Department of Defense
Fiscal Year (FY) 2015 Budget Estimates

March 2014

Army

Justification Book

Research, Development, Test & Evaluation, Army

RDT&E − Volume II, Budget Activity 4

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

APPROPRIATION LANGUAGE

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, $6,593,898,000, to remain available for obligation until September 30, 2016.

The following Justification Books were prepared at a cost of $139,860.00: Aircraft (ACFT), Missile (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 - Tactical & Support Vehicles, Other Procurement Army (OPA) 2 - Communications &Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 6, and Budget Activity 7.

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Department of Defense
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
Research, Development, Test & Eval, Army	8,010,810	7,122,681	13,500	7,136,181	6,593,898
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Summary Recap of Budget Activities	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
Basic Research	384,636	436,493		436,493	424,176
Applied Research	910,391	954,451		954,451	862,611
Advanced Technology Development	961,060	1,063,636		1,063,636	917,791
Advanced Component Development & Prototypes	421,655	408,552	6,500	415,052	323,156
System Development & Demonstration	2,785,237	2,052,576	7,000	2,059,576	1,719,374
RDT&E Management Support	1,241,684	1,163,091		1,163,091	1,000,430
Operational Systems Development	1,306,147	1,043,882		1,043,882	1,346,360
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898
Summary Recap of FYDP Programs					
Strategic Forces	142,508	83,406		83,406	54,076
General Purpose Forces	610,249	575,129		575,129	963,970
Intelligence and Communications	383,165	208,332		208,332	170,244
Research and Development	6,821,245	6,199,708	13,500	6,213,208	5,329,383
Central Supply and Maintenance	53,461	56,106		56,106	76,225
Administration and Associated Activities	182				
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
1	0601101A	In-House Laboratory Independent Research	01	18,836	21,792		21,792	13,464
2	0601102A	Defense Research Sciences	01	197,690	221,783		221,783	238,167
3	0601103A	University Research Initiatives	01	72,243	79,317		79,317	69,808
4	0601104A	University and Industry Research Centers	01	95,867	113,601		113,601	102,737
	Basic Research			384,636	436,493		436,493	424,176
5	0602105A	Materials Technology	02	54,578	55,569		55,569	28,006
6	0602120A	Sensors and Electronic Survivability	02	40,842	43,148		43,148	33,515
7	0602122A	TRACTOR HIP	02	20,638	36,273		36,273	16,358
8	0602211A	Aviation Technology	02	46,828	55,586		55,586	63,433
9	0602270A	Electronic Warfare Technology	02	13,838	17,575		17,575	18,502
10	0602303A	Missile Technology	02	43,277	59,500		59,500	46,194
11	0602307A	Advanced Weapons Technology	02	23,140	26,148		26,148	28,528
12	0602308A	Advanced Concepts and Simulation	02	21,075	24,051		24,051	27,435
13	0602601A	Combat Vehicle and Automotive Technology	02	62,267	64,555		64,555	72,883
14	0602618A	Ballistics Technology	02	55,113	75,263		75,263	85,597
15	0602622A	Chemical, Smoke and Equipment Defeating Technology	02	4,010	4,487		4,487	3,971
16	0602623A	Joint Service Small Arms Program	02	6,378	7,814		7,814	6,853
17	0602624A	Weapons and Munitions Technology	02	46,097	52,778		52,778	38,069
18	0602705A	Electronics and Electronic Devices	02	85,099	58,990		58,990	56,435
19	0602709A	Night Vision Technology	02	48,069	43,403		43,403	38,445
20	0602712A	Countermine Systems	02	28,875	30,563		30,563	25,939

