non-split rim wheel development	FFP	Hutchinson Tire, Hutchinson, KS	400										400	400
Complete SDD Contracts for HMEE Type I	FFP	ADI, Australia; JCB, Pooler, GA	4047										4047	4047
Market Research, Studies, Update Specs for future engineer	various	multiple activities	1333	20	1-4Q	50	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Continue development of engineer and acquisition documents	various	multiple activities	1107	20	1-4Q	440	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Design armor kits for Construction Equipment	various	multiple activities	1324	424	1-4Q	1200	1-4Q	1686	1-2Q			Cont.	Cont.	Cont.
Conduct feasibility studies to armor Construction Equipment Systems	various	multiple activities		100	2-4Q							Cont.	Cont.	Cont.
Initiate SDD for A/G LOC Repair and Construction	TBD	TBD										Cont.	Cont.	Cont.
Development of Robotic Research for Construction Equipment										3108	1-4Q		3108	
Armor Development for HMEE I Light & Heavy Loaders and HYEX		TBD		4115	1-2Q	1400	1-2Q	1660	2-4Q				7175	
Subtotal:			8211	4679		3090		3386		3148		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	TACOM & TARDEC, Warren, MI	10580									Cont.	Cont.	Cont.
Engineering Operational Integrator Support	MIPR	DA/Pentagon, Washington, DC	156										156	156
Construction Equipment Lease	MIPR	DA/Pentagon,	200										200	400

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H01

Study		Washington, DC											
Subtotal:			10936								Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
HMEE Type I (6 prototypes)	MIPR	ATEC, Aberdeen, MD	784										784	784
Armor Tests for IHMEE & DEUCE	MIPR	ATEC, Aberdeen, MD	200	142	1-4Q		1-4Q		1-4Q			Cont.	Cont.	Cont.
Future Engineer Equipment (various)	MIPR	ATEC, Aberdeen, MD	2152	135	1-4Q	495	1-4Q			150	1-4Q	Cont.	Cont.	Cont.
Productivity analysis of TTP	various	multiple				1110	2-4Q						1110	1500
Subtotal:			3136	277		1605				150		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Mgt	In-house	PM CE/MHE, Warren, MI	762									Cont.	Cont.	Cont.
SBIR/STTR						136	1-2Q						136	
Subtotal:			762			136						Cont.	Cont.	Cont.

Project Total Cost:	**23045**	**4956**		**4831**		**3386**		**3298**		**Cont.**	**Cont.**	**Cont.**

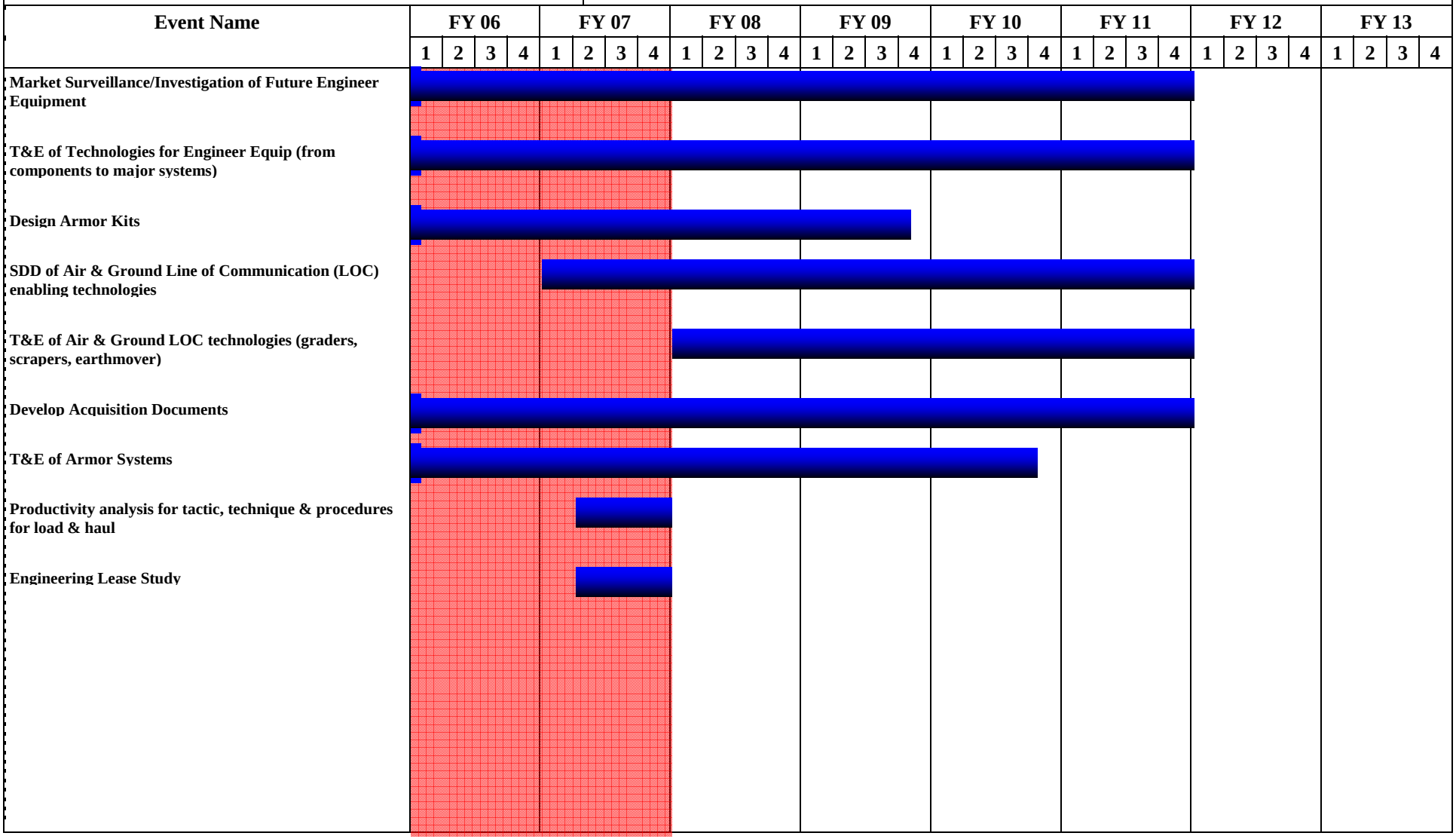
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H01



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H01

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Market Surveillance/Investigation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
T&E of Technologies for Engineer Equip (from components to major systems)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
HMEE Source Selection								
HMEE System Demonstration Contract Award (2 contractors)								
HMEE System Demonstration Testing (PPT & LUT)								
HMEE MS C/ TC Generic								
Design Armor Kits	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
SDD of Air & Ground Line of Communication (LOC) enabling technologies		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
T&E of Air & Ground LOC technologies (graders, scrapers, earthmover)			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Develop Acquisition Documents	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
T&E of Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Milestone C and LRIP Approval for HMEE I								
Milestone C and LRIP Approval for HMEE III								
Productivity analysis for tactic, technique & procedures for load & haul		2Q - 4Q						
Engineering Lease Study		2Q - 4Q						
Market Surveillance/Investigation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Test and Evaluation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Design Armor Kits for various Construction Equipment systems	1Q - 4Q	1Q - 4Q	1Q - 4Q					

Air & Ground Line Of Communication (LOC) SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Air & Ground LOC Test & Evaluation		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Develop Acquisition Documents	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
T&E Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Productivity analysis for tactic, technique & procedure for load & haul	2Q - 4Q							
Engineering Lease Study	2Q - 4Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H02**

COST (In Thousands)		FY 2006 Actual	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
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	956	2871	9331	12337	12237	12616	15044	17037		82429

A. Mission Description and Budget Item Justification: This project supports the engineering, system development and demonstration, and transition to procurement of Future Force Tactical Bridge Systems. Efforts supported include: Assessment of the Rapidly Emplaced Bridging System (REBS) for the Stryker Brigade Combat Team (SBCT) the development, integration and testing of forth-six meter capability for the Dry Support Bridge (DSB). Also included: is the development, integration and testing for float capabilities for the Dry Support Bridge (DSB, development, integration and testing an electronically controlled replacement engine for the Bridge Erection Boat (BEB), a remote controlled automatic launch for the REBS and finally integrate and test the REBS on an FCS chassis.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Continues Development, integration, and test for the DSB 46 meter bridge.	204			
FY06-FY09: Continues Development, integration, and test for the DSB Float Bridge.	247	2790	6331	4200
FY06: Arctic Kit development for the Rapidly Emplaced Bridging	505			
FY08-FY09: BEB Electronically Controlled Engine			3000	2000
FY09: Development, integration and testing of REBS Improved Bridge				2137
FY09: Development, integration and testing of REBS Auto Launch-Retrieve				2000
FY09: Integrate REBS bridge on FCS chassis.				2000
SBIR/STTR		81		
Total	956	2871	9331	12337

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MX0100, Tactical Bridge	25789	69328	50443	68572	60833	61351	63487	59487	Continuing	Continuing
OPA3, MA8890, Tactical Bridging, Float Ribbon	7697	150671	74785	105627	85999	76451	68500	52800	Continuing	Continuing

Comment:

C. Acquisition Strategy Limited RDT&E effort to support testing and follow-on production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H02

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
DSB 46 meter bridge	SS-CPFF	WFEL, Stockport, England	662	204	1Q							Cont.	Cont.	1366
DSB float bridge	SS-CPFF	WFEL, Stockport, England		237	2Q	2780	1Q	6321	1Q	4200		6000	19538	8944
REBS Artic Kit		GDSBS, Germany, DE		505									505	505
BEB Elect Controlled Engine		FBM Babcock Marine Ltd, United Kingdom					1Q	3000	1Q	2000			5000	
REBS Improved Bridge		GDSBS, Germany, DE							1Q	2127			2127	
REBS Auto Launch-Retrieve		GDSBS, Germany, DE							1Q	2000			2000	
REBS Bridge on FCS Chassis		GDSBS, Germany, DE							1Q	2000			2000	
Subtotal:			662	946		2780		9321		12327		Cont.	Cont.	10815

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Other Government Agencies	MIPR	TACOM, Warren, MI--Various	120	10	2Q	10	1Q	10	1Q	10			160	
Subtotal:			120	10		10		10		10			160	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
REBS OT	MIPR	HQ OTC, Ft Hood, TX	2624											1714
DSB 46 meter Bridge	SS-CPFF	WFEL, Stockport, UK	246				1Q							208
Subtotal:			2870											1922

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

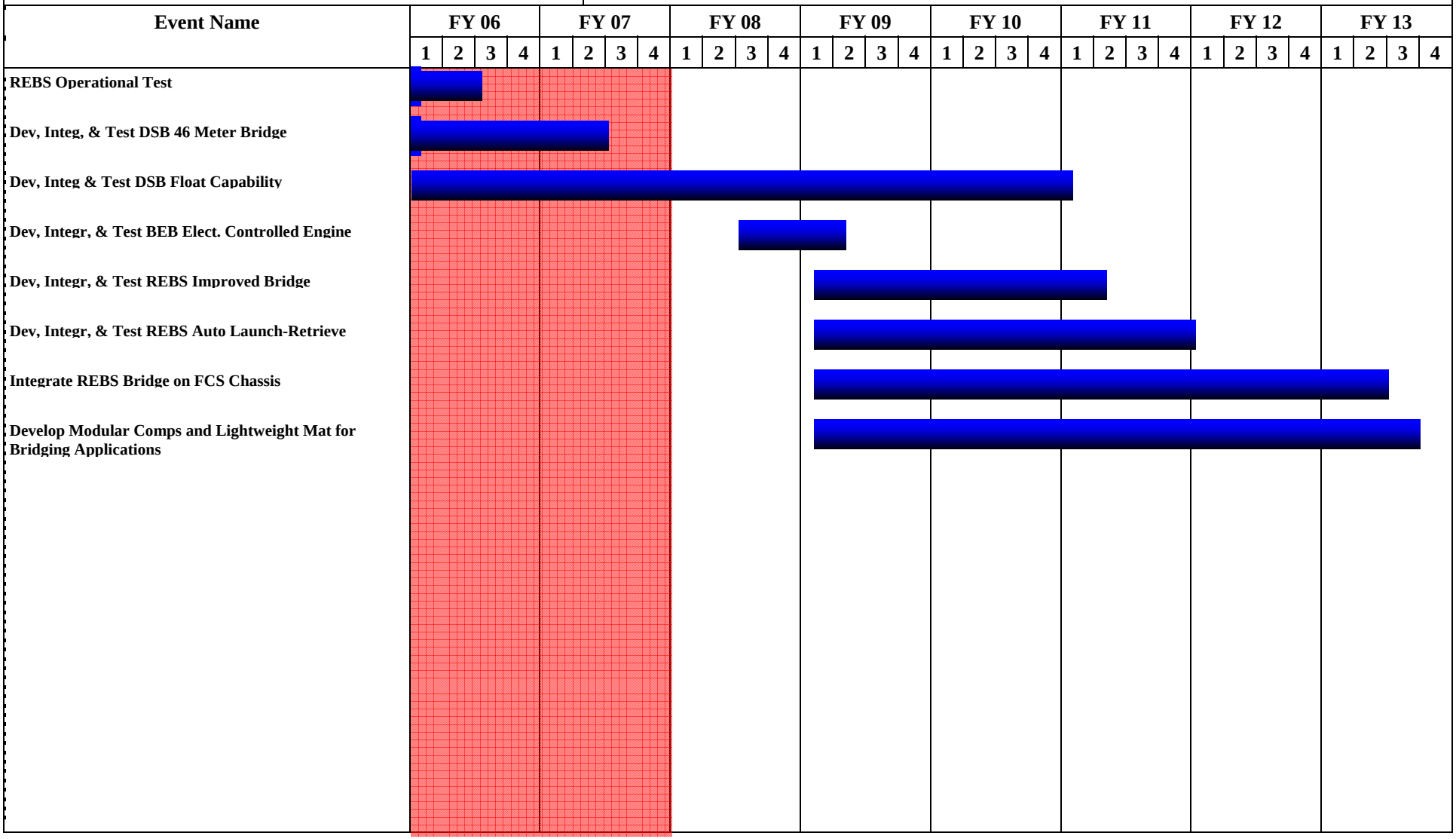
PROJECT
H02

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	NA	TACOM, Warren, MI	727										727	
SBIR/STTR						81							81	
Subtotal:			727			81							808	
Project Total Cost:			**4379**	**956**		**2871**		**9331**		**12337**		**Cont.**	**Cont.**	**12737**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H02**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H02**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
REBS Operational Test	1Q - 3Q							
Dev, Integ, & Test DSB 46 Meter Bridge	1Q - 4Q	1Q - 3Q						
Dev, Integ & Test DSB Float Capability	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		
Dev, Integr, & Test BEB Elect. Controlled Engine			3Q - 4Q	1Q - 2Q				
Dev, Integr, & Test REBS Improved Bridge				1Q - 4Q	1Q - 4Q	1Q - 2Q		
Dev, Integr, & Test REBS Auto Launch-Retrieve				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Integrate REBS Bridge on FCS Chassis				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
Develop Modular Comps and Lightweight Mat for Bridging Applications				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
REBS Operational Test								
Develop DSB 46 Meter Bridge								
Integrate and Test DSB 46 Meter Bridge								
Develop DSB Float Bridge Capability	1Q - 4Q	1Q - 4Q						
Integrate DSB Float Bridge Capability			1Q - 4Q					
Test DSB Float Bridge Capability				1Q - 4Q				
Develop BEB Electronically Controlled Engine		1Q - 3Q						
Integrate BEB Electronically Controlled Engine		4Q	1Q					
Test BEB Electronically Controlled Engine			1Q - 2Q					
Develop New REBS Improved Bridge			1Q - 3Q					
Integrate New REBS Improved Bridge			3Q - 4Q					
Test New REBS Improved Bridge				1Q - 2Q				
Develop REBS Fully Automated Launch/Retrieve			1Q - 4Q					
Integrate REBS Fully Automated Launch/Retrieve				1Q - 2Q				

Test REBS Fully Automated Launch/Retrieve				3Q - 4Q				
Integration of REBS on Future Combat System (FCS) Chassis			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Develop Modular Comps and Lightweight Material for Bridging Applications				1Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L39**

COST (In Thousands)	FY 2006 Actual	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
L39 Field Sustainment Support ED	1848	8357	7489	2107	4664	6690	6619	6776		44550

A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include cargo aerial delivery, field shelters, showers, latrines, heaters, environmental control units, mortuary affairs, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. Project supports development of tactical field systems and support equipment. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment by providing aerial delivery initiatives. These reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY 06: Completed fabrication of Mobile Integrated Remaims Collections System (MIRCS) prototypes and initiated Developmental Testing (DT). FY 07: Complete DT and conduct Operational Testing (OT). FY 08: Complete documentation and prepare for Milestone C package for MIRCS to transition into production.	1362	1911	405	
FY 06: Initiated and completed Operational Testing (OT) and obtained Milestone C for Enhanced Containerized Delivery System (ECDS).	200			
FY 06: Completed OT, obtained ECP and transition into production for Extraction Parachute Jettison System - Heavy (EPJS-H).	286			
FY 07: Procure JPADS 2K DT, test prototypes and start JPADS 2K System DT. FY 08: Complete JPADS 2K DT and OT. FY 09: Obtain JPADS 2K Milestone C and transition into production.		6211	1870	330
FY 07: Obtain Milestone B for JPADS 10K. FY 08: Refit JPADS 10K DemVal Prototypes and initiate DT. FY 09: Complete JPADS 10K DT and OT.			5214	1777
SBIR/STTR		235		
Total	1848	8357	7489	2107

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 3, M77700 Mobile Integrated Remains Collection System			9941	17925	18491	5324			Continuing	Continuing

Comment:

C. Acquisition Strategy Accelerate product development and testing to transition into production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L39

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Soldier Support Equipment	In-House	PM FSS, Natick	1431	217	1-4Q	984	1-4Q	2065	1-4Q	590	1-4Q	Cont.	Cont.	3241
Soldier Support Equipment	In-House	CECOM, FT Belvoir	1441									Cont.	Cont.	
Soldier Support Equipment	Contracts	Various	6656	1273	1-2Q	3946	1-2Q	5198	1-4Q	1454	1-4Q	Cont.	Cont.	
Subtotal:			9528	1490		4930		7263		2044		Cont.	Cont.	3241

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	712	100	1-4Q	804	1-4Q					Cont.		130
Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ, AEC	3772	200	1-4Q	2143	1-4Q					Cont.		76
Subtotal:			4484	300		2947						Cont.		206

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Project Management Support		PM FSS, Natick	386	58	1-4Q	245	1-4Q	226	1-4Q	63	1-4Q	Cont.	Cont.	
SBIR/STTR						235							235	

ARMY RDT&E COST ANALYSIS (R3)												February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604804A - Logistics and Engineer Equipment - Eng Dev**										PROJECT **L39**	
Subtotal:	386	58		480		226		63		Cont.	Cont.	
Project Total Cost:	**14398**	**1848**		**8357**		**7489**		**2107**		**Cont.**	**Cont.**	**3447**

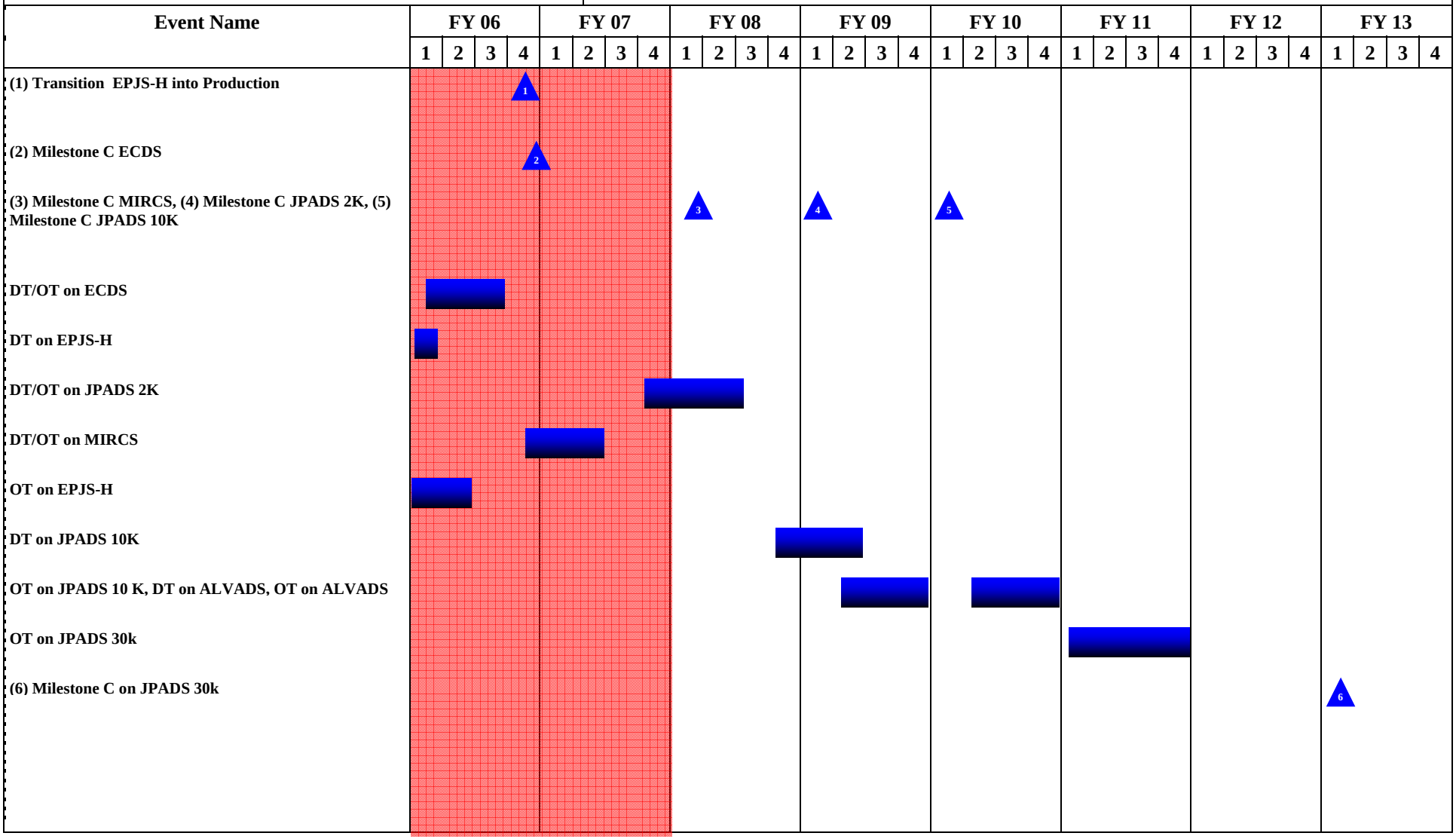
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L39



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L39**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Transition EPJS-H into Production	4Q							
Milestone C ECDS	4Q							
Milestone C MIRCS			1Q					
Milestone C JPADS 2K				1Q				
Milestone C JPADS 10K					1Q			
DT/OT on ECDS	1Q - 3Q							
DT on EPJS-H	1Q							
DT/OT on JPADS 2K		4Q	1Q - 3Q					
DT/OT on MIRCS	4Q	1Q - 2Q						
OT on EPJS-H	1Q - 2Q							
DT on JPADS 10K			4Q	1Q - 2Q				
OT on JPADS 10 K				2Q - 3Q				
DT on ALVADS				2Q - 4Q				
OT on ALVADS					2Q - 4Q			
OT on JPADS 30k						1Q - 4Q		
Milestone C on JPADS 30k								1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L41**

COST (In Thousands)		FY 2006 Actual	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
L41	WATER AND PETROLEUM DISTRIBUTION - ED	2651	7218	9012	5091	3359	3383	2049	3965		44746

A. Mission Description and Budget Item Justification: Description: This project provides all services ample supply of clean fuel and water. The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force, and must supply bulk drinking water to its soldiers. This System Development and Demonstration (SDD) program enables the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and Future Force. The mission includes receiving and transferring petroleum from trucks, ships, pipelines and permanent and temporary storage facilities; moving petroleum from storage to and within corps and division areas; fuel quality surveillance testing; and, dispensing in support of tactical operations, including rapid refueling of aircraft. The Rapidly Installed Fuel Transfer System (RIFTS) is being developed as an enhancement system for bulk fuel distribution and does not replace the Inland Petroleum Distribution System (IPDS). RIFTS can be deployed at a rate of 20-30 miles per day as compared to 2-3 miles per day for IPDS. Additionally, the mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These R&D missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve its transformation vision by providing a highly mobile and self-sustaining system in hostile theaters of operation.

Justification: FY08/09 procures modules for the Rapidly Installed Fuel Transfer System (RIFTS). RIFTS is a bulk fluid distribution system which will consist of four major modules: conduit deployment/retrieval module (Block I), automated pumping station (APS), command and control module (C2M) with leak detection capabilities, and computer based planning aid (Block II). The state-of-the-art technology in Block II will significantly enhance the Army's bulk fuel distribution capabilities over the Inland Petroleum Distribution System (IPDS). IPDS pumps, due to their age and condition, are only marginally supportable. The Block II enhancements will increase mobility by becoming smaller and more efficient and will provide fuel throughput of 850,000 gallons (850K) of liquid per day. Integration of the C2M and the computer based planning aid will increase alertness and responsiveness by providing a quick optimum route for system layout and provide real time system operational status. The leak detection capability will provide fast and precise location of leak points. Pre-planned Product Improvements (P3I) for the family of Fuel System Supply Points (FSSP) and water distribution and purification systems will be transitioned from component development efforts under Project K41. Selected components and other improvements will be integrated into the parent system and system-level tests and evaluations will be conducted. Successfully demonstrated improvements will be incorporated into the system through inserting these proven, new technologies into an on-going production by means of an Engineering Change Proposal (ECP) or into fielded system by means of a Modification Work Order (MWO) or by Modernization by Spares. Petroleum System P3I efforts will include reliability data collection and analysis to improve reliability of the Petroleum Quality Analysis System (PQAS) and procuring, integrating and testing automated tank gauging and flow metering components into a surrogate FSSP for verification of system operation, maintenance, software, and human interface requirements. Water Distribution and Purification P3I efforts will include performing engineering integration analysis and system design to incorporate in-line water quality monitoring and chlorine dosing and controls into the Tactical Water Purification System (TWPS), Lightweight Water Purifier (LWP) and Reverse Osmosis Water Purification Units (ROWPUs), integrating water monitoring equipment into a military water treatment system and perform technical and operational testing. A development contract will be awarded for Petroleum Test Kit (PTK) to design and integrate a comprehensive set of fuel quality analysis instruments and technical acceptance testing will be conducted. Production-level prototype PTKs will be fabricated, logistic and test support package will be procured, Production Prove Out Testing and Limited User Testing will be conducted, a tailored logistic demonstration will be performed, and management and procurement documentation will be prepared to support a Milestone C decision. Camel efforts will include completing technical data, preparing environmental assessments and reporting test results and assessments; performing a system-level Logistics Demonstration, and conducted Limited User Testing. These efforts will support the Full Rate Production Decision.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L41**

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block I development ,Complete production qualification testing. Prepare Milestone C program documents.	2651	3631		
FY07-FY09: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block II development, prototype design, fabrication and test.			3812	1191
FY08-09: Develop prototype Advanced Petroleum Test Kit (PTK) and conduct developmental testing and limited user testing. Prepare technical data package for production.			1200	1200
FY08: Assemble, integrate and test Up-Armored Petroleum Quality Analysis System (PQAS) on Medium Tactical Vehicle. Complete production-level drawing and instructions. Prepare for full-rate production decision.			500	
FY09: Develop PQAS with modified B-2 level testing capability.				1500
FY08: Continue improvements for the Family of Fuel System Supply Points (FSSPs). Conduct system level demonstrations and evaluations of common 600 Gallon Per Minute (GPM) Fuel/Water tactical pump and prepare technical data package and logistic support data.			1000	
FY08-09: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP)and Rverse Osmosis Water Purification Units, Hippo Sytem and the Unit Water Pod (Camel) System. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring into the TWPS, LWP, and ROWPUs and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.			1000	1200
FY08: Complete Production Verification Testing on 450 and 900 Gallon Unit Water Pod (Camel), document and verify logistical data, prepare program management documentation for type classification standard and materiel release, and conduct Milestone C. Complete system-level logistics demonstration and operational testing.		3391	1500	
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		196		
Total	2651	7218	9012	5091

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development	2601	4575	2458	442	3303	2854	4826	3000	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	8394	10530	41981	44338	37000	23715	23715	7089	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	68634	110194	34056	49954	86659	86920	13545	20834	Continuing	Continuing
OPA 3, MB6400, Quality Surveillance Equipment	3245	1288	1293	1294						7120

Comment:

C. Acquisition Strategy System Development and transitions to competitive procurement for most items under this project. Exceptions include Small Business Set Aside for the Rapidly Installed Fuel Transfer System (RIFTS).

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BUDGET ACTIVITY
5 - System Development and Demonstration

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0604804A - Logistics and Engineer Equipment - Eng Dev

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L41

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Rapidly Installed Fuel Transfer System (RIFTS) - BLOCK I	In-House	TARDEC, Warren, MI	2312	200	1-4Q	135	1Q					Cont.	Cont.	Cont.
RIFTS - BLOCK I	C-CPFF	Southwest Research Institute, San Antonio, TX	9320	1707	1Q	2500	1-4Q					Cont.	Cont.	Cont.
RIFTS - BLOCK II	C-CPFF	Southwest Research Institute, San Antonio, TX					1-4Q	3132	1Q	291	1Q	Cont.	Cont.	Cont.
RIFTS - BLOCK II	In-House	TARDEC, Warren, MI					1-4Q	220	1Q	150	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI						200	1Q	200	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	C-CPFF	TBD						700	2Q	300	1Q	Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS) Up-Armored	In-House	TARDEC, Warren, MI						50	1Q			Cont.	Cont.	Cont.
PQAS Up-Armored	MIPR	Rock Island Arsenal, Rock Island, IL						150	1Q			Cont.	Cont.	Cont.
PQAS Modified B-2	In-House	TARDEC, Warren, MI								100	1Q	Cont.	Cont.	Cont.
PQAS Modified B-2	MIPR	Rock Island Arsenal, Rock Island, IL								350	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP) Improvements P3I	In-House	TARDEC, Warren, MI						50	1Q			Cont.	Cont.	Cont.
FSSP Improvements (P3I)	C-CPFF	MTC, Dayton, OH						400	1Q			Cont.	Cont.	Cont.
Water Purification Systems Improvements (P3I)	In-House	TARDEC, Warren, MI						100	1Q	50	1Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements (P3I)	MIPR	NFESC, Port Hueneme, CA						400	1Q	150	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	In-House	TARDEC, Warren, MI				150	1Q	100	1Q			Cont.	Cont.	Cont.
Subtotal:			11632	1907		2785		5502		1591		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Rapidly Installed Fuel Transfer System (RIFTS) - Block I	In-House	TARDEC, Warren, MI				25	1Q					Cont.	Cont.	Cont.
Rapidly Installed Fuel Transfer System (RIFTS) - Block I	C-CPFF	Southwest Research Institute San Antonio, TX				290	2Q					Cont.	Cont.	Cont.
Rapidly Installed Fuel Transfer System (RIFTS) - Block II	In-House	TARDEC, Warren, MI	76					60	1Q	50	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI						50	1Q	50	1Q	Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS) Modified B-2	In-House	TARDEC, Warren, MI								50	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP)	In-House	TARDEC, Warren, MI						25	1Q			Cont.	Cont.	Cont.
Water Purification Systems Improvements (P3I)	In-House	TARDEC, Warren, MI						50	1Q	100	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	In-House	TARDEC, Warren, MI				100	1Q	75	1Q			Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	C-CPFF	TBD				1394	1Q	125	1Q			Cont.	Cont.	Cont.
Subtotal:			76			1809		385		250		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Rapidly Installed Fuel Transfer System (RIFTS) - PQT-Block I	MIPR	Yuma Proving Ground, Yuma, AZ	3624	604	2-4Q	500	2Q					Cont.	Cont.	Cont.
RIFTS (Block I) PQT	In-House	TARDEC, Warren, MI								500	2Q	Cont.	Cont.	Cont.
RIFTS (Block II)	In-House	TARDEC, Warren, MI						100	1Q	100	1Q	Cont.	Cont.	Cont.
RIFTS (Block II	MIPR	TARDEC, Warren, MI						600	4Q	600	1Q	Cont.	Cont.	Cont.

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Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI						50	1Q	50	1Q	Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS) Up-Armored	MIPR	Rock Island Arsenal, Rock Island, IL						200	1Q			Cont.	Cont.	Cont.
Fuel System Supply Point Improvements (P3I)	In-House	TARDEC, Warren, MI						75	1Q			Cont.	Cont.	Cont.
FSSP Improvements (P3I)	MIPR	Yuma Proving Ground, Yuma, AZ						450	1Q			Cont.	Cont.	Cont.
Water Purification P3I Improvements (P3I)	MIPR	NFESC, Port Hueneme, CA	332					400	1Q	900	1Q	Cont.	Cont.	Cont.
Water Purification P3I Improvements (P3I)	In-House	TARDEC, Warren, MI						50	1Q	200	1Q	Cont.	Cont.	Cont.
Water Purification P3I Improvements (P3I)	MIPR	Aberdeen Proving Ground, Aberdeen, MD								900	3Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	MIPR	Yuma Proving Ground, Yuma, AZ				1800	3Q	1200	1Q			Cont.	Cont.	Cont.
Subtotal:			3956	604		2300		3125		3250		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support-Rapidly Installed Fuel Transfer System (RIFTS)	In-House	TARDEC, Warren, MI	877	100	1Q		1Q					Cont.	Cont.	Cont.
Program Management Support - RIFTS	Contract	ICI, Dayton, OH		40	2Q	128	2Q					Cont.	Cont.	Cont.
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)						196							196	196
Subtotal:			877	140		324						Cont.	Cont.	Cont.

Remarks: Not Applicable

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L41**

Project Total Cost:	**16541**	**2651**		**7218**		**9012**		**5091**		**Cont.**	**Cont.**	**Cont.**

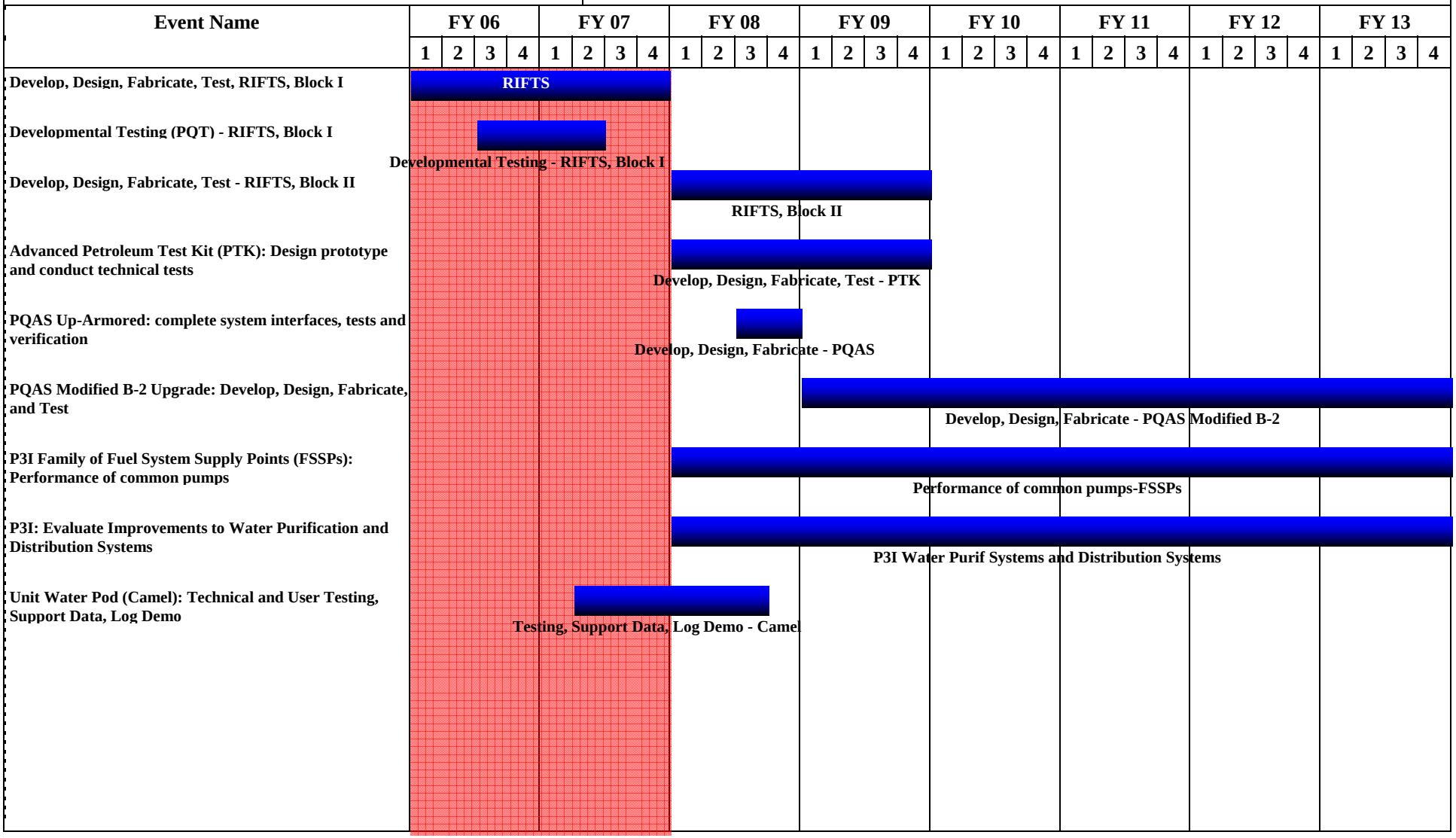
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L41



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L41**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Develop, Design, Fabricate, Test, RIFTS, Block I	1Q - 4Q	1Q - 4Q						
Developmental Testing (PQT) - RIFTS, Block I	3Q - 4Q	1Q - 2Q						
Develop, Design, Fabricate, Test - RIFTS, Block II			1Q - 4Q	1Q - 4Q				
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests			1Q - 4Q	1Q - 4Q				
PQAS Up-Armored: complete system interfaces, tests and verification			1Q - 2Q	4Q				
PQAS Modified B-2 Upgrade: Develop, Design, Fabricate, and Test				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
P3I Family of Fuel System Supply Points (FSSPs): Performance of common pumps			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
P3I: Evaluate Improvements to Water Purification and Distribution Systems			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Unit Water Pod (Camel): Technical and User Testing, Support Data, Log Demo		2Q - 4Q	1Q - 3Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L43**

COST (In Thousands)		FY 2006 Actual	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
L43	ENGINEER SUPPORT EQUIPMENT - ED		307	513	517	6622	4967	10000	5100		28026

A. Mission Description and Budget Item Justification: This project supports development, demonstration, testing and evaluation within the Engineering Support Equipment arena for the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE), Surveying, Individual Firefighter Support, Concrete and Masonry, Electrician, Plumbers, Pipefitters, Field Lighting Sets, Diving Equipment, Surface Swimmer Support Sets, Surface Supplied Diving Set, Procurement of new Technical Tools, Pioneer Support Set, and the Pioneer Land Clearing and Building Set. Funding will support the procurement of market samples and testing for Hazard ID & Marking, Pioneer Light Field Engineering, and Allied Trades. Efforts will also involve modernization of the Swimmer Support Sets and Individual Swimmer Support Sets as well as existing Sets, Kits, and Outfits (SKO's).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Conduct market investigation, develop performance specifications and conduct pre-production award effort for Diving Equipment.		150		
Procure test and Evaluate market samples of the Pioneer Support Set and Pioneer Land Clearing and Building Set.			31	
Development of the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE).			100	80
Sets, Kits, and Outfits (SKO's) optimization efforts for Expedited Modernization Initiative Program / Board Of Directors and individual tool procurement for modernizing SKO's.			12	12
Allied Trade Organization (ORG) & General Purpose (GP) Market Investigation, Engineering Effort and Develop Performance Specifications for Org/Gp Set to procure prototypes in FY08 and conduct test and evaluation in FY09.		75	200	55
Modernize the Surface Swimmer Support Set and Individual Swimmer Support Set.			100	
Update Engineering type SKO's to support Future Combat Systems/Conduct on site reviews.			70	
Procure Market Samples for Test and Evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electrician, Plumbers, Pipefitters, and Field Lighting Sets.		73		170
Description For Purchase development and procurement of test articles for the Surface Supplied Diving Set.				200
SBIR / SITR		9		
Total		307	513	517

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 3 ML5301, ENG Items Less than $5.0M	4252	11808	20099	19647	20161	30155	20900	22400	Continuing	Continuing

Comment:

C. Acquisition Strategy Progression of Programs will be developed by the completion of the Initial Capabilities Document, Capabilities Development Document, Capability Production Document, and Description For Purchase continuing into Low Rate Initial Production. Modernization and Optimization of existing tools and testing of market samples will progress from System Development and Demonstration (SDD) and transition into production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L43

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Diving equipment	MIPR/IN-HOUSE	NAVY/PM SKOT Rock Island	1455			150	1-3Q					Cont.	Cont.	Cont.
HEPPOE	IN-HOUSE	PM SKOT Rock Island						100	1-3Q	80	1-3Q	Cont.	180	Cont.
Surface Swimmer Support Set	IN-HOUSE	PM SKOT Rock Island						50	1-3Q			Cont.	50	Cont.
Individual Swimmer Support Set	IN-HOUSE	PM SKOT Rock Island						50	1-3Q			Cont.	50	Cont.
Market Samples of Engineering SKO's	IN-HOUSE	PM SKOT Rock Island				73				170	1-3Q	Cont.	Cont.	Cont.
Subtotal:			1455			223		200		250		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Allied Trade ORG & GP	IN-HOUSE	PM SKOT Rock Island				75	1-3Q	200	1-3Q	55	1-3Q	Cont.	330	Cont.
Pioneer Land Clearing and Building Erection	IN-HOUSE	PM SKOT Rock Island						10	1-3Q			Cont.	10	Cont.
Pioneer Support Set								21	1-3Q			Cont.	21	Cont.
Future Combat Systems								70	1-3Q			Cont.	70	Cont.
Subtotal:						75		301		55		Cont.	431	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Organization/General Purpose Tools	IN-HOUSE	PM SKOT Rock Island	51									Cont.	51	Cont.
Surface Supplied Diving Set	MIPR/IN-HOUSE	Navy/PM SKOT Rock Island								200	1-3Q	Cont.	200	Cont.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L43**

Subtotal:			51							200		Cont.	251	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
EMIP / BOD Procurement of Technical Tools	IN-HOUSE	PM SKOT Rock Island						12	1-3Q	12	1-3Q	Cont.	24	Cont.
SIBR/STTR						9							9	
Subtotal:						9		12		12		Cont.	33	Cont.
Project Total Cost:			**1506**			**307**		**513**		**517**		**Cont.**	**Cont.**	**Cont.**

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L43**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

COST (In Thousands)		FY 2006 Actual	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
L46	Maintenance Support Equipment		1409	1455	1523	3363	8231	8257	4000		28238

A. Mission Description and Budget Item Justification: This project supports development of Initial Capabilities Documents, Capabilities Development Document, Capability Production Document,and Description For Purchase Documents. Modernize and procure new technical tools for Sets, Kits, and Outfits (SKO's) optimization based on field feed back to include special forces, Industrial Plant Equipment (IPE), and air compressors. Funding includes efforts to update Uniform Identification Codes, Future Combat Systems, Composite Manipulation, and Machinist Tool Sets. Modernization and reconfiguration of Flatracks for the Forward Repair System, and revision of the four (4) Manned Shop Equipment Contact Maintenance Vehicle . Funding efforts include procurement of test articles from Allied Trade Configurations, and optimization of antiquated Sets, Kits, Outfits, and Tools to support modularity in a two level maintenance environment.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Optimization of antiquated SKOTs to support modularity in a 2 level maintenance environment		1145		
Standard Automotive Tool Set (SATS) future field modules and feasibility of incorporating LHS capability		225		
Modernize and update tool loads - Procure and verify additional items based on field feedback.			200	70
Procure new technical tools and subsequent evaluations of tools for SKO optimization			12	12
Revised SECM 4 Manned Team / Rapid Maintenance				300
Uniform Identification Codes			80	37
Future Combat Systems			220	70
Fund efforts to create documentation for Industrial Plan Equipment and air compressors to allow creation of Purchase Descriptions and procurement of test articles			360	360
Perform testing on Flat Rack design for the Forward Repair System (FRS)			100	50
Procure test articles of Allied Trade configurations			200	150
Composite Manipulation			183	70
Machinist Tool Sets Shelter and Non-Shelter			100	70
Create Purchase Descriptions and procure IPE and Air Compressors				334
SBIR / SITR		39		

Total		1409	1455		1523

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 1, D16400, FHTV FORWARD REPAIR SYSTEM	60321	82195	93359	113060	110553	9526			Continuing	Continuing

Comment:

C. Acquisition Strategy Programs will progress from Initial Capabilities Document, Capabilities Development Document, and Capabilities Production Document, and testing into Low Rate Initial Production for future procurement and fielding. Efforts will be performed to transition into production and incorporate enhanced future technologies to support the war fighter in a two level maintenance environment. Procurement and testing of new technologies as well as updating and enhancing current systems will support modularity, modernize and enhance war fighting capabilities, and ensure stability and progression of systems into the future.