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
21	0602716A	Human Factors Engineering Technology	02	18,161	21,328		21,328	23,783
22	0602720A	Environmental Quality Technology	02	18,259	20,304		20,304	15,659
23	0602782A	Command, Control, Communications Technology	02	26,200	34,191		34,191	33,817
24	0602783A	Computer and Software Technology	02	8,886	10,434		10,434	10,764
25	0602784A	Military Engineering Technology	02	71,553	70,027		70,027	63,311
26	0602785A	Manpower/Personnel/Training Technology	02	15,979	17,645		17,645	23,295
27	0602786A	Warfighter Technology	02	53,206	31,529		31,529	25,751
28	0602787A	Medical Technology	02	98,023	93,290		93,290	76,068
		Applied Research		910,391	954,451		954,451	862,611
29	0603001A	Warfighter Advanced Technology	03	36,975	66,025		66,025	65,139
30	0603002A	Medical Advanced Technology	03	99,924	100,999		100,999	67,291
31	0603003A	Aviation Advanced Technology	03	57,364	81,037		81,037	88,990
32	0603004A	Weapons and Munitions Advanced Technology	03	69,788	73,885		73,885	57,931
33	0603005A	Combat Vehicle and Automotive Advanced Technology	03	128,463	146,992		146,992	110,031
34	0603006A	Space Application Advanced Technology	03	3,702	5,862		5,862	6,883
35	0603007A	Manpower, Personnel and Training Advanced Technology	03	8,756	7,796		7,796	13,580
36	0603008A	Electronic Warfare Advanced Technology	03	45,254	45,394		45,394	44,871
37	0603009A	TRACTOR HIKE	03	6,792	9,161		9,161	7,492
38	0603015A	Next Generation Training & Simulation Systems	03	15,404	13,620		13,620	16,749
39	0603020A	TRACTOR ROSE	03	8,762	10,662		10,662	14,483
40	0603105A	Military HIV Research	03	20,920				

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
41	0603125A	Combating Terrorism - Technology Development	03	9,199	15,046		15,046	24,270
42	0603130A	TRACTOR NAIL	03	3,207	3,192		3,192	3,440
43	0603131A	TRACTOR EGGS	03	2,560	2,366		2,366	2,406
44	0603270A	Electronic Warfare Technology	03	19,561	25,335		25,335	26,057
45	0603313A	Missile and Rocket Advanced Technology	03	80,379	83,975		83,975	44,957
46	0603322A	TRACTOR CAGE	03	12,026	11,077		11,077	11,105
47	0603461A	High Performance Computing Modernization Program	03	202,969	220,565		220,565	181,609
48	0603606A	Landmine Warfare and Barrier Advanced Technology	03	24,448	22,794		22,794	13,074
49	0603607A	Joint Service Small Arms Program	03	5,478	5,027		5,027	7,321
50	0603710A	Night Vision Advanced Technology	03	33,328	44,387		44,387	44,138
51	0603728A	Environmental Quality Technology Demonstrations	03	12,398	11,739		11,739	9,197
52	0603734A	Military Engineering Advanced Technology	03	30,503	23,705		23,705	17,613
53	0603772A	Advanced Tactical Computer Science and Sensor Technology	03	22,900	32,995		32,995	39,164
		Advanced Technology Development		961,060	1,063,636		1,063,636	917,791
54	0603305A	Army Missle Defense Systems Integration	04	22,340	23,289		23,289	12,797
55	0603308A	Army Space Systems Integration	04	9,038	13,584		13,584	13,999
56	0603619A	Landmine Warfare and Barrier - Adv Dev	04	4,089				
57	0603627A	Smoke, Obscurant and Target Defeating Sys-Adv Dev	04	2,430				
58	0603639A	Tank and Medium Caliber Ammunition	04	27,114	30,596		30,596	29,334
59	0603653A	Advanced Tank Armament System (ATAS)	04	11,116	49,963		49,963	
60	0603747A	Soldier Support and Survivability	04	15,936	5,185	6,500	11,685	9,602

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
61	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	7,960	6,890		6,890	8,953
62	0603774A	Night Vision Systems Advanced Development	04	9,556	9,061		9,061	3,052
63	0603779A	Environmental Quality Technology - Dem/Val	04	4,060	2,631		2,631	7,830
64	0603782A	Warfighter Information Network-Tactical - DEM/VAL	04	161,505	122,319		122,319	
65	0603790A	NATO Research and Development	04	4,393	3,872		3,872	2,954
66	0603801A	Aviation - Adv Dev	04	7,227	5,015		5,015	
67	0603804A	Logistics and Engineer Equipment - Adv Dev	04	13,028	11,549		11,549	13,386
68	0603805A	Combat Service Support Control System Evaluation and Analysis	04	4,499				
69	0603807A	Medical Systems - Adv Dev	04	22,514	15,594		15,594	23,659
70	0603827A	Soldier Systems - Advanced Development	04	30,793	14,152		14,152	6,830
71	0603850A	Integrated Broadcast Service	04	96	79		79	
72	0604100A	Analysis Of Alternatives	04					9,913
73	0604115A	Technology Maturation Initiatives	04	12,636	11,110		11,110	74,740
74	0604120A	Assured Positioning, Navigation and Timing (PNT)	04					9,930
75	0604131A	TRACTOR JUTE	04	54				
76	0604319A	Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)	04	25,710	79,190		79,190	96,177
77	0604785A	Integrated Base Defense (Budget Activity 4)	04	3,604	4,473		4,473	
78	0305205A	Endurance UAVs	04	21,957				
		Advanced Component Development & Prototypes		421,655	408,552	6,500	415,052	323,156
79	0604201A	Aircraft Avionics	05	60,472	76,547		76,547	37,246
80	0604220A	Armed, Deployable Helos	05	80,934	69,807		69,807	

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
81	0604270A	Electronic Warfare Development	05	102,812	144,543		144,543	6,002
82	0604280A	Joint Tactical Radio	05		31,809		31,809	9,832
83	0604290A	Mid-tier Networking Vehicular Radio (MNVR)	05	2,556	23,328		23,328	9,730
84	0604321A	All Source Analysis System	05	5,601	4,837		4,837	5,532
85	0604328A	TRACTOR CAGE	05	11,297	23,829		23,829	19,929
86	0604601A	Infantry Support Weapons	05	83,224	85,054		85,054	27,884
87	0604604A	Medium Tactical Vehicles	05	2,908	2,139		2,139	210
88	0604611A	JAVELIN	05	4,540	5,000		5,000	4,166
89	0604622A	Family of Heavy Tactical Vehicles	05	17,975	21,310	7,000	28,310	12,913
90	0604633A	Air Traffic Control	05	10,140	514		514	16,764
91	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05	2,795				6,770
92	0604710A	Night Vision Systems - Eng Dev	05	29,352	43,382		43,382	65,333
93	0604713A	Combat Feeding, Clothing, and Equipment	05	1,901	1,938		1,938	1,335
94	0604715A	Non-System Training Devices - Eng Dev	05	40,470	18,971		18,971	8,945
95	0604716A	Terrain Information - Eng Dev	05	928				
96	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	42,876	18,284		18,284	15,906
97	0604742A	Constructive Simulation Systems Development	05	25,828	17,004		17,004	4,394
98	0604746A	Automatic Test Equipment Development	05	10,307	6,697		6,697	11,084
99	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	12,427	12,569		12,569	10,027
100	0604780A	Combined Arms Tactical Trainer (CATT) Core	05	16,005	27,619		27,619	42,430
101	0604798A	Brigade Analysis, Integration and Evaluation	05	191,065	99,947		99,947	105,279

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
102	0604802A	Weapons and Munitions - Eng Dev	05	12,999	15,712		15,712	15,006
103	0604804A	Logistics and Engineer Equipment - Eng Dev	05	45,135	41,682		41,682	24,581
104	0604805A	Command, Control, Communications Systems - Eng Dev	05	18,543	7,376		7,376	4,433
105	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	38,712	39,447		39,447	30,397
106	0604808A	Landmine Warfare/Barrier - Eng Dev	05	37,769	92,236		92,236	57,705
107	0604814A	Artillery Munitions - EMD	05	3,576	8,205		8,205	
108	0604818A	Army Tactical Command & Control Hardware & Software	05	50,279	22,945		22,945	29,683
109	0604820A	Radar Development	05	3,734	1,548		1,548	5,224
110	0604822A	General Fund Enterprise Business System (GFEBS)	05	24,742	226		226	
111	0604823A	Firefinder	05	18,303	20,210		20,210	37,492
112	0604827A	Soldier Systems - Warrior Dem/Val	05	28,358	18,467		18,467	6,157
113	0604854A	Artillery Systems - EMD	05	149,667	121,270		121,270	1,912
114	0604869A	Patriot/MEADS Combined Aggregate Program (CAP)	05	348,234				
115	0604870A	Nuclear Arms Control Monitoring Sensor Network	05	7,093				
116	0605013A	Information Technology Development	05	44,684	68,778		68,778	69,761
117	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	122,168	69,253		69,253	138,465
118	0605028A	Armored Multi-Purpose Vehicle (AMPV)	05		28,285		28,285	92,353
119	0605030A	Joint Tactical Network Center (JTNC)	05		68,112		68,112	8,440
120	0605031A	Joint Tactical Network (JTN)	05					17,999
121	0605035A	Common Infrared Countermeasures (CIRCM)	05					145,409
122	0605350A	WIN-T Increment 3 - Full Networking	05					113,210