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BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L46

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MSE Life Cycle Configuration Analyses and Initial Capabilities Document (ICD) Development Support	In-House	PM SKOT Rock Island	505			360	1-3Q					Cont.	Cont.	Cont.
SATS Additional Field Maintenance Module Development and feasibility of incorporating LHS capability	In-House	PM SKOT Rock Island	183			125	1Q					Cont.	125	Cont.
Modernization of Industrial Plant Equipment	MIPR / In-House	CASCOM / PM SKOT Rock Island								334	1-3Q	Cont.	Cont.	Cont.
EMIP/BOD Procurement of new Technical Tools	In-House	PM SKOT Rock Island						12	1-3Q	12	1-3Q	Cont.	24	Cont.
Machinest Tool Sets, Shelter / Non-Shelter	In-House	PM SKOT Rock Island						100	1-3Q	70	1-3Q	Cont.	170	Cont.
Allied Trades Test Article Configurations	In-House	PM SKOT Rock Island						200	1-3Q	150	1-3Q	Cont.	350	Cont.
Subtotal:			688			485		312		566		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	In-House	PM SKOT Rock Island	52			100	1-2Q					Cont.	152	Cont.
Future Combat Systems	In-House	PM SKOT Rock Island						220	1-3Q	70	1-3Q	Cont.	290	Cont.
Modernization of Tool Loads based on Field Feedback	In-House	PM SKOT Rock Island						200	1-3Q	70	1-3Q	Cont.	270	Cont.
Industrial Plant Equipment Documentation for new test articles	MIPR / In-House	CASCOM / PM SKOT Rock Island						360	1-3Q	360	1-3Q	Cont.	720	Cont.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

Subtotal:			52			100		780		500		Cont.	1432	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	MIPR/In-House	Army Test & Evaluation Command (ATEC)/PM SKOT Rock Island/CASCOM Ordinance Center & School, Ft. Lee	430			400	1-2Q					Cont.	830	Cont.
SATS Additional Field Maintenance Modules and feasibility of incorporating LHS capability			163			100	1-3Q					Cont.	263	Cont.
Forward Repair System Flatrack Redesign	In-House	PM SKOT Rock Island						100	1-3Q	50	1-3Q	Cont.	150	Cont.
Revised SECM four (4) Manned Team / Rapid Maintenance	In-House	PM SKOT Rock Island								300	1-3Q	Cont.	300	Cont.
Subtotal:			593			500		100		350		Cont.	1543	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Conduct SKO Modernization Efforts	MIPR/In-House	Army Test & Evaluation Command & PM SKOT Rock Island	268			285	1-2Q					Cont.	Cont.	Cont.
Composite Manipulation	In-House	PM SKOT Rock Island						183	1-3Q	70	1-3Q	Cont.	253	Cont.
Unique Identification Codes	In-House	PM SKOT Rock Island						80	1-3Q	37	1-3Q	Cont.	Cont.	Cont.
SBIR/STTR						39							39	
Subtotal:			268			324		263		107		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

Project Total Cost:	**1601**			**1409**		**1455**		**1523**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

Event Name	FY 06				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	2	3	4
Configuration Analyses & ICD Support for Current-to-Future SKO, Continue in FY07																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Configuration Analyses & ICD Support for Current-to-Future SKO, Continue in FY07	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

Configuration Analyses for Current-to-Future and SBCT SKOT and ICD Support

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L47**

COST (In Thousands)		FY 2006 Actual	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
L47	IMPROVED ENVIRONMENTAL CONTROL UNITS ED			4465	5989	3500	1500				15454

A. Mission Description and Budget Item Justification: The IECU program will provide a new generation of ECUs that use environmentally approved refrigerants, with zero ozone-depleting chemicals (ODCs), to replace the current Military Standard (MIL-STD) Family of ECUs. The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II Ozone Depleting Chemicals (ODCs) and to increase the performance of military ECUs. They are form, fit and function replacements to the current MIL-STD ECUs. Technical improvements over existing military-standard ECUs will yield significant fuel and weight savings, reduction in scheduled maintenance, and increased reliability. 60K BTU/H IECU: The 60K BTU/H IECU is a joint program between the Army and Air Force. The 60K BTU/H IECU will be a replacement for the existing Army 54K BTU/H Environmental Control Unit (ECU) and Air Force developed 66K BTU/H Field Deployable Environmental Control Unit (FDECU). 9, 18, and 36K BTU/H IECUs: The 9, 18 and 36K BTU/H IECUs will be a replacement for the current MIL-STD ECU variants. In FY07, PM MEP will begin acquisition planning for these variants. FY08 and FY09 will fund Milestone B System Development and Demonstration (SDD) Phase activities for 9, 18 and 36K IECU's and Milestone B and C activities for the 60K IECU.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY08: 9, 18 and 36K IECU SDD contract award.			3435	
FY08: Milestone C Decision for the 60K BTU/H IECU			1030	
FY09: Continue SDD for the 9, 18 and 36K IECUs.				5559
FY09: Complete Type Classification Materiel Release (MR) and other actions required for Milestone C Full Rate Production (FRP) decision for the 60K IECU.				430
Total			4465	5989

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDT&E:PE0603804A - Logistics & Engineer Equipment - Adv Dev K39	1628	1202								2830
RDT&E:PE0604804A - Logistics and Engineer Equipment - Eng Dev 194		1000								1000
OPA 3, Improved Environmental Control Units , MF9303	2719	3846	11628	16992	11220	11684				58089

Comment:

C. Acquisition Strategy 9, 18 and 36K BTU/H IECU: PM-MEP will award one Developmental Phase contract based on "Best Value" using Full and Open Competition (FAOC). Successful completion of development and production qualification testing will result in the award of a Production Phase contract. The initial Developmental Phase contract will be Cost-Plus Fixed Fee (CPFF) and include as deliverables: prototypes of each configuration, PQT, Logistics Demonstration (LD), Validation/Verification (Val/Ver) and User Evaluation (UE). The Production Phase contract will be Firm Fixed Price (FFP) with the contractor producing Production Test Quantities to prove out Transition to Production by First Article Testing (FAT). Subsequent delivery orders will be placed according to programmed funding.

60K BTU/H IECU: Conduct Product Qualification Testing (PQT), logistics demonstration, validation/verification and user evaluation. Prepare, update and revalidate the Operational Requirements Documents (ORD) and other acquisition documentation prior to Milestone C decision.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L47

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
9, 18 and 36K IECU	CPFF	Various						2595	2Q	4219	2Q		6814	
60K IECU	CPFF	Various						500	1Q				500	
Subtotal:								3095		4219			7314	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
9, 18 and 36K IECU	MIPR	CERDEC, Ft Belvoir, VA						450	2Q	450	2Q		900	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA						250	2Q	250	2Q		500	
Subtotal:								700		700			1400	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
9, 18 and 36K IECU	MIPR	CERDEC, Ft Belvoir, VA								500	3Q		500	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA						100	3Q				100	
Subtotal:								100		500			600	

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L47

	Type		Cost		Date		Date		Date		Date	e		Contract
9, 18 and 36K IECU	In-house	PM-MEP, Ft Belvoir, VA						390	1-4Q	390	1-4Q		780	
60K IECU	In-house	PM-MEP, Ft Belvoir, VA						180	1-4Q	180	1-4Q		360	
Subtotal:								570		570			1140	
Project Total Cost:								**4465**		**5989**			**10454**	

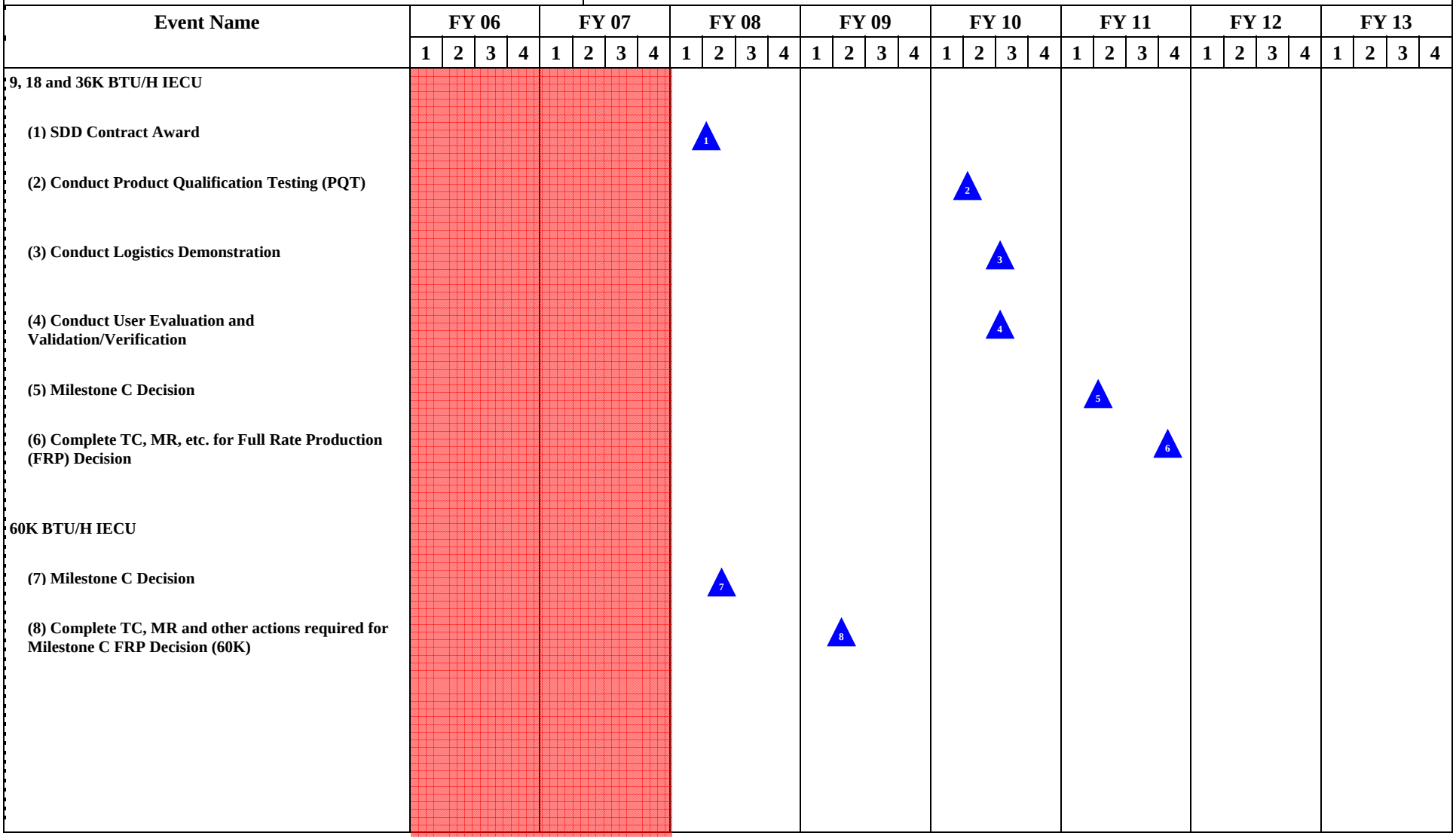
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L47



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L47**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
9, 18 and 36K BTU/H IECU								
SDD Contract Award			2Q					
Conduct Product Qualification Testing (PQT)					2Q			
Conduct Logistics Demonstration					3Q			
Conduct User Evaluation and Validation/Verification					3Q - 4Q			
Milestone C Decision						2Q - 3Q		
Complete TC, MR, etc. for Full Rate Production (FRP) Decision						4Q		
60K BTU/H IECU								
Milestone C Decision			2Q - 4Q					
Complete TC, MR and other actions required for Milestone C FRP Decision (60K)				2Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**

	COST (In Thousands)	FY 2006 Actual	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	309036	13037	10047	9858	10155	10444	10674	10908	Continuing	Continuing
485	Info Standards Interop Eng/Joint Interop Cert	5019	5179	4838	4792	4884	5175	5289	5405	Continuing	Continuing
589	ARMY SYS ENGINEERING & WARFIGHTING TECH SUP	5215	7858	5209	5066	5271	5269	5385	5503		44776
615	JTRS-GROUND DOMAIN INTEGRATION	167069									264301
61A	JTRS CLUSTER 5 DEVELOPMENT	124641									220683
F99	NUCLEAR ARMS CTRL TECH - SENSORE NETWORK MONIT	7092									22661

A. Mission Description and Budget Item Justification: This Program Element (PE) supports efforts to develop interoperability of Army programs and products, horizontally and vertically for the digitized battlefield. Project D485 supports Information Standards Interoperability Engineering and Joint Interoperability Certification. It provides the critical elements of the Army/Joint Technical Architecture, the mandated standards and communication protocols for Army/Joint ground and air operations, and crucial certification test tools to evaluate systems¿ interoperability for the Warfighter in support of the Vice Chief of Staff of the Army (VCSA) and Army Acquisition Executive (AAE). It also provides Joint certification testing and certification recommendations to the Joint Chiefs of Staff (JCS) for Army systems. This Army-wide effort directly supports the management, oversight, development, maintenance, and interoperability at the Army enterprise level C4I/IT (Command, Control, Communications, Computers, and Intelligence/Information Technology) architecture efforts required to implement Unit Set Fielding (USF), Software Blocking (SWB) Policy and Army Knowledge Management. Project D589 Army Systems Engineering (ASE) & Warfighter Technical Support provides essential technology expertise on all Systems Engineering and Technical Architecture (SE/TA) matters critical to gain Information Dominance and foster interoperability among all Army systems. The Weapons Systems Technical Architecture (WSTA), Project D591, supports the Army's development and employment of a Real-Time and Embedded Weapon Systems Common Operation Environment (COE). The WSTA Working Group also defines the Defense Information Standards Repository (DISR) specific Weapons Domain profiles and standards (mandatory and emerging) that provide the Department of Defense "building code" which is the foundation for designing, building, fielding, and supporting interoperable systems in an expedient and cost-effective manner. Project D615 supports the JTRS Cluster 1 program, which is being renamed to Ground Mobile Radios (GMR). This project provides for the development of Ground Vehicular platforms. Project D61A supports JTRS Cluster 5 program, which is being renamed to Handheld, Manpack, and Small Form Fit (HMS) radios. This project provides for the development of three radio form factors: Handheld; Manpack (including vehicular mounted); and a family of Small Form Fit (SFF) embedded applications. Project D629, Tactical Communications System - Demonstration Validation, provides for insertion of selected proven communications technology from program elements 0602782A, Project AH92 applied research and 0603008A, advanced technology development, into the next phase of development. The Protocol Investigation for the Next Generation (PING) program evaluates and assesses emerging network protocols, concentrating on the assessment and evaluation of the next generation of Internet Protocol (IPv6) and its protocol dependencies affecting the Army Enterprise Architecture. The Applied Communications and Information Networking (ACIN) project provides for the evaluation and capitalization of emerging commercial communications and networking technologies by leveraging advances, influencing development efforts, influencing standards and delivering technical solutions in support of emerging architectures (JTA-A).

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	318947	10783	10126	9876
Current BES/President's Budget (FY 2008/2009)	309036	13037	10047	9858
Total Adjustments	-9911	2254	-79	-18
Congressional Program Reductions		-50		
Congressional Rescissions				
Congressional Increases		2400		
Reprogrammings	-9911	-96		
SBIR/STTR Transfer				
Adjustments to Budget Years			-79	-18

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**485**

COST (In Thousands)		FY 2006 Actual	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
485	Info Standards Interop Eng/Joint Interop Cert	5019	5179	4838	4792	4884	5175	5289	5405	Continuing	Continuing

A. Mission Description and Budget Item Justification: Focus for this project is to support the engineering or evaluation of commercially-available information technology (IT) tools to develop architecture products Information Technology based Command, Control, Computers, and Communications (C4/IT) systems such as Applications Program Interfaces for Weapons Systems. A significant effort will be on building Army (consistent with DoD) C4/IT technical standards-compliant Army data repositories that are web-accessible but secure. These repositories will be consistent with DoD standards and policies and virtually appear to be a single repository for Army C4/IT architecture products. FY2004-2006 are "transitioning" periods for the Army to incorporate DoD policies, procedures, and constraints.

What follows below is the retention of the original objectives of this project (modified effective FY2006):
To support the Army Vice Chief of Staff (VCSA) and the Army Chief Information Officer/G6,
as cited in the AEA Master Plan, this initiative fulfills the Clinger-Cohen Act¿s mandate of developing sound integrated Information Technology (IT) architectures and the Army¿s Software Blocking Policy. The increased combat power of the Future Force will be dependent on the information superiority of network & knowledge centric warfare and the ability of systems to be fully ¿interoperable as a member of the joint, multinational, interagency team as well as emerging Future Force (FF) C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) Systems.¿ It identifies and reduces interoperability issues earlier in the life cycle by intra-Army/FF/Joint/combined experiments and assessments, and through the establishment & sustainment of common standards. This Army wide effort directly supports the management, oversight, development, maintenance, and interoperability of the Army enterprise level C4I/IT architecture efforts required to implement Unit Set Fielding, Software Blocking and Army Enterprise Architecture (AEA). Specifically, this project resources the Army¿s messaging standards conformance authority in assessing compliance with the Defense Information Systems Repository (DISR), in meeting the warfighter information exchange requirements and in facilitating their interoperability. It also resources, in accordance with the DISR, the development and maintenance of the following information standards: Variable Message Format (VMF) & Combat Net Radio (CNR) protocol, which support Army/Joint ground operations; Tactical Digital Information Links (TADILs), which support Air Defense operations; and US Message Text Format (USMTF), which support Intel and Commanders operations. It provides the Army¿s lead for configuration management functions of these standards and test tools at both Army and Joint levels. This project resources the Army participation in joint/allied messaging certification testing & configuration management processes. This project also resources the development and fielding of a suite of four (4) crucial tools which are used throughout the entire Army. These tools which are currently under development will provide the ideal means to: a) validate JTA-A critical messaging and protocol standards; b) improve systems interoperability; c) verify/certify correct system implementations and interpretation to JTA-A; d) sustain/support digitization and transition of fielded systems; e) support Software Blocking and interoperability testing; f) provide Legacy AEA interoperability with Future Combat System (FCS) command and control systems. These crucial tools are critical to the JTA-A Compliance, Certification Testing mission & Interoperability programs. The task also supports the Army¿s transformation campaign while mitigating interoperability issues resulting in reducing cost & program slippages. This project also provides the Configuration Management & Control for the Software Blocking (SWB)/USF (Unit Set Fielding).

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Develop and update architecture standards and protocols necessary to ensure C4ISR systems interoperabilty.	1283	1552	1543	1529
Engineer, develop & publish Army Warfighter Information Standards (i.e. XML-USMTF/VMF,Wireless XML, database exchange, etc...)	1200	1000	977	968

incorporating DoD standards requirements.				
Identify, analyze, and provide solutions to gaps in technical architecture standards requirements.	1200	1140	1065	1055
Develop and engineer Army Net-Centric Enterprise Service standards and protocols supporting OSD Global Information Grid messaging requirements and serve as Army focal point for messaging working group.	1136	1200	1121	1110
Knowledge Center Development - Build & update as necessary access to website repositories for key policies, directives, and architecture products.	200	141	132	130
Small Business Innovative Research/Small Business Technology Transfer Programs		146		
Total	5019	5179	4838	4792

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

C. Acquisition Strategy The efforts funded in this project are non-system specific, interoperability experimentation, evaluation and certification across multiple systems. The contractual efforts/services are obtained from existing competitive omnibus support service contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
485

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Labor	In House	USACECOM , Fort Monmouth, NJ	12529	5019		5179		4838		4792		Cont.	Cont.	
Travel	In House	USACECOM, Fort Monmouth, NJ	457									Cont.	457	
Subtotal:			12986	5019		5179		4838		4792		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	C/CPFF	Arinc, Fort Monmouth, NJ	5699										5699	
Development Support	C/CPAF	Telos, Fort Monmouth, NJ	4581										4581	
Development Support	C/CPFF	CSC, Fort Monmouth, NJ	1963										1963	
Development Support	C/CPFF	C3I, Fort Monmouth, NJ	1374										1374	
Development Support	SS/CPFF	Mitre, Fort Monmouth, NJ	280										280	
Development Support/ Army Enterprise Applications Architecture	C/T&M	Binary, Ft. Belvoir, VA	46										46	
Development Support- Knowledge Center	C/T&M	ITEL, Ft Monmouth, NJ	1198										1198	
Development Support	C/T&M	ITEL, Ft Monmouth, NJ	2640									Cont.	2640	
Development Support	C/T&M	Northrop Grumman (SEC SSES), Ft Monmouth, NJ	2579									Cont.	2579	
Technical Support	C/CPFF	TFE, Fort Monmouth, NJ	95									Cont.	95	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY: **5 - System Development and Demonstration**

PE NUMBER AND TITLE: **0604805A - Command, Control, Communications Systems - Eng Dev**

PROJECT: **485**

Technical Support	C/CPFF	Marconi, Fort Monmouth, NJ	183										183	
Equipment	In House	USACECOM, NJ	485									Cont.	485	
Equipment (Development Support)	C/FFP	GTE, Tauton, MA	106										106	
Telecommunications	MIPR	USASC, Fort Huachuca, AZ	1145									Cont.	1145	
Subtotal:			22374									Cont.	22374	

Remarks: *Contracts/awards cited are 5 year (1 base + 4 option years). Future award dates imply future competitive award, contractor TBD.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:			**35360**	**5019**		**5179**		**4838**		**4792**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

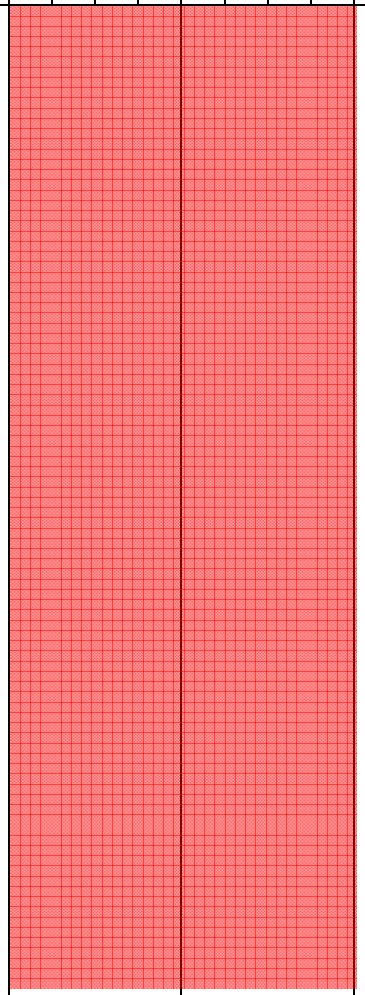
February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
485

Event Name	FY 06				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	2	3	4



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**485**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Knowledge Center Development	1Q - 4Q							
Army Enterprise Architecture Policy Development	1Q - 4Q							
Develop Comfiguration Management Processes	1Q - 4Q							
Engineer Warfighter C4/IT Standards	1Q - 4Q							
Evaluate, experiment, and provide systems integration for testing of ACTD, ATD,								
Experiment/Evaluate Joint Interoperability in conjunction with CIPO initiatives	1Q - 4Q							
Conduct Joint/Coalition Experiments	1Q - 4Q							
Evaluate, certify systems for and support SDD								
Evaluate, certify systems for and support FDC								
DOTE/JDEP Initial Concept/Evaluation/Experiments								
Develop and maintain Combat Net Radio (CNR) Standard								
Develop and maintain Variable Message Format (VMF) application header standards								
Develop and maintain Variable Message Format (VMF) Standards & standard databas								
Configuration Management and control of TADIL(A,B,J) and USMTF standards								
Represent Army on Army/DOD forums								
Test and promulgate Defense Collaborative Tools Set within the Army								

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**589**

COST (In Thousands)		FY 2006 Actual	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
589	ARMY SYS ENGINEERING & WARFIGHTING TECH SUP	5215	7858	5209	5066	5271	5269	5385	5503		44776

A. Mission Description and Budget Item Justification: This project has been re-aligned to better support the mission of Army Chief of Staff (CSA) santioned Army Architecture Integration Cell (AAIC) for developing and, implementing and maintianing the Army Enterprise Architecture for Information Technology based Command, Control, Computers & Communications (C4/IT) systems. AAIC mission is to develop standards-based architecture products that are inter-operable within the Army as well as the with Joint, Interagency, and Multinational systems.

Through FY2005, this project funded the Army Systems Engineering Office (ASEO) with the primary mission of developing technical architecture standards without compromising DoD-mandated standards but ensuring Amry C4/IT systems under development are interoperable with legacy systems still utilized by the Army warfighter, which extend from tactical levels up through operational and strategic components of the Army Battle Command Architecture (ABCA), as well as, the institutional portions of the Enterprise to include the Army¿s Business Enterprise Architecture (BEA). The ASEO supports the Army CIO/G6 Architecture Integration Cell (AIC) in establishing an integrated AEA framework that complements, and is a natural extension of, the GIG-Enterprise Services (GIG-ES). In addition, the ASEO is an essential contributor in the development of the JBMC2 integrated architecture, the Battle Command Architecture, and emerging Cross-Service Integrated Architecture efforts. Each of these architecture definition and integration efforts is elemental to achieving the Army¿s goal of a NetCentric Future Force.

Previously, the Joint Technical Architecture (JTA) and JTA-Army (JTA-A) have provided the foundation for designing, building, fielding and supporting Joint interoperable Army systems in an expedient and cost-effective manner. With the revision to the standardization process as implemented by the Defense Information Systems Agency (DISA), technical architecture standards are encompassed in the new Defense Information Systems Repository (DISR) program. The Army must participate in DISR to ensure Army requirements are adequately captured and reflected in any new baseline developed by DISA. The ASEO identifies emerging standards in support of the integration of new technologies into existing Army systems and Advanced Technology Demonstrations/Advanced Concept Technology Demonstrations (ATD/ACTDs), enabling the Army transformation to the Future Force. The ASEO¿s work efforts in the development and maintenance of Army IT standards within the context of DISR guidelines are critical path elements to achieve transformation, increase joint interoperability and to provide the future Army with the ability to fight and win on tomorrow¿s battlefields. However, the Technical Architecture (TA) alone only provides the foundation for interoperability. Integrated Army Enterprise Architectures (e.g., ABCA, BEA, etc.) fuse Operational, Systems and Technical views of the Army Enterprise into cohesive and manageable information sets that allow the Army to make consequent decisions regarding the Army¿s inventory of present and future systems and their associated funding. In this area the ASEO specializes in defining and exploiting (through analysis) the relationships between architectural views to provide quantitative answers to complex questions regarding the Army¿s future capabilities and the roadmap the Army will pursue in realizing them.

The allocated resources fund two support efforts for CIO/G6. First, subsequent to the development of the AKEA (Army Knowledge Enterprise Architecture) Guidance Document, V1.1, the effort has shifted to development of the Army Technical Reference Model (TRM) for information broker/mediation services, and mapping the Army¿s architecture requirements to DOD Net-Centric Operations and Warfare Reference Model, including NCES (Net-Centric Enterprise Services). Second, support of the design, development, deployment and maintenance of the AAIC (Army Architecture Integration Cell) Web-based Knowledge Center continues with increased development requirements and

functionality, including the consolidation of architectural repositories, design of the DARS-A (Defense Architecture Repository-Army) database, and acting as the Army¿s agent for DARS/DARS-A.

Actual availability for FY2005 was $5759K due to Army withholds.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Analyze and provide Systems Engineering solutions to fill in gaps identified in C4ISR systems under development as welll as fielded systems.	1623	1407	1675	1600
Identify unique Army requirements to influence Army/DoD Architecture Technical standards under new Defense Inforamtion Systems Repository developed under Defense Information Systems Agency (DISA) oversight. Prior years: Technically influence the development/implementation of Joint Technical Architecture (JTA). FY03 accomplishements: JTA Versions 5.x, 6.0 restructured and aligned with Net-Centric Philosophy and redefined scope and standards applicability. Planned activities: JTA-A version 7.0, 7.5 to include major revision of Information Security Section, to include results of Tactical Imagery Transport Study	222	185	210	176
Investigate information technical standards for inclusion in DSR, Defense Standards Repository. Global Information Grid (GIG) Technologies (XML, JPEG 2000, MPEG 4, IPV6)	185	185	180	180
Research and incorporate applicable emerging open standards-based commercial technologies to influence future force systems. Ensure that open commercial standards adopted by Future Force enabling systems are reflected in the DISR baseline. Maintain subject matter expertise on DISR, Defense Standards Repository Information Technology (IT) standards' mandates to ensure current and future force systems remain interoperable. Ensure a logical and cost-effective evolution of TA baselines while maximizing Joint interoperability.	740	740	740	740
DISR Compliance Requirements -Ensure Program Managers have an executable and effective strategy for implementing the Army/DoD Technical Architecture standards.	370	555	364	350
Validate/Integrate Army Enterprise Technical Views to enable the Army Technical and Systems Architect (CIO/G6) to monitor, assess and control the inherent risks associated with leveraging continuously changing technologies across all Army Enterprise Functionals/PEO/Communities.	835	925	830	800
Provide systems analysis for implementing IPv6 protocol across Army to ensure communications/data-sharing/data-exchange between systems. Prior Years: As a result of the decision agreed to at the 19 Dec 02 AKEA, GOSC, direction of MU17 funding was realigned to support the Protocols Investigation for the Next Generation (PING) program. The PING supported current technology agreements with various technology developers such as HP, Cisco, Microsoft and Telecordia. In addition, PING represented the ARMY CIO/G6 office at various ASD (NII)/DoD CIO meetings discussing DoD IPv6 policy and Transisition Planning, participated with JITC at DISA's Def Interop Comm Exercise 2003 (DICE 2003) demonstrating IPv6 interoperability, active member of DoD IPv6 Test Bed evaluating and testing IPv6 benefits and trade-offs, first Army lab participating with North American IPv6 Task Forces MoonV6 initiative, drafted ARmy's Phase I IPv6 Transition plan and initial transition strategy to migrate Army systems and networks to native IPv6 by FY08 in compliance with DoD policy,prepared evaluation criteria for selecting early IPv6 adopter candidates in support of the Army GIO/G6 office, hosted first Army IPv6 data call to collect systems impact information and baseline on Army IPv6 transition plan, provided IPv6 technical guidance and knowledge to the Army acquisition community.	370	370	370	370
Define and exploit (through analysis) the relationships between architectural views to provide quantitative answers to complex questions	370	370	370	370

regarding the Army's future capabilities and the roadmap the Army will pursue in realizing them.				
Provide systems engineering solutions including techincal architectures for Army systems supporting Joint Blue Force Situational Awareness (JBFSA)initiative	500	500	470	480
Development of software based voice over internet protocol		2400		
Small Business Innovative Research/Small Business Technology Transfer Programs		221		
Total	5215	7858	5209	5066

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

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
589

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Government Systems Engineering Support	In House	ASEO, DCTS, PING/03 only, Fort Monmouth, NJ	13733	1978		1978		1970		1970		Cont.	Cont.	
Contract Support	C & T&M-R	C3ISGI, Tinton Falls, NJ	3080										3080	
Contract Support	C & FP	TRW, Domingues Hills, CA	1281										1281	
Overhead		ASEO/WTS CECOM, Fort Monmouth, NJ	1422										1422	
Contract Systems Engineering Support	C & FP	Battelle, Alexandria, VA	354										354	
System Development and Integration	MIPR	PEO C3S, PM TOCS, Fort Monmouth, NJ	25										25	
Travel	In House	SEC, USACECOM, Ft. Monmouth, NJ	20	25		25		25		25			120	
Development Support	C/T&M	Northrop Grummon (SEC SSES), Ft. Monmouth, NJ	50	50		50		50		50			250	
Contract Systems Engineering Support	C & FP	SRI, Menlo Park, CA	199										199	
Labor (Internal Government)	In House	SEC, USACECOM, Ft. Monmouth, NJ	867	867		867		850		856			4307	
Equipment	In House	USACECOM, NJ	5	5		5		5		5			25	
Development Support	C & TM	ITEL, Mays Landing, NJ	50	50		50		50		50			250	
Contract Support	C & FP	Lockheed Martin, Eatontown, NJ	545										545	
Development Support - Army Enterprise Applications Architecture	C/T&M	Binary, Ft. Belvoir, VA												
Contract Support	C & T&M	SAIC, Falls Church,	1811										1811	

		VA												
Contract Systems Engineering Support	C & FP	SRC, Atlanta, GA	612										612	
Contract Systems Engineering Support	SS & FP	MITRE, Tinton Falls, NJ	7964	167	1Q	299		290		290			9010	
Systems Engineering and Integration	MIPR	WTS - ISIO CECOM, Fort Monmouth, NJ	2341									Cont.	2341	
Contract Support	C & T&M	Datron, Simi Valley, CA	305										305	
Contract Systems Engineering Support	C & FP	Gemini, Billerica, MA	137										137	
Development Support- Knowledge Center	C & TM	ITEL, Mays Landing, NJ	849										849	
Contract Support	IPA Agreement	Rutgers University, New Brunswick, NJ	528										528	
Contract Systems Engineering Support	C & FP	Suntek Systems, Eatontown, NJ	460										460	
Contract Systems Engineering Support	C & FP	HTPi, Shrewsbury, NJ	145										145	
Contract Support	C & TM	Telos, Eatontown, NJ	24										24	
Engineering Support	MIPR	ISEC, Fort Huachuca, AZ	1357									Cont.	1357	
Contract Support	C & TM	PTG/CACI, Eatontown, NJ	26										26	
Contract Systems Engineering Support	C & FP	Litton, Reading, MA	245		1Q	245		240		240			970	
Contract Support	C & FP	CSC, Eatontown, NJ	1746		1-2Q								1746	
Contract Support	C & T&M	BAE, Tinton Falls, NJ	139										139	
Contract Support	C & FP	Janus Research Group, Appling GA	72										72	
Contract Systems Engineering Support	C & FPI	CSC, Eatontown, NJ	12103	1993		1859		1649		1500			19104	
Contract Systems Engineering Support	C & FP	GTE/BBN, Cambridge, MA	960										960	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**589**

Travel	In House	ASEO/WTS CECOM, Fort Monmouth, NJ	1456	80		80		80		80		Cont.	Cont.	
Development of software based VOIP	TBD					2400							2400	
Subtotal:			54911	5215		7858		5209		5066		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:			**54911**	**5215**		**7858**		**5209**		**5066**		**Cont.**	**Cont.**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**

	COST (In Thousands)	FY 2006 Actual	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	15890	24536	15823	35190	33842	15588	17336	17745		179689
812	MIL HIV VAC&DRUG DEV	3931	4511	4665	4727	4573	4573	4570	4676		36226
832	COMBAT MEDICAL MATL ED	756	3721	5275	14947	14277	5494	6217	6364		57051
834	SOLDIER SYS PROT-ED		2979	1856	1795	1698	1691	1789	1832		13640
849	INFEC DIS DRUG/VACC ED	565	3139	4027	13721	13294	3830	4760	4873		48209
A11	LSTAT MEDICAL TECHNOLOGY (CA)	1916	2176								5819
A12	BIOMEDICAL ENGINEERING TECH & ADV MATERIALS (CA)	4505	3560								8065
A14	CHITOSAN BANDAGE COMPONENT (CA)	3258	4450								9720
MD3	CARTLEDGE INFUSER	959									959

A. Mission Description and Budget Item Justification: This program element (PE) funds advanced development of medical materiel within the System Demonstration and Low Rate Initial Production portions of the Acquisition Life Cycle. It supports products successfully transitioned through the Systems Development and Demonstration In-Process Review (IPR). This largely includes Phase 3 human clinical trials, along with related stability and production manufacturing testing for medical pharmaceuticals, biologics, and devices. Added operational testing and evaluation (OT&E) for military unique requirements is evaluated and fulfilled as required.

Disease and non-battle injuries (DNBI) are the largest contributor to the medical footprint. Infectious disease vaccines and preventive drugs reduce the risk of service members contracting debilitating or fatal diseases, which reduces levels of DNBI affected soldiers and in turn, negates the requirement for supporting echelon 3 facilities in the theater of operations, as well as mitigates the strain placed on the Army's personnel replacement and logistical systems. This is especially important due to the higher risk posed by the ever expanding urban warfare environments. The reduction of patient evacuation requirements within Future Force (F2) units will act as a force multiplier, due to the retention of uniquely skilled and combat tested soldiers in the theater.

Combat Casualty Care devices and medicines have the major effects of: (1) enhancing forward care at the first responder level and, (2) reducing the medical footprint. The result is a far greater mobile and more easily sustained medical force. The F2 concept places soldiers into a more austere environment with lengthened evacuation times (both arrival and transit). This requires medics and first responders to improve their ability to save lives and extend stabilization. Reduction in weight, cube, and sustainment allows medical units to increase mobility and maintain contact with their supported Units of Action.

Soldier Performance Enhancers in the form of drugs or diagnostics, allow commanders to increase soldiers cognitive awareness and stamina. This improves soldiers operational capabilities and has the potential to reduce casualties.

The U.S. Army Medical Research and Materiel Command manages this program.

Project 812, Military HIV Vaccine and Development funds militarily relevant human immunodeficiency virus (HIV) research.

Major contractors/intra-governmental agencies include Allied Technologies & Consulting, IGR Enterprises, Army Medical Department Board Test Center, and SeQual Technologies, Inc.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	16487	14509	15934	35243
Current BES/President's Budget (FY 2008/2009)	15890	24536	15823	35190
Total Adjustments	-597	10027	-111	-53
Congressional Program Reductions		-94		
Congressional Rescissions				
Congressional Increases		10300		
Reprogrammings	-597	-179		
SBIR/STTR Transfer				
Adjustments to Budget Years			-111	-53

FY 2007 - Congressional Plus-Up ($10,300) - LSTAT Medical Technology ($2,200); Biomedical Engineering Technology and Advanced Materiel ($3,600); and Chitosan Bandage Component ($4,500).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**812**

COST (In Thousands)	FY 2006 Actual	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
812 MIL HIV VAC&DRUG DEV	3931	4511	4665	4727	4573	4573	4570	4676		36226

A. Mission Description and Budget Item Justification: This project funds Congressionally mandated, militarily relevant human immunodeficiency virus (HIV) medical countermeasures. These funds provide for engineering and manufacturing development of multiple candidate vaccines and drugs to permit large-scale field testing. Development efforts are focused on militarily unique needs affecting manning, mobilization, and deployment.

The major contractor is Henry M. Jackson Foundation for the Advancement of Military Medicine, Rockville, MD.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Reviews, evaluations and trials of Human Immunodeficiency Virus (HIV) Vaccine: In FY06, completed immunizations and entered the observation and follow-up phase of the multi-year Phase 3 clinical trial of the Prime-Boose HIV Vaccine in Thailand. In FY07, continue the observation and follow-up phase of the Phase 3 study in Thailand and conduct a Design Readiness Review. In FY08, continue the observation and follow-up phase of the Phase 3 trial in Thailand. In FY09, complete the observaton and follow-up phase of the Phase 3 trial in Thailand and begin data analysis.	3931	4384	4665	4727
Small Business Innovative Research/Small Business Technology Transfer Programs.		127		
Total	3931	4511	4665	4727

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

C. Acquisition Strategy Test and evaluate commercially developed vaccine candidates in government-managed trials.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
812

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Product Development	Cooperative Agreement	Henry M. Jackson Foundation, Rockville, MD	6930	2791		3203		3312		3356			19592	
Subtotal:			6930	2791		3203		3312		3356			19592	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			271	39		45		46		47			448	
Subtotal:			271	39		45		46		47			448	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test and Evaluation	Government Laboratory	Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD	1733	1022		1173		1213		1229			6370	
Subtotal:			1733	1022		1173		1213		1229			6370	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater			235	79		90		94		95			593	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**812**

than $1M individually													
Subtotal:			235	79		90		94		95			593	
Project Total Cost:			**9169**	**3931**		**4511**		**4665**		**4727**			**27003**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
812

Event Name	FY 06				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	2	3	4
(1) HIV Vaccine Design Readiness Review (DRR)					1																											

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**812**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
HIV Vaccine Design Readiness Review (DRR)		1Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**832**

COST (In Thousands)	FY 2006 Actual	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
832 COMBAT MEDICAL MATL ED	756	3721	5275	14947	14277	5494	6217	6364		57051

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical products for the advancement of combat casualty care, especially far forward on the battlefield with first responders, combat lifesavers, and field medics. This primarily funds Phase 3 human clinical trials or mechanical engineering evaluations for efficacy of devices or biologics unique to military operational requirements. This work is frequently completed through a joint laboratory and contractor team with the contractor obtaining ultimate U.S. Food and Drug Administration (FDA) licensure. These products (enhanced location and diagnostic devices of patients and more potent resuscitative biologics) will decrease mortality rates and increase soldier's morale and willingness to place themselves in danger. Additionally, several products, Dental Field Treatment and Operating System (DEFTOS), Ventilatory Assist Device (VAD), and Oxygen Generator will reduce medical organizational sustainment footprint through smaller weight, cube volume, or equipment independence from supporting materiels. Priority is given to those products that provide the greatest clinical benefit balanced with the technical and financial risks.

Major contractors/intra-governmental agencies include: Bell Dental Inc., Allied Technologies Consulting, IGR Enterprises, Army Medical Department Board Test Center, Smisson-Cartledge Biomedical, SeQual Technologies, Inc., and Enginivity, Inc.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Conduct testing & milestone reviews for the following field medical treatment and treatment aid devices: (1) Dental Field Treatment & Operating System (DEFTOS): In FY06, completed long term user evaluation. Results of evaluation used to upgrade system. Test and evaluation of upgraded system were completed and results positive. In FY07, complete transition of latest model to field. (2) Ventilatory Assist Device (VAD): In FY06, continued to support the fielding process. FY07, integrate new P3I self-contained electric ventilator. In FY08, conduct technical and user acceptance testing. In FY09, conduct Milestone C. (3) Ceramic Oxygen Generator (COG): In FY08, conduct technical and user acceptance testing. In FY09, conduct Milestone C. (4) Rotary Valve Pressure Swing Adsorption Oxygen Generator (RVPSAOG): In FY08, conduct user testing and evaluation of Omni II system. In FY09, conduct Milestone C review of Omni II. Initiate low rate production. (5) Battery Powered IV Fluid Warmer: In FY07, conduct airworthiness release of line-powered unit. In FY08, conduct Milestone C. (6) Cartledge Infuser (CI): In FY06, completed FDA-requested testing for 510(k) review. Initated Low Rate Initial Production. In FY07, conduct technical/user evaluation. FY08, conduct Milestone C.	756	3619	5275	14947
Small Business Innovative Research/Small Business Technology Transfer Programs.		102		
Total	756	3721	5275	14947

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

C. Acquisition Strategy Evaluate commercially developed materiel in government-managed trials.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
832

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Rotary Valve Pressure Swing Adsorption oxygen Generator		Sequal Technologies,Inc., San Diego, CA	1780	357		759		5275		14947			23118	
Cartledge Infuser		Smisson-Cartledge Biomedical L.L.C., Macon, GA	3110										3110	
Subtotal:			4890	357		759		5275		14947			26228	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Not Applicable														
Subtotal:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Not Applicable														
Subtotal:														

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater			14713	399		2962						Cont.		

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**832**

than $1M individually													
Subtotal:			14713	399		2962						Cont.	
Project Total Cost:			**19603**	**756**		**3721**		**5275**		**14947**		**Cont.**	**26228**

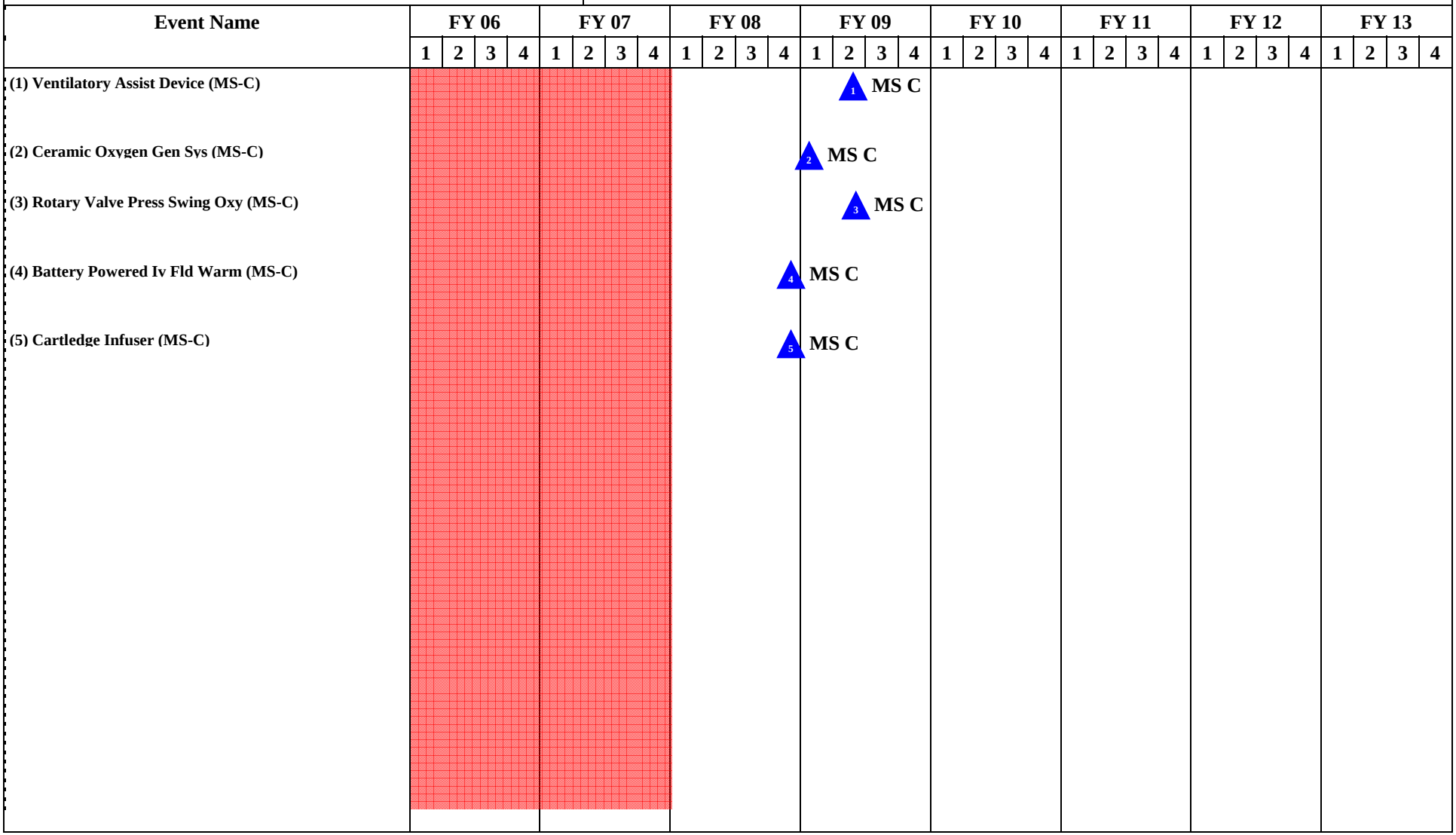
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
832



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
832

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Ventilatory Assist Device (MS-C)				2Q				
Ceramic Oxygen Gen Sys (MS-C)				1Q				
Rotary Valve Press Swing Oxy (MS-C)				2Q				
Battery Powered Iv Fld Warm (MS-C)			4Q					
Cartledge Infuser (MS-C)			4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**834**

COST (In Thousands)	FY 2006 Actual	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
834 SOLDIER SYS PROT-ED		2979	1856	1795	1698	1691	1789	1832		13640

A. Mission Description and Budget Item Justification: This project supports system development and demonstration of preventive medicine materiels to include devices and medicines in order to provide protection, sustainment, and enhancement of the physical and psychological capabilities of soldiers engaged in combat operations across environmental conditions. The focus is on reduction of personnel losses due to preventable disease and non-battle injuries through development of environmental and physiological performance monitors and other preventive medicine countermeasures.

A major contractor is Allermed Laboratories, Inc., San Diego, CA.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
(1) Special Medical Emergency Evacuation Device (SMEED): FY06, obtained fleetwide UH-60 Air Worthiness Release for the SMEED. FY07, conduct Milestone C. (2) Life Support for Trauma and Transport (LSTAT): FY06, obtained CENTCOM CH-47 AWR for LSTAT. (3) Coliform Analyzer: In FY07, begin preliminary design of engineering development model. In FY08, finalize new design. In FY09, conduct technical testing and user evaluations.		2895	1856	1795
Small Business Innovative Research/Small Business Technology Transfer Programs		84		
Total		2979	1856	1795

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

C. Acquisition Strategy Test and evaluate in-house and commercially developed materiel in government-managed trials to meet FDA requirements.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
834

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			2317			1371		853		826			5367	
Congressional Add in Support of Chem-Bio Protection			4550										4550	
Subtotal:			6867			1371		853		826			9917	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			74			89		56		54			273	
Subtotal:			74			89		56		54			273	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			480			566		353		341			1740	
Subtotal:			480			566		353		341			1740	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater			901			953		594		574			3022	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**834**

than $1M individually														
Subtotal:			901			953		594		574			3022	
Project Total Cost:			**8322**			**2979**		**1856**		**1795**			**14952**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
834

Event Name	FY 06				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	2	3	4
(1) Special Medical Emergency Evacuation Device (SMEED) (MS-C)					MS C 1																											

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**834**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Special Medical Emergency Evacuation Device (SMEED) (MS-C)		4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipm**	**849**

COST (In Thousands)	FY 2006 Actual	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
849 INFEC DIS DRUG/VACC ED	565	3139	4027	13721	13294	3830	4760	4873		48209

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical countermeasures for infectious diseases that occur within militarily relevant areas of the world. These products fall within three major areas: vaccines, drugs, and diagnostic kits. The funds support Phase 3 human clinical trials for large-scale efficacy testing, long-term animal studies, and related manufacturing tests. This work, which is jointly performed by military laboratories, civilian contracted pharmaceutical firms and foreign research partners, is directed toward the prevention of disease, early diagnosis if contracted, and speeding recovery once diagnosed. These trials are required to meet U.S. Food and Drug Administration (FDA) regulatory approval guidance, a mandatory obligation for all military products placed into the hands of medical providers or service members. Priority is based upon four major factors: (1) the extent of the disease within the Combatant Commands' theater of operations, (2) the clinical severity of the disease, (3) the technical maturity of the proposed solution, and (4) the affordability of the solution (development and production). Consequently, malaria, dysentery, hepatitis, and dengue diseases (which are found in Central Command, European Command, Southern Command, and Pacific Command areas) rise to the top of the requirement list.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Clinical trials, developmental testing, and appropriate reviews of malarial/antimalarial vaccines, drugs, and diagnostics: In FY06 completed the FDA mandated Phase 3 Malaria Rapid Diagnostic Device (MRDD) clinical trial in the United States and submitted the 510(k) Package for FDA review. In FY06, completed the enrollment phase and continued the observation and follow-up phase of the FDA-mandated Phase 1 safety trial of the Antimalarial Drug, Tafenoquine (treatment and post-exposure prophylaxis of Plasmodium vivax malaria), conducted Key Opinion Leader meetings in Brazil and Thailand, and initiated clinical site selection process for clinical field trials to bring Tafenoquine to FDA licensure. In FY07 for MRDD conduct FDAs required Cross-Reactivity Testing on spiked samples and a FDA mandated Clinical Specificity Study and submit the results to the 510(k) Package already under FDA review for approval of commercial sales; conduct a Milestone C IPR to transition MRDD to Full-Rate Production and Deployment, resulting in fielding of state-of-the-art malaria diagnostic capability for military physicians. In FY07 conduct a Design Readiness Review to re-baseline product development plan, complete the observation phase and initiate data analysis of the FDA-mandated Phase 1 safety trial, and initiate a new Phase 1 drug-drug-interaction study for Tafenoquine. In FY08, for the Tafenoquine drug, complete the Phase 1 drug-drug interactions study and perform data analysis and prepare for a Phase 3 pivotal study in Asia. In FY09, initiate a Tafenoquine Phase 3 pivotal study for a treatment indication.	441	2758	2219	6872
Prepare for conducting clinical studies, trials, and appropriate reviews of grouped vaccines, drugs, and diagnostics (Hepatitis E Vaccine, Combined Camouflage Face Paint/Insect Repellent, a new Standard Military Insect Repellent and leishmania): In FY06, conducted a Design Readiness Review (DRR) to re-baseline Hepatitis E vaccine development based on agreement with industry partner. Conducted a DRR for the Combined Camouflage Face Paint/Insect Repellent (CCFP) in stick packaging and initiated a Soldier Acceptability Survey. In FY07, continue a technology watch on the industry partners progress with a new Hepatitis E vaccine; finalize the CCFP Soldier Acceptability Survey. In FY08, continue monitoring industry partners Hepatitis E vaccine effort; and for the CCFP complete clinical efficacy trials (laboratory and field) and their data analysis and monitor stability testing; transition a new Standard Military Insect	124	308	1808	6849

Repellent(to replace current DEET repellent) to System Development and Demonstration (Milestone B) and initiate Phase 2b field testing; and initiate a Phase 3 pivotal trial for Topical Antileishmanial Cream. In FY09, finalize all field trial reports, complete stability testing, and conduct a Milestone C IPR to transition the CCFP to Full-Rate Production and Deployment, resulting in fielding of state-of-the-art camouflage face paint with insect repellent in stick packaging; continue Phase 2b field testing of a new Standard Military Insect Repellent; and complete the Phase 3 pivotal trial and perform data analysis for Topical Antileishmanial Cream				
Small Business Innovative Research/Small Business Technology Transfer Programs.		73		
Total	565	3139	4027	13721

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

C. Acquisition Strategy Test and evaluate in-house and commercially developed products in government-managed trials to meet FDA requirements and Environmental Protection Agency registration.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
849

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			7038	192		1067		1369		4665		Cont.	Cont.	Cont.
Subtotal:			7038	192		1067		1369		4665		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			510	11		63		81		274		Cont.	Cont.	Cont.
Subtotal:			510	11		63		81		274		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			10345	266		1475		1893		6449		Cont.	Cont.	Cont.
Subtotal:			10345	266		1475		1893		6449		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
No product/contract costs greater than $1M individually			2966	96		534		684		2333		Cont.	Cont.	Cont.
Subtotal:			2966	96		534		684		2333		Cont.	Cont.	Cont.

Project Total Cost:	**20859**	**565**		**3139**		**4027**		**13721**		**Cont.**	**Cont.**	**Cont.**

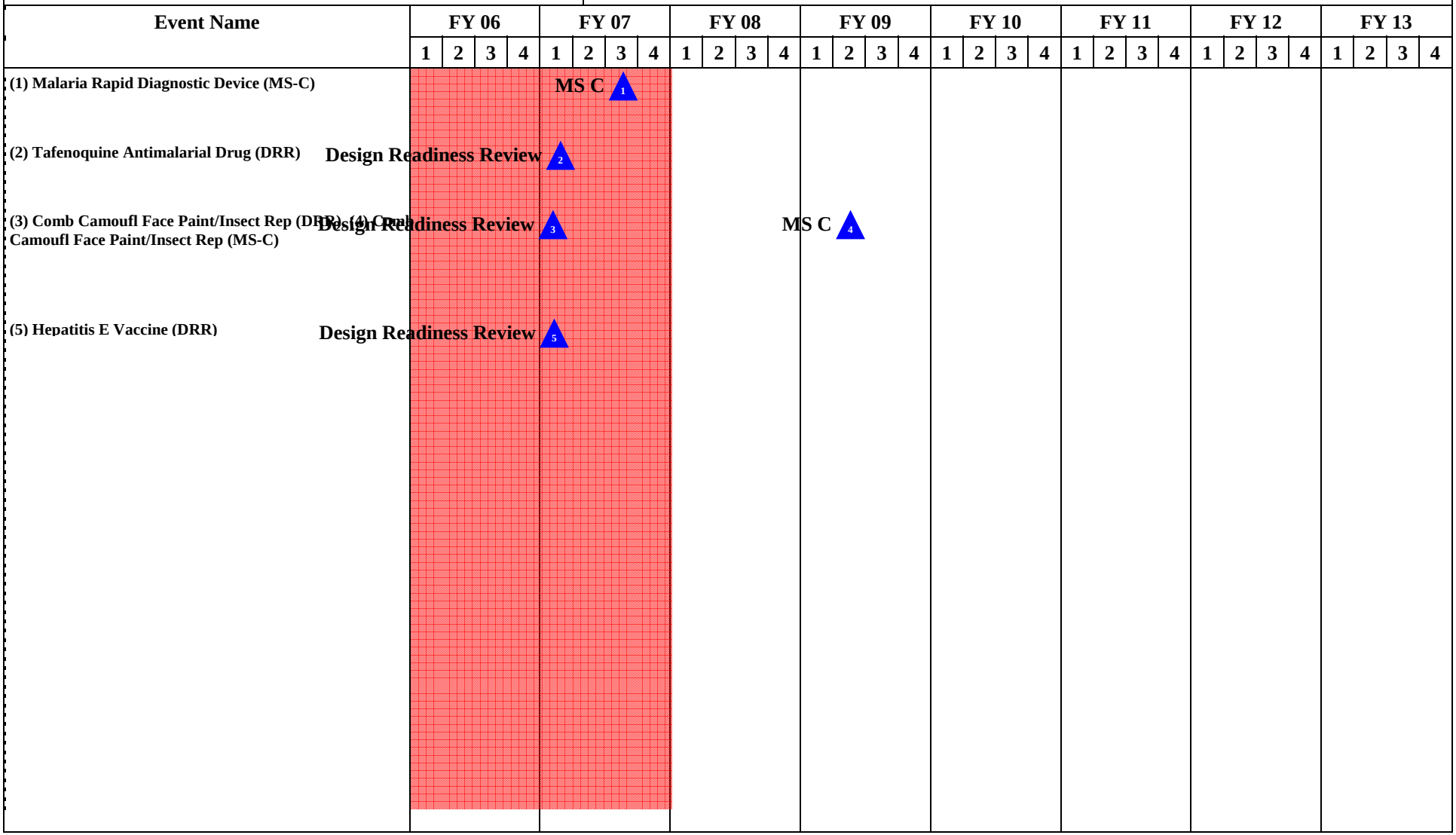
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
849



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipm

PROJECT
849

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Malaria Rapid Diagnostic Device (MS-C)		3Q						
Tafenoquine Antimalarial Drug (DRR)		1Q						
Comb Camoufl Face Paint/Insect Rep (DRR)		1Q						
Comb Camoufl Face Paint/Insect Rep (MS-C)				2Q				
Hepatitis E Vaccine (DRR)		1Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**

	COST (In Thousands)	FY 2006 Actual	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	103399	92237	142315	89105	62797	41351	51523	39908	Continuing	Continuing
016	Close Combat Capabilities ENG DEV	30878	56529	95203	36321	19101	19835	31300	21300	Continuing	Continuing
415	MINE NEUTRAL/DETECTION	36469	35708	47112	52784	43696	21516	20223	18608		276116
419	FULL SPECTRUM EFFECTS PLATFORM (F-SEP)	31300									31300
434	ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)	4752									11692

A. Mission Description and Budget Item Justification: This program element (PE) provides for System Development and Demonstration of networked munitions and countermine systems. This PE implements the National Landmine Policy to develop alternatives to the non-self-destructing anti-vehicle and anti-personnel landmine systems: the Close Combat Capabilities Engineering Development, provides for the development of the anti vehicle mine replacement, the Intelligent Munitions System (IMS), a Future Combat System Core system. Anti-Personnel Landmine Alternatives provides for development of the Spider alternative systems for Non Self-Destruct (NSD)Anti-Personnel Landmines (APLs). The program also provides for a variety of demolition efforts to include development of Magneto-Inductive Remote Activation Munition System (MI-RAMS). Project Mine Neutralization/Detection Engineering Development provides for development of the Airborne Surveillance, Target Acquisition and Minefield Detection (ASTAMIDS), Ground Standoff Mine Detection System (GSTAMIDS), and the Advanced Mine Detection System (AMDS)
IMS is a Future Combat System Core and a Landmine alternative program; ASTAMIDS and GSTAMIDS are Future Combat System Complementary Programs.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	74482	118078	103817	101633
Current BES/President's Budget (FY 2008/2009)	103399	92237	142315	89105
Total Adjustments	28917	-25841	38498	-12528
Congressional Program Reductions		-28364		
Congressional Rescissions				
Congressional Increases		3200		
Reprogrammings	28917	-677		
SBIR/STTR Transfer				
Adjustments to Budget Years			38498	-12528

Change Summary Explanation: Funding:

FY 2006: $31.3M reprogrammed from OSD Rapid Equipping Force to Project 419 for Full Spectrum Effects Platform.

FY 2007: $28.0M Congressional decrease for Intelligent Munitions System (IMS), Project 016. $3.2M Congressional increase for Magneto-Inductive Remote Activation Munition System (MI-RAMS).

FY 2008: Funds realigned (+$38.5M) from IMS PAA, E96901 to IMS RDTE, Project 016 due to delay in award of SDD contract.

FY 2009: Funds realigned (-$12.5M) to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**016**

COST (In Thousands)	FY 2006 Actual	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
016 Close Combat Capabilities ENG DEV	30878	56529	95203	36321	19101	19835	31300	21300	Continuing	Continuing

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

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06-FY09: Continues with the IMS system development.	22173	37727	69197	25225
FY06-FY09: Continues integration of IMS into FCS..	800	4200	4045	1461
FY06-FY09: Continues to conduct IMS modeling and simulation.	1100	1100	1340	970
FY06-FY09: Conduct IMS system Contractor/Government, Development and Operational Testing.	4905	7410	17469	7365
FY06-FY09: Provide Government Furnished Material to contractor for development of IMS	1900	1318	3152	1300
FY07 : Complete developmentof MI-RAMS		3200		
Small Business Innovative Research/Small Business Technology Transfer Programs		1574		
Total	30878	56529	95203	36321

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PAA E96901 - Intelligent Munitions System				83805	82432	206653	207372	212180	Continuing	Continuing
OPA2 B55503 - Intelligent Munitions System (IMS) Remote Control Unit				20951	19910	51663	51843	53044	Continuing	Continuing

Comment:

C. Acquisition Strategy The Intelligent Munitions System (IMS) is a core FCS system that being developed as an evolutionary acquisition, in an incremental approach. An

incremental strategy will meet all requirements in the future. The first increment will meet US National Landmine Policy and provide future force capability to the current force. In June 2006 a System Development and Demonstration contract was awarded to Textron Systems of Wilmington, MA. This contract has two Low Rate Initial Production (LRIP) Options. Increment 1 will serve as the baseline design for the follow-on increments and enabling technology development will be conducted to ensure the follow-on increments_ requirements can be rapidly achieved at the lowest cost possible.

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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
016

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IMS System Development & Demonstration	C-CPIF	Textron System Corp., Wilmington, MA	15993	19653		35841	2Q	67238	2Q	19100	2Q	Cont.	Cont.	
IMS - MITRE provide C4 support		MITRE, McLean, VA	576	720	1-3Q	1175	1Q	805	1-3Q	805	1-3Q	Cont.	Cont.	
MI RAMS Development	SS-CIPF	Magnito Inductance Systems LTD Panama City, FL	5207			3200	3Q						8407	
Subtotal:			21776	20373		40216		68043		19905		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IMS Engineering Support	MIPR	ARDEC Picatinny Arsenal, NJ	5145	4293	1Q	4200	1Q	5300	1Q	4305	1Q	Cont.	Cont.	
IMS Engineering Support	MIPR	Various	1267	1834	1Q	2948	1-4Q	3200	1-4Q	2011	1-4Q	Cont.	Cont.	
IMS - PM HMS	MIPR	Fort Monmouth, NJ		1400	4Q	1344	3Q	3500	2Q	1500	2Q		7744	
Subtotal:			6412	7527		8492		12000		7816		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IMS	MIPR	Various	310	689	1Q	1030	1-4Q	2400	1-4Q	2000	1-4Q	Cont.	Cont.	
IMS	MIPR	DTC,APG,MD		7	1Q	1000	2Q	8000	2-4Q	2500	1-4Q	Cont.	Cont.	
Subtotal:			310	696		2030		10400		4500		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
016

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IMS	In-House	PM CCS, Picatinny Arsenal, NJ	896	1171	1-4Q	3257	1-4Q	3500	1-4Q	3000	1-4Q	Cont.	Cont.	
IMS	T.O. Contract	Robbins-Goia, Alexandria, VA		829	2Q	440	2Q	600	2Q	600	2Q	Cont.	Cont.	
IMS	T.O. Contract	BRTRC, Alexandria, VA		282	2Q	520	2Q	660	2Q	500	2Q	Cont.	Cont.	
SBIR/STTR						1574							1574	
Subtotal:			896	2282		5791		4760		4100		Cont.	Cont.	
Project Total Cost:			**29394**	**30878**		**56529**		**95203**		**36321**		**Cont.**	**Cont.**	

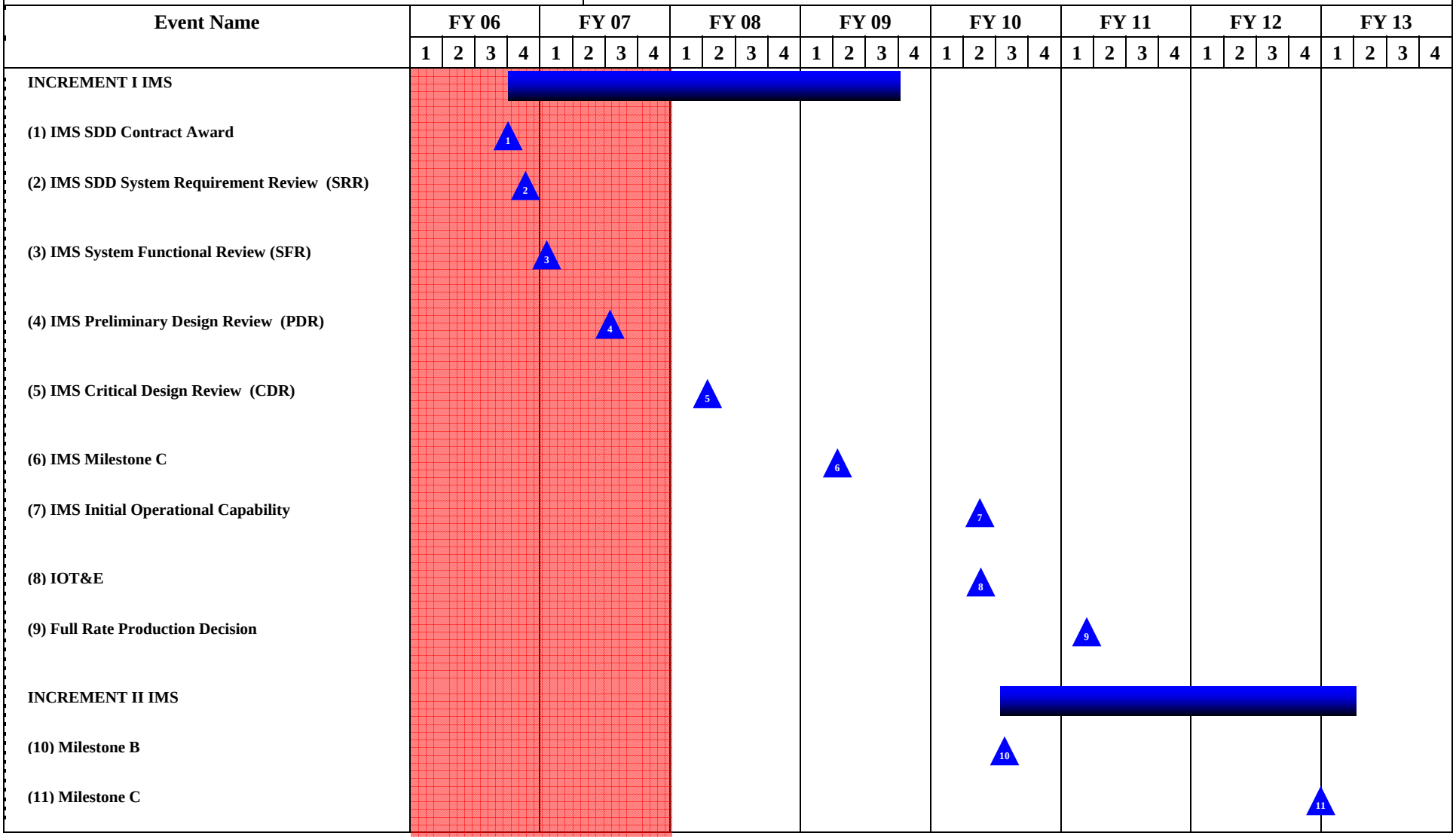
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
016



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**016**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
INCREMENT I IMS	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q				
IMS SDD Contract Award	3Q							
IMS SDD System Requirement Review (SRR)	4Q							
IMS System Functional Review (SFR)		1Q						
IMS Preliminary Design Review (PDR)		3Q						
IMS Critical Design Review (CDR)			2Q					
IMS Milestone C				2Q				
IMS Initial Operational Capability					2Q			
IOT&E					2Q			
Full Rate Production Decision						1Q		
INCREMENT II IMS					3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q
Milestone B					3Q			
Milestone C							4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**415**

COST (In Thousands)	FY 2006 Actual	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
415 MINE NEUTRAL/DETECTION	36469	35708	47112	52784	43696	21516	20223	18608		276116

A. Mission Description and Budget Item Justification: This project provides System Development and Demonstration (SDD) for the Airborne Surveillance, Target Acquisition, and Minefield Detection System (ASTAMIDS). The ASTAMIDS uses Multi-Spectral Imaging (MSI) and visible/Near Infrared sensor mounted on a Future Combat System Brigade Combat Team (BCT) Unmanned Aerial Vehicle to detect and locate combat targets and to detect minefields and obstacles that are impediments to maneuver forces. ASTAMIDS can be used in tactical operations day and night, to detect surface emplaced and recently buried minefields and obstacles. ASTAMIDS can also recognize and identify combat targets and designate them for laser guided munitions.

Ground Standoff Mine Detection System Future Combat Systems (GSTAMIDS FCS) With the advent of the Army's Future Force Transformation, the GSTAMIDS Program was restructured to meet the countermine requirements for FCS. The April 2003, Joint Requirements Oversight Council (JROC) approved the FCS Operational Requirements Document (ORD) which includes countermine requirements. The GSTAMIDS FCS will provide the Unit of Action (UA) a capability that can be used for on-route mine detection, mine and temporary lane marking, precision mine neutralization and interfaces with FCS host platform(s) and Command, Control, Communications, and Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR).
ASTAMIDS and GSTAMIDS have been identified in FCS Spinouts 2 & 3 respectively as part of the Army's initiative to spiral future capabilities to the current force.

Autonomous Mine Detection Sensors (AMDS) is the Mine Detection Mission Payload for a robotic platform

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
FY06: ASTAMIDS - Completes Preliminary Design Reviews	9664			
FY06: ASTAMIDS - Completes Spiral 1 Component Fabrication	2000			
FY06: ASTAMIDS - Initiates Spiral 1 Gimbal Fabrication	4000			
FY06: ASTAMIDS - Initiates Spiral 2 Component Fabrication	1576			
FY07: ASTAMIDS - Completes Spiral 1 Prototype Fabrication		1746		
FY07: ASTAMIDS - Initiates Contractor Functional and Qual Test		5738		
FY07: ASTAMIDS - Completes Critical Design Reviews		7204		
FY08: ASTAMIDS - Completes Spiral 2 Prototype Fabrication /Delivery AP #3, #4			3500	
FY08: ASTAMIDS - Initiates Spiral 3 Component Fabrication			4805	
FY08: ASTAMIDS - Initiates Spiral 3 Gimbal/Prototype Fabrication			5000	
FY08: ASTAMIDS - Completes Test Readiness Review (TRR)			3500	

FY08: ASTAMIDS - Completes Contractor DT Testing			5682	
FY08: ASTAMIDS - Delivery of AP PROTOTYPES #1, #2			3000	
FY09: ASTAMIDS Take delivery of 3 systems and begin DT/OT testing.				27283
FY06: GSTAMIDS FCS - Complete computer architecture	2774			
FY06: GSTAMIDS FCS - Complete initial lane marker visibility experiment	862			
FY06: GSTAMIDS FCS - Complete testing of scanning sensor EDU (12A). Complete design of second iteration scanning sensor	8488			
FY06: GSTAMIDS FCS - Procurement of surrogate test vehicle and integration tasks	1140			
FY06: GSTAMIDS FCS - SEIT - Complete Trade studies and System Requirements Review 2	4499			
FY06: GSTAMIDS FCS -Initiate design of mine neutralizer munition and fuze	1466			
FY07: GSTAMIDS FCS - Computer system and subsystem manager with initial integration with scanning sensor		3959		
FY07: GSTAMIDS FCS - Conduct lane marker visibility experiment with manned platform		226		
FY07: GSTAMIDS FCS - Complete scanning sensor final prototype preliminary design and detection algorithm		6162		
FY07: GSTAMIDS FCS - Complete initial fuze prototype, RF command initiated fuze simulator, and initial design of munition		5714		
FY07: GSTAMIDS FCS - Complete Preliminary Design review, SRR 3, integration/test of computer and scanning sensor		3552		
FY07: GSTAMIDS FCS - Complete fabrication and build of surrogate test vehicle		472		
FY08: GSTAMIDS FCS - Complete computer s/w and hardware, deliver initial emulator hardware and s/w			3848	
FY08: GSTAMIDS FCS - Complete build and test of Lane Marking subsystem final prototype			2439	
FY08: GSTAMIDS FCS - Complete build and test of scanning sensor final prototype and deployment mechanism			4266	
FY08: GSTAMIDS FCS - Complete neutralizer munition design, neutralizer magazine and deliver mechanism design			7287	
FY08 - FY09: GSTAMIDS FCS - Complete critical design review and final prototype development and testing			3785	25501
Small Business Innovative Research/Small Business Technology Transfer Programs		935		
Total	36469	35708	47112	52784

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0603619A, Project 606, Countermine/Barrier Advanced Dev		8346	24737	29423	19008	19213	19800	20300	Continuing	Continuing
OPA 3, R68102, GSTAMIDS FCS/Interim capability			63016	47103	44490	63123	64100	30100	Continuing	Continuing
OPA 3, S11500 ASTAMIDS			11708	12860	12487	12631	12600	12900	Continuing	Continuing

Comment:

C. Acquisition Strategy The ASTAMIDS competitively selected Prime System contractor was awarded Cost Plus Incentive Fee (CPIF) System Development and Demonstration (SDD) in FY03 after MDA Milestone B approval. Milestone C is scheduled for FY 2009.

GSTAMIDS FCS entered the SDD Phase in June 2004 with MDA approval of MS B and competitively awarded a SDD Cost Plus Fixed Fee (CPFF) contract. Milestsone C is scheduled for FY2012. Production will be initiated/executed via noncompetitive contract in FY2013.

AMDS - The acquisition strategy for SDD supports a competitive effort with one or more contractors/technology approaches. AMDS funding will transition from Advanced Development (D606) to Engineering Development (D415) in FY2011.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
415

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GSTAMIDS FCS	C-CPFF	BAE Systems, Austin,TX	17869	14889	2Q	14011	1Q	14183	1Q	17135		Cont.	Cont.	Cont.
ASTAMIDS	C-CPIF	Northurp Grumman	12000	14220	1Q	8700	1Q	17844		19100		Cont.	Cont.	Cont.
Subtotal:			29869	29109		22711		32027		36235		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GSTAMIDS FCS	MIPR	Various OGAs		715	1Q	1333	1Q	1490	1Q	1639	1Q	Cont.	Cont.	
GSTAMIDS FCS Engineering Support	MIPR	NVESD/CECOM, Ft Belvoir, VA		1662	1Q	2145	1Q	2450	1Q	2900	1Q	Cont.	Cont.	
GSTAMIDS FCS Support	Task Orders	Various Contractors		305	1Q	360	1Q	380	1Q	418	1Q	Cont.	Cont.	
ASTAMIDS Engineering Support	MIPR	NVESD/CECOM, Fortt Belvoir, VA		1266	1Q	1550	1Q	1274	1Q	1548	1Q	Cont.	Cont.	
ASTAMIDS Support	Various	Various		131	1Q	21	1Q	1001	1Q	1101	1Q	Cont.	Cont.	
Subtotal:				4079		5409		6595		7606		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GSTAMIDS FCS Test Support	MIPR	ATEC, Alexandria, VA		620	3Q	509	2Q	500	2Q	500		Cont.	Cont.	
ASTAMIDS	MIPR	ATEC, Alexandria, VA		175	4Q	1950	2Q	2707	2Q	2980		Cont.	Cont.	
Subtotal:				795		2459		3207		3480		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
415

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	In-House	PM-CCS, Picatinny Arsenal, NJ		601	1-4Q	2314	1-4Q	3388	1-4Q	3558	1-4Q	Cont.	Cont.	
Program management Contractor support	Task Order	BRTRC		1885	1-4Q	1880	1-4Q	1895		1905	1-4Q	Cont.	Cont.	
SIBR/STTR						935							935	
Subtotal:				2486		5129		5283		5463		Cont.	Cont.	
Project Total Cost:			**29869**	**36469**		**35708**		**47112**		**52784**		**Cont.**	**Cont.**	**Cont.**

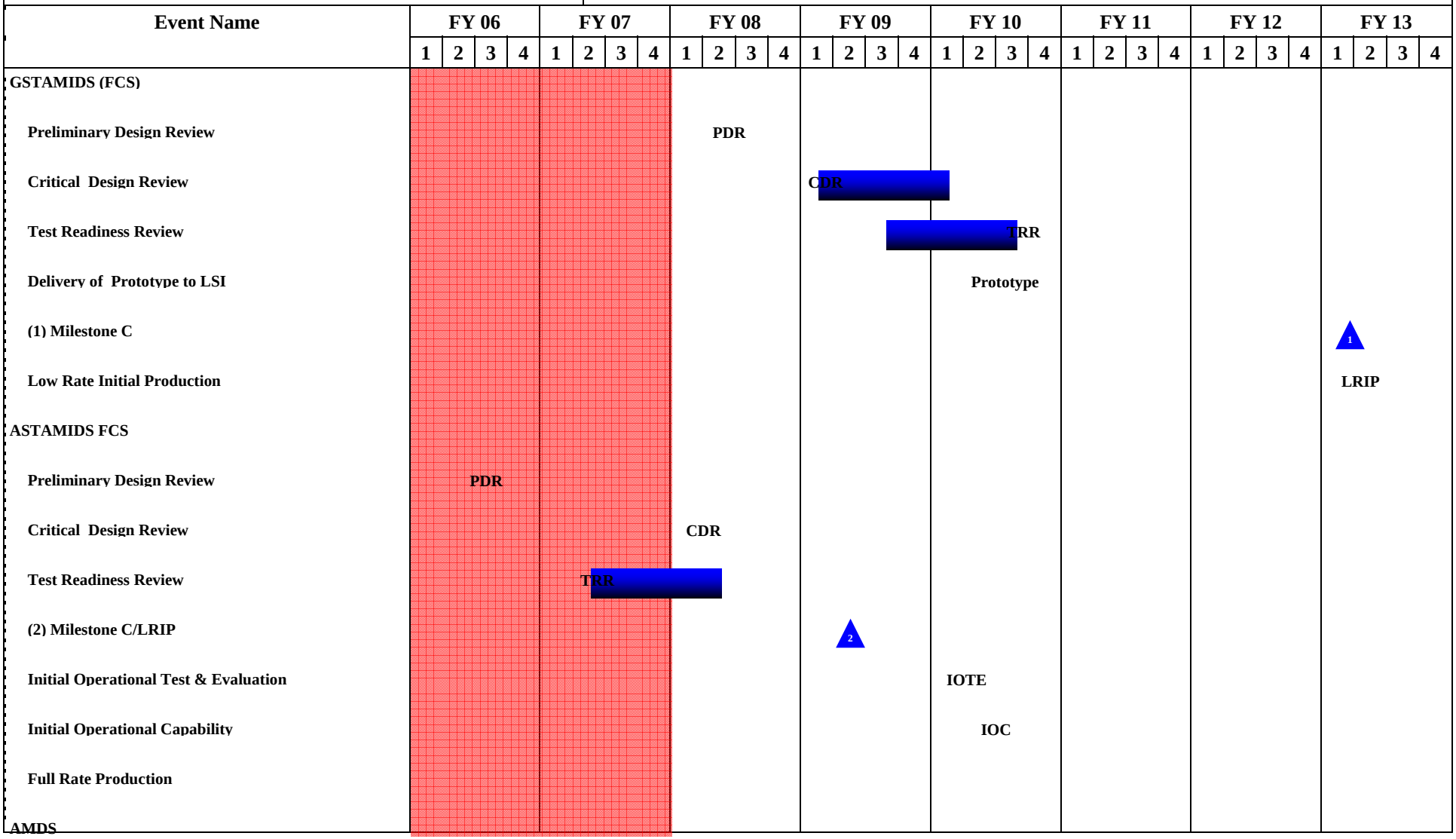
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
415



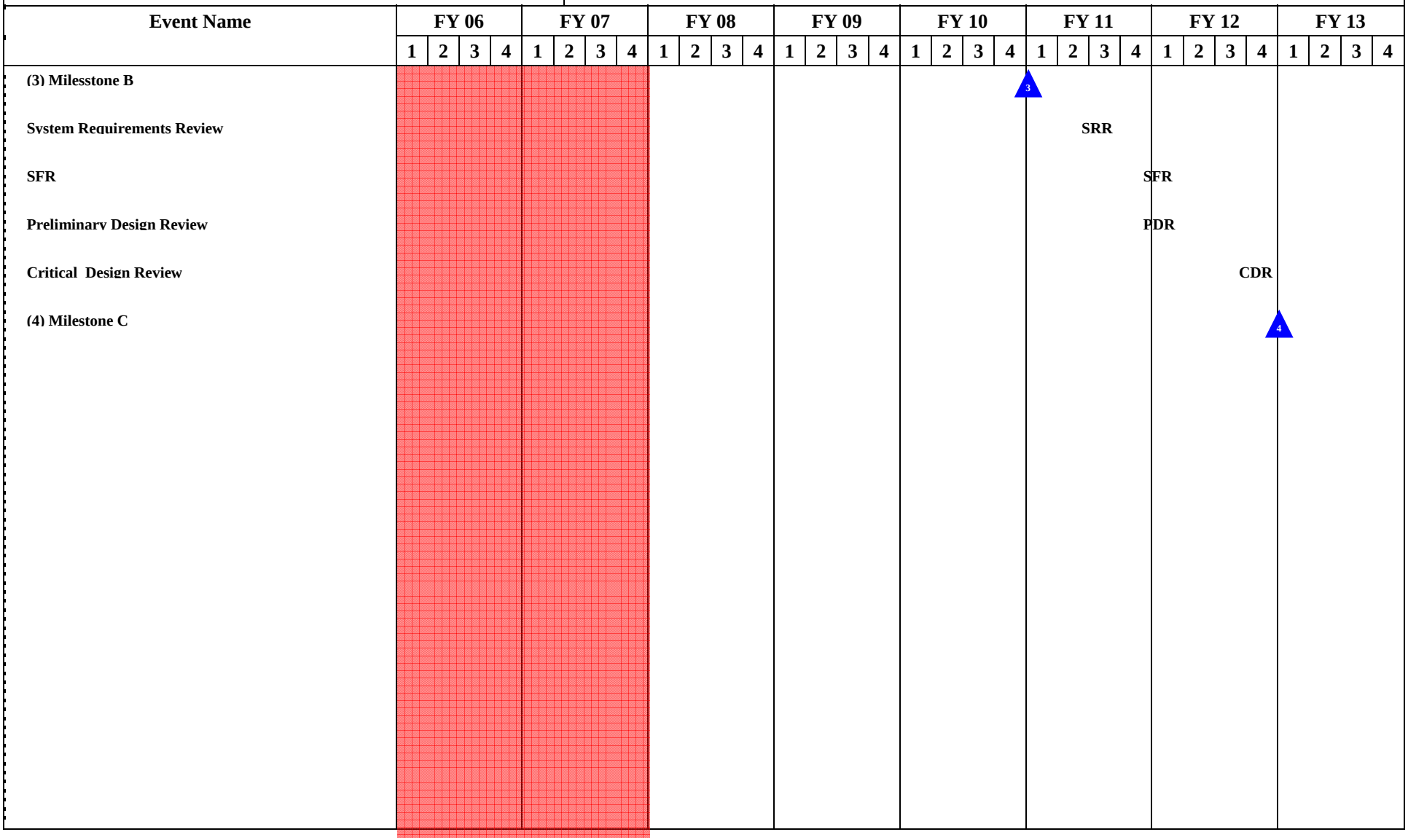
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
415



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**415**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
GSTAMIDS (FCS)								
Milestone B								
Preliminary Design Review			2Q					
Critical Design Review				1Q	4Q			
Test Readiness Review				3Q - 4Q	1Q - 3Q			
Delivery of Prototype to LSI					2Q			
Milestone C								1Q
Low Rate Initial Production								1Q
ASTAMIDS FCS				2Q				
Milestone B								
Preliminary Design Review	3Q							
Critical Design Review			1Q					
Test Readiness Review		1Q - 2Q	4Q					
Milestone C/LRIP				2Q				
Initial Operational Test & Evaluation					1Q			
Initial Operational Capability					2Q			
Full Rate Production					3Q			
AMDS								
Milesstone B					4Q			
System Requirements Review						2Q		
SFR						4Q		
Preliminary Design Review						4Q		
Critical Design Review							3Q	
Milestone C							4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604814A - Artillery Munitions - EMD**	**708**

COST (In Thousands)	FY 2006 Actual	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
708 XM982 PROJECTILE	101957	101422	63039	78532	43584	2759	2088	2289		395670

A. Mission Description and Budget Item Justification: Excalibur provides improved fire support through a Precision Guided Extended Range family of munitions with greatly increased accuracy and offer significant reduction in collateral damage in most of all urban environments. The Excalibur will be interoperable with the M777A2 Lightweight 155mm howitzer (LW155), the M109A6 (Paladin) howitzer, and the Future Combat System (FCS) Non-Line of Sight Cannon (NLOS-C). Excalibur will provide a 33% range increase over current Rocket Assisted Projectiles, with a 10 meter accuracy (Circular Error Probable) at all ranges. Excalibur is also highly resistant to GPS jamming. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributes resources towards the development in accordance with an established Project Agreement.