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
123	0605380A	AMF Joint Tactical Radio System (JTRS)	05		10,213		10,213	6,882
124	0605450A	Joint Air-to-Ground Missile (JAGM)	05	9,686	15,119		15,119	83,838
125	0605456A	PAC-3/MSE Missile	05	63,123	68,807		68,807	35,009
126	0605457A	Army Integrated Air and Missile Defense (AIAMD)	05	247,407	369,452		369,452	142,584
127	0605625A	Manned Ground Vehicle	05	570,121	100,147		100,147	49,160
128	0605626A	Aerial Common Sensor	05	108,566	10,377		10,377	17,748
129	0605766A	National Capabilities Integration (MIP)	05		21,132		21,132	15,212
130	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	05	59,205	84,185		84,185	45,718
131	0605830A	Aviation Ground Support Equipment	05					10,041
132	0210609A	Paladin Integrated Management (PIM)	05					83,300
133	0303032A	TROJAN - RH12	05	3,892	3,463		3,463	983
134	0304270A	Electronic Warfare Development	05	12,828	10,801		10,801	8,961
		System Development & Demonstration		2,785,237	2,052,576	7,000	2,059,576	1,719,374
135	0604256A	Threat Simulator Development	06	16,409	23,921		23,921	18,062
136	0604258A	Target Systems Development	06	12,583	13,481		13,481	10,040
137	0604759A	Major T&E Investment	06	45,057	46,647		46,647	60,317
138	0605103A	Rand Arroyo Center	06	18,892	18,909		18,909	20,612
139	0605301A	Army Kwajalein Atoll	06	162,089	193,555		193,555	176,041
140	0605326A	Concepts Experimentation Program	06	24,720	22,246		22,246	19,439
141	0605502A	Small Business Innovative Research	06	169,555				
142	0605601A	Army Test Ranges and Facilities	06	334,087	340,477		340,477	275,025

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

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143	0605602A	Army Technical Test Instrumentation and Targets	06	61,711	66,025		66,025	45,596
144	0605604A	Survivability/Lethality Analysis	06	40,865	43,256		43,256	33,295
145	0605606A	Aircraft Certification	06	5,258	6,022		6,022	4,700
146	0605702A	Meteorological Support to RDT&E Activities	06	6,668	7,345		7,345	6,413
147	0605706A	Materiel Systems Analysis	06	18,622	19,799		19,799	20,746
148	0605709A	Exploitation of Foreign Items	06	5,501	5,938		5,938	7,015
149	0605712A	Support of Operational Testing	06	64,458	55,475		55,475	49,221
150	0605716A	Army Evaluation Center	06	57,037	65,240		65,240	55,039
151	0605718A	Army Modeling & Sim X-Cmd Collaboration & Integ	06	1,375	1,282		1,282	1,125
152	0605801A	Programwide Activities	06	75,662	81,993		81,993	64,169
153	0605803A	Technical Information Activities	06	48,995	33,835		33,835	32,319
154	0605805A	Munitions Standardization, Effectiveness and Safety	06	50,838	58,309		58,309	49,052
155	0605857A	Environmental Quality Technology Mgmt Support	06	4,276	5,191		5,191	2,612
156	0605898A	Management HQ - R&D	06	16,844	54,145		54,145	49,592
157	0909999A	Financing for Cancelled Account Adjustments	06	182				
		RDT&E Management Support		1,241,684	1,163,091		1,163,091	1,000,430
158	0603778A	MLRS Product Improvement Program	07	110,860	96,424		96,424	17,112
159	0607141A	Logistics Automation	07		3,715		3,715	3,654
160	0607664A	Biometric Enabling Capability (BEC)	07					1,332
161	0607865A	Patriot Product Improvement	07	44,581	35,034		35,034	152,991
162	0102419A	Aerostat Joint Project Office	07	142,508	83,406		83,406	54,076