The Excalibur program is using an incremental development approach to provide a combat capability to the Soldier as quickly as possible, and to deliver advanced capabilities and lower costs as technology matures. The Block Ia-1 will be fielded to the CFLCC in Iraq to fulfill an Urgent Need Request. Additional fielding in FY07 is planned to the LW155 howitzer equipped Stryker Brigade Combat Team #5 being formed in Hawaii. Block Ia-2 delivered in FY08 will provide greatly increased range to LW155, Paladin and FCS Cannon forces Army-wide when fielded. The third planned increment, Block Ib, will be fielded in FY11 and will provide a further performance improvement while significantly lowering unit costs.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Complete airframe structure, warhead, guidance, systems and procure and test projectiles for system level qualification testing for Block Ia qualification.	93003	70466		
Initiate Block Ib airframe structure and warhead development and integration.			7871	13460
Initiate Block Ib guidance unit integration, gun hardening, tactical telemetry, systems software development, and programmed maneuver flight demonstration and support system integration efforts.			15890	23780
Conduct Systems and Specialty Engineering activities to include specification development, Cost As Independent Variable (CAIV), program metric tracking, and conduct modeling of lethality, effectiveness, and aeroballistics, and reliability in support of Block Ib development		3725	13210	15960
FY07 Support Contractor competitive evaluation demonstration test series. FY08-09 procure and test Contractor Developmental Test (DT) hardware in accordance with the Contractor Development Master Test Plan and Test and Evaluation Master Plan (TEMP) for Block Ib development.		6230	18979	23282
Engineering support for Excalibur platform integration to include development and qualification of the Enhanced Platform Integration Kit and Portable Inductive Artillery Fuze Setter (EPIAFS), Portable Excalibur Fire Control System (PEFCS), Advanced Field Artillery Tactical Direction System (AFATDS), and digital howitzer integration	6162	4880	2250	1800
Procure production representative projectiles and conduct Limited User Test (LUT) and Independent Operational Test & Evaluation	2792	13298	4839	250

(IOT&E) efforts for Block Ia.				
Small Business Innovative Research/Small Business Technology Transfer Programs.		2823		
Total	101957	101422	63039	78532

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604814A - Artillery Munitions - EMD**	**708**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	114709	102554	62841	77969
Current BES/President's Budget (FY 2008/2009)	101957	101422	63039	78532
Total Adjustments	-12752	-1132	198	563
Congressional Program Reductions		-387		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-12752	-745		
SBIR/STTR Transfer				
Adjustments to Budget Years			198	563

Change Summary Explanation: Funding:

FY 2006: $9.0M reprogrammed to PE 0604802A, Project S36, for Course Correcting Fuze (CCF) Tech Demo Contract awards.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Procurement Ammunition Army: Proj 155mm Extended Range: XM982-U Excalibur: E80103	49260	26863	28781	34372	64766	61929	85954	102306	956790	1411021
OPA2: Enhanced Portable Inductive Fuze Setter (E-PIAFS): AD3260	6408	7411	7572	2596					Continuing	Continuing

Comment:

D. Acquisition Strategy Excalibur is a family of 155mm Precision Guided Extended Range Munitions. A competitive source selection awarded an Engineering and Manufacturing Development (E&MD) contract for the initial block, with options for the other block's development and all Low Rate Initial Production quantities (LRIP). In coordination with the Defense Acquisition Executive, the Army has implemented an incremental development process to provide for an early fielding capability in FY07 in response to an Urgent Needs Statement. The Product Manager's Office is currently managing a contract option for the Block Ia-1 LRIP concurrent with the balance of System Development and Demonstration (SDD) for the Block Ia-2 configuration. The initial increment (Block Ia-1) will meet the most critical Operational Requirement Document (ORD) Block Ia Key Performance Parameter (KPP) requirements. The second increment (Block (Ia-2)) will meet all of the ORD Block Ia KPP requirements by the fourth quarter FY08. The Product Manager's office intends to award the third increment (Block Ib) SDD in FY07, which will meet all of the ORD Block Ib KPP requirements and fielded in FY11.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604814A - Artillery Munitions - EMD

PROJECT
708

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Excalibur Block Ia Development	C/CPAF	Raytheon Missile System,Tucson, AZ	310664	58306	1-4Q	44909	1-4Q					Cont.	Cont.	Cont.
Award Fee on Excalibur Development Contract	N/A	Raytheon Missile System,Tucson, AZ	25511	3843	2-4Q	3006	2-4Q					Cont.	Cont.	Cont.
TCM Merger Assessment	FP	Bofors Defence, Karlskoga, Sweden	14430										14430	
Platform Integration-Systems Contractor	CPAF	TBS	150	450	1Q	120	2Q	120	2Q	125	2Q	Cont.	Cont.	
Misc Support Contracts	Various	Various	1766	350	1-2Q	350	1-2Q	400	1-2Q	400	1-2Q	Cont.	Cont.	
Platform Integration/Fire Control - AFATDS	SS/CPIF	Raytheon AFATDS, Ft Wayne, IN	4045	450	1-2Q	450	1-2Q	200	1-2Q	200	1-2Q	Cont.	Cont.	
Platform Integration Firing Tables Development	MIPR	ARDEC, Firing Tables Branch, Picatinny, NJ/Aberdeen, MD	1261	463	1Q	250	1Q	250	1Q	250	1Q	Cont.	Cont.	
Platform Integration LW155 M777A2	CPIF	BAE, Burlington Vt.	8739	3250	1-2Q		1-2Q						11989	
SS-SFM Test Projectiles	C/FFP	Various	10815										10815	
Excalibur Block Ib Development	C/CPAF	TBS			2-4Q	7177	2Q	27510	1-4Q	42935	1-4Q	Cont.	Cont.	
Govt IPT Support Platform Integration Development	MIPR	ARDEC, Picatinny, NJ	1120	1730	1-4Q	3700	1-4Q	820	1-4Q	500	1-4Q	Cont.	Cont.	
Platform Integration & EPIAFS Software Development	MIPR	Navy, Surface Warfare Center, MD	80	150	2Q		2Q					Cont.	Cont.	
Block Ia Engineering Services	CPIF	Raytheon Missile System, Tucson, Az.				5467	3Q	4000	1-4Q	4000	1-4Q		13467	
Subtotal:			378581	68992		65429		33300		48410		Cont.	Cont.	Cont.

II. Support Costs	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604814A - Artillery Munitions - EMD

PROJECT
708

	Type		Cost		Date		Date		Date		Date	e		Contract
Program Management	In House	PM Excalibur , Picatinny, NJ	16465	4147	1-4Q	3458	1-4Q	3613	1-4Q	3812	1-4Q	Cont.	Cont.	
Government IPT Support-Excalibur XM982	MIPR	ARDEC, Picatinny, NJ	31384	10349	1-4Q	10306	1-4Q	9500	1-4Q	10250	1-4Q	Cont.	Cont.	
Government TCM Support	MIPR	ARDEC, Picatinny, NJ	910										910	
Goverment Support- Ft Sill	MIPR	Ft. Sill, OK	2427	400	1-2Q	600	1-2Q	400	1-2Q	400	1-2Q	Cont.	Cont.	
Paladin Platform Integration	MIPR	PM Paladin Picatinny, NJ	650			280		200	1-2Q				1130	
Modeling and Structural Development	MIPR	Army Research Labs, Adelphi, MD	4632	1344	1-4Q	1198	1-4Q	850	1-4Q	850	1-4Q	Cont.	Cont.	
Govt IPT Support Platform Integration	MIPR	ARDEC, Picatinny, NJ	5591			450		850	1-4Q	850	1-4Q		7741	
Milestone Support	SS/FP	Camber, Alexandria, VA	1040	250	2Q	250	2Q	250	1-4Q	250	1-4Q	Cont.	Cont.	
Technical Spt Contract for Platform Integration	SS/FP	Camber, Dallas, TX	571	125	1-2Q	125	1-2Q	150	1-2Q	150	1-2Q	Cont.	Cont.	
Fire Control development support	MIPR	Ft Monmouth, NJ/Ft Sill, OK	631	252	1-2Q	125	1-2Q	87	1-2Q	90	1-2Q	Cont.	Cont.	
Miscellaneous Support	MIPR	Various	875	500	1-4Q	647	1-4Q	650	1-4Q	650	1-4Q	Cont.	Cont.	
Platform Integration Software Support	MIPR	Navy Surface Warfare Center, MD	390		2Q	36							426	
PM CAS SS-SFM	In-House	PM CAS, Picatinny, NJ	700										700	
Government IPT Support - SS-SFM	MIPR	ARDEC, Picatinny, NJ	1625										1625	
Subtotal:			67891	17367		17475		16550		17302		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
TECOM Test Range	MIPR	YPG, Yuma, AZ	9519	4374	1-4Q	4900	1-4Q	4375	1-4Q	7250	1-4Q	Cont.	Cont.	
Test Instrumentation and Analysis	MIPR	Army Research Labs,	2902	350	1-4Q	125	1-4Q	350	1-4Q	350	1-4Q	Cont.	Cont.	

		Adelphi, MD											
Telemetry Support	SS/FF	Physical Science Laboratories (PSL), Las Cruces, NM	1646	350	2Q	900	2Q	200	2Q	450	2Q	Cont.	Cont.	
Telemetry Support	MIPR	ARDEC, Picatinny, NJ	7575	4743	1-4Q	4743	1-4Q	1850	1-4Q	3200	1-4Q	Cont.	Cont.	
Telemetry Cryptographic Support & Anti-Jam Support	MIPR	Ft. Huachuca, AZ	138			150	2-3Q	50	2-3Q	50	2-3Q		388	
Tri-Service Software Assessment	MIPR	OSD, Wash, DC	61										61	
Operational Test Support & AEC	MIPR	ATEC, Alexandria, VA	559	4831	2Q	3281	2Q	4639	1-4Q		1-4Q	Cont.	Cont.	
Target Replacement, Definition, Maintenance and Repair and Threat Assessment	MIPR	Target Management Office, Huntsville, AL.	600	400	1-2Q	250	1-2Q	500	2-3Q	250	2-3Q	Cont.	Cont.	
ARDEC Testing	MIPR	ARDEC, Picatinny, NJ	1165	350	1-4Q	350	1-4Q	350	1-4Q	350	1-4Q	Cont.	Cont.	
Test Gun Equipment	MIPR	Watervliet Arsenal, NY	3572	200	1-2Q	200	1-2Q	200	1-2Q	120	1-2Q	Cont.	Cont.	
SS-SFM Testing	MIPR	Yuma Proving Grounds, Yuma, AZ	2300										2300	
Live Fire Test and Evaluation	MIPR	ARL, Aberdeen, MD				296		125	1-4Q	250	1-4Q	Cont.	Cont.	
White Sands Missile Range	MIPR	White Sands Missile Range, NM				250	2-3Q	300	1-4Q	300	1-4Q	Cont.	Cont.	
Test Hardware	SS/CP	SAVIT, Parsippanny, NJ				250	2-3Q	250	2-3Q	250	2-3Q		750	
Subtotal:			30037	15598		15695		13189		12820		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SBIR/STTR						2823							2823	
Subtotal:						2823							2823	

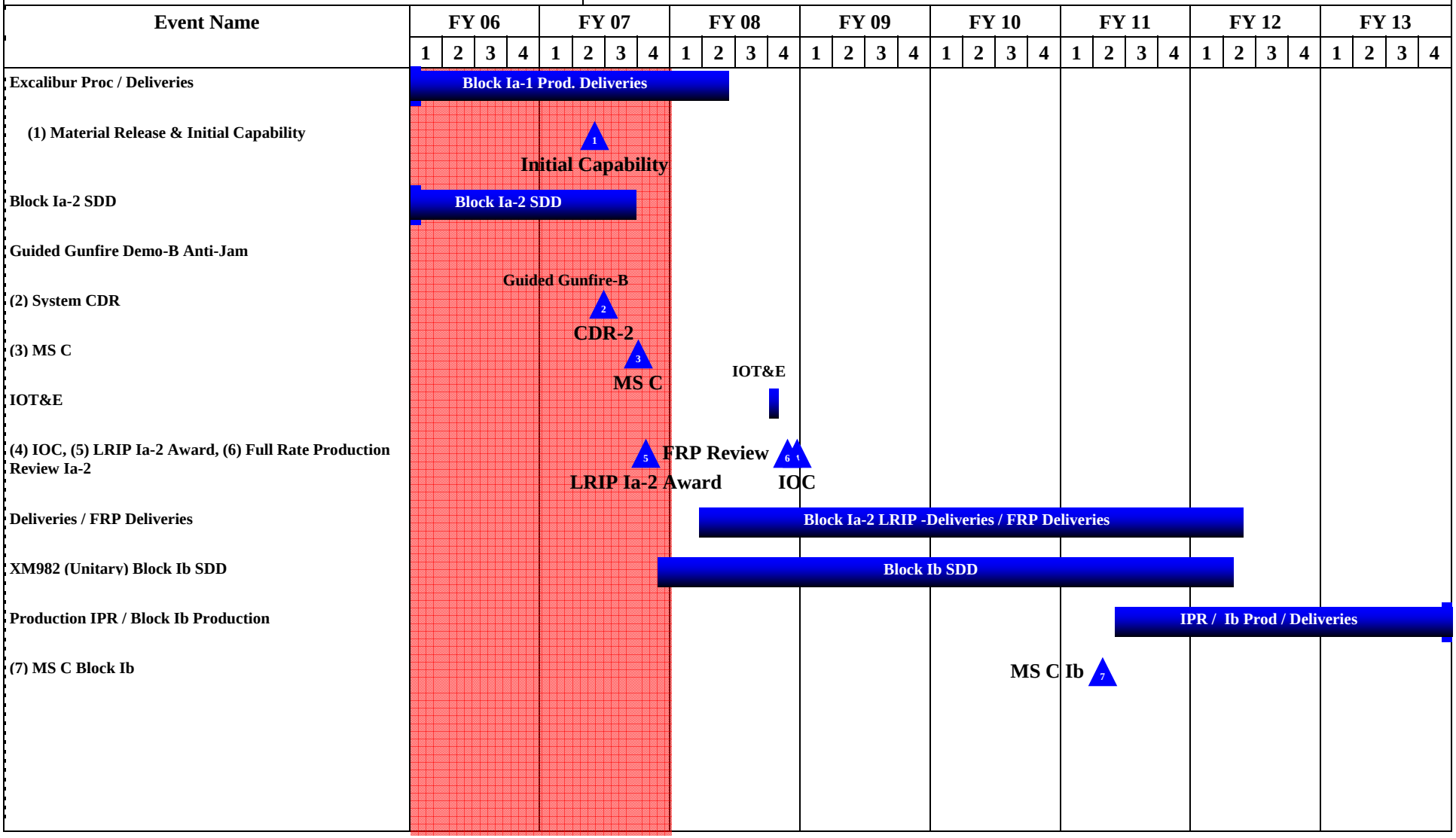
Remarks: Not Applicable

Project Total Cost:	**476509**	**101957**		**101422**		**63039**		**78532**		**Cont.**	**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604814A - Artillery Munitions - EMD**	**708**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604814A - Artillery Munitions - EMD

PROJECT
708

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XM982 (Unitary) Block Ia-1 SDD								
Preliminary Design Review								
Guided Gunfire Demo - A								
Decision Point 2								
Milestone C for Block Ia-1								
SS-SFM JBMOU Testing								
Excalibur Proc / Deliveries	1Q - 4Q	1Q - 4Q	1Q - 2Q					
Material Release & Initial Capability		2Q						
Block Ia-2 SDD	1Q - 4Q	1Q - 3Q						
Guided Gunfire Demo-B Anti-Jam		2Q						
Critical Design Review (CDR)								
System CDR		2Q						
MS C		3Q						
IOT&E			3Q - 4Q					
IOC			4Q					
LRIP Ia-2 Award		4Q						
Full Rate Production Review Ia-2			4Q					
Deliveries / FRP Deliveries			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q	
XM982 (Unitary) Block Ib SDD		4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q	
Production IPR / Block Ib Production						2Q - 4Q	1Q - 4Q	1Q - 4Q
MS C Block Ib						2Q		
SS-SFM JBMOU Testing								
Guidance Soft Recovery Testing/Sys. Reliability Growth	1Q - 3Q							
Guided Gunfire A (Tactical Guidance System Testing)								

Milestone C for Block Ia-1								
Guided Gunfire B (Initial Full System Test Firing)								

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604814A - Artillery Munitions - EMD**							PROJECT **708**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
XM982 Excalibur	10769	33664						
Total Termination Liability Funding:	10769	33664						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**

COST (In Thousands)	FY 2006 Actual	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
482 Ground Combat Identification	2193	39	11362	3404						16998

A. Mission Description and Budget Item Justification: The ultimate goal of Combat Identification (CID) is to maximize overall combat effectiveness by minimizing and mitigating incidents of fratricide and maximizing the situational understanding of the trigger puller. This is achieved by rapid, reliable identification of friends, foes, and neutrals in the Joint battlespace. This program supports the development of mounted ground-to-ground (G-G) CID solutions for the current force, while ensuring interoperability with the Future Combat System (FCS). It also supports CID initiatives approved by the Army Marine Corps Board in March 2006 to narrow existing CID capability gaps. Millimeter Wave (mmW) was selected by the AMCB to be the technology of choice to address Joint Cooperative Target Identification in the direct fires G-G CID Mission Area known as JCTI-G. JCTI-G provides near real-time CID that aids in the prevention of G-G friendly fire incidents and resulting fratricides. In this instance, JCTI-G can be defined as a cooperative (question and answer) technology that uses mmWs in the Ka-Band frequency spectrum to query a battle-space entity of interest and allows the recipient of that query to respond to that same query as a friend. JCTI-G systems generally consist of an interrogation antenna and a separate transponder antenna coupled to a central processing unit or Communications-Electronics Interface Unit (CEIU). Upon triggering the vehicle Laser Range Finder (LRF), the gunner and/or commander of the host vehicle platform automatically initiates the interrogator antenna to query the battle space entity of interest using a Low Probably of Detection and Interception (LPI/LPD) directional mmW signal to determine if the target is a friend or unknown entity. Any vehicle equipped with this technology that is within the specified beam width of the interrogation wave will respond in an omni-directional reply indicating it is a friend. This entire process takes less than 1 second to ensure firing operations are not disrupted. Indications received by the Commander and/or Gunner will be visual in the vehicle sighting unit and/or audible through the vehicle's intercommunications system. The technology will correctly identify a potential target as a friend or unknown from ranges of over 3 miles (>5.5 Km) more than 98% of the time. If tied to an existing US and Coalition Country ratified NATO Standardization Agreement (STANAG 4579), the technology can then be made to be Coalition and Joint Service interoperable.

FY08/09 funds will support the JCTI-G System Development & Demonstration (SDD) Phase and prepare for a Milestone C decision to initiate the Low Rate Initial Production (LRIP) Phase of the program.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Identified technical solutions for reducing the unit procurement costs of BTID for vehicle-to-vehicle fratricide reduction	1643			
Conduct JCTI-G Milestone (MS) B			500	
Inititate JCTI-G System Development and Demonstration (SDD)			7362	
Conduct JCI-G Developmental Test (DT)			2000	
Complete JCTI-G SDD				2404
Prepare for JCTI-G MS C				500
Support internal program management office requirements	550	38	1500	500
Small Business Innovative Research/Small Business Technology Transfer Programs		1		

Total	2193	39	11362	3404

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	5395	39	20225	21733
Current BES/President's Budget (FY 2008/2009)	2193	39	11362	3404
Total Adjustments	-3202		-8863	-18329
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings	-3202			
SBIR/STTR Transfer				
Adjustments to Budget Years			-8863	-18329

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA2, SSN BA0510 Combat Identification Program			4228	31637	54215	101966	104236	97193	Continuing	Continuing

Comment:

D. Acquisition Strategy C. Acquisition Strategy : This will be a joint Army and Marine Corps acquisition beginning with a MS B decision to move forward with an SDD effort for a Cooperative Target Identification (CTI) Device that is NATO Standardization Agreement (STANAG) 4579 compliant for use in joint and coalition operations. Post MS B activities will consist of the solicitation of a competitive cost-plus type contract award to baseline the design consistent with existing Joint Capability Development Documentation (CDD) and to conduct a demonstration phase, resulting in a baseline production configuration item. Following a MS C Decision, Cost As an Independent Variable (CAIV) goals will be utilized to award follow-on options for LRIP quantities.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604817A - Combat Identification

PROJECT
482

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
B-Kit Development	C/CPAF	TRW, CA	69765										69765	69765
A-Kit Development (Abrams)	C/CPFF	GDLS, MI	10909										10909	10909
A- Kit Development (Bradley)	C/CPFF	UDLP, CA	3364										3364	3364
A-Kit Development (Various)	Misc.	E&S, TRW, UDLP, AM General, Raytheon.	5836										5836	5836
Air-to-Ground Efforts	MIPR	I2WD Ft. Monmouth, NJ	2206										2206	
Air-to-Ground Solution Efforts	MIPR	Sandia National Labs/DOE Albuquerque, NM	550										550	
Combat Identification International Efforts	C/CPFF	Raytheon Ft. Wayne, IN	415										415	
BTID Cost Reduction Efforts	FFP	Raytheon Ft. Wayne, IN	3421	1643	3Q								5064	
RF Tags Program Efforts	MIPR	I2WD Ft. Monmouth, NJ	2023											
RF Tag Prototypes	C/CPFF	BAE Nashua, NH	800										800	
JCTI-G MS B	MIPR	PM TIMS/CE LCMC/Support Contractors						500	1Q				500	
JCTI-G SDD	C/CP	TBD						7362	1Q	2404	1Q		9766	
JCTI-G MS C	MIPR	PM TIMS/ CE LCMC/Support Contractors								500	1Q		500	
Subtotal:			99289	1643				7862		2904			109675	89874

II. Support Costs	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604817A - Combat Identification

PROJECT
482

	Type		Cost		Date		Date		Date		Date	e		Contract
Matrix Support	MIPR	CE LCMC, Fort Monmouth NJ	8303	82	1-4Q			370	1Q	125	1Q		8880	
System Eng/Tech Assistance	MIPR	COLSA, Falls Church, VA; Tecolote, Crystal City, VA; Sytex, Eatontown, NJ	7242	298	1Q			500	1Q	125	1Q		8165	
Test Planning	MIPR	CERDEC, Fort Monmouth NJ	437					130	1Q				567	
Technical Support	MIPR	Sandia National Laboratories/IDA Albuquerque, NM	570										570	
Subtotal:			16552	380				1000		250			18182	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Developmental Test, Log Demo, SCD, IOTE	MIPR	ATEC, TBD	3513					2000	1Q				5513	
Limited User Test	MIPR	ATEC, YPG, AZ	673										673	
ASCIET	MIPR	Misc.	6651										6651	
Subtotal:			10837					2000					12837	

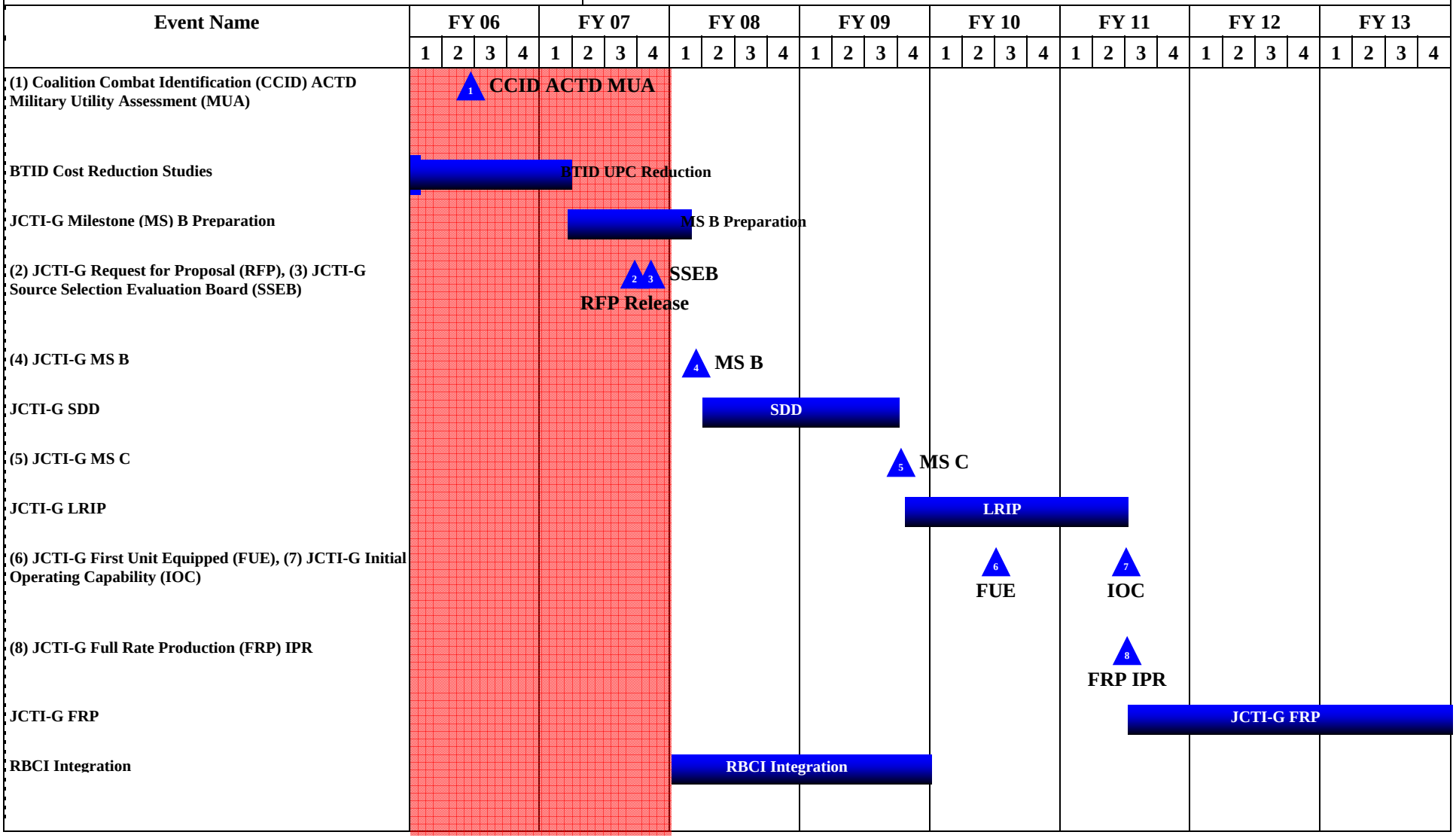
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	In-house support	PM NavSys/PM TIMS, Ft. Monmouth, NJ	5995	170	1-4Q	39	1Q	500	1-4Q	250	1-4Q		6954	
Subtotal:			5995	170		39		500		250			6954	

Project Total Cost:	**132673**	**2193**		**39**		**11362**		**3404**			**147648**	**89874**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Coalition Combat Identification (CCID) ACTD Military Utility Assessment (MUA)	2Q							
BTID Cost Reduction Studies	1Q - 4Q	1Q						
JCTI-G Milestone (MS) B Preparation		1Q - 4Q	1Q					
JCTI-G Request for Proposal (RFP)		3Q						
JCTI-G Source Selection Evaluation Board (SSEB)		4Q						
JCTI-G MS B			1Q					
JCTI-G SDD Contract			1Q					
JCTI-G SDD			1Q - 4Q	1Q - 3Q				
JCTI-G DT			3Q					
JCTI-G MS C				4Q				
JCTI-G LRIP Contract				4Q				
JCTI-G LRIP				4Q	1Q - 4Q	1Q - 2Q		
JCTI-G First Unit Equipped (FUE)					2Q			
JCTI-G Initial Operating Capability (IOC)						2Q		
JCTI-G Full Rate Production (FRP) IPR						2Q		
JCTI-G FRP						2Q - 4Q	1Q - 4Q	1Q - 4Q
RBCI Integration			1Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**

	COST (In Thousands)	FY 2006 Actual	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	77381	59901	99202	65082	69611	62809	65148	66176	Continuing	Continuing
323	COMMON HARDWARE SYSTEMS	4283	6678	7008	7339	7525	7826	8000	8000	Continuing	Continuing
334	COMMON SOFTWARE	14270	11632	21145	23967	24276	25236	27640	27644		175810
C15	MOUNTED BATTLE COMMAND ON-THE-MOVE (MBCOTM)	9507	9987	22020	11904	8383	1000				62801
C29	CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)	15207	10115	20548	10221	9876	8780	8743	8936		92426
C34	ARMY TAC C2 SYS ENG	14445	11402	12009	11651	19551	19967	20765	21596		131386
C39	Tactical Operations Centers (TOCs)	5301									15651
C3A	ARMY AIRBORNE COMMAND & CONTROL SYS (A2C2S)	7168	10087								17255
JN1	JOINT NETWORK NODE (JNN) TESTING	7200		16472							23672

A. Mission Description and Budget Item Justification: The umbrella program to exploit automation technology for the conduct of combat operations is the Army Tactical Command and Control System (ATCCS) program which is a component of the Army Battle Command System (ABCS). The ATCCS program provides automation in the five battlefield functional areas (BFAs) with the following specific systems: (1) Maneuver Control System (MCS); (2) Effects and Fires Command and Control Systems (EFCCS); (3) All Source Analysis System (ASAS) for Intelligence/Electronic Warfare; (4) Forward Area Air Defense Command, Control and Intelligence System (FAADC2I); and (5) Battle Command Sustainment Support System (BCS3). To provide an overall technically sound, cost effective, and operationally responsive approach, the design and development of ATCCS must be accomplished on a total systems basis. The ATCCS Engineering Program, more commonly known as Systems Engineering and Integration (SE&I), provides the required overall systems engineering to assure integrated Army tactical command and control and the utilization of common hardware and software throughout the five ATCCS nodal systems. This program element also includes the Central Technical Support Facility (CTSF) which provides a single technical "center of mass" for software checkout and physical system integration. The Common Hardware and Software projects provide common products to customers to meet their developmental and fielding needs. The Tactical Operations Centers (TOCs) project designs and develops the TOCs that form the structural backbone of the Army's digitized fielding concept. Starting in FY04 this program includes funding for the SICPS program which was previously funded in project C12 in FY03. The Army Airborne Command & Control (A2C2S) provides the avionics system required to horizontally and vertically integrate the battlefield. These systems support the Legacy to Objective transition path.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	66026	69172	60826	52587
Current BES/President's Budget (FY 2008/2009)	77381	59901	99202	65082
Total Adjustments	11355	-9271	38376	12495
Congressional Program Reductions		-8829		
Congressional Rescissions	-665			
Congressional Increases	-289			
Reprogrammings	12309	-442		
SBIR/STTR Transfer				
Adjustments to Budget Years			38376	12495

FY07 Summary:
Congressional Reprogrammings:
SE&I: + $2.4M for C34 Cross Domain Strategic and Operational Solution
TOCS: - $4.5M for Program Reductions-Redundancies with DJC2
MBCOTM: - $6.5M for Mounted battle Command on the Move

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**323**

COST (In Thousands)	FY 2006 Actual	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
323 COMMON HARDWARE SYSTEMS	4283	6678	7008	7339	7525	7826	8000	8000	Continuing	Continuing

A. Mission Description and Budget Item Justification: CHS provides state of the art, fully qualified, interoperable, compatible, deployable and survivable hardware and COTS software for Command, Control and Communications at all echelons of command for the United States Army and other DoD services with worldwide repair, maintenance and logistics support through contractor-operated CHS Repair Centers (CRCs) and management of a comprehensive warranty program. In FY08-FY09, CHS continues to manage the acquisition and delivery of CHS equipment, Technology Insertion and Common Standardized Testing in support of customer requirements.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue management of the acquisition and delivery of CHS equipment in support of customer requirements	3483	5615	6133	6464
Continue supporting customers testing efforts with CHS equipment	300	300	300	300
Continue CHS technology insertion	500	575	575	575
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		188		
Total	4283	6678	7008	7339

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

C. Acquisition Strategy The overall goal is to improve interoperability and compatibility and lower life cycle costs by standardizing battlefield command and control (C2) automation through centralized buys of non-developmental items (NDI), standardized protocols and reusable commercial common software. This project provides a coherent migration strategy for ABCS systems through the use of technolgy insertion.

CHS also conducts common environmental and developmental testing of hardware items thereby reducing the testing requirements for individual BFAs. A firm fixed price, full and open competition contract, was awarded to GDC4S in May 2003, for ruggedization and production.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
323

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
GDC4S/CHS-3 Non-Recurring Engineering	C/FFP/IDIQ	Taunton, MA	12000									12000	Cont.	
Technology Insertion	Various	Various	12185	500	1-3Q	575	1-3Q	575	1-3Q	575	1-3Q	Cont.	Cont.	
Product Development	Various	Fort Monmouth, NJ	66343	572	1-3Q	2457	1-3Q	2704	1-3Q	2820	1-3Q	Cont.	Cont.	
Support Costs	MIPR	Fort Monmouth, NJ/Huntsville, AL	51636	2911	1-3Q	3158	1-3Q	3429	1-3Q	3644	1-3Q	Cont.	Cont.	
SBIR/STTR						188	1Q						188	
Subtotal:			142164	3983		6378		6708		7039		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Not applicable														
Subtotal:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CHS Test Activities	MIPR	Other Government Activities	1200	300	3Q	300	3Q	300	1-3Q	300	1-3Q	Cont.	Cont.	
Subtotal:			1200	300		300		300		300		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

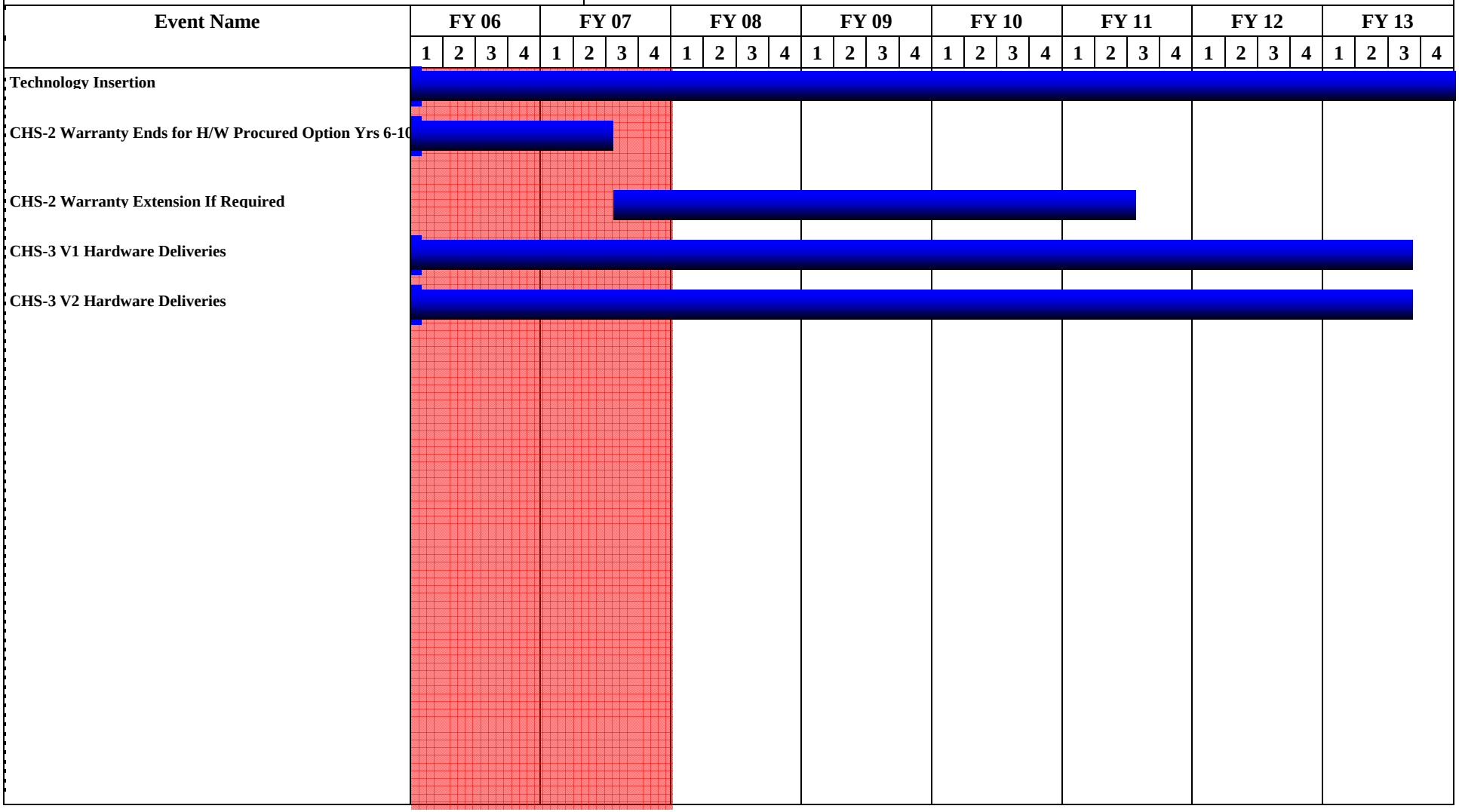
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**323**

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														
Project Total Cost:			**143364**	**4283**		**6678**		**7008**		**7339**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**323**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**323**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Technology Insertion	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
CHS-2 Warranty Ends for H/W Procured Option Yrs 6-10	1Q - 4Q	1Q - 3Q						
CHS-2 Warranty Extension If Required		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q		
CHS-3 V1 Hardware Deliveries	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
CHS-3 V2 Hardware Deliveries	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**334**

COST (In Thousands)	FY 2006 Actual	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
334 COMMON SOFTWARE	14270	11632	21145	23967	24276	25236	27640	27644		175810

A. Mission Description and Budget Item Justification: Project D334 Common Software (CS): Common Software is the program through which the Army procures, develops, integrates and tests common software products and/or components used for communication between Army Battle Command Systems (ABCS), Joint and coalition Command and Control (C2) applications. The CS project provides state-of-the-art software technologies and functionality that is used by numerous Army Battle Command Systems (ABCS) and joint systems thereby eliminating the need for similar independent development and duplication of effort. The CS program is a cornerstone in the Army's digitization efforts. FY08 and FY09 funding will continue the development, acquisition management, and delivery of CS products in support of Army and Joint Service customer requirements. Funding will also be used to develop the System of Systems (SOS) architecture for Battle Command systems providing a cohesive development strategy amongst C2 systems.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue the development, acquisition management and delivery of CS products in support of Army and Joint Service customer requirements to include software upgrades. Continue to achieve enhanced levels of interoperability by defining, testing and implementing software techologies that are provided to the warfighter. CS products will bridge current to future force technologies in support of the Future Combat System (FCS) and the Army's way ahead.	6380			
Continue execution of the Common Software technology and reuse program; support customer integration and testing; explore and evaluate new software technologies in support of the overall CS program; and develop, upgrade and deliver DII COE products into Army and Joint Service systems. The CS products released to the Army and Joint Programs are also used in support of the US/Allied coalition efforts.	7890			
Continue the development, acquisition management and delivery of Common Software (CS) products in support of Army and Joint Services customer requirements. This shall include the area of military messaging for Variable Message Format (VMF) and United States Message Text Format (USMTF), e-mail integration and bridging data exchanging with the Battle Command Common Services architecture. CS products will bridge current to future force technologies in support of the Future Combat Systems (FCS) and Army's campaign plan.		9290	13500	15440
Serve as the executive agent and provide software for interoperability, for Joint and Coalition efforts. These efforts include Coalition interoperability between GCCS family of systems, Coalition interoperability with Battle Command systems and developing new interoperability data model standards including validation and management.		2060	3375	3861
Develop the System of System (SOS) architecture for Battle Command (BC) systems to establish a cohesive development strategy amongst C2 systems. The architecture shall be established through the Office of the Chief Architect and the vision developed in coordination with Battle Command Migration Plan developed by TRADOC Program Integration Office/BC. The architecture shall include evolving technologies such as Service Oriented Architecture (SOA), Net-Centric Enterprise Services (NCES) and eventual migration to Future Combat Systems.			4270	4666

Small Business Innovative Research/Small Business Technology Transfer Programs		282		
Total	14270	11632	21145	23967

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Not applicable for Common Software Program										

Comment:

C. Acquisition Strategy Competively award Time and Material contracts to support efforts for development, integration, maintenance and test of Common Software Products and services. The overall goal is the improvement of life cycle costs by providing Common products that are used horizontally across programs thereby avoiding duplication of efforts by Army and Joint programs.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
334

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 of CS Lab, Data Access	MIPR	CECOM, Fort Monmouth, NJ	1853										1853	
Engineering/Software Development	C, T&M	Various Contractors / Various Locations	41198	12513	1-3Q	8383	1-3Q	12313	1-3Q	14437	1-3Q	Cont.	Cont.	
ABCS System Engineering & Integration	MIPR	PEO C3T, Fort Monmouth, NJ	210										210	
ABCS/Army System Engineering & Integration	C, T&M	Various Contractors / Various Locations				118	2Q	1330	2Q	1410	2Q	Cont.	Cont.	
Battle Command Chief Architect Support								4270	1-3Q	4666	1-3Q	Cont.	Cont.	
Digital System Engineers	C, T&M	Mantech, Ft. Hood, TX	14400										14400	
3D Display Technology	OTA	Concurrent Technology Corp., Johnstown, PA	9083										9083	
IDM-T Engineering Support	MIPR	GSA Contractors	2000										2000	
DISA Support for COE	MIPR		1486										1486	
SBIR/STTR						282	2Q						282	
Subtotal:			70230	12513		8783		17913		20513		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	In-house	PM Battle Command, Ft. Monmouth, NJ	1593	841	1-3Q	866	1-3Q	904	1-3Q	955	1-3Q	Cont.	Cont.	
Automation Support	C, T&M	ESP, Oceanport, NJ	664	171	1-2Q	179	1-2Q	194	2Q	209	2Q	Cont.	Cont.	
Subtotal:			2257	1012		1045		1098		1164		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
334

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Developmental Test	C, T&M	Various Contractors/Various locations				1033	2-3Q	1324	1-3Q	1440	1-3Q	Cont.	Cont.	
Subtotal:						1033		1324		1440		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Office Management	In-House	Fort Monmouth, NJ	3077	745	1-4Q	771	1-4Q	810	1-4Q	850	1-4Q	Cont.	Cont.	
Subtotal:			3077	745		771		810		850		Cont.	Cont.	

Project Total Cost:			**75564**	**14270**		**11632**		**21145**		**23967**		**Cont.**	**Cont.**	

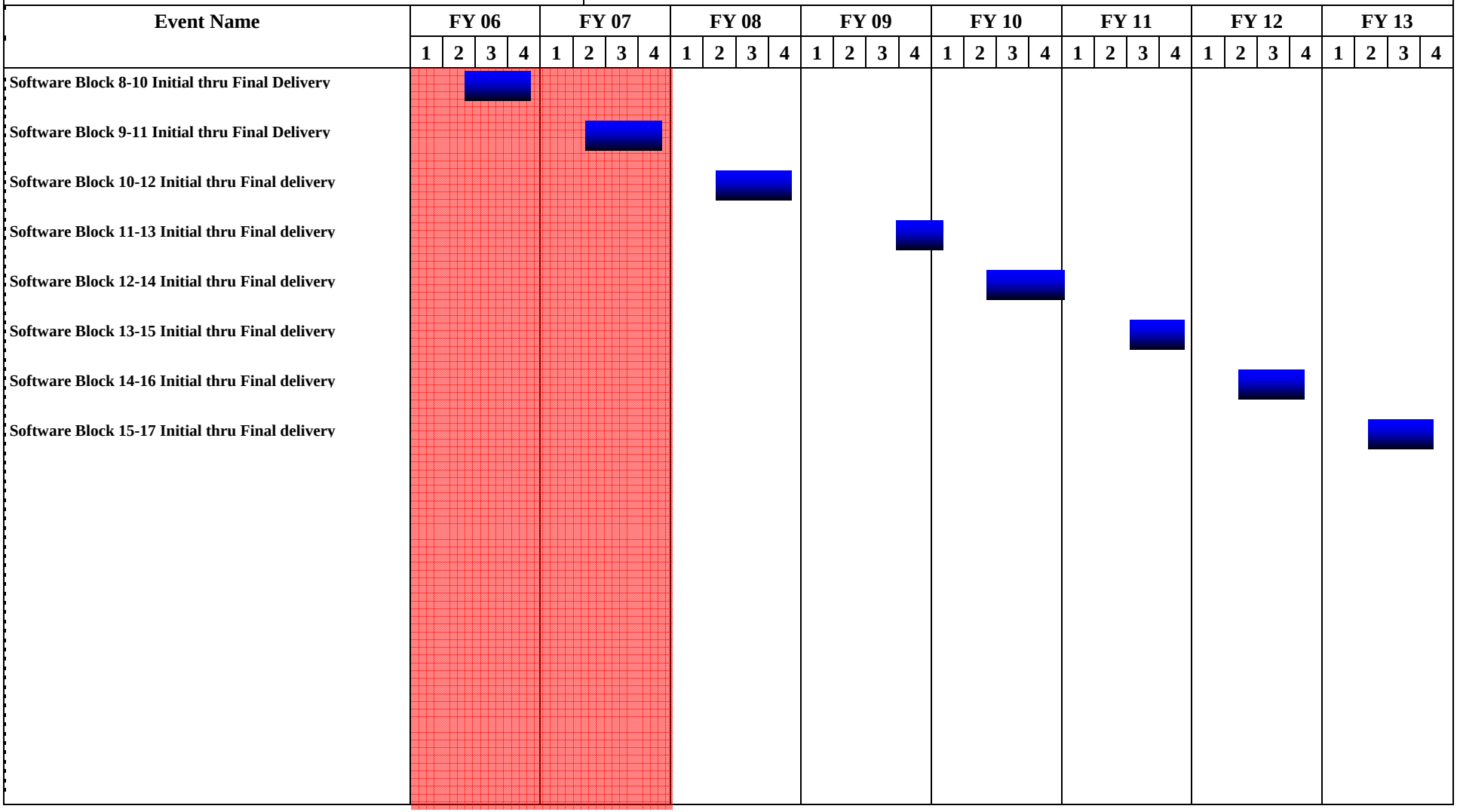
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
334



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**334**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Software Block 8-10 Initial thru Final Delivery	2Q - 4Q							
Software Block 9-11 Initial thru Final Delivery		2Q - 4Q						
Software Block 10-12 Initial thru Final delivery			2Q - 4Q					
Software Block 11-13 Initial thru Final delivery				3Q - 4Q	1Q			
Software Block 12-14 Initial thru Final delivery					2Q - 4Q			
Software Block 13-15 Initial thru Final delivery						2Q - 4Q		
Software Block 14-16 Initial thru Final delivery							2Q - 4Q	
Software Block 15-17 Initial thru Final delivery								2Q - 4Q

Note: Scheduled deliveries are based on Software Blocking timelines.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C15**

COST (In Thousands)		FY 2006 Actual	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
C15	MOUNTED BATTLE COMMAND ON-THE-MOVE (MBCOTM)	9507	9987	22020	11904	8383	1000				62801

A. Mission Description and Budget Item Justification: This project funds the procurement of the Mounted Battle Command on the Move System (MBCOTM). MBCOTM is a Command, Control, Computers, Communications, Intelligence (C4I) mission equipment package/ B Kit integrated into TO&E authorized platforms which allows Brigade and above Commanders to move to the decisive point on the battlefield. The focus of MBCOTM is to facilitate commander execution of Netcentric operations versus command post centric operations. MBCOTM provides the battle command commander situational awareness in the form of a digital common operational picture enabling a commander to maintain situational understanding while On The Move (OTM) and when physically separated from fixed command posts. MBCOTM provides battle command enablers to support war (i.e., deterring aggression and coercion; fighting conflicts) and operations other than war (i.e., peacekeeping, domestic disaster relief, reducing potential conflicts, promoting regional stability, humanitarian missions and homeland security). MBCOTM supports the mission area of Command and Control. Future capabilities will include adding Joint Tactical Radio System (JTRS) and Wideband Gapfiller system (WGS). Future improvements will include addition of Secure Wireless Local Area Network (SWLAN), Land Warrior, and Unmanned Aerial Vehicle (UAV) feed, as well as the integration of MF-TDMA technology which allows large numbers of MBCOTMs to populate the battlefield and provide OTM communications services and range extension on the Battlefield. Other future enhancements will include 20 inch KU SOTM antennas, 18 or 20 inch Ku/Ka Satellite on the Move (SOTM) antenna, Multiple Frequencies Time Division Multiple Access (MF TDMA)modem with spreading at 512kbps Tx, 1+mbps Rx, NIPR/SIPR, and wireless access point. In FY08 procurement of 4 Bradley and 1 Stryker MBCOTM test articles. In FY08 and FY09 MBCOTM will go through an IOT&E test event.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
System Development/Tech Upgrades	5198	4935	5466	5670
Prototype Build			11624	2587
Log Development/CLS	424			
Program Spt/SSEB	2717	347	247	247
Test/Evaluation	1168	4424	4683	3400
SBIR/STTR		281		
Total	9507	9987	22020	11904

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Mounted Battle Command on the Move MBCOTM	18859	72742	42000	70530	73449	84242	28340	38244	Continuing	428406

Comment:

C. Acquisition Strategy Mounted Battle Command on the Move (MBCOTM) will be integrated on three vehicle platforms: HMMWV, Bradley Command Vehicle, and the Stryker Command Vehicle. Various tests will be run throught this SDD phase such as Systems and Engineering tests for the MBCOTM PP1 HMMWV variant. Upgrades to include PLGRS to DGRS. The Government is developing technology demonstrators of the Common Army Marine Command and Control Vehicle (CAMC2V) which will be designed to be a Transit Case solution (Mission Equipment Package/B Kit) to be integrated on a HMMWV. This is a cooperative variant being developed with the Army and Marine Corps in order to gather information for writing the product specification, as well as to gain better insight on a design. This competitive Request for Proposal (RFP) for the System Design and Development (SDD) phase for the Bradley, Stryker and CAMC2V variant is anticipated 3QFY07. Award of this contract is scheduled for 3QFY07.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
C15

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Development/Prototype build	T&M	TBD		5198	1-2Q	4935	3Q	17090	1-2Q	8257	1-2Q	Cont.	Cont.	
Subtotal:				5198		4935		17090		8257		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Engineering Services/ICS/Log Development	T&M	Various		424	1-2Q		1Q					Cont.	Cont.	
Subtotal:				424								Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Operational Assessments/IOT&E	MIPR	Army Test and Evaluation Center		1168	2Q	4424	3-4Q	4683	1-2Q	3400	1-2Q	Cont.	Cont.	
Subtotal:				1168		4424		4683		3400		Cont.	Cont.	

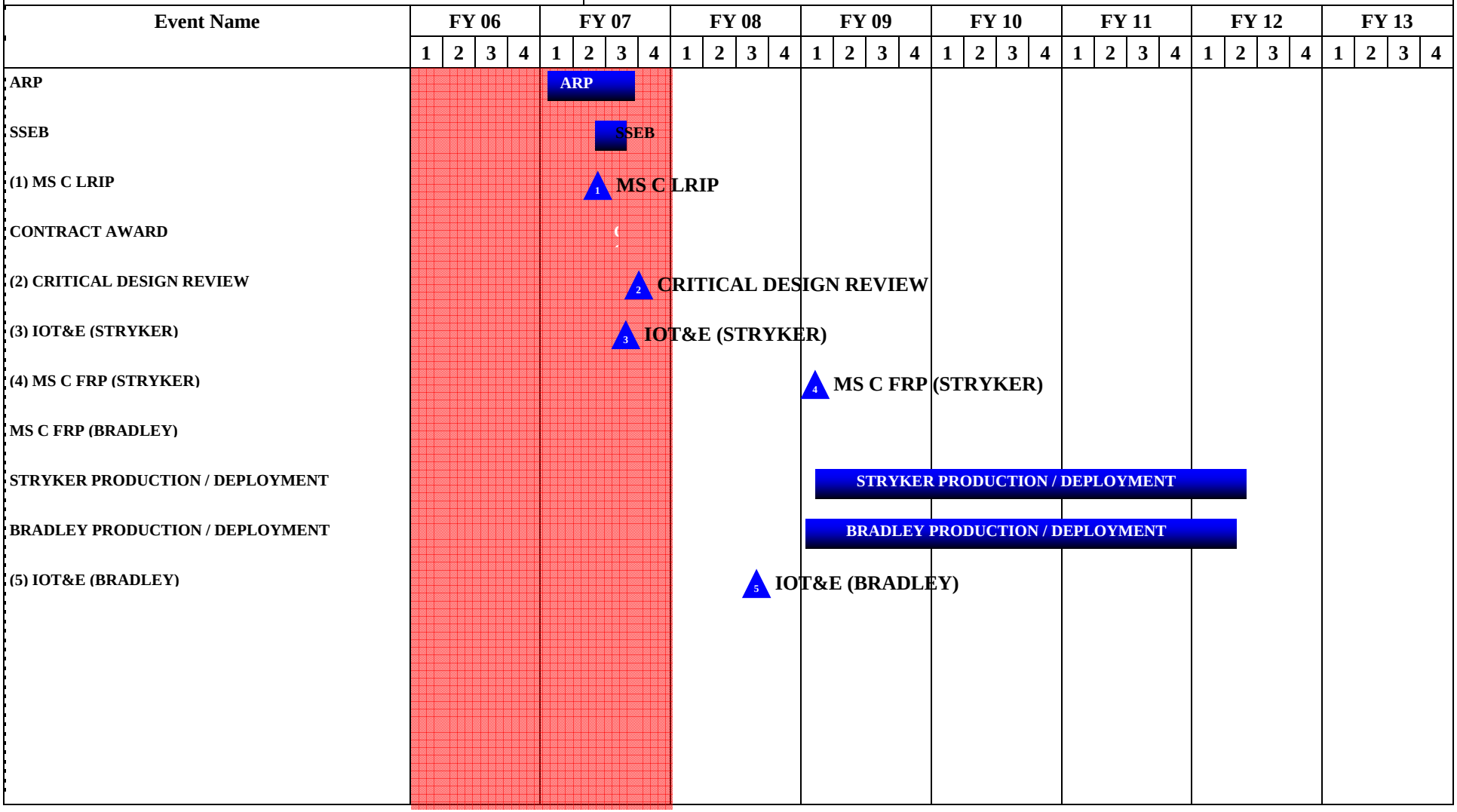
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	MIPR	Various		2717	1-2Q	347	1-2Q	247	1-2Q	247	1-2Q	Cont.	Cont.	
SBIR/STTR						281							281	

ARMY RDT&E COST ANALYSIS (R3)													February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**		PE NUMBER AND TITLE **0604818A - Army Tactical Command & Control Hardware & Softwar**										PROJECT **C15**	
Subtotal:		2717		628		247		247		Cont.	Cont.		
Project Total Cost:		**9507**		**9987**		**22020**		**11904**		**Cont.**	**Cont.**		

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C15**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C15**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
ARP		1Q - 3Q						
SSEB		2Q - 3Q						
MS C LRIP		2Q						
CONTRACT AWARD		3Q						
CRITICAL DESIGN REVIEW		3Q						
IOT&E (STRYKER)		3Q - 4Q	1Q					
MS C FRP (STRYKER)				1Q				
MS C FRP (BRADLEY)				1Q				
STRYKER PRODUCTION / DEPLOYMENT				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q	
BRADLEY PRODUCTION / DEPLOYMENT				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q	
IOT&E (BRADLEY)			3Q - 4Q	1Q				
MS B								

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C29**

COST (In Thousands)		FY 2006 Actual	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
C29	CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)	15207	10115	20548	10221	9876	8780	8743	8936		92426

A. Mission Description and Budget Item Justification: Project DC29 - Centralized Technical Support Facility: The Central Technical Support Facility (CTSF) is located in Fort Hood, Texas. The CTSF provides a centralized on-the-ground capability to ensure interoperability among various digitized platforms and serves as the final integration and maturation facility for Common Operating Environment (COE). The CTSF is the Warfighters "Edge" that acts as an enabler for rapid integration of dissimilar software and hardware systems through real time, on-site integration of soldiers, contractors, testers, Program Managers and the requirements community. Also the CTSF provides a single technical "center of mass" for software checkout and system integration and provides a controlled environment with connectivity to other C4I systems either on-site or through the Army Interoperability Network (AIN) to support digital integration and fielding. This effort supports the Current to Future transition path.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue test planning/procedures/execution/reporting	1674	1814	5200	2000
Continue software engineering.	1741	1791	100	400
Provide infrastructure (Facilities, upgrades, additions).	6845	1236	1640	
Continue Digital System Engineering	1089	1120	4935	3425
Continue management operations.	1104	1135	6773	3241
Provide equipment for instrumentation, simulation/stimulation, software evaluation and development tools.	755	777		
Continue configuration management.	689	709	750	500
Provide networks connections to include DISN, SIPRNET, NIPRNET, GUARDNET.	263	270	500	500
Provide logistics support.	194	200	150	155
Provide DA Mandated Intra-Army Digital Certification test and validation.	853	795	500	
Small Business Innovative Research/Small Business Technology Transfer		268		
Total	15207	10115	20548	10221

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

C. Acquisition Strategy This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition

management, testing, software development, interoperability, fielding and sustainment to ensure an interoperable and affordable ATCCS. The Program Executive Officer for Command, Control, Communications, Tactical (PEO C3T) has planned an evolutionary approach to fielding ATCCS as soon as possible.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
C29

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CSC (MANTECH -Direct Labor)	C/CPFF	Fort Hood, TX	7305	7751	1Q	1377	1Q	6773	1-2Q	2241	1-2Q	Cont.	Cont.	Cont.
COMPUTER SCIENCE CORP (System Engineering)	C/CPAF	Fort Hood, TX/Fort Monmouth, NJ	3558	1013	1Q	1086	1Q	3000	1-2Q	1500	1-2Q	Cont.	Cont.	Cont.
MITRE Corp (System Engineering)	C/CPFF	Fort Hood, TX/Eatontown, NJ	3220	921	1Q	948	1Q	1925	1-2Q	1925	1-2Q	Cont.	Cont.	Cont.
CAMBER (Config Mgt/)	C/CPAF	Fort Hood, TX	1800	501	1Q	515	1Q	750	1-2Q	500	1-2Q	Cont.	Cont.	Cont.
Northrop Grumman (Field Engineering)	C/CPIF	Fort Hood, TX	2964	844	1Q	868	1Q					Cont.	4676	Cont.
NICHOLS (Logistics Support)	C/CPAF	Fort Hood, TX	2311	659	1Q	678	1Q					Cont.	3648	Cont.
ILEX (Field Engineering)	C/CPAF	Fort Hood, TX	1158	330	1Q	339	1Q					Cont.	1827	Cont.
ROBBINS- GIOIA (Data Base Management)	C/CPAF	Fort Hood, TX/Fort Monmouth, NJ	921	262	1Q	270	1Q	500	1-2Q	500	1-2Q	Cont.	Cont.	Cont.
GTE	C/CPFF	Fort Hood, TX	711	203	1Q	209	1Q					Cont.	Cont.	Cont.
EWA	C/CPAF	Fort Hood, TX	429	122	1Q	125	1Q					Cont.	676	Cont.
Subtotal:			24377	12606		6415		12948		6666		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
CECOM Matrix	MIPRs	Fort Hood, TX/Fort Monmouth, NJ	145			145	1-2Q	150	1-2Q	155	1-2Q	Cont.	Cont.	Cont.
In-House Support	MIPRs	Fort Hood, TX	432	133	1Q	500	1-2Q	500	1-2Q	500	1-2Q	Cont.	Cont.	Cont.
Other Government Support	MIPRs	Fort Hood, TX	138	46	1Q	225	1-2Q	1000	1-2Q	400	1-2Q	Cont.	Cont.	Cont.
Subtotal:			715	179		870		1650		1055		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
C29

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ELECTRONIC PROVING GROUNDS (EPG)	MIPR		7096	2025	1-2Q	2082	1-2Q	5200	1-2Q	2000		Cont.	Cont.	Cont.
CAMBER (Testing)	CPAF	Fort Hood, TX	1350	397	1-2Q	480	1-2Q	750	1-2Q	500		Cont.	Cont.	Cont.
Subtotal:			8446	2422		2562		5950		2500		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SBIR / SBTT						268	1-2Q						268	
Subtotal:						268							268	

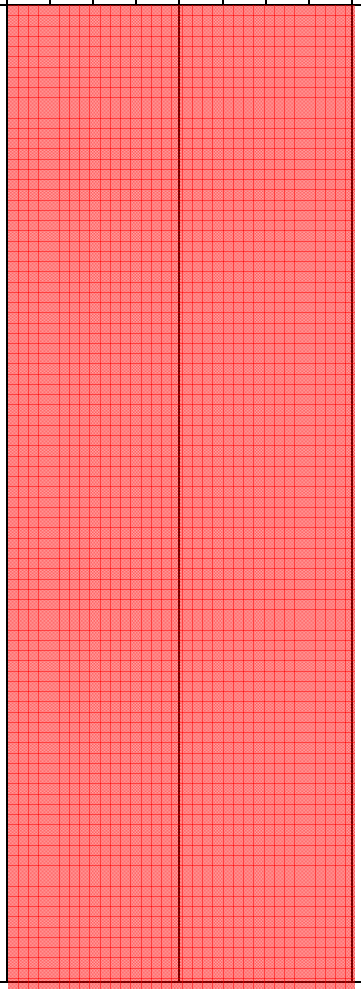
Project Total Cost:			**33538**	**15207**		**10115**		**20548**		**10221**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C29**

Event Name	FY 06				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	2	3	4



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C29**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Army Battle Command System (ABCS) 6.3 Test/Fixes/Integration								
ABCS 6.4 System of System (SoS) Integration								
Operation Iraqi Freedom (OIF)	1Q - 4Q	1Q - 4Q	1Q - 4Q					
ABCS 6.4 Test Window								
Operation Enduring Freedom (OEF)	1Q - 4Q	1Q - 4Q	1Q - 4Q					
I Corps Warfighter								
Prairie Warrior 05								
III Corps Warfighter								
Prairie Warrior	1Q - 4Q	1Q - 4Q	1Q - 3Q					
Ulchie Focus Lens (UFL)	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Certification Software Blocking	1Q - 4Q	1Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C34**

COST (In Thousands)	FY 2006 Actual	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
C34 ARMY TAC C2 SYS ENG	14445	11402	12009	11651	19551	19967	20765	21596		131386

A. Mission Description and Budget Item Justification: Project DC34 - Army Tactical Command and Control Systems (ATCCS) Engineering which is also referred to as Systems Engineering and Integration (SE&I): Doctrine requires military leaders to make sound and timely command and control decisions to direct the activities of assigned and supporting units. The umbrella program to exploit automation technology in support of this mission is the ATCCS or SE&I program. The effort to achieve horizontal integration of the ATCCS Battlefield Functional Areas (BFAs), although going on independently in each BFA, was not disciplined enough to address all connections and needs within the entire spectra of command, control and communications. Therefore, to ensure this horizontal integration effort is complete and fully automated, a significant management, systems engineering and integration effort is required. This effort, supporting the Army Battle Command Systems (ABCS) Version 6.30, includes fielding the ABCS Version 6.4 to the entire Army in four years and the current to the future transition path. The four year fielding is with "Good Enough" software and the future transition path was developed as the "Top Down Architecture".

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue Army Battle Command System (ABCS) Integrated Logistics Support	382	713	752	729
Continue ABCS Testing and Evaluation of all Battlefield Functional Area (BFA) fielded software	803	747	788	764
Continue ABCS Fielding/Scheduling	1410	985	1034	980
Continue ABCS Integrated Training Support				
Continue ABCS information engineering	2209	1177	1241	1228
Conduct and support system interoperability engineering	571	318	335	325
Continue exploring state of the art technology insertion in support of the ABCS program	373	1480	1559	1512
Continue development and implementation of the ABCS information assurance	525	292	307	298
Continue ABCS System Engineering	4082	2666	3146	3052
Continue System of Systems Development	4090	2703	2847	2763
Small Business Innovative Research/Small Business Technology Transfer Programs		321		
Total	14445	11402	12009	11651

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

C. Acquisition Strategy This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition management, testing, interoperability, support to fielding and sustainment to ensure an interoperable and affordable Army Tactical Command and Control Systems (ATCCS). The Program Executive Officer for Command , Control, Communications, Tactical (PEO C3T) has planned an evolutionary approach to fielding ABCS 6.4 in four years which ends in first quarter FY08. Fiscal years FY08 and FY09 will focus on "Systems of Systems" Engineering and integration for evolution toward JC2 and FCS.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
C34

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Northrop Grumman	C/CPIF	Fort Monmouth, NJ/Fort Hood, TX	10553	595	1Q	1692	1Q	1885	1-2Q	1942	1-2Q	Cont.	Cont.	Cont.
CSC	C/CPAF	Fort Monmouth, NJ/Fort Hood, TX	32534	4044	1Q	888	1-2Q	1440	1-2Q	1483	1-2Q	Cont.	Cont.	Cont.
MITRE	C/CPFF	Ft Monmouth, NJ/Eatontown, NJ	31582	6522	1Q	3934	1Q	5461	1-2Q	4862	1-2Q	Cont.	Cont.	Cont.
MANTECH (Direct Labor)	C/CPFF	Fort Monmouth, NJ/Fort Hood, TX	6496										6496	6546
CAMBER (Config Mgt/)	C/CPAF	Fort Hood, TX	1788										1788	855
ROBBINS-GIOIA	C/CPAF	Fort Monmouth, NJ/Fort Hood, TX	5512	1620	1Q	890	1Q	160	1-2Q	165	1-2Q	Cont.	Cont.	Cont.
LOCKHEED MARTIN	C/CPAF	Eatontown, NJ	6034		1-2Q	640	1Q	618	1-2Q	679	1-2Q	Cont.	Cont.	Cont.
GTE (Labor and Equipment)	C/CPFF	Fort Hood, TX	2281				1Q					Cont.	2281	Cont.
Misc Contracts	C/CPAF	Fort Monmouth, NJ/Fort Hood, TX	5888			90	1-2Q					Cont.	Cont.	Cont.
Unixpros	C/CPAF	Eatontown, NJ	3711										3711	3711
ATSC	MIPR	Fort Leavenworth, KY	1850									Cont.	1850	Cont.
IDA	MIPR	Fort Monmouth, NJ	1724									Cont.	1724	Cont.
ITT	C/CPAF	Eatontown, NJ	1070									Cont.	Cont.	Cont.
MISCELLANEOUS SUPPORT	C/CPAF	Eatontown, NJ/Fort Hood, TX	1985			566	1-2Q					Cont.	Cont.	Cont.
BOOZ-ALLEN	C/CPAF	Eatontown, NJ	1950				1Q					Cont.	Cont.	Cont.
Subtotal:			114958	12781		8700		9564		9131		Cont.	Cont.	Cont.

II. Support Costs	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
C34

	Type		Cost		Date		Date		Date		Date	e		Contract
IN-HOUSE SUPPORT	MIPRs	Fort Monmouth, NJ/Fort Hood, TX	6062	352	1Q	1294	1Q	1630	1-2Q	1680	1-2Q	Cont.	Cont.	Cont.
CECOM MATRIX	MIPRs	Fort Monmouth, NJ/Fort Hood, TX	5027	1031	1Q	791	1Q	815		840		Cont.	Cont.	Cont.
OTHER GOVERNMENT SUPPORT	MIPRs	Fort Monmouth, NJ/Fort Hood, TX/Fort Belvoir, VA	3469	137	1Q	144	1Q					Cont.	3750	Cont.
Subtotal:			14558	1520		2229		2445		2520		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
EPG	MIPR	Fort Huachuca, AZ	2593	144	1Q	152	1Q					Cont.	2889	
Subtotal:			2593	144		152						Cont.	2889	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
SBIR/STTR			792			321	1-2Q						1113	
Subtotal:			792			321							1113	

Project Total Cost:			**132901**	**14445**		**11402**		**12009**		**11651**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C34**

Event Name	FY 06				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	2	3	4

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C34**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NATIONAL TRAINING CENTER (NTC) ROTATIONS	1Q - 4Q	1Q - 4Q	1Q - 4Q					
ABCS 6.4 SOFTWARE DEVELOPMENT and TESTING								
SBCT - 4 FIELDING								
SBCT-5 FIELDING	1Q - 3Q							
SBCT-6 FIELDING	1Q - 4Q	1Q - 3Q						
FUTURE OPERATIONAL ARCHITECHTURE (OA)/SYSTEM ARCHITECTURE (SA)		1Q - 4Q	1Q - 4Q	1Q - 4Q				
ABCS SYSTEMS ENGINEERING & INTEGRATION TRANSITION TO FCS		1Q - 4Q	1Q - 4Q	1Q - 4Q				
FIELDING OF ABCS 6.4 TO ARMY	1Q - 4Q	1Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C3A**

COST (In Thousands)		FY 2006 Actual	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
C3A	ARMY AIRBORNE COMMAND & CONTROL SYS (A2C2S)	7168	10087								17255

A. Mission Description and Budget Item Justification: This project funds the development of an Airborne Battle Command On The Move System. Provides the maneuver commander with a highly mobile, self-contained and reliable airborne digital command post with command, control, communications, and computers (C4) systems needed to command and control in joint, interagency, and multi-national environments. Tasks in this project support RDTE efforts in the Low Rate Initial Production (LRIP) phase of this system. Major upcoming events planned include Initial Operational Test and Evaluation, JITC inteoperability certification, engineering and development of system technical improvements, and test and evaluation in support of obtaining a statement of airworthiness qualification. The Army Airborne Command and Control System (A2C2S) supports the Brigade Combat Teams, Division, Corps and Theater Army Commanders. The A2C2S enables Commanders and their staffs, to traverse the battle space rapidly - maintaining situational awareness of all battlefield systems and maintaining communications. Using Battle Command Software coupled with line-of-sight and non-line-of-sight voice and data communications the A2C2S provides information superiority through a common operational picture. This system is critical to enhance the Battle Command Group's ability to effectively perform combat operations and serve as a force multiplier in the Future Force. Due to new technology and requirements to be compatible, design integration will be required to retrofit existing A2C2S systems. A2C2S supports the Chief's Vision and the modularity concept of the Army Over Time. In addition, A2C2S is the airborne first-responder for Homeland Defense and disaster relief by providing a robust communications platform for emergency response coordinators of air and ground operations. It will support disaster coordination between state, federal, civilian and military organizations.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue System Development and Evaluation	3003	2605		
Continue "Good Enough" Integration (ABCS 6.4 and NLOS SATCOM)	760	665		
Continue AWQ, Development and Operational Test	2913	5217		
Complete Technical Manuals	492	600		
Develop Homeland Defense (HLD) Capabilities (Civil Use Waveforms and Applications)		1000		
Total	7168	10087		

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Airborne Command and Control SSN AA0710	27678	40220								67898

Comment:

C. Acquisition Strategy A competitive cost type contract was awarded for A2C2S development in August 2001 to Raytheon. Raytheon produced three (3) rapid prototype systems in FY03 in support of OEF/OIF. Raytheon produced five (5) LRIP Systems before the end of the contract period of performance, 30 Sep 05. The PIF upgraded the three (3) rapid prototype A2C2S 1.0 Systems as described in MOA dated Jan 05 and produced four (4) LRIP A2C2S 1.0 System in FY06. The Prototype Integration Facility (PIF) produced one (1) LRIP A2C2S 1.1 Systems in FY06 and two (2) LRIP A2C2S 1.1 Systems in FY07.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
C3A

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Dev and Eval	CPIF, MIPR	Raytheon Huntsville, and PIF JVYS	12523	3669	2Q	4076	1Q						20268	
Prototype Integration (Systems 3 - 7)	CPIF	Raytheon	9497										9497	
Software Integration/Development	CPIF	Raytheon Huntsville	2618										2618	
Systems and Engineering Logistics Support	Various	Raytheon /AMCOM	13884										13884	
ABCS SE&I	MIPR	Ft. Monmouth, NJ	195										195	
Inhouse/Government	Various	Various	560	431	2Q	431	1Q						1422	
Subtotal:			39277	4100		4507							47884	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Support of System 1 and 2 deployed to 4th ID and 101st ABN	Various	Various	3759										3759	
Subtotal:			3759										3759	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Test & Evaluation and AWQ	MIPR/CPIF	ATEC/RTTC/AATD/AED/Raytheon/PIF JVYS	13376	1400	2Q	4925	1Q						19701	
Operational Test	Various	Various	1883	1513	2Q	500	1Q						3896	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C3A**

Subtotal:			15259	2913		5425						23597	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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/Gov't			5630	155	1Q	155	1Q						5940	
Subtotal:			5630	155		155							5940	
Project Total Cost:			**63925**	**7168**		**10087**							**81180**	

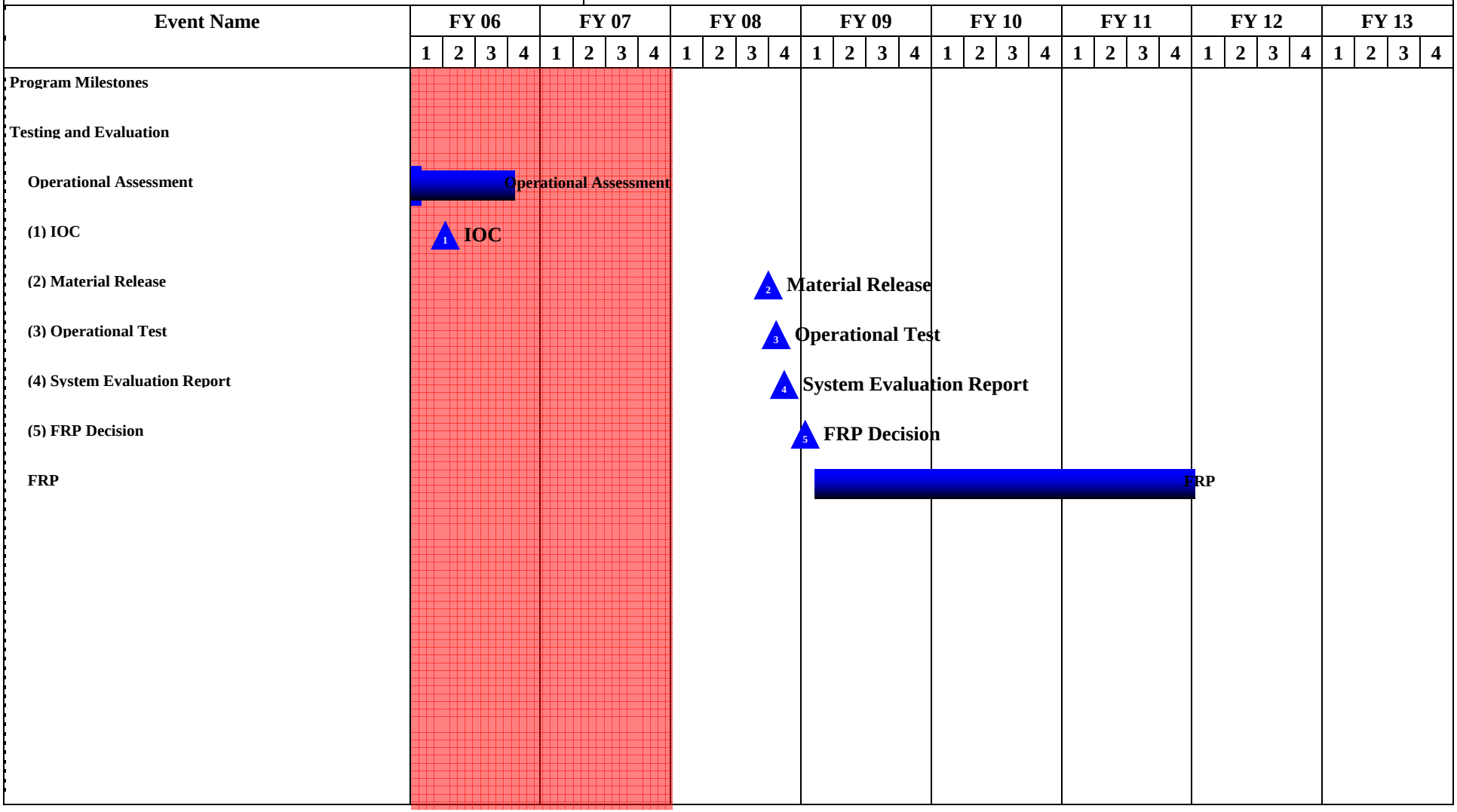
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Softwar

PROJECT
C3A



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**C3A**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Program Milestones								
MS C								
Testing and Evaluation								
Operational Assessment	1Q - 4Q							
Field Test								
IOC	2Q							
Material Release			3Q					
Operational Test			4Q					
System Evaluation Report			4Q					
FRP Decision				1Q				
FRP				1Q - 4Q	1Q - 4Q	1Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Softwar**	**JN1**

COST (In Thousands)		FY 2006 Actual	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
JN1	JOINT NETWORK NODE (JNN) TESTING	7200		16472							23672

A. Mission Description and Budget Item Justification: As the emerging major component of the Army Bridge to Future Network, the Joint Network Node (JNN) Network is intended to replace legacy Mobile Subscriber Equipment (MSE), while moving the Army to a unified Everything Over Internet Protocol (EOIP) Communication System. This fundamental shift in the Tactical backbone communications system prepares the Army culture and leadership for the future introduction of both Warfighter Information Network-Tactical (WIN-T) and Future Combat System (FCS). Once proliferated throughout the force structure, tied to modernizations for the Global War on Terrorism (GWOT) deployment missions, the JNN Network will provide encrypted internet connectivity, from landfall sanctuaries to the Battalion Echelon. The Network is capable of passing unclassified and classified traffic levels, throughout its entire structure, from Home Station Operations Center (HSOC) to the furthest forward Battalion Elements. Designed to meet modularity and rapid deployment mandates, the Network is also intended to support Joint Communications Requirements, as well as Internet Applications from approved National federal Agencies and Coalition Partners. The Network, by its basic design, will allow incorporation of Future Communication improvements, as well as a lot of technologies for modular Communications, offered by both overmanned and industry sources.

FY 08: RDT&E funding will be used to test the initial out put of the production from the competitive contract award which is expected in June 2007.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Operational Testing Event	7200		16472	
Total	7200		16472	

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

C. Acquisition Strategy

JNN Network has previously been acquired in substantial quantities as urgent Army directive procurement. JNN Network is in the process of becoming a program of record. It is planned to obtain Milestone C in March 2007. A competitive contract award is expected in June 2007. RDT&E funding will be used to test the initial out put of the production.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604820A - RADAR DEVELOPMENT**	**E10**

COST (In Thousands)	FY 2006 Actual	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
E10 SENTINEL	4775	2499	7067							14341

A. Mission Description and Budget Item Justification: The Sentinel Modernization Program is part of the Missiles and Space System of Systems (SoS). This enables the Cruise Missile Defense Systems (CMDS) weapons to engage these targets at maximum effective range. Sentinel supports Missiles and Space (MS) SoS through efforts which are initiated in FY05. These are Surface Launched Advance Medium Range Air-to-Air Missile (SLAMRAAM) Integration (SI), Mode 5 (M5), Joint Identification (JID) and Composite Sensor Net (CSN).

SLAMRAAM Integration modifies Sentinel to interface with the SLAMRAAM Air and Missile Defense (AMD) Army Common Software communications network and adds specific SLAMRAAM engagement support capabilities.

Mode 5 is a replacement for Mode 4. Mode 5 provides improvements over Mode 4 in crypto sensitivity, range performance, probability of identification, Friend from Foe identification (IFF), lethal interrogation capability and reduced interference with Civil Air Traffic Control Systems.

Joint Identification leverages off of fielded Air Force and Navy Electronic Support Measures (ESM) Technology, to optimize the affordability and effectiveness to address Cruise and Unmanned Aerial Vehicles (UAV) threats. Cutting edge specific emitter identification technology and cruise missile emitter detection will be integrated with Sentinel to provide passive and semi-active target acquisition along with jointly accepted identification capability. Signal processing will be tailored to reduce ESM processing by multiplexing processing across emitter bands. This capability improves survivability, effectiveness against air breathing Weapons of Mass Destruction (WMD) delivery systems, and fully supports multi-service SoS sensor and Joint Identification capability.

Composite Sensor Netting is a software and communications link that allows target data to be shared among sensors and the Command, Control, Communications, Computers and Intelligence (C4I) structure to support both hostile identification and sensor resource management. This software and communication link allows a Sentinel radar communication net to effectively exchange target acquisition, tracking and classification information with other Sentinel radars on the battlefield. It improves the ability to cue weapon systems to destroy fixed wing, rotary wing, unmanned aerial vehicles and cruise missiles. When integrated with SLAMRAAM system it improves the accuracy of the missile by providing 3 times the update rate of commands to the missile versus the current system.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Product Development	4388	1466	4924	
Support Costs	176			
Test and Evaluation	29	962	1743	
Project Management	182		400	
Small Business Innovative Research (SBIR) ($63 million)/Small Business Technology Transfer (STTR)($8 million)		71		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604820A - RADAR DEVELOPMENT**	**E10**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	5008	2527	2622	
Current BES/President's Budget (FY 2008/2009)	4775	2499	7067	
Total Adjustments	-233	-28	4445	
Congressional Program Reductions		-28		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-233			
SBIR/STTR Transfer				
Adjustments to Budget Years			4445	

The FY07 President's Budget listed above does not reflect the SBIR/STTR reductions. Those reductions are listed in the FY07 accomplishments/Planned Program section.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0604869A, Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)	274339	325945	372146	408182	589779	427981	436415	77399	Continuing	Continuing
SSN C50001, PATRIOT/MEADS CAP					403735	674386	1042010	1317190	Continuing	Continuing
PE 0102419A, Proj E55, JLENS	99851	242781	481251	353983	337464	320787	182528		Continuing	Continuing
SSN BZ0525, JLENS Production						445850	223550	395200	Continuing	Continuing
PE 0604802A, Proj S23, SLAMRAAM	34034	26663	34762	11979					Continuing	Continuing
SSN C81001, SLAMRAAM Production	18825			65506	118124	76747	61850	61850	Continuing	Continuing
PE 0603327A, Proj E88, Integrated Fire Control AMD	23662	41249							Continuing	Continuing
PE 0603327A, Proj S34, AMD System of System Engineering and Integration	2684		138399	114587	81636	37876	5238		Continuing	Continuing

Comment: This PE is an integral part of the PEO, Missiles and Space Integrated Air and Missile Defense (IAMD) Program including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

D. Acquisition Strategy In FY 2005, an Engineering Services Memorandum Task Order was issued under the current Sentinel Engineering Services contract for the Sentinel

integration into SLAMRAAM. Sentinel funded the FY05 integration effort. The additional funding for FY 06 and 07 is provided by the Integrated Air and Missile Defense (IAMD) Program under the current SLAMRAAM System Design and Development Contract. The System Design, Development and Production of Mode 5, Joint Identification and Composite Sensor Netting hardware will be funded from several contract and government sources.