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

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163	0203726A	Adv Field Artillery Tactical Data System	07	26,216	25,507		25,507	22,374
164	0203728A	Joint Automated Deep Operation Coordination System (JADOCS)	07					24,371
165	0203735A	Combat Vehicle Improvement Programs	07	189,396	177,437		177,437	295,177
166	0203740A	Maneuver Control System	07	60,948	36,475		36,475	45,092
167	0203744A	Aircraft Modifications/Product Improvement Programs	07	193,404	239,696		239,696	264,887
168	0203752A	Aircraft Engine Component Improvement Program	07	804	315		315	381
169	0203758A	Digitization	07	34,225	6,183		6,183	10,912
170	0203801A	Missile/Air Defense Product Improvement Program	07	17,863	1,577		1,577	5,115
171	0203802A	Other Missile Product Improvement Programs	07		62,067		62,067	49,848
172	0203808A	TRACTOR CARD	07	58,174	18,768		18,768	22,691
173	0205402A	Integrated Base Defense - Operational System Dev	07					4,364
174	0205410A	Materials Handling Equipment	07					834
175	0205412A	Environmental Quality Technology - Operational System Dev	07					280
176	0205456A	Lower Tier Air and Missile Defense (AMD) System	07					78,758
177	0205778A	Guided Multiple-Launch Rocket System (GMLRS)	07					45,377
178	0208053A	Joint Tactical Ground System	07	29,187	7,104		7,104	10,209
179	0208058A	Joint High Speed Vessel (JHSV)	07	32				
180	0301359A	Special Army Program	07					
181	0303028A	Security and Intelligence Activities	07	6,778	7,596		7,596	12,525
182	0303140A	Information Systems Security Program	07	14,314	9,351		9,351	14,175
183	0303141A	Global Combat Support System	07	108,506	41,203		41,203	4,527

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
184	0303142A	SATCOM Ground Environment (SPACE)	07	14,101	18,188		18,188	11,011
185	0303150A	WWMCCS/Global Command and Control System	07	13,208	14,208		14,208	2,151
186	0304348A	Advanced Geospatial Intelligence (AGI)	07					
187	0305204A	Tactical Unmanned Aerial Vehicles	07	28,466	33,515		33,515	22,870
188	0305208A	Distributed Common Ground/Surface Systems	07	38,673	27,607		27,607	20,155
189	0305219A	MQ-1C Gray Eagle UAS	07	68,694	10,895		10,895	46,472
190	0305232A	RQ-11 UAV	07	3,716	2,320		2,320	
191	0305233A	RQ-7 UAV	07	28,554	12,025		12,025	16,389
192	0307665A	Biometrics Enabled Intelligence	07	15,225	12,443		12,443	1,974
193	0310349A	Win-T Increment 2 - Initial Networking	07					3,249
194	0708045A	End Item Industrial Preparedness Activities	07	53,461	56,106		56,106	76,225
		Operational Systems Development		1,306,147	1,043,882		1,043,882	1,346,360
		Total Research, Development, Test & Eval, Army		8,010,810	7,122,681	13,500	7,136,181	6,593,898

Table of Contents

Program Element Table of Contents (by Budget Activity then Line Item Number)

Budget Activity 04: Advanced Component Development & Prototypes (ACD&P)
Appropriation 2040: Research, Development, Test & Evaluation, Army

Budget Activity 04: Advanced Component Development & Prototypes (ACD&P)
Appropriation 2040: Research, Development, Test & Evaluation, Army

Program Element Table of Contents (Alphabetically by Program Element Title)

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603305A *I Army Missle Defense Systems Integration*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	22.340	23.289	12.797	-	12.797	12.203	11.590	11.802	12.350	Continuing	Continuing
TR5: *Missile Defense Battlelab*	-	22.340	23.289	12.797	-	12.797	12.203	11.590	11.802	12.350	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY13 Other Adjustments 1: Funds were added to design, fabricate and test component to develop a test-bed for enhanced thermal management technologies supporting missiles/Tactical Operation Centers (TOCs)/shelters and other systems utilizing mobile thermal management in realistic operating environments.
FY14 Other Adjustments 1: Funds were added to continue fabrication and test oc omponents to develop a test-bed for enhanced thermal management technologies supporting missiles?TOCs/shelters and other systems utilizing mobile thermal management in realistic operating environments.
FY15 Adjustments to Budget Years: Efforts described above should be complete this FY.

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/Army Forces Strategic Command (USASMDC/ARSTRAT) and the Program Executive Office for Missiles and Space (PEO-MS).