Several Firm Fixed Price (FFP) procurement contracts are planned for award to Thales Raytheon Systems (TRS) in FY 07 through FY 15 to procure and install Enhanced Target Range and Classification (ETRAC) System Kits (a single modification kit that includes an upgraded Transmitter Mod Kit and an ETRAC Mod Kit) into the remaining Sentinel fleet.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604820A - RADAR DEVELOPMENT

PROJECT
E10

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ETRAC System Development	SS/CFFP	Raytheon, CA; CMDS Project Office (PO), AL	102729									Cont.	Cont.	Cont.
Initiate MS SoS Integration Development (SI, JID, M5, CSN)	SS/CPFF	Raytheon, CA; CMDS PO, AL; Multiple Support Contractors, AL	5848	4388	1-4Q	1466	1-4Q	4924	1-4Q			Cont.	Cont.	Cont.
Subtotal:			108577	4388		1466		4924				Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ETRAC Product Support Services	N/A	Aviation & Missile Command (AMCOM), AL	16930									Cont.	Cont.	Cont.
Initiate MS SoS (SI, JID,M5, CSN)	N/A	CMDS PO, AL; Multiple Support Contractors, AL		176	1-4Q							Cont.	Cont.	Cont.
Subtotal:			16930	176								Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ETRAC IOT&E, KPP Demonstration & other T&E Activities	N/A	Army Test & Evaluation Center (ATEC), VA; Aviation & Msl Rsch, Dev. & Engr Center (AMRDEC), AL	34599					667	1-4Q			Cont.	Cont.	Cont.
Initiate MS SoS (SI, JID,M5, CSN)	N/A	Thales Raytheon, CA;		29	1-4Q	1033	1-4Q	1076	1-4Q			Cont.	Cont.	Cont.

		CMDS PO, AL; Multiple Support Contractors, AL												
Subtotal:			34599	29		1033		1743				Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
ETRAC Product Manager support	N/A	Thales Raytheon, CA; CMDS PO, AL ; Vista Tech, AL; Multiple support Contractors, AL	11398									Cont.	Cont.	Cont.
Initiate MS SoS Integration Development (SI, JID, MV, CSN)	N/A	Thales Raytheon, CA; CMDS PO, AL ; Multiple support Contractors, AL		182	1-4Q			400	1-4Q			Cont.	Cont.	Cont.
Subtotal:			11398	182				400				Cont.	Cont.	Cont.
Project Total Cost:			**171504**	**4775**		**2499**		**7067**				**Cont.**	**Cont.**	**Cont.**

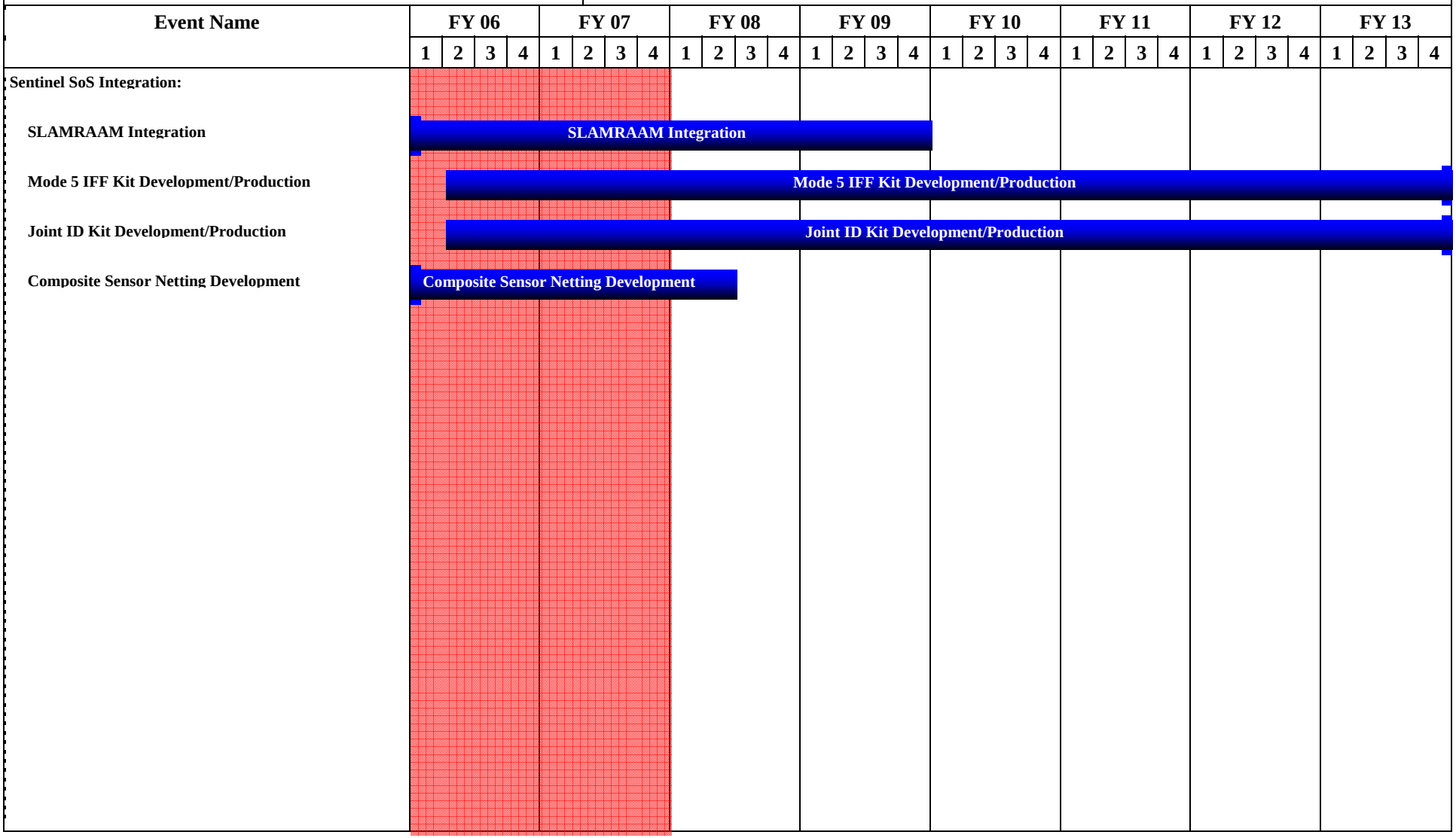
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604820A - RADAR DEVELOPMENT

PROJECT
E10



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604820A - RADAR DEVELOPMENT**	**E10**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Sentinel SoS Integration:								
SLAMRAAM Integration	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Mode 5 IFF Kit Development/Production	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Joint ID Kit Development/Production	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Composite Sensor Netting Development	1Q - 4Q	1Q - 4Q	1Q - 2Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604822A - General Fund Enterprise Business System (GFEBS)**	**GF5**

COST (In Thousands)		FY 2006 Actual	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
GF5	GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)	68372	21751	53559	50237						193919

A. Mission Description and Budget Item Justification: The General Fund Business Enterprise System (GFEBS) is a Major Automated Information System (MAIS) program and is in the developmental phase. It will follow the DoD Business Enterprise Architecture which is aligned to the mandated Federal Enterprise Architecture. GFEBS was implemented to fulfill the needs and comply with the Federal Financial Management Improvement Act (FFMIA), The Chief Financial Officers Act of 1990, the Government Performance and Results Act of 1993, the Government Management Reform Act of 1994, and the Clinger-Cohen Act of 1996 and to fulfill the stated mission of the Assistant Secretary of the Army for Financial Management and Comptroller (ASA(FM&C)). GFEBS will replace financial systems operating in excess of 30 years like the Standard Finance Systems (STANFINS) and other costly feeder systems which do not allow the Department of Defense (DoD) or the U.S. government to achieve an unqualified opinion on its financial statements. GFEBS will become the Department of the Army's new core financial management system for administering its General Fund. GFEBS will be a commercial off-the-shelf (COTS) Enterprise Resource Planning (ERP) system that is certified by the Chief, Financial Officer Council (CFOC) and provides the six core financial functions. GFEBS will allow tactical commanders to make informed decisions on a virtually real time system.

In FY08, GFEBS will complete Release 1.2 and implement at Ft. Jackson. Subsequently, Release 1.3 will be built and tested, and any additional required capabilities will be added. Later in the year, after GFEBS has been successfully implemented at Ft. Jackson, the Army will begin the process of fielding GFEBS Release 1.3 at all Army installations.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
System Concept Exploration	781	1056		
Development	8045	5285	40166	36844
System Procurement	15389			
System maintenance/Item Management	7897			
Project Management	22207	14797	13393	13393
System Initiation, Implementation, and Fielding	4664			
Hardware maintenance	949			
Software maintenance	8440			
Small business Innovative Research/Small Business Technology Transfer Programs		613		
Total	68372	21751	53559	50237

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	70105	61194	62162	31047
Current BES/President's Budget (FY 2008/2009)	68372	21751	53559	50237
Total Adjustments	-1733	-39443	-8603	19190
Congressional Program Reductions	-1026	-39443		
Congressional Rescissions	-707			
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			-8603	19190

Change Summary Explanation: FY06 decrease due to internal reprogramming; FY07 decrease reflects Congressional reduction; FY08 decrease and FY09 increase represent budget year adjustments.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 655013MO5									Continuing	Continuing
OPA, BE4168000		1992	39353	109141					Continuing	Continuing
OMA, 432612000	6900		40445	86305	87779	95921			Continuing	Continuing

Comment:

D. Acquisition Strategy GFEBS was being procured as a performance-based acquisition to encourage innovative and creative solutions and to avoid hampering, dictating, or prescribing how the work must be performed. Therefore, the focus of the Statement of Objectives (SOO) was on "what" the Army is trying to achieve instead of "how" it must be achieved. The use of an SOO is an emerging method that transforms the acquisition process by requiring each of the competing contractors to develop their unique proposed technical approach, work breakdown schedule, project plan and schedule, schedule of deliverable items, performance metrics, performance measurement plan, and quality assurance plan. To achieve its GFEBS project objectives, the Army used an existing Blanket Purchase Agreement (BPA) to select a System Integrator (SI). The contract period of performance is 1 base year with 9 option years. DoD through the Department of the Navy has established enterprise agreements for ERP System Integration Services with five qualified SI(s) that are General Services Administration (GSA) Federal Supply Service (FSS) Schedule holders under the Enterprise Software Initiative (ESI). The Army has selected the SI; all contractor work will be performed under the selected SI's ESI-SI BPA through the award of one task order with several options. Multiple options are anticipated to support each project objective. The products and services described in task orders will be grouped and referenced as Contract Line Item Numbers (CLIN). All

CLINs will be awarded on a Fixed Price basis with performance based incentives and disincentives. The task order and all options exercised will be performance based, containing financial incentive and disincentive provisions. Offerors were provided performance based metrics and were required to propose performance incentive and disincentive provisions by CLIN in their Quality Assurance Surveillance Plan (QASP) submitted in response to the Request for Quote (RFQ). The QASP elements were evaluated as part of the evaluation of the Offerors' proposals.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604822A - General Fund Enterprise Business System (GFEBS)

PROJECT
GF5

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Concept Exploration	FFP	Accenture Springfield, Va.	19612	781	1-4Q	1196	1-4Q					Cont.	Cont.	
Development	FFP	Accenture Springfield Va.		8045	1-4Q	5436	1-4Q	40166	1-4Q	36844	1-4Q	Cont.	Cont.	
Subtotal:			19612	8826		6632		40166		36844		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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	FFP	Accenture Springfield Va.	38395	22207	1-4Q	15119	1-4Q	13393	1-4Q	13393	1-4Q	Cont.	Cont.	
Subtotal:			38395	22207		15119		13393		13393		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Initiation and Implementation	FFP	Accenture Springfield Va.		4664	1-4Q							Cont.		
System Procurement	FFP	Accenture Springfield Va.		15389	1-4Q							Cont.		
System Maintanence/Item Management	FFP	Accenture Springfield Va.		7897	1-4Q							Cont.		
Hardware Maintanence	FFP	Accenture Sprinfield Va.		949	1-4Q							Cont.		
Software Maintanence	FFP	Accenture Sprinfield Va.		8440								Cont.		

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604822A - General Fund Enterprise Business System (GFEBS)**	**GF5**

Subtotal:				37339								Cont.		

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														
Project Total Cost:			**58007**	**68372**		**21751**		**53559**		**50237**		**Cont.**	**Cont.**	

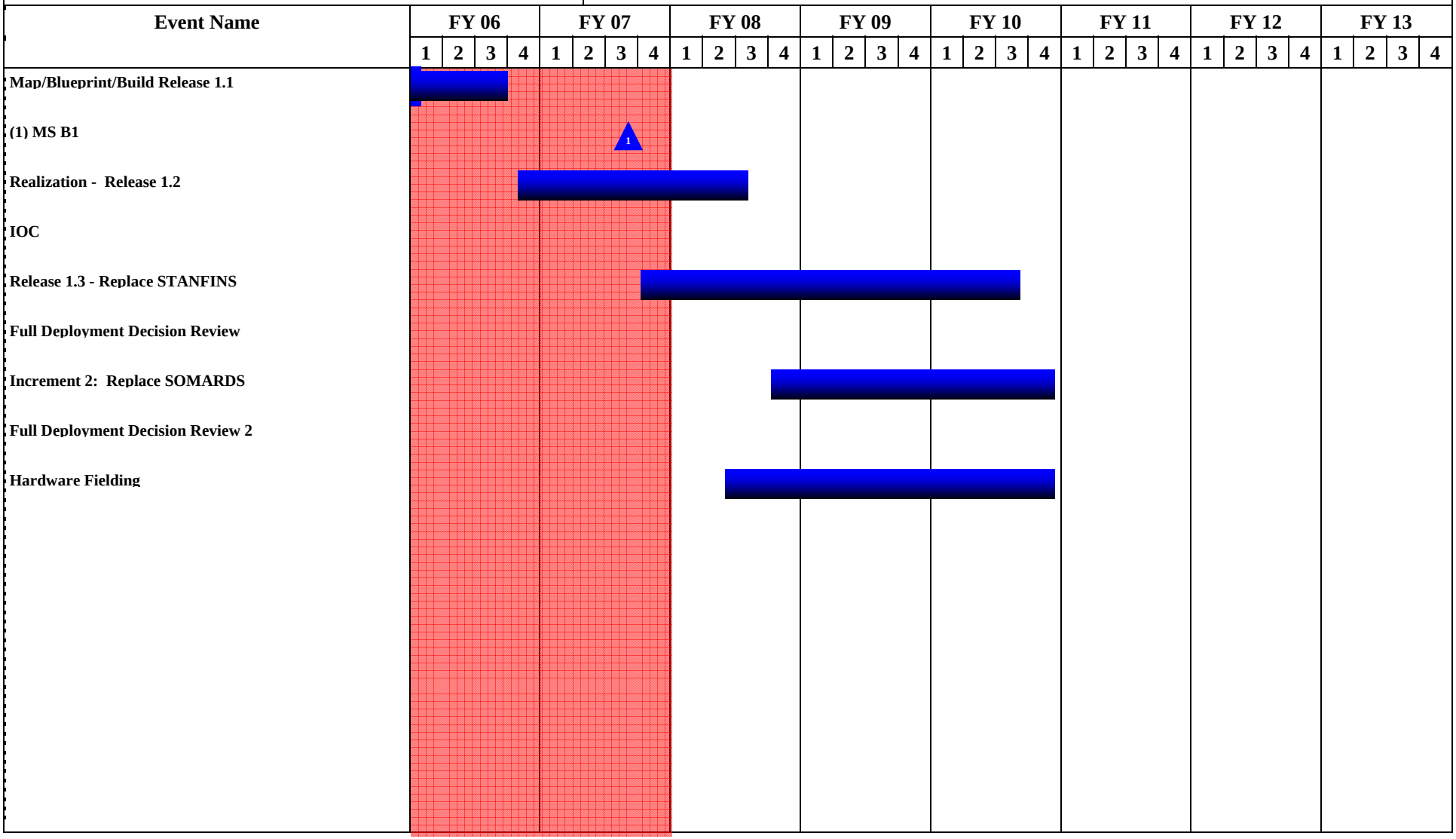
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604822A - General Fund Enterprise Business System (GFEBS)

PROJECT
GF5



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604822A - General Fund Enterprise Business System (GFEBS)**	**GF5**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Map/Blueprint/Build Release 1.1	1Q - 3Q							
MS B1		3Q						
Realization - Release 1.2	4Q	1Q - 4Q	1Q - 3Q					
IOC				1Q				
Release 1.3 - Replace STANFINS		4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			
Full Deployment Decision Review				1Q				
Increment 2: Replace SOMARDS			4Q	1Q - 4Q	1Q - 4Q			
Full Deployment Decision Review 2				3Q				
Hardware Fielding			2Q - 4Q	1Q - 4Q	1Q - 4Q			

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604822A - General Fund Enterprise Business System (GFEBS)**							PROJECT **GF5**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
GFEBS								
Total Termination Liability Funding:								

Remarks:
The GFEBS contract period of performance for the System Integrator (Accenture) will have 1 base year with 9 option years. At this time, the government is only liable for the base year (Release 1.1) portion of the contract. The government if need be can opt not to execute the 9 option years without liability. Funding is available in case Release 1.1 is terminated prior to completion date.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604823A - FIREFINDER**

	COST (In Thousands)	FY 2006 Actual	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	43711	54542	77279	31424	9860	103				216919
L86	LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)	22757	16747	7926							47430
L87	LONG RANGE COUNTERFIRE RADAR			11	101	109	86				307
L88	ENHANCED AN/TPQ 36	20954	37795	69342	31323	9751	17				169182

A. Mission Description and Budget Item Justification: This Program funds design, development and test of primary target acquisition and counterfire radars to automatically detect, locate and classify hostile indirect fire weapons (mortars, artillery, rockets, and missiles). This PE directly supports the prioritization, tracking, and locating of targets, and dissemination of that information for simultaneous attack of multiple threats. It provides the Warfighter with continuous and responsive counterfire target acquisition systems for all types and phases of military operations. Project L85, Phoenix Battlefield Sensor System AN/TPQ-47, was re-structured in FY05 to an alternate contract conclusion due to technical challenges and competing near term radar performance shortfalls identified in Operation Iraqi Freedom (OIF). Project L86, Advanced Lightweight Counter Mortar Radar (A-LCMR), will provide 360 degree coverage and be used to detect, locate and report hostile locations of enemy indirect firing systems out to a range of 10 kilometers. Project L88, Enhanced AN/TPQ-36 (EQ-36), is a highly mobile radar system that will leverage the latest in technology design to accelerate technology infusion and increase range while improving False Alarm Rate, reducing obsolescence and increasing reliability. EQ-36 will provide 90 degree coverage and extended range, with an incremental development to increase detection capability to 360 degrees. The EQ-36 will be interoperable with Firefinder and future Battle Command Systems.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604823A - FIREFINDER**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	45405	70151	62256	52527
Current BES/President's Budget (FY 2008/2009)	43711	54542	77279	31424
Total Adjustments	-1694	-15609	15023	-21103
Congressional Program Reductions	-1694	-15609		
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			15023	-21103

Change Summary Explanation: FY2007 Project DL88 decrease of $15208 due to late 4Q EQ-36 Contract Award.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L86**

COST (In Thousands)		FY 2006 Actual	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
L86	LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)	22757	16747	7926							47430

A. Mission Description and Budget Item Justification: The AN/TPQ-48(V)3 Lightweight Counter Mortar Radar (LCMR) will provide 360 degrees of azimuth coverage and be used to detect, locate, and report hostile locations of enemy indirect firing systems. It will cover a range of 500 meters to 10 kilometers and provide observed fires from friendly units. The AN/TPQ-48(V)3 shall be a digitally connected, day/night mortar, cannon, and rocket locating system. The AN/TPQ-48(V)3 will be a spiral enhancement to the existing AN/TPQ-48(V)2. The LCMR was originally designed to operate as a stand alone capability for Special Forces and is man portable when disassembled. This capability has been fielded to Operation Iraqi Freedom (OIF) as a Limited Procurement Urgent (LPU) capability.

FY2008 funds the continuation of primary development of thirteen (13) AN/TPQ-48(V)3 test articles.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Primary development of thirteen (13) test articles to include non recurring engineering and Program Management support.	22096	9958	4445	
Develop/build Radar Environmental Simulator (RES) to simulate system hardware/software and emulate the radar performance.		2082	1063	
Activities to support Development Test/Operational Test. Efforts include conduct of Live Ammunition Test at Yuma Proving Ground (YPG), Limited User Test, ammunition and manpower to support system test.	661	4236	2418	
Small Business Innovative Research/Small Business Technology Transfer Programs		471		
Total	22757	16747	7926	

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SSN: B05201 Lightweight Counter Mortar Radar	94638	16260	43893	44051	33986	34492	35254	36140	Continuing	Continuing

Comment:

C. Acquisition Strategy The Lightweight Counter Mortar Radar (LCMR) prototype was developed as a Special Operations Command (SOCOM) program under the Office of Special Technology, Broad Agency Announcement (BAA). The LCMR Engineering Development Program was also SOCOM funded which resulted in to a functional system. The LCMR leverages the SOCOM developed program and serves as a spiral development effort to provide greater range, accuracy, interoperability and transportability to support Army's requirements. Acquisition Strategy Approval was obtained in May 06 and a contract was awarded in Sep 06 to spiral the existing system into the Army's objective system.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

PROJECT
L86

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Primary Hardware Dev	SS/CPFF	SRCTec, North Syracuse, NY		18307	4Q	7639	2Q	3335	2Q			Cont.	29281	
Radar Environmental Simulators (RES)	TBD	TBD				2082	2Q	1063	2Q			Cont.	3145	
Systems Engineering Contractor	SS/T&M	Various		1570	1-3Q	605	1-2Q	300	1-2Q			Cont.	2475	
Systems Engineering Government	MIPR	CERDEC, Fort Monmouth, NJ		700	1-2Q	400	1-2Q	350	1-2Q				1450	
SBIR/STTR Transfers						471							471	
Subtotal:				20577		11197		5048				Cont.	36822	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support (Government)	MIPR	Various		161	1-2Q	145	1-2Q					Cont.	306	
Subtotal:				161		145						Cont.	306	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test Support (Contractor)	MIPR	TBD				478	2Q	240	1Q			Cont.	718	
Developmental Test & Evaluation	MIPR	Yuma, AZ/WSMR, NM				3105	2-3Q	1786	1-2Q			Cont.	4891	
Test Support (Government)	MIPR	Various		250	2Q	250	2Q	154	1-2Q			Cont.	654	
Subtotal:				250		3833		2180				Cont.	6263	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

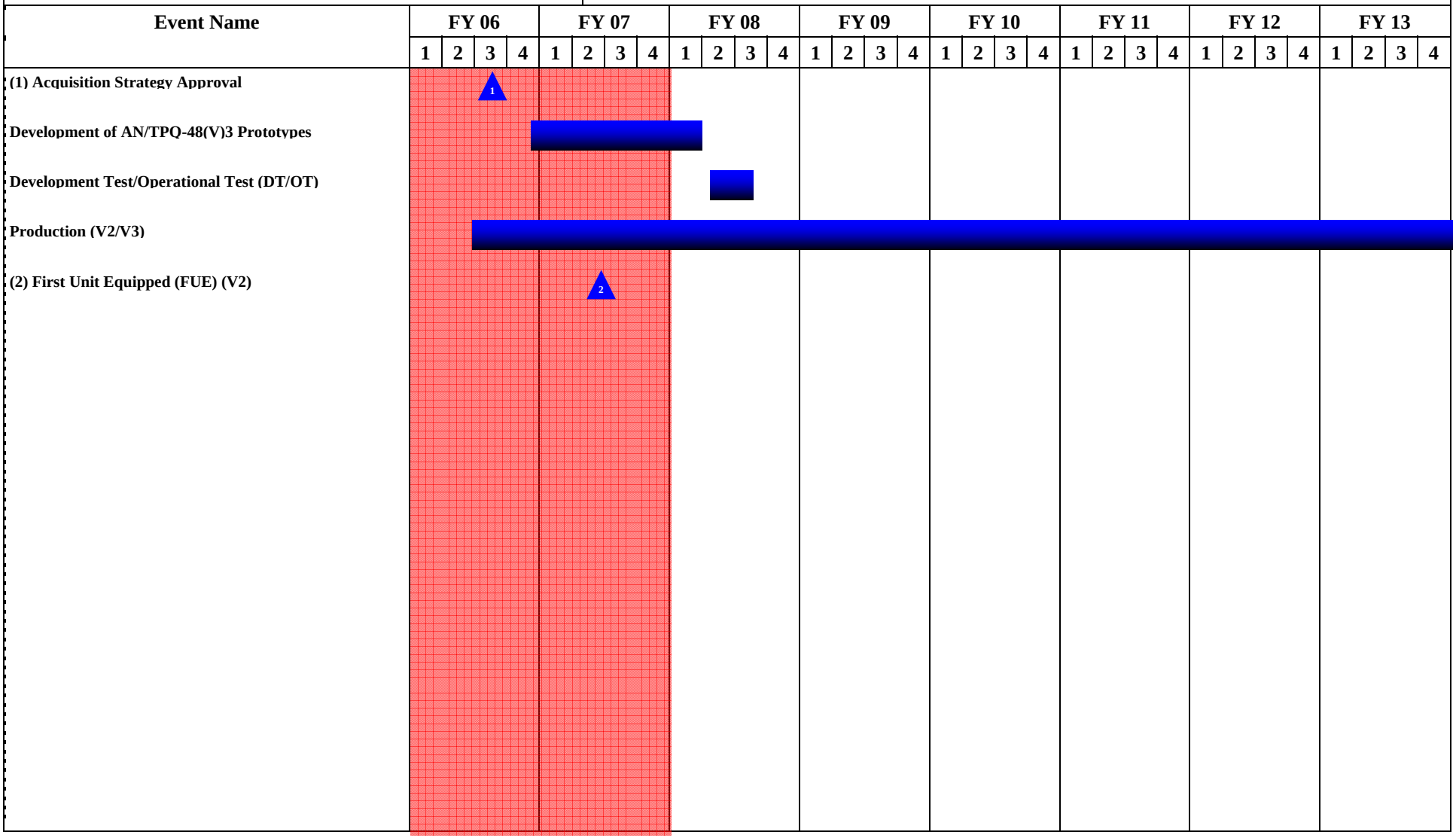
PROJECT
L86

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 (Contractor)	C/FP	Various		890	1-3Q	752	1-3Q					Cont.	1642	
Program Management	In House	PM NV/RSTA, Fort Monmouth, NJ		435	1-4Q	444	1-4Q	342	1-4Q			Cont.	1221	
Program Management (Government Matrix)	MIPR	Various		444	1-2Q	376	1-2Q	356	1-2Q			Cont.	1176	
Subtotal:				1769		1572		698				Cont.	4039	
Project Total Cost:				**22757**		**16747**		**7926**				**Cont.**	**47430**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L86**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L86**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Acquisition Strategy Approval	3Q							
Development of AN/TPQ-48(V)3 Prototypes	4Q	1Q - 4Q	1Q					
Development Test/Operational Test (DT/OT)			2Q - 3Q					
Production (V2/V3)	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
First Unit Equipped (FUE) (V2)		2Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L88**

COST (In Thousands)	FY 2006 Actual	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
L88 ENHANCED AN/TPQ 36	20954	37795	69342	31323	9751	17				169182

A. Mission Description and Budget Item Justification: The Enhanced AN/TPQ-36 (EQ-36) is a highly mobile radar system designed to classify targets for automatic first-round location of mortar, cannon and rocket enemy fires and to provide observed fires from friendly units. The EQ-36 will provide 90 degree coverage, with a shorter range 360 degree coverage for mortars. The EQ-36 will provide 32KM range coverage for cannons and 60KM for rockets. This program will leverage the latest in technology design to provide increased range, reduced crew size, as well as increased reliability, availability, and maintainability. The EQ-36 will provide digital communications and be interoperable with Firefinder and future Battle Command Systems. The system will be capable of drive-on/drive off C-130 and will be mounted on standard Army vehicles.

FY2008 funds:
a. Continuation of development and manufacture of five (5) Non-Recurring Engineering (NRE) Increment 1 systems
b. Design and integration of Increment 2

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Primary development and test of five (5) Enhanced AN/TPQ-36 NRE Increment 1 systems, and associated Program Management support to meet the Army's counterfire requirements.	17204	35981	66344	25410
Increment 2 Design and Integration			2998	5913
Develop/Build Radar Environmental Simulator (RES) to simulate system hardware/software and emulate the radar performance.	3750	750		
Small Business Innovative Research/Small Business Technology Transfer Programs		1064		
Total	20954	37795	69342	31323

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
B05310 Enhanced AN/TPQ-36				107797	150827	175508	263480	251116	Continuing	Continuing

Comment: Existing OPA funding line procures 66 systems through FY13.

C. Acquisition Strategy The Enhanced AN/TPQ-36 (EQ-36) leverages technology developed in the Multi-Mission Radar Advanced Technology Objective (ATO) program incorporating the latest antenna technology into the EQ-36. In order to field the EQ-36 capability to the Warfighter in the most expeditious manner with the least amount of risk, the EQ-36 will be produced in two increments based on two tiers of technical threshold requirements. Increment 1 capabilities are planned to be fielded as a replacement to the

AN/TPQ-36 radar system. Increment 2 capabilities will provide increased performance over Increment 1 and will meet all of the user's requirements. A contract was awarded in 4QFY06 based on full and open competition and is currently under Government Accounting Office (GAO) audit. Resolution to be completed by 16 Jan 07. The system will be fielded in two Initial Production lots of six (6) systems each in FY09 and FY10, followed by a full rate production contract scheduled for award in FY11. The system is planned to eventually replace all of the AN/TPQ-36 and AN/TPQ-37 legacy systems in the fleet.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

PROJECT
L88

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Primary Hardware Development	CPIF	TBD		11000	4Q	31027	1-4Q	64172	1-4Q	22590	1-4Q	Cont.	Cont.	
Ancillary Equipment	MIPR/Requisitions	Various		1032	3-4Q								1032	
Radar Environmental Simulators (RES)	MIPR	Oakridge National Labs, Oak Ridge, TN		3750	3Q	750	3Q						4500	
Systems Engineering (Contractor)	C/FP	Various		1054	2Q	1605	1-2Q	1362	1-2Q	784	1-2Q	Cont.	Cont.	
Systems Engineering (Government)	MIPR	Various		300	1-2Q	309	1Q	350	1-2Q	361	1-2Q	Cont.	Cont.	
SBIR/STTR Transfers						1064							1064	
Subtotal:				17136		34755		65884		23735		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Source Selection Efforts	MIPR	Various		828	3-4Q							Cont.	Cont.	
Development Support (Government)	MIPR	Various		100	2Q	150	1-2Q	155	1-2Q	159	1-2Q		564	
Development Support (Contractor)	C/FF	Various		190	2Q	398	1-2Q	409	1-2Q	422	1-2Q		1419	
Subtotal:				1118		548		564		581		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test Support (Government)	MIPR	Various		125	2Q	185	2Q	300	2Q	4845	2Q	Cont.	Cont.	
Subtotal:				125		185		300		4845		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

PROJECT
L88

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 (Contractor)	C/FP	Various		1074	1-3Q	1000	1-3Q	1225	1-3Q	1018	1-3Q	Cont.	Cont.	
Program Management (Government)	MIPR	Various		421	1-2Q	376	1-2Q	387	1-3Q	398	1-3Q	Cont.	Cont.	
Program Management	In-House	PM NV/RSTA, Fort Monmouth, NJ		1080	1-4Q	931	1-4Q	982	1-4Q	746	1-4Q	Cont.	Cont.	
Subtotal:				2575		2307		2594		2162		Cont.	Cont.	
Project Total Cost:				**20954**		**37795**		**69342**		**31323**		**Cont.**	**Cont.**	

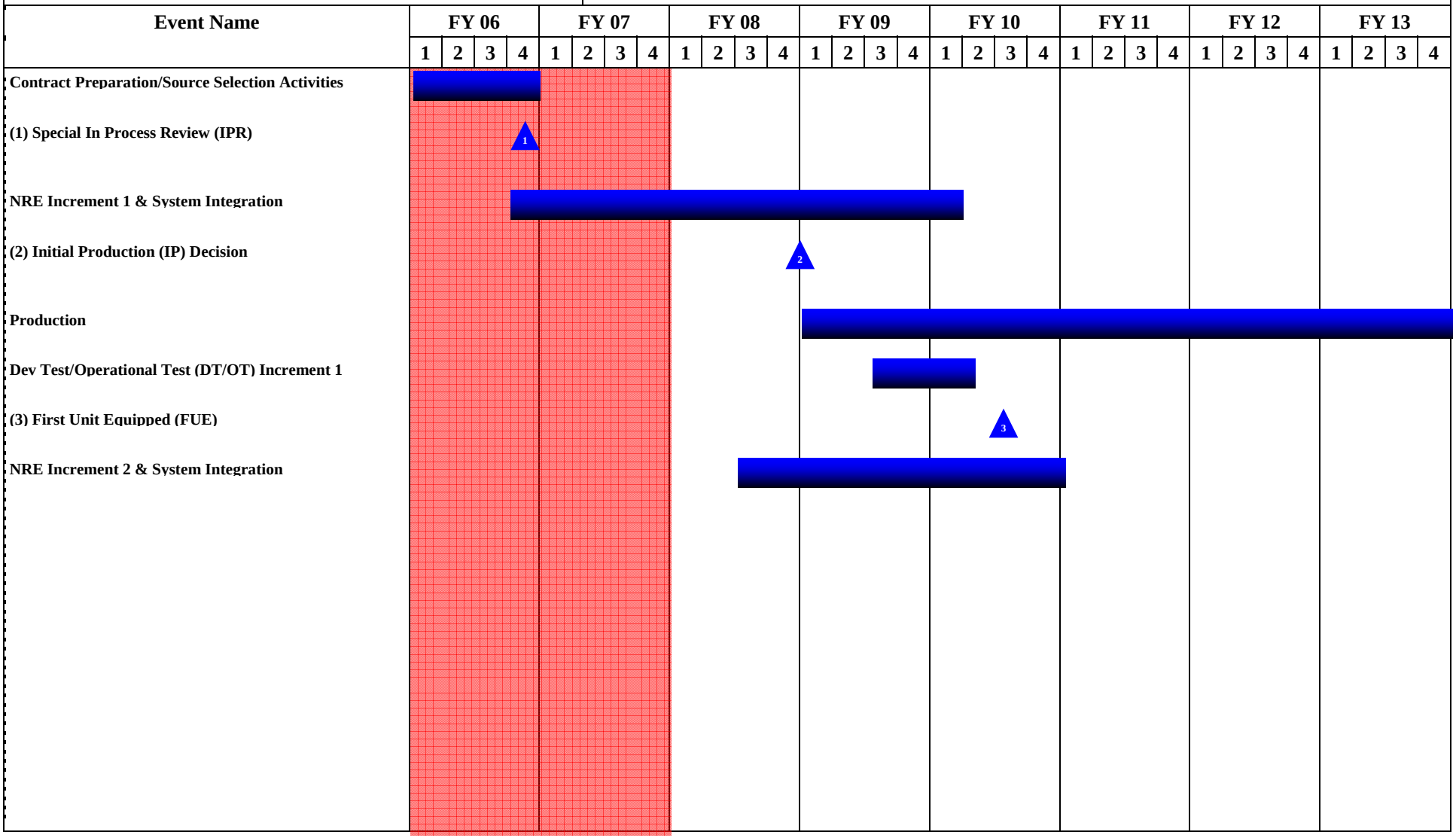
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

PROJECT
L88



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L88**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Contract Preparation/Source Selection Activities	1Q - 4Q							
Special In Process Review (IPR)	4Q							
NRE Increment 1 & System Integration	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q			
Initial Production (IP) Decision			4Q					
Production				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Dev Test/Operational Test (DT/OT) Increment 1				3Q - 4Q	1Q - 2Q			
First Unit Equipped (FUE)					3Q			
NRE Increment 2 & System Integration			3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**

	COST (In Thousands)	FY 2006 Actual	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	5222	1632	24221	24073	23978	5900	5600	5400	Continuing	Continuing
509	LIGHTWEIGHT 155M HOWITZER	649		5963	5606	5778					17996
516	PALADIN/FAASV	4573	1632	18258	18467	18200	5900	5600	5400	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element supports the Joint Light Weight 155mm Howitzer (LW155) and the Paladin/FAASV Improvement programs.

The LW155, a joint program with the Marine Corps, provides the replacement for the current 1970's vintage M198, 155mm Towed Howitzer. The LW155 provides significant improvement in strategic and tactical mobility over the M198. The Army portion of the joint development is the Towed Artillery Digitization (TAD). TAD is the digital fire control system for the LW155. TAD provides increased accuracy, survivability, and lethality for Army and USMC 155mm Towed Artillery. The LW155 will be the first towed platform capable of firing the Excalibur precision munition, which will provide precision strike capability out to ranges of 40 kilometers with 10 meter accuracy.

The Paladin/FAASV project integrates several system improvements that provide for: stowage and automated dispensing of M231/M232, Modular Artillery Charge System (MACS) that is displacing the current propelling charges; the Graphical User Interface (GUI) software; the Defense Advanced GPS Receiver (DAGR); and upgrading components of the Paladin Digital Fire Control System (PDFCS) to avoid obsolescence, as well as develop and integrate XM982 Extended Range Projectile requirements in the PDFCS. In addition, other system improvements include the battlefield digitization trainer, the direct drive generator, and development of the Paladin Operations Center Vehicle (Pal OCV). The system improvements provide significantly improved mission effectiveness, increased reliability, maintainability, supportability, and Battle Command on-the-move, as well as reduced life cycle costs.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	5397	1650	6009	5616
Current BES/President's Budget (FY 2008/2009)	5222	1632	24221	24073
Total Adjustments	-175	-18	18212	18457
Congressional Program Reductions		-6		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-175	-12		
SBIR/STTR Transfer				
Adjustments to Budget Years			18212	18457

Change Summary Explanation: Funding: For the Lightweight 155 program, FY08/09 funding increased to support software development and engineering efforts for lethality and survivability enhancements, to include ballistic computation at the weapon system and the addition of a Muzzle Velocity System to increase accuracy.
The Paladin Integrated Management (PIM)Program which will begin in FY08 will take the Paladin product cycle to the next level to address all obsolescence, reliability, maintainability and supportability faced by the Paladin and FAASV today and in the near future to include: Power Train upgrade; Suspension System; Electronic sub-systems to include the next generation fire control system, navigation system , communication/data transfer and Vehicle Health Management system; Improvement Gun Drive System to meet the needs of the future battle field.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**509**

COST (In Thousands)	FY 2006 Actual	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
509 LIGHTWEIGHT 155M HOWITZER	649		5963	5606	5778					17996

A. Mission Description and Budget Item Justification: The Lightweight 155mm (LW155) Towed Howitzer, a jointly managed program with the Marine Corps, will provide the replacement for the M198, 155mm Towed Howitzer. LW155 provides significant strategic and tactical mobility improvements. Project 509 supports Towed Artillery Digitization (TAD) Block II, a software upgrade to the digital fire control system for the M777A1 (LW155). Close coordination with the Excalibur office will ensure that the M777A1 will be capable of firing the Excalibur precision munition in FY07.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Incremental funding for the TAD Block 1 SDD Contract	449			
Funded matrix support personnel for the development of TAD At-Systems Testing hardware and software.	200			
Funds Matrix Support Software Engineers for TAD Block II Software Development			5963	5606
Total	649		5963	5606

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Procurement, Marine Corps LW155 Towed Howitzer with TAD Prod, BLIN 218500	170499	94365	92770							357634
Procurement, WTCV, Army, LW155 with TAD G01700	49975	172194	270251	44242	38411	36079	47112	47099	72100	777463

Comment:

C. Acquisition Strategy Towed Artillery Digitization (TAD) is an evolutionary acquisition strategy for the Lightweight 155mm Towed Howitzer (LW155). Block 0 consisted of "glass and iron" optical sights as the weapon's fire control. Block 1 TAD incorporated digitized aiming and pointing which increased accuracy and enabled a battery of howitzers to emplace and engage the enemy within 2 to 3 minutes as opposed to 15 to 20 minutes. Block 1a, which will be fielded in FY07, adds the ability for the LW155 Howitzer to fire the XM982 Excalibur Precision Munition. Funding identified above will be used to upgrade to Block 2, which is the objective TAD configuration. The primary benefit of TAD Block 2 will be the addition of mission processing capability at the platform, enabling enhanced responsiveness and flexibility to the battlefield commander. It will also integrate a Muzzle Velocimeter for increased accuracy.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
509

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Incremental funding for the TAD Block 1 SDD Contract		BAE Systems, United Kingdom		449	4Q								449	
Funded matrix support personnel for the development of TAD At-Systems Testing hardware and software.		ARDEC, Picatinny Arsenal, NJ		196	1Q								196	
Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR				4									4	
Funds Matrix Support Software Engineers for TAD Block II Software Development		ARDEC, Picatinny Arsenal, NJ						5963	1Q	5606	1Q		11569	
Funds Matrix Support Software Engineers for TAD Block II Software Testing and Evaluation		ARDEC, Picatinny Arsenal, NJ										5778	5778	
Develop TAD Block 2 Hardware												14100	14100	
Subtotal:				649				5963		5606		19878	32096	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**509**

Subtotal:														

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														
Project Total Cost:				**649**				**5963**		**5606**		**19878**	**32096**	

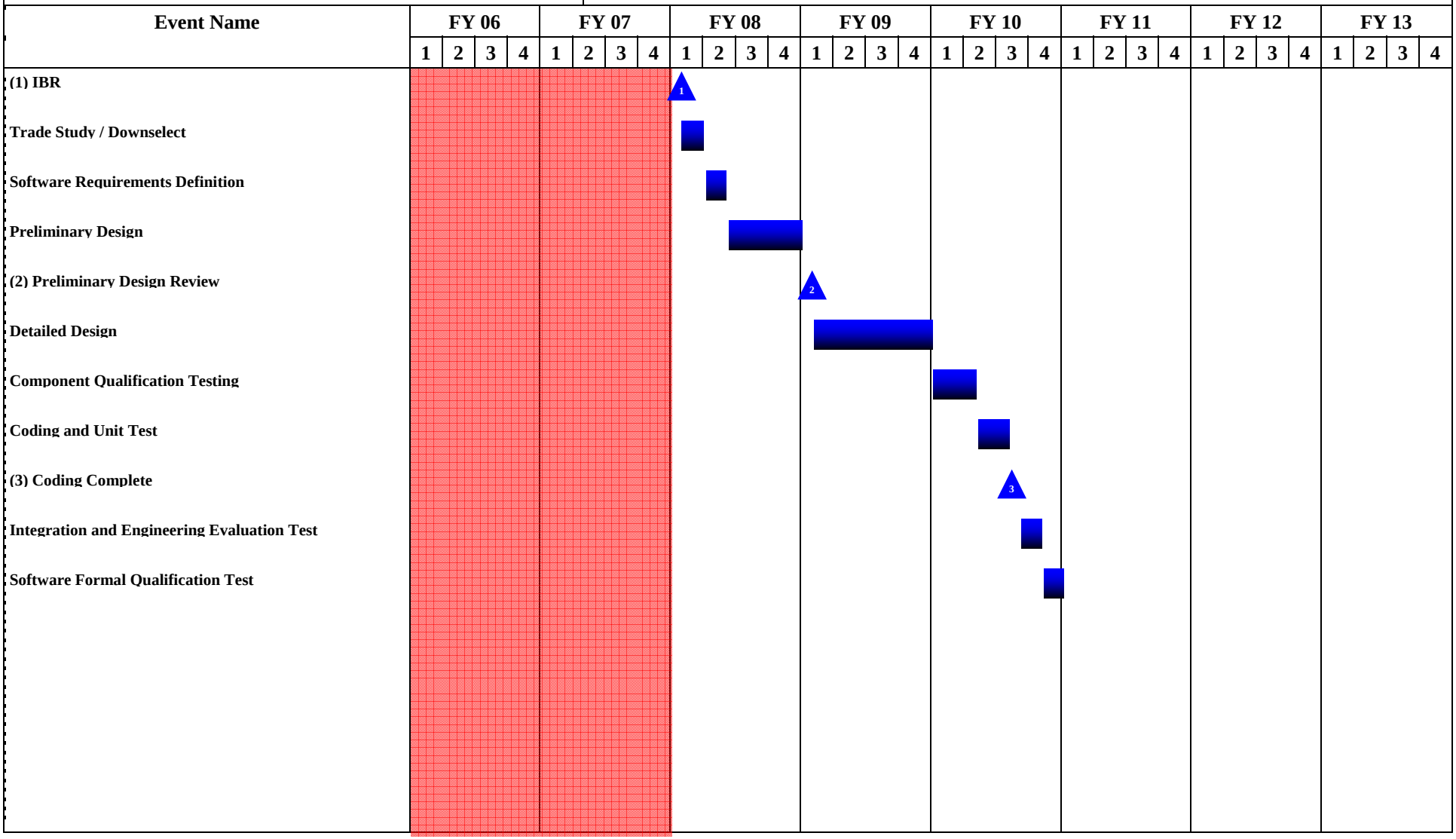
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
509



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**509**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
IBR			1Q					
Trade Study / Downselect			1Q					
Software Requirements Definition			2Q					
Preliminary Design			2Q - 4Q					
Preliminary Design Review				1Q				
Detailed Design				1Q - 4Q				
Component Qualification Testing					1Q - 2Q			
Coding and Unit Test					2Q - 3Q			
Coding Complete					3Q			
Integration and Engineering Evaluation Test					3Q - 4Q			
Software Formal Qualification Test					4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**516**

COST (In Thousands)	FY 2006 Actual	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
516 PALADIN/FAASV	4573	1632	18258	18467	18200	5900	5600	5400	Continuing	Continuing

A. Mission Description and Budget Item Justification: The current Paladin/Field Artillery Ammunition Vehicle (FAASV) project allows for the integration of several selected system improvements which provide for: development of Battlefield Digitization Trainer software, development and integration of the Excalibur (M982) extended range projectile requirements into the Paladin Digital Fire Control System (PDFCS). These systems improvements improved the Paladin mission effectiveness, increase reliability as well as reduce life cycle costs and address electronic obsolescence with the obsolete Paladin Automatic Fire Control System (AFCS). The Paladin Integrated Management (PIM) Program which will begin in FY08 will take the Paladin product cycle to the next level to address all obsolescence, reliability, maintainability and supportability faced by the Paladin and FAASV today and the near future to include: Power Train upgrade; Suspension system; electronic sub-systems to include the next generation fire control system, navigation system, communication/data transfer and Vehicle Health Management system; Improvement Gun Drive System to meet the needs of the future battle field.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Develop and integrate the EXCALIBUR (XM982) Extended Range Projectile requirements into the Paladin Digital Fire Control System	4162	1511		
Program management of Paladin/FAASV program	50	75		
Develop Battlefield Digitization Trainer software which combines the current Paladin Fire Control PC trainer with the Force XX1 Battle Command Brigade and Below (FBCB2) Digitization trainer. This combined package will allow for realistic classroom training for the First Digitized Corps and the Counter Attack Corps.				
Research and investigate Power Management requirements.	361			
Paladin Integrated Management (PIM)			18258	18467
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		46		
Total	4573	1632	18258	18467

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PA, WTCV, GA0400 Paladin	15082	28599	36924	47648	99678	158891	178481	223366	Continuing	Continuing
PA, WTCV, GA8010 FAASV PIP	6335								Continuing	Continuing
OMA, FAASV Recap, MDEP RR17	5671								Continuing	Continuing

Comment:

C. Acquisition Strategy The Paladin/FAASV project will leverage both Government and Contractor capabilities to accomplish the development of the Paladin/FAASV system improvement projects. Government in-house engineering will perform some component level design and system integration. Final System Level Testing will be performed by Other Government Agencies (OGA). Competitive contracts will be used for many of the component level design and hardware fabrication. To the extent possible, maximum use of existing commercial off-the-shelf hardware and software will be utilized.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
516

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Component Design and Software Development	STS/CPFF	Northrop Grumman, Carson, CA	5027										5027	6250
System Integration	STS/CPFF	BAE Systems, York, Pa	4304	265	2Q								4569	7304
TDP Development	MIPR	Other Gov't Agencies	452										452	452
Software Development & System Integration	MIPR	TACOM-ARDEC, Picatinny, NJ	3196	3897	3Q	757	2Q						7850	4136
PIM Development	STS/CPFF	BAE/Northrup Grumman						18258	2Q	18467	2Q		36725	
Generator Power Management	STS/CPFF	BAE Systems, York, PA		361	4Q								361	370
Subtotal:			12979	4523		757		18258		18467			54984	18512

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Logistics	MIPR	TACOM-ACALA, Moline, IL	229										229	370
Subtotal:			229										229	370

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Component Level Testing	MIPR	TACOM-ARDEC, Picatinny, NJ	953			200	2Q						1153	1158
System Level Testing	MIPR	Various OGAs	930			600	2Q						1530	4022
Subtotal:			1883			800							2683	5180

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
516

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
PMO Support	NA	PM Paladin/FAASV, Picatinny, NJ	848	50	2Q	75	2Q						973	995
Subtotal:			848	50		75							973	995
Project Total Cost:			**15939**	**4573**		**1632**		**18258**		**18467**			**58869**	**25057**

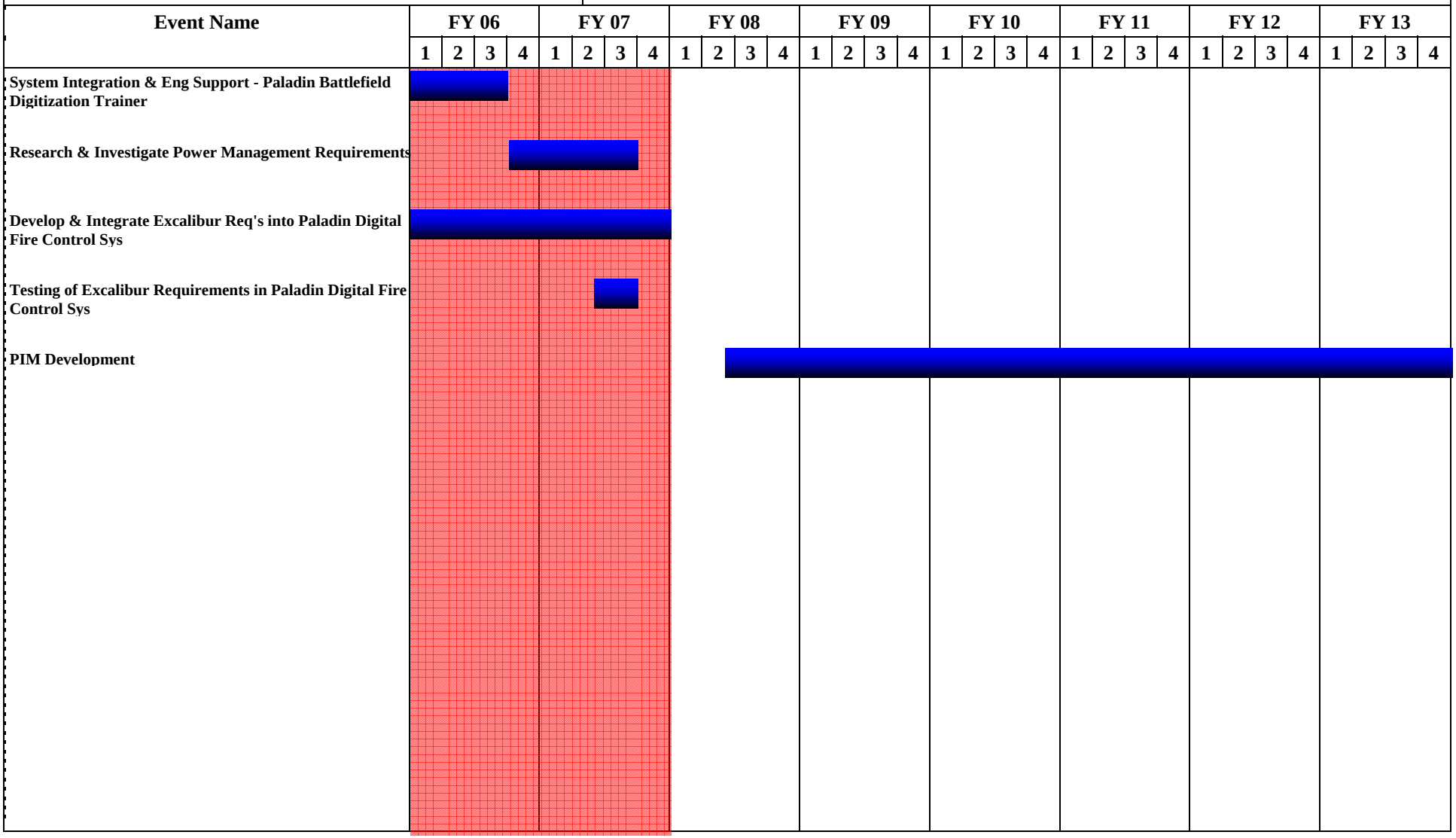
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
516



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
516

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
System Integration & Eng Support - Paladin Battlefield Digitization Trainer	1Q - 3Q							
Research & Investigate Power Management Requirements	4Q	1Q - 3Q						
Develop & Integrate Excalibur Req's into Paladin Digital Fire Control Sys	1Q - 4Q	1Q - 4Q						
Testing of Excalibur Requirements in Paladin Digital Fire Control Sys		2Q - 3Q						
PIM Development			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**	**M06**

COST (In Thousands)		FY 2006 Actual	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
M06	PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	274339	325945	372146	408182	589779	427981	436415	77399		2912186

A. Mission Description and Budget Item Justification: Medium Extended Air Defense System (MEADS) is a tri-national co-development program among the United States, Germany, and Italy to replace the U.S. PATRIOT air defense systems, PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. Participating countries will sign a Memorandum Of Understanding (MOU) for each successive program phase. The NATO MEADS Management Agency (NAMEADSMA) is the NATO contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the Design and Development(D&D) MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The MOU was amended in March 05 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a $3.4 Billon D&D definitized contract to MEADS International Inc. on May 31, 2005. Within the PATRIOT/MEADS CAP there are two synergistic efforts: an international MEADS development effort managed by NAMEADSMA, and a U.S. effort to inject U.S.-specific capability requirements into the MEADS Major End Items (MEIs).

MEADS will provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, unmanned aerial vehicles (UAVs) and tactical air-to-surface missiles (TASMs). MEADS will have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS battery, which will be scalable and tailorable to operational requirements, will consist of: a Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; a near-vertical launcher capable of transporting and launching up to eight missiles; a launcher reloader; the PAC-3 missile; an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree coverage and near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search.

In addition, MEADS will provide significant improvements in strategic deployability, transportability, mobility and maneuverability. Its substantially reduced lift requirements enable MEADS to be deployed rapidly with essential combat loads via inter/intra-theater land, sea, and airlift anywhere in the world. MEADS will provide Combatant Commanders with an Air Missile Defense (AMD) system that is fully transportable by C-130 aircraft, thus increasing strategic and tactical mobility. Further, its decreased size/weight and ability to conduct rapid march order and system emplacement will enhance maneuverability, thereby providing better AMD protection to maneuvering forces.

The Missile Segment Enhancement (MSE) missile has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The PAC-3 MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded guidance software, and insensitive munitions improvements.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Continue the U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel)budgets to manage the Design and Development (D&D) Phase contract to design, build, test and evaluate the production representative MEADS hardware.	151079	154829	295030	386421
Implement program integration efforts that will examine Department of Defense (DOD) Joint Integrating Concept and Army Transformation Future Force mix and integration issues; support development and maintenance of Joint Data Network interface requirements; and appropriate planning of MEADS manpower, training, human factors, safety issues, cost reduction initiatives, and protection of U.S. background technology.	66940	65966	39545	14502
Continue management, support and salaries for the national and international program offices.	6120	7100	6930	7259
Includes US only efforts to support Exciter & Exportable Missile Model in FY06-FY07 and Missile Segment Enhancement in FY06-FY08. Includes White Sands Missile Range (WSMR) Support and Targets.	50200	88877	30641	
Small Business Innovative Research/Small Business Technology Transfer Programs		9173		
Total	274339	325945	372146	408182

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**	**M06**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	284695	329583	459684	517049
Current BES/President's Budget (FY 2008/2009)	274339	325945	372146	408182
Total Adjustments	-10356	-3638	-87538	-108867
Congressional program reductions		-1245		
Congressional rescissions				
Congressional increases				
Reprogrammings	-10356	-2393		
SBIR/STTR Transfer				
Adjustments to Budget Years			-87538	-108867

FY 2008, funds realigned ($87,538) to higher priority requirements.
FY 2009, funds realigned ($108,867) to higher priority requirements.
The FY07 President's Budget listed above does not reflect the SBIR/STTR reductions. Those reductions are listed in the FY07 Accomplishments/Planned Program section.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SSN C50001, Patriot/MEADS CAP					403735	674386	1042010	1317190	Continuing	Continuing
PE 0102419A, Proj E55, JLENS	99851	242781	481251	353983	337464	320787	182528		Continuing	Continuing
SSN BZ0525, JLENS Production						445850	223550	395200	Continuing	Continuing
PE 0604082A, Proj S23, SLAMRAAM	34034	26663	34762	11979					Continuing	Continuing
SSN C81001, SLAMRAAM Production	18825			65506	118124	76747	61850	61850	Continuing	Continuing
PE 0604820A, Proj E10, SENTINEL	4775	2499	7067						Continuing	Continuing
PE 0603327A, Proj E88, Integrated Fire	23662	41249							Continuing	Continuing
PE 0603327A, Proj S34, AMD System of System Engineering and Integration	2684		138399	114587	81636	37876	5238		Continuing	Continuing

Comment: PAC-3 / MEADS CAP RDTE funding was combined under PE0604869A beginning in FY06. This PE is an integral part of the PEO, Missiles and Space Integrated Air and Missile Defense (IAMD)Program including Integrated Fire Control (IFC), JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, SENTINEL and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

D. Acquisition Strategy On 1 July 2004, the Defense Acquisition Board approved the Acquisition Strategy (AS) for the PATRIOT/MEADS CAP Milestone B. On 6 April 2006, the Lower Tier Project Manager submitted a Program Deviation Report (PDR) to notify the Under Secretary of Defense for Acquisition, Technology, and Logistics, of changes affecting the 6 August 2004, approved PATRIOT/MEADS CAP Acquisition Program Baseline (APB). On 9 February 2006, the Army System Acquisition Review Council (ASARC) approved establishment of the Integrated Air and Missile Defense (IAMD) Project Office (PO) to lead development efforts for the Army IAMD. On 8 May 2006, the Army established the IAMD PO which will manage the U.S. Army's initiatives to implement the user's operational concept from a System-Centric focus to a Network-Centric, Component-Based (Plug and Fight) architecture. The lead proponent for the U.S. only MEADS Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) effort now resides with the IAMD PO. The PATRIOT/MEADS CAP Acquisition Program Baseline (CAP APB) and Acquisition Strategy will be modified to reflect these changes.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604869A - Patriot/MEADS Combined Aggregate Program (CAP)

PROJECT
M06

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Design and Development	CPIF	NAMEADSMA, Huntsviile, AL		113500	2-3Q	138600	2-3Q	291000	2-3Q	382200	2-3Q	Cont.	Cont.	
Missile Segment Enhancement - LMMFC	SS-CPIF	LMMFC, Dallas, TX		18000	1-2Q	37000	3Q	11250	2Q			Cont.	Cont.	
Missile Segment Enhancement - Raytheon	SS-FP	Raytheon, Boston, MA		10400	1-2Q	11000	1-2Q	5800	1-2Q			Cont.	Cont.	
Program Integration	N/A	Various, Huntsville, AL		32339	1-3Q	30243	1Q	13000	1-2Q			Cont.	Cont.	
U.S. Only Security / Exciter	N/A	Lockheed Martin, Sycracuse, NY, Dallas, TX & Orlando, FL		7650	1-2Q	20600	2Q					Cont.	Cont.	
U. S. OGA's	N/A	Various, Huntsville, AL		7830	2-3Q	8254	2-3Q	781	1-2Q			Cont.	Cont.	
In-House	N/A	PO, Huntsville, AL		8880	1-2Q	12180	1-4Q	10178	2-3Q	10700	2-3Q	Cont.	Cont.	
U.S. Only Combined Aggregate Program (CAP)	N/A	Various, Huntsville, AL & Dallas, TX		29725	2-3Q	7700	2-3Q					Cont.	Cont.	
D&D GFE Procurement Efforts	N/A	TACOM, Warren, MI		4844	2-3Q	4399	2-3Q						9243	
Subtotal:				233168		269976		332009		392900		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Int'l Program Office	N/A	NAMEADSMA, Huntsville, AL		3010	2Q	4130	2Q	4030	2Q	4221	2Q	Cont.	Cont.	
U.S. Contracts	N/A	CAS, Huntsville, AL		12043	2Q	12294	2Q	7043	2Q			Cont.	Cont.	
Systems Engineering	N/A	MRDEC, Huntsville, AL		5698	2Q	9245	2Q	8543	2Q	3802	2Q	Cont.	Cont.	
Subtotal:				20751		25669		19616		8023		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Range Support	N/A	WSMR, White Sands, NM		1800	1-3Q	4800	2-3Q	5000	2-3Q			Cont.	Cont.	
Targets	N/A	SMDC, Huntsville, AL		9000	1-3Q	17400	2-3Q	8591	2-3Q			Cont.	Cont.	
Mod & Sim	N/A	Huntsville, AL		3500	1-3Q	1000	1Q					Cont.	Cont.	
Subtotal:				14300		23200		13591				Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Internal Operating	N/A	NAMEADSMA, Huntsville, AL		6120	2-3Q	7100	2-3Q	6930	2-3Q	7259	2-3Q	Cont.	Cont.	
Subtotal:				6120		7100		6930		7259		Cont.	Cont.	

Project Total Cost:				**274339**		**325945**		**372146**		**408182**		**Cont.**	**Cont.**	

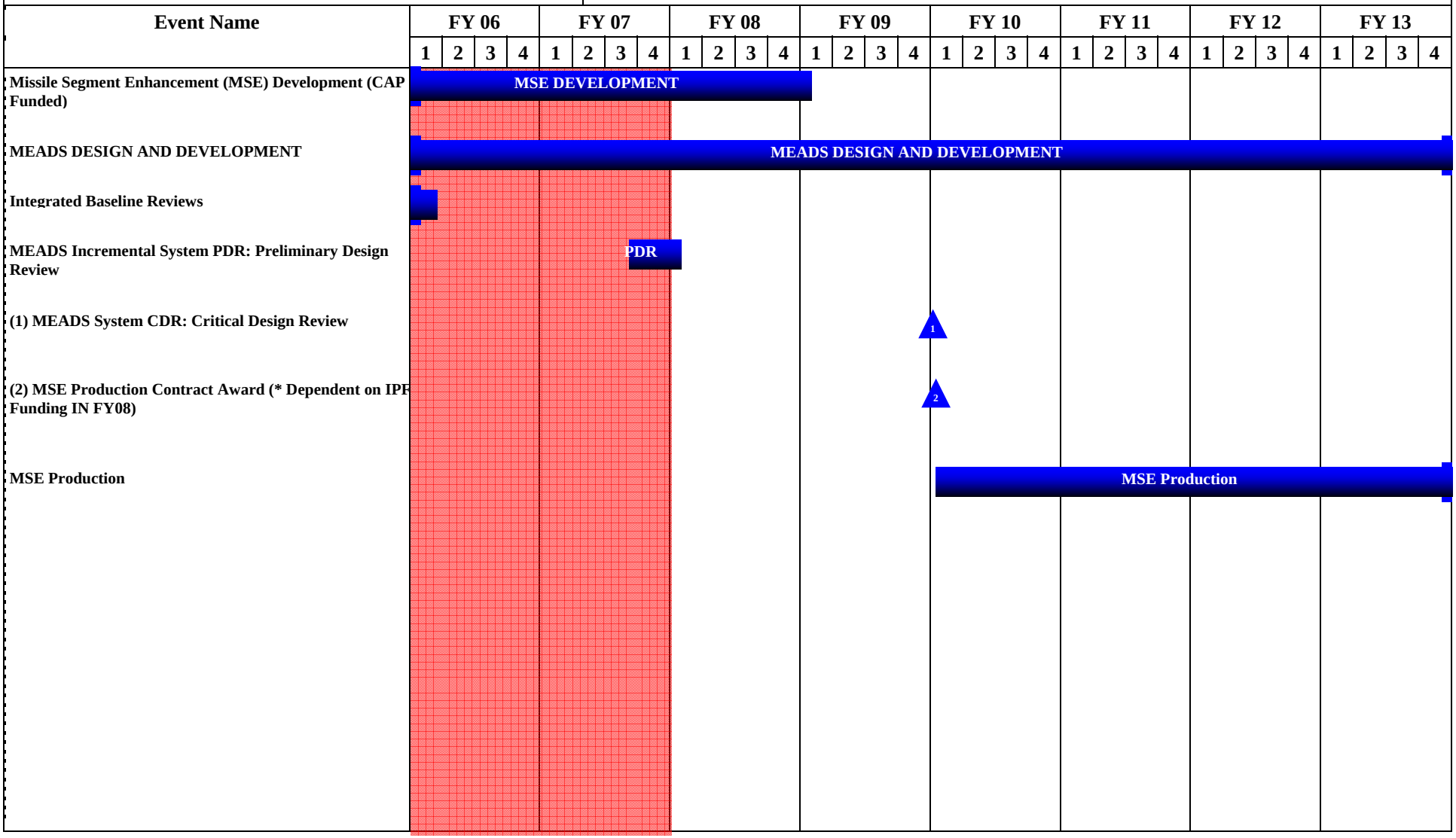
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604869A - Patriot/MEADS Combined Aggregate Program (CAP)

PROJECT
M06



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**	**M06**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Missile Segment Enhancement (MSE) Development (CAP Funded)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q				
MEADS DESIGN AND DEVELOPMENT	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Integrated Baseline Reviews	1Q							
MEADS Incremental System PDR: Preliminary Design Review		3Q - 4Q	1Q					
MEADS System CDR: Critical Design Review					1Q			
MSE Production Contract Award (* Dependent on IPF Funding IN FY08)					1Q			
MSE Production					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
MSE Production Contract Award					1Q			

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**							PROJECT **M06**

Funding in $000

Program	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Patriot/MEADS CAP								
Total Termination Liability Funding:								

Remarks:

The Patriot/Meads CAP Prime Contract Incorporates the "Limitation Of Funds" Clause (DFARS 52.232-22) To Limit The Government's Liability. For the Patriot Meads CAP Program, The "Limitation Of Funds" Clause Limits The Government's Financial Liability Per The Contract To Those Funds Placed On Contract Plus Any Outstanding Commitments Plus Costs Associated With The Orderly Termination Of Contractual Actions.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

COST (In Thousands)		FY 2006 Actual	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
SE1	NACT SENSOR ENGINEERING		7346	7300	7300						21946

A. Mission Description and Budget Item Justification: This project provides Research, Development, Testing & Evaluation (RDT&E) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging nuclear arms control activities and dual use technology for missile defense integration activities. The project addresses requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD AT&L). This project conforms to the administration's research and development priorities as related to Weapons of Mass Destruction (WMD) arms control and disarmament. Technical assessments are made to provide the basis for sound project development, evaluate existing programs and provide the data required to make compliance judgments and support US policy, decision-makers and negotiating teams. Technology developments and system improvement projects are conducted to ensure that capabilities for monitoring systems are available when required.

Primary emphasis is on improved sensor capabilities and improved detection and assessment capabilities against a wide range of threat origins.

The program includes development of equipment and procedures for data exchanges, inspections and monitoring capability and analysis. The technologies and procedures developed in the arms control technology program provide an invaluable source of information on equipment and procedures that is extensively used by US and international agencies. This project also supports the warfighting capability area of combating Weapons of Mass Destruction (WMD).

The Department of Defense transferred the Nuclear Arms Control Technology Program from the Defense Threat Reduction Agency (DTRA) to the Army under PBD 289 to be executed by the US Army Space and Missile Defense Command. For FY04 the RDT&E funding request was placed in PE 0603782A Warfighter Information Network-Tactical-Dem/Val under Project F98 Nuclear Arms Control Tech-Sensor & Network Monitoring. For FY05 and FY06 the funding request was placed in PE 0604805A Command, Control, Communications Systems-Eng Dev under Project F99 Nuclear Arms Control Technology-Sensor Network Monitoring. Congress directed the Secretary of Defense to create a stand alone PE for this effort - not a new start. PE 0604870A is the new PE.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Conduct analyses as required to support the OSD treaty manager.		450	500	500
Continue development of a prototype sensor.		1400	1300	1200
Continue development of radionuclide particle and noble gas detectors		200	325	400
Continue Information management systems enhancements		1300	1200	1200
Continue the R&D support system		600	700	700
Continue on-location research of calibration for infrasound events		128	350	400
Continue development of techniques to identify signals from sensor systems		1611	1500	1500

Continue development of nuclear detection and measurement systems		1450	1425	1400
Small Business Innovative Research/Small Business Technology Transfer Programs		207		
Total		7346	7300	7300

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)		7428		
Current BES/President's Budget (FY 2008/2009)		7346	7300	7300
Total Adjustments		-82	7300	7300
Congressional Program Reductions		-28		
Congressional Rescissions				
Congressional Increases				
Reprogrammings		-54		
SBIR/STTR Transfer				
Adjustments to Budget Years			7300	7300

Change Summary Explanation: FY 2008 and FY 2009 funding restored to continue research and development of nuclear arms control monitoring technology.

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

D. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604870A - Nuclear Arms Control Monitoring Sensor Network

PROJECT
SE1

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Product Development	Various	MS, VA				1731	1-3Q	2428	1-3Q	2400	1-3Q		6559	
Subtotal:						1731		2428		2400			6559	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Monitoring Sensor Systems, Program Data Analysis, Verification Systems Concept Demo	Various	SAIC, General Dynamics, VA				2615	1-4Q	2160	1-4Q	2100	1-4Q		6875	
Support Contracts & Government Support	Various	FL, NM, VA, AL				1500	1-4Q	1212	1-4Q	1300	1-4Q		4012	
SMDC Support	Various	Huntsville, AL				500	1-4Q	500	1-4Q	500	1-4Q		1500	
Subtotal:						4615		3872		3900			12387	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test and Evaluation	Various	Huntsville, AL				500	2-3Q	500	2-3Q	500	2-3Q		1500	
Subtotal:						500		500		500			1500	

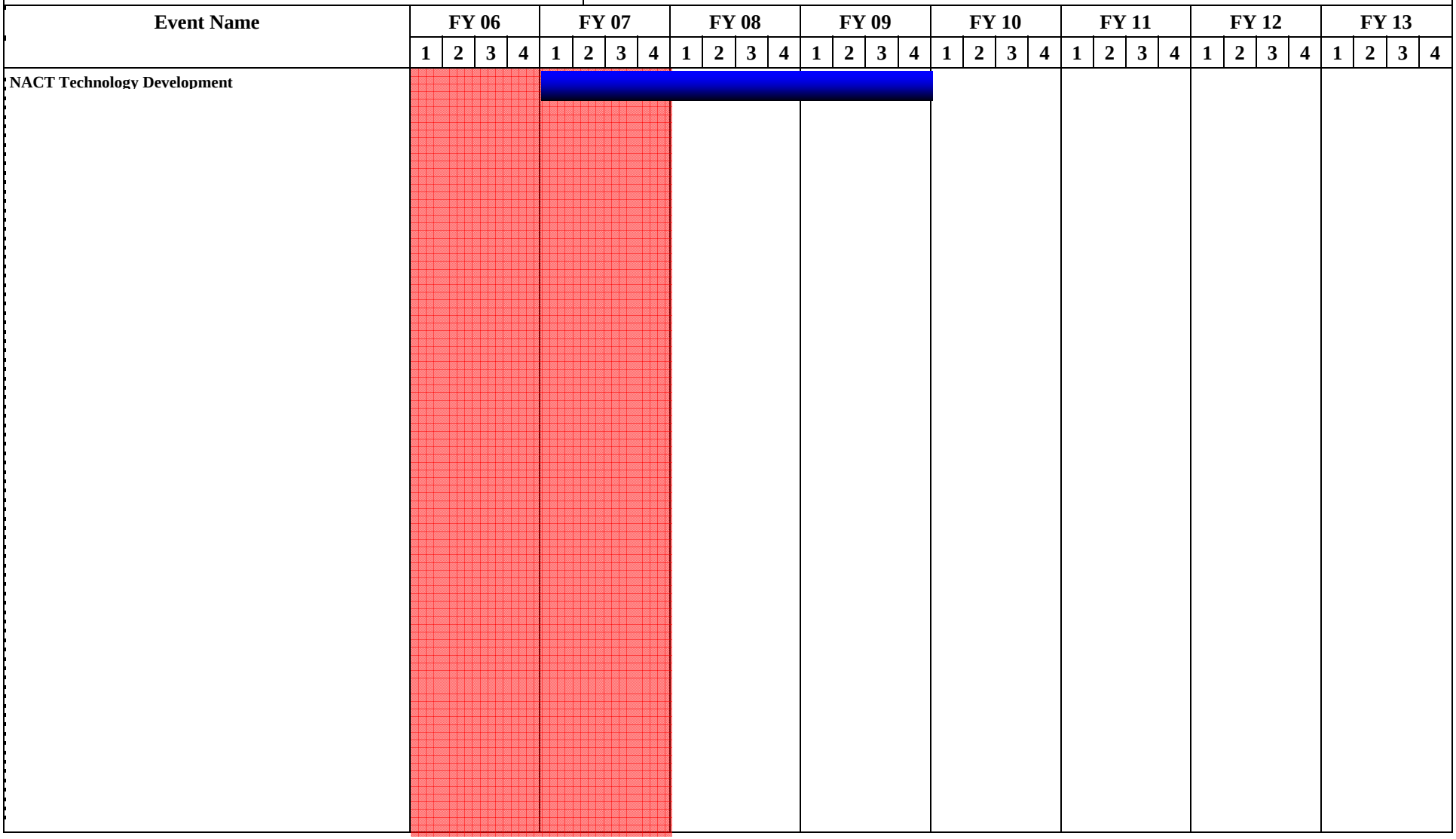
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SMDC Support	Various	Huntsville, AL				500	1-4Q	500	1-4Q	500	1-4Q		1500	

ARMY RDT&E COST ANALYSIS (R3)													February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604870A - Nuclear Arms Control Monitoring Sensor Network**												PROJECT **SE1**
Subtotal:				500		500		500			1500		
Project Total Cost:				**7346**		**7300**		**7300**			**21946**		

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NACT Technology Development		1Q - 4Q	1Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0605013A - Information Technology Development**

	COST (In Thousands)	FY 2006 Actual	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	62161	96515	103485	55978	41633	36041	25426	18983	Continuing	Continuing
087	Distributed Learning System (DLS)	4612	1287	449	458	467	476	486	496	Continuing	Continuing
099	Army Human Resource System (AHRS)	6304	38014	58437	10255	2495	1695	1695	1695	Continuing	Continuing
137	TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II	16175	22337	3175							41687
184	INSTALLATION SUPPORT MODULES (ISM)	1322	1060	756	740	734	735	753	768	Continuing	Continuing
193	MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE	7892	11502	7802	6883	5899	6102	1149	1153		48382
316	STACOMP	8806	14847								31670
474	ENTERPRISE TRANSMISSION SYSTEMS	5161	3025	1004	2000	3045	4580	4681	4784		28280
738	Future Business Systems (FBS)	11769	4443	21533	19150	10970	9254	9312	9507		95938
M05	Enterprise Army Workload & Performance Sys (eAWPS)	120		1544	1263	530	546	563	580	Continuing	Continuing
T04	USMEPCOM TRANSFORMTION - IT MODERNIZATION			8785	15229	17493	12653	6787			60947

A. Mission Description and Budget Item Justification: Supports efforts to plan, design, develop, and test information technology solutions to fulfill the Army's Warfighter Support Mission and accommodate changing Army requirements while fulfilling future Army needs. Provides for development and acquisition of Combat Service Support (CSS) and business information technology solutions to help arm, sustain, fix, move, train and man the force. Completed development/acquisition efforts will also enhance sustaining base functions and power projection capabilities and facilitate global messaging and electronic data interchange (EDI). Ongoing development efforts support multiple functional areas including logistics, personnel, transportation, training, medical/health protection, and sustaining base.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0605013A - Information Technology Development**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	66106	70185	64022	60327
Current BES/President's Budget (FY 2008/2009)	62161	96515	103485	55978
Total Adjustments	-3945	26330	39463	-4349
Congressional Program Reductions		-8036		
Congressional Rescissions	-956			
Congressional Increases	3400	34366		
Reprogrammings	-6389			
SBIR/STTR Transfer				
Adjustments to Budget Years			39463	-4349

FY06 decrease due to mandated Congressional program reductions; FY07 increase due to Congressional adds for a variety of systems under Information Technology Development; FY08 increase and FY09 decrease reflect HQDA budget adjustments.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**099**

COST (In Thousands)		FY 2006 Actual	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
099	Army Human Resource System (AHRS)	6304	38014	58437	10255	2495	1695	1695	1695	Continuing	Continuing

A. Mission Description and Budget Item Justification: Army Human Resource System (AHRS)is the Army's system of systems that provides commanders the necessary personnel information to make informed decisions on mobilized military personnel resources (both Active Duty and Reserve Component). The implementation of AHRS requires the development of an authoritative Army Corporate database to support the eventual migration to the Defense Integrated Military Human Resource System (DIMHRS). However, major elements of AHRS are not planned to be subsumed into DIMHRS. AHRS consists of three major components:

- Electronic Military Personnel Office (eMILPO) is a web-based, multi-tiered application, accessed via the AKO portal. eMILPO provides the U.S. Army with a reliable, timely, and efficient mechanism for performing personnel actions and managing strength accountability. The application is vital in determining the strength and capability of the Army and subordinate commands. It delivers enhanced performance to the Soldier, providing superior data accuracy, and a more intuitive web-based approach resulting in increased productivity, quality, timeliness, security, and user satisfaction. It re-hosted the USC Title 10 functionality, formerly resident in the Standard Installation Division Personnel System-3 (SIDPERS-3) application, for the migration to DIMHRS. Select elements of eMILPO will need to be operated in parallel with DIMHRS until/unless DIMHRS is able to absorb all eMILPO functionality.
- Deployed Theater Accountability System (DTAS) is a web-enabled system residing on the Secret Internet Protocol Router (SIPRNet) that accounts for military and civilian personnel in a deployed theater by unit, day and location supporting force tracking and deployed Operations Tempo (OPTEMPO) tracking. DTAS will continue to exist after DIMHRS migration and will be interfaced to DIMHRS in order to provide this accountability function, which is not present within DIMHRS.
- The Tactical Personnel System (TPS) is a stand-alone application for task organization/manifests and jump manifests used by tactical units. The system interfaces with DTAS, allowing soldiers to be loaded into DTAS en mass upon arrival in theater. TPS will need to operate for some time after DIMHRS migration, and will eventually be subsumed into DIMHRS or the Army Enterprise Human Resource System (eHRS).

Personnel Transformation (PT)- Enterprise Service Bus (ESB)- The Army_s Enterprise Service Bus (ESB) provides a data integration service in which data can be extracted from the legacy human resource systems and transferred to DIMHRS. The ESB will be a middleware application which will provide a single interface to and from DIMHRS from the Army Legacy Systems. The ESB will provide the infrastructure for the integration of new and existing applications by allowing systems and applications to easily exchange information across different environments and platforms. It will also form the information bridge between DIMHRS, the Army Legacy Systems, and external systems.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
AHRS - Post Deployment Software Support (PDSS) - Engineering Change Packages (ECPs)/System Change Packages (SCPs) Interim Change Packages(ICPs)in support of eMILPO and DTAS	1186	10220	18698	4922
AHRS - Development	1367	10985	20435	5333
AHRS - Enterprise Datastore	1043			

Personnel Transformation - Enterprise Service Bus (ESB)	2708	16719	19304	
Small Business Innovative Research/Small Business Technology Transfer Programs		90		
Total	6304	38014	58437	10255

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
AHRS, OPA, SSN W00800, STACOMP	4851	5061	10001	10579	10781	10987			Continuing	Continuing
AHRS, OMA, 432612/432615	4332	4480	5570	5586	5736	5888			Continuing	Continuing
Personnel Transformation- ESB, OPA, BE4164000	2826	3025	3043	3243	3305	3368			Continuing	Continuing
Personnel Transformation-ESB OPA, SSN W00800									Continuing	Continuing
Personnel Transformation-eHRS, OMA, 432612	23556	18120	25155	22320	22870	23433			Continuing	Continuing

Comment:

C. Acquisition Strategy Army Human Resource System (AHRS)- The program manager makes extensive use of Integrated Product Teams (IPTs). Sub-elements of the acquisition (engineering and design, logistics planning, testing, etc.) are intensively managed by integrated teams of government and contractor personnel. Task performance is tracked against the Work Breakdown Structure (WBS) and resources allocated to each task are adjusted based on performance against the WBS. AHRS contractual efforts are acquired on a time and materials basis through GSA schedule and existing contractual vehicles. The Title 10 functionality has transferred to AHRS. Additionally, as the Personnel community manages their migration to the Defense Integrated Military Human Resource System (DIMHRS), the functionality resident in the 320+ external interface current systems will migrate to AHRS. This migration began in FY03, and will ensure the personnel community retains functionality necessary to meet operational requirements while addressing Transformation requirements.

Personnel Transformation - The Enterprise Service Bus (ESB) program management approach is a middleware application which will provide a single interface to and from DIMHRS from the Army Legacy Systems. The ESB will provide the infrastructure for the integration of new and existing applications by allowing systems and applications to easily exchange information across different environments and platforms. It will also form the information bridge between DIMHRS, the Army Legacy Systems, and external systems. Contractor selection will be accomplished through open competition, administered by a federal certified contracting agency. Program Management is accomplished by combining a "best practices" approach coupled with standard tools.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
099

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
AHRS - PDSS ECPs/SCPs/ICPs	C/FP	Electronic Data Systems, Herndon, VA	8738	1186	2Q	10220	1Q	18698		4922		Cont.	Cont.	Cont.
AHRS - Software Development		Electronic Data Systems, Herndon, VA	24096	2410	2Q	10985	1Q	20435		5333		Cont.	Cont.	Cont.
Personnel Transformation ESB - Research/Development PT Impacts on Objective Force	C/FP	Science Applications International Corp (SAIC) , San Diego, CA	1931	2708	4Q	16809	2Q	19304				Cont.	Cont.	Cont.
Subtotal:			34765	6304		38014		58437		10255		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
												Cont.	Cont.	Cont.
Subtotal:												Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:	**34765**	**6304**		**38014**		**58437**		**10255**		**Cont.**	**Cont.**	**Cont.**

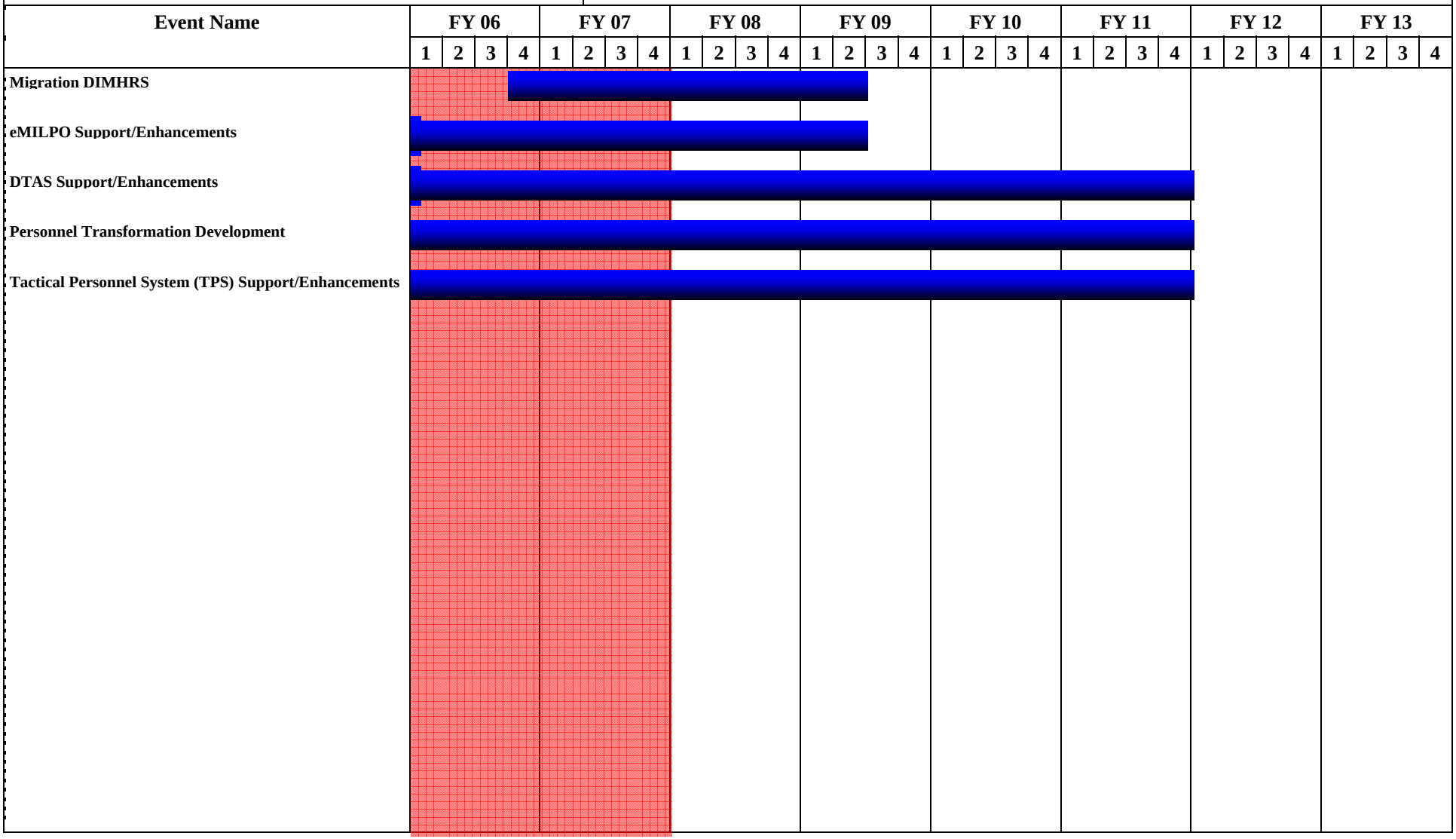
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
099



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**099**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Migration DIMHRS	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
eMILPO Support/Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
DTAS Support/Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Personnel Transformation Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Tactical Personnel System (TPS) Support/Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**137**

COST (In Thousands)		FY 2006 Actual	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
137	TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II	16175	22337	3175							41687

A. Mission Description and Budget Item Justification: Transportation Information Systems (TIS) Project Office funding supports design, development, testing, and program management functions for Transportation Coordinators' - Automated Information for Movement System II (TC-AIMS II).
TC-AIMS II:
- Provides an integrated information transportation system capability for deployment, sustainment, and redeployment operations during both war and peacetime operations for the U.S. Army and U.S. Navy.
- Consolidates the management of unit/installation-level transportation functions of Unit Movement, Load Planning, and Installation Transportation Office/Traffic Management Office (ITO/TMO) operations, and facilitates the movement and support of personnel and cargo during all phases of military operations in all environments, including sustainment; reception, staging, onward movement and integration (RSO&I); and battlefield operations.
- Supports routine and surge requirements and automates shipping/receiving, and deployment; sustainment and redeployment processes; produces movement documentation, unit move data; and furnishes timely transportation information to major commands, transportation component commands, and United States Transportation Command.
- Supports Pre-Planned Product Improvements (P3I), a post Block 3 development capabilities.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Project Management Office (PMO) Contractor Support	5830	6184		
PMO Operations	3028	3765		
Facility Lease/Service Management	2339	2368		
Block 3 (Movements Control & Planning; Map Graphics) System Development	4644	2414		
Block 3 (Movements control & Planning; Map Graphics) System Test and Evaluation	334	536		
Pre-Planned Product Improvements (P3I)		6497	3175	
Small Business Innovative Research/Small Business Technology Transfer Programs		573		
Total	16175	22337	3175	

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA - SSN: BZ8900 TC AIMS II	14896	29923	29037	31500	17600	16300	13640	21900	Continuing	Continuing
OMA - APE: 432612	10887	23427	34750	40800	36562	44700	29022	24300	Continuing	Continuing

Comment:

C. Acquisition Strategy Transportation Information Systems (TIS) Project Office for the Transportation Coordinators' - Automated Information for Movement System II (TC-AIMS II) uses an Integrated Support Cost Plus Award Fee contract to develop, maintain, and field (including training) the software. A separate contract provides program management support. TC-AIMS II system development is following a multi-block, phased development and fielding strategy to reduce technical, program, and user acceptance risks. TC-AIMS II system capability is broken into three separate, software blocks including: Block 1 - Unit Move, Block 2 - Enhanced Unit Move (Web), and Block 3 - Reception, Staging, Onward Movement and Integration (RSO&I), Movement Control and Planning, and Map Graphics. Infrastructure requirements are being satisfied by the establishment of an Enterprise Architecture composed of a Central Management Facility supporting Multiple Regional Access Nodes. Additional infrastructure requirements include the acquisition and deployment of Commercial-Off-The-Shelf (COTS) hardware to provide a breakaway client-server capability which will function in isolated workgroups or in stand-alone modes. Funding supports the operations of a Central Management Facility (CMF) with a minimum of three Regional Access Nodes. This Enterprise Management System operating at the CMF supports central software distribution to remote sites. Funding for Army hardware is included in the TIS program.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
137

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
System Development	C/CPAF	Various	28059	4644	3Q	2414						Cont.	Cont.	Cont.
Pre-Planned Product Improvements (P3I)	C/CPAF	TBS (To Be Selected)				7070	3Q	3175				Cont.	Cont.	Cont.
Subtotal:			28059	4644		9484		3175				Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Facility Lease/Service Management	T&M	Various	8486	2339	1Q	2368	1Q					Cont.	Cont.	Cont.
Project Management Office (PMO) Contractor Support	T&M	Various	21190	5830	4Q	6184	4Q					Cont.	Cont.	Cont.
PMO Operations	NA	PMO, Springfield, VA	9879	3028	1-4Q	3765	1-4Q					Cont.	Cont.	Cont.
Subtotal:			39555	11197		12317						Cont.	Cont.	Cont.

Remarks: JPMO Operations includes direct pay of government employees, TDY, training, supplies, etc.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
OT & DT	MIPR	Various	5264	334	1-4Q	536						Cont.	Cont.	Cont.
Subtotal:			5264	334		536						Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:	**72878**	**16175**		**22337**		**3175**				**Cont.**	**Cont.**	**Cont.**

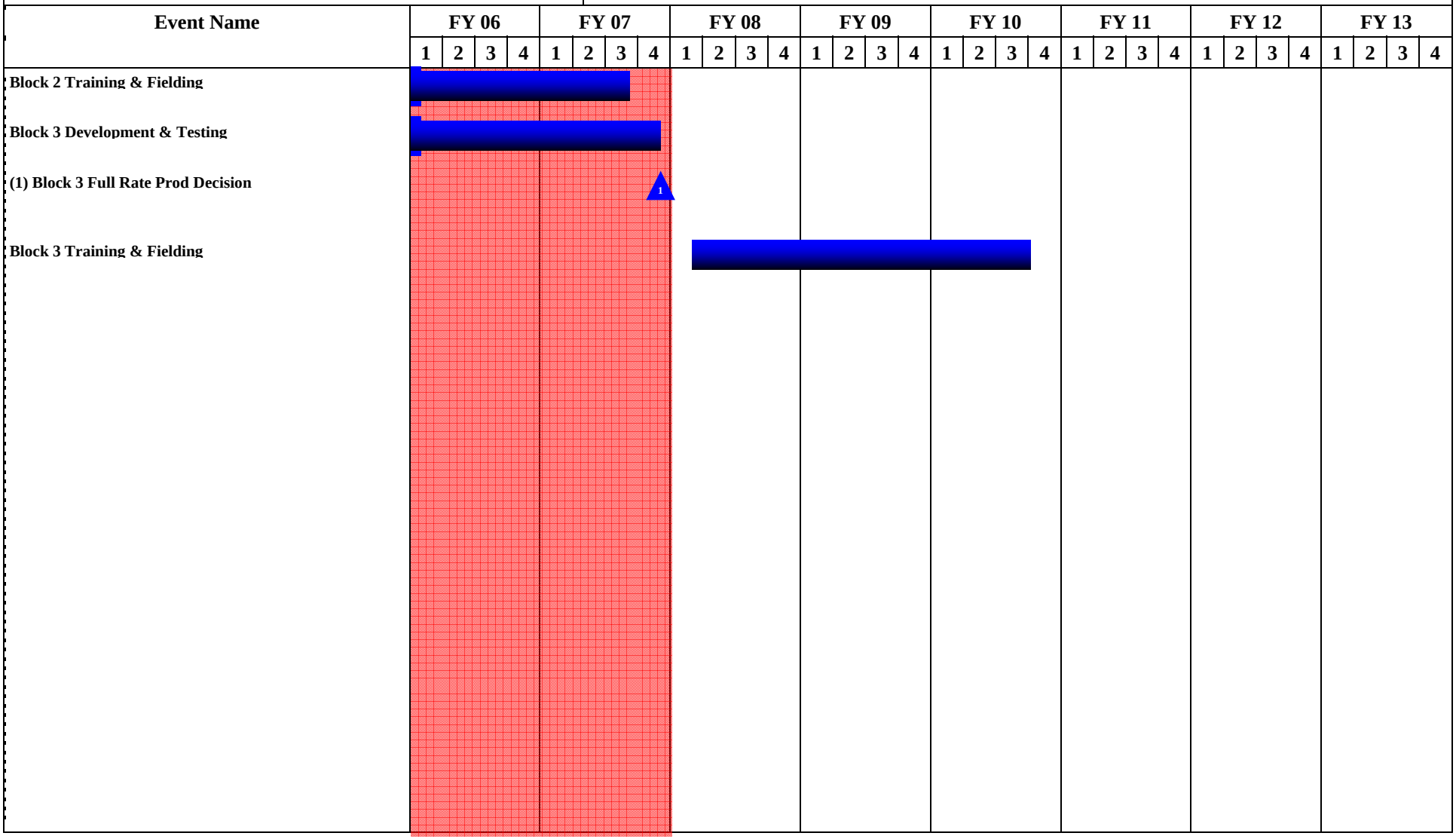
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
137



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**137**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Block 2 Training & Fielding	1Q - 4Q	1Q - 3Q						
Block 3 Development & Testing	1Q - 4Q	1Q - 4Q						
Block 3 Full Rate Prod Decision		4Q						
Block 3 Training & Fielding			1Q - 4Q	1Q - 4Q	1Q - 3Q			

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)								February 2007
BUDGET ACTIVITY **5 - System Development and Demonstration**			PE NUMBER AND TITLE **0605013A - Information Technology Development**					PROJECT **137**
Funding in $000								
Program	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Total Termination Liability Funding:								

Remarks:
There is no termination liability to contractor because all products used for TC-AIMS II are purchased by the government.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**184**

	COST (In Thousands)	FY 2006 Actual	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
184	INSTALLATION SUPPORT MODULES (ISM)	1322	1060	756	740	734	735	753	768	Continuing	Continuing

A. Mission Description and Budget Item Justification: Continues the migration of the fielded Installation Support Modules (ISM) software (DOS character based) applications to a more modern graphical user interface in a web based environment. Additional functionality will be fielded in FY08. ISM is currently deployed to Army sites worldwide. ISMs are software applications that have been developed and standardized to perform business functions at the Installation or Garrison level. These modules are based upon the functional processes accomplished by the installation staff. The ISM system was migrated to a web environment that utilizes a single, centralized, replicated database to store data for the entire Army. The web server architecture supports a graphical user interface, web-based user access, and a consolidated infrastructure in accordance with the Army Knowledge Management (AKM) Strategic Plan. This modernized system enables the Army Installation Management community to provide simple web-enabled software applications for soldier processing; ready and relevant information to the commander; while transparently integrating multiple complex processes for soldiers, commanders and top of the system managers. ISM consists of five discrete modules focusing on activities including in/out processing of soldiers, personnel locator services, soldier transition processing, management of soldier educational records, and management of organizational clothing and individual equipment. The Theater Network Operations and Security Center (TNOSC), located in Ft. Huachuca, AZ manages the ISM network, performs the Network and Systems Management (NSM) functions, provides general system configuration control, operates a 24/7 Helpdesk, provides user account management, and performs automated backups for ISM devices located at Army installations. ISM is currently being used in Kuwait.
Coalition Warfighter Interoperability Demonstration (CWID) is a mandated Joint program that requires participation by the US Army to explore near-term technologies that support Joint and Coalition Warfare Interoperability. Funding is to facilitate Coalition Force interoperability research and development and to comply with CJCSI 6230.2 dated 30 April 05.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Post-Deployment Software Support (PDSS) - Engineering Change packages (ECPs)/System Change Packages (SCPs)	278	326	342	350
Independent Verification and Validation (IV&V) Testing	50	60	60	60
Coalition Warfighter Interoperability Demonstration (CWID)	994	644	354	330
Define requirements and assess needs for a Rock Island Arsenal operations center and install force protection equipment and software				
Small Business Innovative Research/Small Business Technology Transfer Programs		30		
Total	1322	1060	756	740

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OMA APE: 432612/432100	12352	12694	13165	12219	12546	12861	13144	13433	Continuing	Continuing

BE4162 MACOM AUTOMATION SYSTEMS	762	476	512	509	521	532	544	556	Continuing	Continuing

Comment:

C. Acquisition Strategy This system is in Post Deployment Software Support (PDSS). The present concept calls for the use of full and open competition to implement enhancements as defined by the Functional Proponent, Army Chief Information Officer (CIO)/G-6.

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BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
PDSS ECPs/SCPs/ICPs	C/FP	Systems Research & Applications, Fairfax, VA	8880	278	2Q	326	2Q	342	2Q	350	2Q	Cont.	Cont.	Cont.
JWID Development - Army	MIPR	OSD	1297	994	1Q	674	1Q	354	1Q	330	1Q	Cont.	Cont.	Cont.
Rock Island Ops Center	C/FP	Intergraph, Huntsville, AL	949										949	
Subtotal:			11126	1272		1000		696		680		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Support	MIPR	AMRDEC, Redstone Arsenal, AL												
Subtotal:														

Remarks: AMRDEC - Aviation and Missile Research, Development and Engineering Center (US Army Aviation and Missile Command)

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Independent Verification and Validation (IVV) Testing	C/FP	ANTEON Corp, Fairfax, VA	1580	50	1Q	60	1Q	60	1Q	60	1Q	Cont.	Cont.	Cont.
Subtotal:			1580	50		60		60		60		Cont.	Cont.	Cont.

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complet	Total Cost	Target Value of

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**184**

	Type		Cost		Date		Date		Date		Date	e		Contract
Subtotal:														
Project Total Cost:			**12706**	**1322**		**1060**		**756**		**740**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**184**

Event Name	FY 06				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	2	3	4
ISM Hardware Fielding																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**184**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
ISM Hardware Fielding	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

COST (In Thousands)		FY 2006 Actual	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
193	MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE	7892	11502	7802	6883	5899	6102	1149	1153		48382

A. Mission Description and Budget Item Justification: The Medical Communications for Combat Casualty Care (MC4) System provides multipliers to the medical force structure through the acquisition of digital communications and information technology solutions for the deployable medical forces. The MC4 System will also fulfill the requirements highlighted in United States Code; Title 10; Subtitle A; Part II; Chapter 55; Section 1074f; mandating the proper documentation of deployed service members' medical treatment to include pre- and post-deployment screening and its associated medical surveillance. The MC4 System will also interface Force Health Protection and medical surveillance information with Army Battle Command and Combat Service Support information technology systems as they evolve to support the Army Transformation. Current MC4 Program efforts are focused on system engineering, testing and integration, and fielding automation infrastructure for Army users of the Joint Theater Medical Information Program (TMIP) suite of software. Funding provides support system engineering, integration and developmental testing of information management/information technology to better support Force Health Protection in the Army Campaign Plan and Global War On Terrorism units as well as overall MC4 Project Management. This funding will also support the integration of the Future Force Warrior and Future Combat System, as described in the Memorandum of Agreement between PEO Ground Combat Systems and PEO Enterprise Information Systems.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Program Management	1970	180	195	210
Logistics Support Planning for P3I and System Upgrades	379	156	167	179
Engineering and Technical Support for MC4 interface/integration with Future Combat Systems	708	733	705	775
Engineering and Technical Support for P3I and System Upgrades	2318	2306	2201	1554
MC4 Testing for P3I and System Upgrades	407	407	425	425
Integration and testing for Army Unique Solutions	870	1135	354	389
MC4/TMIP Integration and Testing for P3I and System Upgrades	1240	5296	3755	3351
Electronic Commodity, provided to GOV WORKS, from Congressional MARKS		1000		
Small Business Innovative Research/Small Business Technology Transfer Programs		289		
Total	7892	11502	7802	6883

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA SSN MA8046 (MC4)	34175	10506	19525	16948	8571	5158	16649	17279	Continuing	Continuing

OMA APE 432612	5940	6938	13831	9037	9352	9689	4968	3701	Continuing	Continuing

Comment:

C. Acquisition Strategy The MC4 Program supports a number of Army Medical Information Technology/Communications initiatives. The near and mid-term focus of the MC4 program is to engineer, design, test, acquire and field the Army specific automation/communications infrastructure capabilities supporting the Joint Theater Medical Information Program (TMIP) integrated software application suite and other Army requirements. The hardware being procured is Commercial-off-the-Shelf (COTS). Since TMIP software is a major component of the MC4 System, the MC4 Program will deliver capabilities in increments, recognizing the need for future system upgrades and Preplanned Product Improvements (P3Is). The MC4 Program will continue to work with the user community to continually define and refine additional requirements and match them with available technologies to provide the user enhanced capabilities. These enhanced capabilities will be provided to the user at the earliest possible date. This approach yields the most operationally useful and supportable capability in the shortest time possible with Cost As an Independent Variable. Moreover, this approach provides an initial capability with the explicit intent of delivering improved and updated capability in subsequent upgrades and P3Is. This spiral development approach will be accomplished through a rapid prototyping process that will progress the system from its current functional capabilities to fully integrated objective capabilities. Appropriate commercial technology enhancements (e.g. advances in operating systems, voice activated technology, etc) will be incorporated into MC4 products and systems as they become available. Each MC4 System component will undergo a full range of developmental testing to include software unit testing, integration testing, interoperability testing and software qualification testing. The MC4 system upgrades and improvements will continue to undergo follow-on operational testing.

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BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
PMO Support	C/CPFF	General Dynamics (was Anteon Inc.), Fairfax, VA	708									Cont.	Cont.	Cont.
PMO Support	C/CPFF	CACI Inc-Federal, Arlington, VA	2275		1Q		1Q					Cont.	Cont.	Cont.
Logistics Planning	In House	PMO, Ft. Detrick, MD	1715	379	1-4Q	156	1-4Q	167	1-4Q	179	1-4Q	Cont.	Cont.	Cont.
Logistics Planning Spt	C/CPFF	CACI Inc-Federal, Arlington, VA	1481		1Q		1Q					Cont.	Cont.	Cont.
Engineering & Technical Spt	In House	PMO, Ft. Detrick, MD	1336	1000	1-4Q		1-4Q					Cont.	Cont.	Cont.
Engineering & Tech Spt	C/CPFF	L3 (was Titan), Reston, VA	4436	870	1Q	1165	1Q	354	1Q	389	1Q	Cont.	Cont.	Cont.
Electronic Commodity		GOV WORKS	900			1000	2Q						1900	
Subtotal:			12851	2249		2321		521		568		Cont.	Cont.	Cont.

Remarks: Electronic Commodity is a pass-through to GOV WORKS, an initiative of SEN Byrd of West Virginia, from Congressional MARKS. SBIR/STTR reductions taken from program.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
MC4 Integration and Testing	C/CPFF	L3 (was Titan), Reston, VA	4347	1240	1Q	5454	1Q	3755	1Q	3351	1Q	Cont.	Cont.	Cont.
PMO Testing Spt	MIPR	ATEC/AMEDD Board	1821	407	1-4Q	407	1-4Q	425	1-4Q	425	1-4Q	Cont.	Cont.	Cont.
MC4/TMIP System Engineering	C/CPFF	John Hopkins University	7872	3026	1Q	3140	1Q	2906	1Q	2329	1Q	Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

		(JHU) Applied Physics Lab, Laurel, MD											
Subtotal:			14040	4673		9001		7086		6105		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Prog Mgmt Operations	In House	PMO, Ft Detrick, MD	5690	970	1-4Q	180	1-4Q	195	1-4Q	210	1-4Q	Cont.	Cont.	Cont.
Subtotal:			5690	970		180		195		210		Cont.	Cont.	Cont.

Remarks: Funding in Program Management Operations includes direct pay of PMO government employees, TDY, training, supplies, etc.

Project Total Cost:	**32581**	**7892**		**11502**		**7802**		**6883**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

Event Name	FY 06				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	2	3	4
Pre-Planned Product Improvements																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Pre-Planned Product Improvements		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**474**

COST (In Thousands)	FY 2006 Actual	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
474 ENTERPRISE TRANSMISSION SYSTEMS	5161	3025	1004	2000	3045	4580	4681	4784		28280

A. Mission Description and Budget Item Justification: Combat Service Support (CSS) Automated Information System Interface (CAISI) is a high-data-rate wireless system that provides sensitive but unclassified (SBU) data and is the backbone for logistics connectivity down to each Combat Service Support (CSS) computer systems located within the tactical battle space. The CAISI design effort focuses on integrating Commercial Off-The-Shelf (COTS) equipment from various manufacturers to create a standard deployable set of communications equipment. Current CAISI equipment is being fielded with new equipment training to logistics units Army-wide. Maintenance support is provided at a depot level with additional support at forward repair activities. Computer based training and on-line refresher training and technical support is also provided for CAISI users. A standard set of CAISI equipment currently provides network communications to up to 40 tents, vans, or shelters within a 7 x 7 kilometer area using wireless bridging between tents. CAISI design is developed from a lifecycle perspective to ensure reliability and supportability in real world conditions. Ongoing design efforts are being focused in three areas: 1) updating security accreditation for compliance with new communications security regulations, 2) improving the distance and range capabilities, 3) designing a lifecycle replacement version of CAISI scheduled for fielding starting FY 2008.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Research Test and evaluate COTS equipment to develop a new version of CAISI with improved capabilities ready to field in FY08 as a life-cycle replacement.	5161	2940	1004	2000
Small Business Innovative Research/Samll Business Technology Transfer Programs		85		
Total	5161	3025	1004	2000

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA, BD7000	6342								Continuing	Continuing
OPA, BD3512		9875	12002	16140	17155	17170	13736	17170	Continuing	Continuing
OMA 463612	2699	3521	3561	3609	3610	3612	3691	3773	Continuing	Continuing

Comment:

C. Acquisition Strategy Acquisition strategy will be to obtain engineering support, satellite air time as well as various hardware and software to augment and enhance CAISI capabilities. Funding provides the development of prototypes, test and select of most promising lifecycle replacement equipment, and develops additional components for the new CAISI to fulfill unforeseen emerging regulatory requirements.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test satellite links and associated equipment	C/FFP	ISEC, Ft Huachuca, AZ	4629	5161		3025		1004		2000		Cont.	Cont.	Cont.
Subtotal:			4629	5161		3025		1004		2000		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

Project Total Cost:			**4629**	**5161**		**3025**		**1004**		**2000**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

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BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
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Event Name	FY 06				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	2	3	4
Test and Evaluation																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**474**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Test and Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**738**

COST (In Thousands)	FY 2006 Actual	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
738 Future Business Systems (FBS)	11769	4443	21533	19150	10970	9254	9312	9507		95938

A. Mission Description and Budget Item Justification: The Future Business System (FBS) is the Program Element (PE) designed to capture funding for the Research, Development, Test and Evaluation (RDT&E) projects required to transform the acquisition inventory of Information Technology (IT) systems into a centrally managed and centrally funded suite of enterprise capabilities that enable the acquisition community to more effectively support the war-fighter. It includes project funds to develop the Army Acquisition Business Enterprise Architecture (AABEA), the National Defense Authorization Act (NDAA)'05 required tool for developing a roadmap for IT systems transformation; it includes project funds to support domain requirements development and documentation activities; it includes project funds to support analysis and study activities that enable portfolio management and inventory reduction; and it includes project funds to establish the FBS program to manage the development, fielding and improvement of an enterprise solution to the documented business system requirements. FBS will not field just another business system; rather, it will provide an integrated set of business capabilities that supports an agile and highly adaptive info-structure and the constantly evolving business environment. FBS will implement a Service Oriented Architecture and implement the Army and DoD data strategy. By doing so, FBS will provide the business tools that enable knowledge-based decision making and focus on the acquisition of end-items. It will reduce the costs related to management and support of existing acquisition business tools. It will enable interoperability among acquisition programs and with other domains and Office of the Secretary of Defense (OSD) enterprise IT business systems by optimizing access to and sharing of data. It will contribute to the security of the network by substantially reducing the number and variety of IT systems. The FBS program will enable effective and efficient support to the decision and management processes through which the Army Acquisition Community obtains or develops supplies and materiel for the war-fighter. The FBS acquisition program, the dominant project within the FBS PE, will provide the IT and Information Management (IM) support for reengineered business processes that will standardize how the business of acquisition is accomplished. FBS will utilize spiral development and rely on commercial-off-the-Shelf (COTS) tools in order to continuously improve its ability to meet Army demands for capability and efficiency. By providing the RDT&E funding for the above projects, the FBS PE provides for the development and fielding of a priority information management capability that will dramatically improve the effectiveness and efficiency of the process that equips the war-fighter.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Analysis and Design, Development, Test and Integration of FBS.	6122	3449	10683	9558
Training and Customer Support	62	50	3255	2878
Application Software and Licenses	4420		5425	4796
Program Management	1165	819	2170	1918
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		125		
Total	11769	4443	21533	19150

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OMA APE 432612	5473	3755	15879	18096	17275	15997	16262	16625	Continuing	Continuing

Comment:

C. Acquisition Strategy The Future Business System (FBS) program employs a spiral development strategy in order to deliver managed, incremental sets of capabilities required by the domain. This incremental approach enables the managed evolution of Information Technology (IT) capabilities that flow from Lean-Six-Sigma enabled process improvements and formal requirements development and documentation. The FBS acquisition strategy utilizes a test bed to validate the Service Oriented Architecture (SOA) and to enable user prototyping of process improvements and IT capability enhancements. By relying primarily on Commercial-Off-The-Shelf (COTS) software, the FBS strategy ensures the necessary flexibility and reliability of proven solutions, leading edge technologies and an IT environment that can be maintained at low cost and with minimal impact to using elements. It provides for the continued support to the acquisition business by integrating the development and fielding of required capabilities with the phased retirement of existing systems. The strategy keeps cost down by promoting incorporation of select existing systems into the SOA where doing so satisfies a required domain capability with a best-value solution. The strategy is designed around a coordinated process reengineering and requirements development and documentation process, which is a precursor to solution set development and fielding. The spiral development strategy aligns to the fielding of Department of Defense (DoD) and other Army domain enterprise systems (e.g. General Fund Enterprise Business Systems (GFEBS), Logistics Modernization Plan (LMP), Defense Information Management Human Resources Systems (DIHMRS), Defense Acquisition Management Information Retrieval (DAMIR), Standard Procurement System (SPS), etc.) so as to preclude fielding of duplicate capability and ensure optimal interoperability among systems. But most importantly, the FBS acquisition strategy incorporates the rigor of the Acquisition lifecycle management process and in doing so, enables the risk and cost management controls that ensure a managed solution that meets domain requirements.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Analysis and Design, Development , Integration and Testing	C & T&M	Northrup Grumman, McClean, VA		5697	1-4Q	3074	1-4Q					Cont.	Cont.	Cont.
Analysis and Design, Development, Integration	C & T&M	TBD						9183	1-4Q	6358	1-4Q	Cont.	Cont.	Cont.
Application Licenses	C & FP	TBD						5425	1-4Q	4796	1-4Q	Cont.	Cont.	Cont.
Application Licenses	SS & FP	Mythics, Virginia Beach, VA		4420	1Q							Cont.	Cont.	Cont.
Subtotal:				10117		3074		14608		11154		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Training Development	SS	Bearing Point Inc, McClean, VA		62	3Q	50	1Q	3255	1-4Q	2878	1-4Q	Cont.	Cont.	Cont.
Subtotal:				62		50		3255		2878		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Test and Evaluation	MIPRs to Various Agencies			425	2-4Q	500	1-4Q	1500	1-4Q	3200	1-4Q	Cont.	Cont.	Cont.
Subtotal:				425		500		1500		3200		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 Administration	TBD	TBD		1165	2Q	819	1-4Q	2170	1-4Q	1918	1-4Q	Cont.	Cont.	Cont.
Subtotal:				1165		819		2170		1918		Cont.	Cont.	Cont.
Project Total Cost:				**11769**		**4443**		**21533**		**19150**		**Cont.**	**Cont.**	**Cont.**

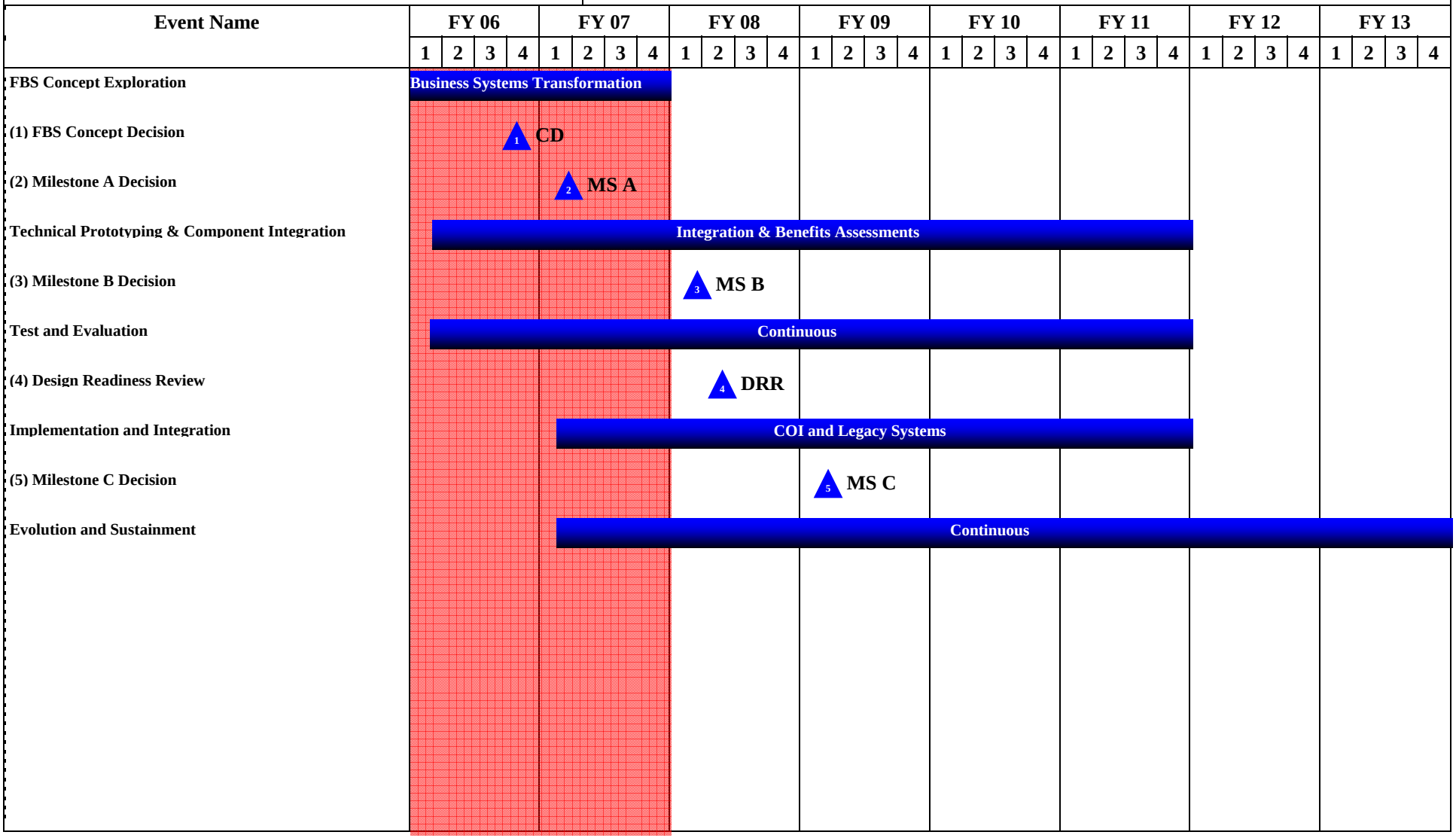
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
738



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**738**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FBS Concept Exploration	1Q - 4Q	1Q - 4Q						
FBS Concept Decision	4Q							
Milestone A Decision		1Q						
Technical Prototyping & Component Integration	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Milestone B Decision			1Q					
Test and Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Design Readiness Review			2Q					
Implementation and Integration		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Milestone C Decision				1Q				
Evolution and Sustainment		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**M05**

	COST (In Thousands)	FY 2006 Actual	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
M05	Enterprise Army Workload & Performance Sys (eAWPS)	120		1544	1263	530	546	563	580	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Enterprise Army Workload and Performance System (eAWPS) is a capstone Human Resource based system that combines information from multiple Army business operations into an integrated data environment to support senior decision making. Additionally, it provides scenario planning to identify program alternatives and risks linked to the transformation of the Army business enterprise. eAWPS operates on the principle of building information from workload and performance data derived from authoritative Army systems (existing and future) to create an enterprise view. The system is comprised of five major modules integrating data on operational requirements, current performance information, resource management, time and attendance, and output to facilitate the linkage between manpower and budget programming, planning, and execution. eAWPS provides strategic and operational decision makers the ability to view information at user-specified levels of aggregation providing unique customization capabilities. eAWPS was originally designed for the Army Material Command maintenance community and is now being extended to non-maintenance activities commencing with the Office of the Administrative Assistant, Army Reserve, Human Resources and Army Medical Command, as well as maintenance expansion into Army Reserve and Army National Guard maintenance sites.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Software and architecture development	100		1312	1048
Program Management	20		232	215
Total	120		1544	1263

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

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**M05**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Software and architecture development	TBD	TBD		100				1312		1048		Cont.	Cont.	Cont.
Subtotal:				100				1312		1048		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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:														

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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 2006 Cost	FY 2006 Award Date	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	TBD	TBD		20				232		215		Cont.	Cont.	
Subtotal:				20				232		215		Cont.	Cont.	

Project Total Cost:				**120**				**1544**		**1263**		**Cont.**	**Cont.**	**Cont.**

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**T04**

	COST (In Thousands)	FY 2006 Actual	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
T04	USMEPCOM TRANSFORMTION - IT MODERNIZATION			8785	15229	17493	12653	6787			60947

A. Mission Description and Budget Item Justification: The US Military Entrance Processing Command (USMEPCOM) is responsible for determining the physical, mental, and moral qualifications of candidates for enlistment into the Armed Forces of the United States. As such, USMEPCOM is an integral and essential part of the military recruiting and personnel systems of the Services because the command serves as an entry point for much of the information that supports recruiting, training, and management of the nation_s warfighting resources. Critical to USMEPCOM fulfilling its mission is the capability to electronically acquire, process, store, secure, and seamlessly share personnel information across the command and the Accessions Community of Interest (ACOI). The Virtual Interactive Processing System (VIPS) will modernize and enhance the Information Technology (IT) capabilities of USMEPCOM to collect, evaluate, validate, and exchange enlistee qualification information during peacetime and mobilization. The VIPS system will provide automated baseline personnel data for Department of Defense (DoD) health, human resources, and biometrics systems. When fully implemented, VIPS will substantially expand the capacity of USMEPCOM to qualify and process applicants and will reduce the cycle time required to induct enlistees to meet the warfighting needs of the Services and the Combatant Commands. Moreover, VIPS will allow USMEPCOM to break its current _brick and mortar_ paradigm by enabling pre-qualification and screening of candidates without the need for potential enlistees to physically travel to Military Entrance Processing Stations (MEPS). This Program Element supports acquisition of a VIPS system will be based on a Service Oriented Architecture that will enable 100% electronic capture of required applicant qualification data; make accession data fully, appropriately and securely available to applicants and accession partners (i.e., Recruiting and Training Commands); enable full compliance with DoD direction to move toward a paperless, net-centric environment and electronically provide complete data to official DoD health (Armed Forces Health Longitudinal Technology Application) and human resources (Defense Integrated Military Human Resources System) systems; and take advantage of automated data capture technology (i.e., medical equipment with the capability to capture and electronically transmit exam results). When VIPS is implemented, USMEPCOM's role in the ACOI will shift from carrying out the execution of qualifying processes and activities to verifying qualification information and serving as an information broker and provider, not only to its ACOI partners, but secondary stakeholders as well. The USMEPCOM of the future will be location independent, virtually paper-free and highly automated. In this environment VIPS data will be highly available and easily shared with ACOI and stakeholder organizations, dramatically improving the effectiveness and efficiency of manning the Armed Forces.

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
Product Development - Prototype Development			5535	
Product Development - Design and Development of Increment 1/Release 1				11044
Test and Evaluation - Prototype Evaluation			325	
Test and Evaluation - IOT&E for Increment 1/Release 1				850
Project Support			250	500
Program Management			2675	2835
Total			8785	15229

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OMA APE 33271600			11815	9171	4007	11847	16813	24000		77653
OPA SSN BE4164					9000	13900	21300	19614		63814

Comment:

C. Acquisition Strategy The VIPS project will be acquired using an evolutionary acquisition strategy to develop and field the system in two increments consisting of two or more releases each. Releases will be developed using a spiral approach to meet known/defined user requirements and to place a useful capability in the hands of the users as early in the program as possible. The spiral release development strategy will allow for opportunities to align VIPS engineering and development with the deployment of other Service modernization projects such as AHLTA and DIMHRS, promoting incorporation of existing systems into the VIPS SOA and mitigating program costs. Requirements will be based on business process reengineering and continuous process improvement activities conducted by USMEPCOM and the ACOI as a precursor to VIPS development. RDT&E funding beginning in FY 08 will support technology demonstration activities and risk reduction efforts for development of the first increment of functionality that will improve applicant processing in a web based paperless environment. Technology demonstration activities and risk reduction efforts for Increment 1, Release 1 will lead to successful completion of milestone (MS) B during early FY 09. Completion of MS B in early FY 09 will ensure start of System Development and Demonstration in FY 09 and early achievement of MS C-1 for Increment 1 in FY 10. Following Initial Operational Test & Evaluation, Increment 1 will be deployed to USMEPCOM Headquarters and the 65 MEPS, thereby providing a functional baseline and Initial Operational Capability early in the program life cycle. Subsequently, VIPS will begin development of Release 2 of Increment 1 leading to a MS C-2 and deployment in FY 11. The final Increment will be deployed in FY 12 with Full Operational Capability attained in FY 13 following completion of a Final Operational Test and Evaluation to verify that functional capability requirement have been fulfilled and that the system is operationally effective and suitable. The VIPS system will be acquired using a competitive contracting strategy using performance based contracting. The VIPS Program Office will employ rigorous cost controls using Earned Value and a comprehensive risk management program to ensure development and deployment of a managed solution that meets USMEPCOM and ACOI requirements and fulfills identified capability gaps.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
T04

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Prototype	C/CPAF	TBD						5535	1Q				5535	5535
Increment 1/Release 1	C/CPAF	TBD								11044	1Q		11044	11044
Increment 1/Release 2	C/CPAF	TBD										9738	9738	9738
Increment 2/Release 1	C/CPAF	TBD										5430	5430	5430
Increment 2/Release 2	C/CPAF	TBD										9843	9843	9843
Subtotal:								5535		11044		25011	41590	41590

Remarks: See acquisition strategy discussion. A prototype will be developed to serve as a test bed to validate reengineered business processes, validate requirements, and reduce risks. The prototype will support a Milestone B decision in early FY 09. Product development contracts will be competitively awarded and will be performance based.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
Technical Support and Engineering Studies	Various	TBD/Ft. Belvoir						250	1-4Q	500	1-4Q	1150	1900	1900
Subtotal:								250		500		1150	1900	1900

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
IOT&E	MIPR	TBD						325		850		1803	2978	2978
FOT&E	MIPR	TBD										770	770	770
Subtotal:								325		850		2573	3748	3748

Remarks: Cost for developmental test activities are included in the Product Development costs shown above. Operational testing will follow an incremental approach that aligns with the evolutionary acquisition strategy. A final operational test will be conducted to verify that the VIPS system has fulfilled requirements and is operationally effective and suitable for its intended operational environment.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
T04

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	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
PMO Personnel	Reqn	VIPS PM, Ft. Belvoir						163	1-4Q	170	1-4Q	555	888	888
Government Eng Support	MIPR	SEC, Ft. Belvoir						162	1-4Q	170	1-4Q	554	886	886
Contractor PM Support	C/CPIF	TBD/Ft. Belvoir						2275	1Q	2345	1Q	6715	11335	11335
Travel/ODCs	Various	VIPS PM, Ft. Belvoir						75	1-4Q	150	1-4Q	375	600	600
Subtotal:								2675		2835		8199	13709	13709
Project Total Cost:								**8785**		**15229**		**36933**	**60947**	**60947**

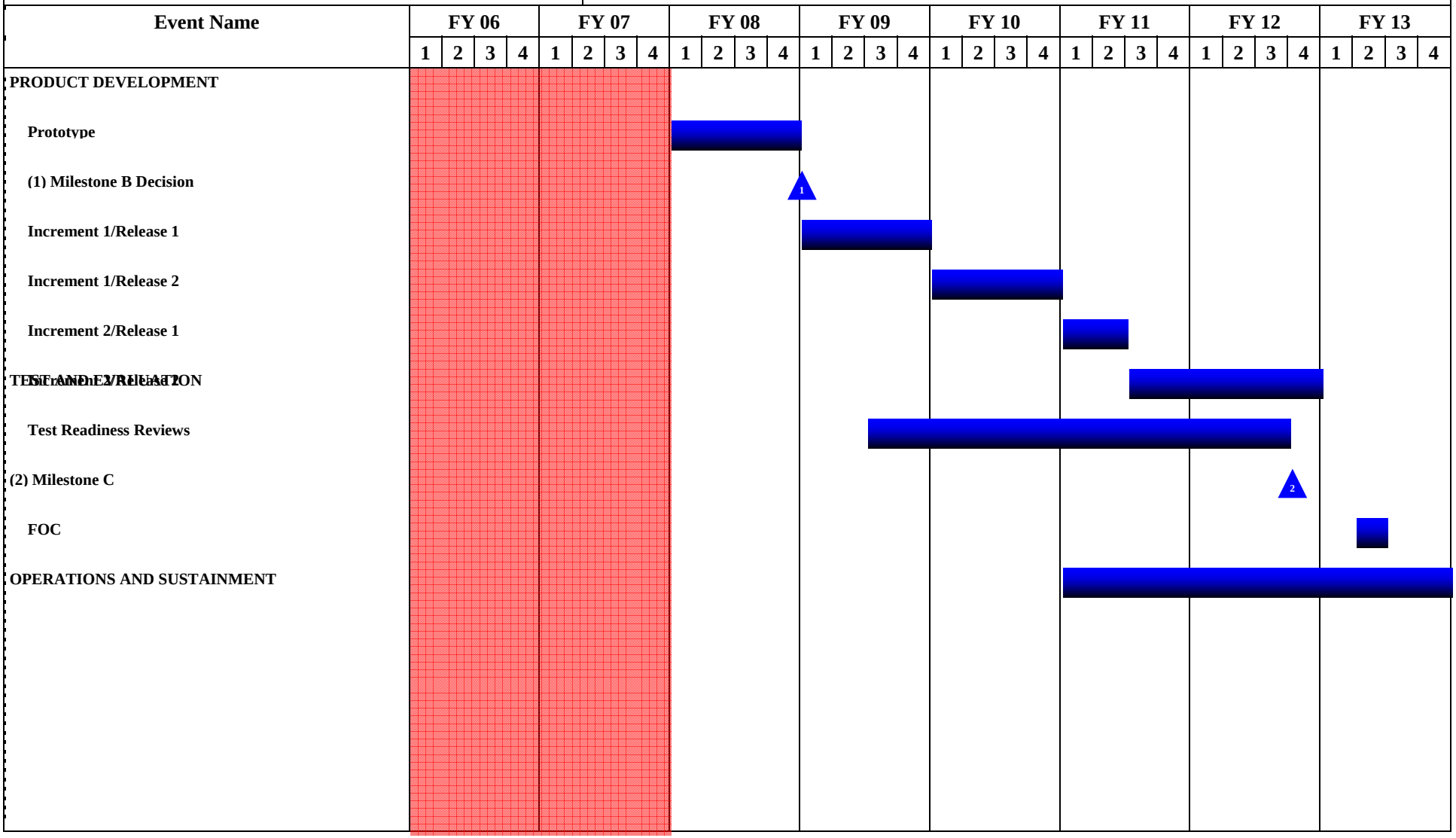
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
T04



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**T04**

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PRODUCT DEVELOPMENT								
Prototype			1Q - 4Q					
Milestone B Decision				1Q				
Increment 1/Release 1				1Q - 4Q				
Increment 1/Release 2					1Q - 4Q			
Increment 2/Release 1						1Q - 2Q		
Increment 2/Release 2						3Q - 4Q	1Q - 4Q	
TEST AND EVALUATION								
Test Readiness Reviews				3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q	
Milestone C							4Q	
FOC								2Q
OPERATIONS AND SUSTAINMENT						1Q - 4Q	1Q - 4Q	1Q - 4Q