USASMDC/ARSTRAT: Headquarters, Department of the Army General Order 37, dated 16 October 2006, designated USASMDC/ARSTRAT as the Army proponent for space and ground-based midcourse defense (GMD), the Army integrator for global missile defense, and the Army Service Component Command (ASCC) of the U.S. Strategic Command (USSTRATCOM). Army Regulation (AR) 10-87 Army Commands, Army Service Component Commands, and Direct Reporting Units, dated 4 September 2007 and AR 5-22 The Army Force Modernization Proponent System dated 19 August 2009 designates USASMDC/ARSTRAT as the Army specified proponent for Global Missile Defense and Space/High Altitude capabilities. As the Army proponent for space, high altitude and GMD, USASMDC/ARSTRAT is responsible for developing warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organizations, Training, Material, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize the GMD capabilities. As the Army integrator for global missile defense, USASMDC/ARSTRAT is responsible for reviewing programs managed by the Army, other Services, Defense agencies and National agencies to ensure that they are correctly synchronized and will ultimately provide the capabilities required by USSTRATCOM to execute its global missile defense responsibilities.

Project TR5 funds United States Army Space and Missile Defense Command/ Army Strategic Command (USASMDC/ARSTRAT) efforts to develop the associated operational prototyping, experimentation, operational analysis, and modeling and simulation in support of current and future Forces.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0603305A / *Army Missle Defense Systems Integration*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	14.505	15.301	15.604	-	15.604
Current President's Budget	22.340	23.289	12.797	-	12.797
Total Adjustments	7.835	7.988	-2.807	-	-2.807
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	0.150	-			
• Adjustments to Budget Years	-	-	-2.807	-	-2.807
• Other Adjustments 1	7.685	7.988	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603305A / *Army Missle Defense Systems Integration*	Project (Number/Name) TR5 / *Missile Defense Battlelab*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
TR5: *Missile Defense Battlelab*	-	22.340	23.289	12.797	-	12.797	12.203	11.590	11.802	12.350	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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/Army Forces Strategic Command (USASMDC/ARSTRAT) and the Program Executive Office for Missiles and Space (PEO-MS).

USASMDC/ARSTRAT: Headquarters, Department of the Army General Order 37, dated 16 October 2006, designated USASMDC/ARSTRAT as the Army proponent for space and ground-based midcourse defense (GMD), the Army integrator for global missile defense, and the Army Service Component Command (ASCC) of the U.S. Strategic Command (USSTRATCOM). Army Regulation (AR) 10-87 Army Commands, Army Service Component Commands, and Direct Reporting Units, dated 4 September 2007 and AR 5-22 The Army Force Modernization Proponent System dated 19 August 2009 designates USASMDC/ARSTRAT as the Army specified proponent for Global Missile Defense and Space/High Altitude capabilities. As the Army proponent for space, high altitude and GMD, USASMDC/ARSTRAT is responsible for developing warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organizations, Training, Material, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize the GMD capabilities. As the Army integrator for global missile defense, USASMDC/ARSTRAT is responsible for reviewing programs managed by the Army, other Services, Defense agencies and National agencies to ensure that they are correctly synchronized and will ultimately provide the capabilities required by USSTRATCOM to execute its global missile defense responsibilities.

Project TR5 funds United States Army Space and Missile Defense Command/ Army Strategic Command (USASMDC/ARSTRAT) efforts to develop the associated operational prototyping, experimentation, operational analysis, and modeling and simulation in support of current and future Forces.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Prototypes	16.496	17.094	7.628
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2013 Accomplishments: Took the lessons learned from the FY12 efforts to continue to evaluate new technologies in realistic operating environments. This was accomplished by participating in and providing support to Unified Quest wargames and experiments to analyze and integrate technology to identify the feasibility integration into Army space, missile defense, and high altitude systems. The Space and Missile Defense Command participated and supported biennial rewrites of Army Capstone, Operational and Functional			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603305A / *Army Missle Defense Systems Integration*	**Project (Number/Name)** TR5 / *Missile Defense Battlelab*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Concepts. Continued to provide operational manager support to STRATCOM, NORTHCOM and SOCOM Joint Technical Capability Demonstrations to ensure Army space, missile defense, and high altitude equities were represented in advanced technology developments by demonstrating military utility when applied to military equipment and techniques. Examples include: supporting multi-service experiments and capability development of the national-directed Phased Adaptive Approach (PAA) for Ballistic Missile Defense (BMD) as it is applied to each of the regional COCOMs; and experimenting with operationally responsive space and high altitude capabilities to ensure the broader Army enterprises can leverage the advantages of these platforms for communications, Intelligence Surveillance and Reconnaissance (ISR), position navigation, missile warning and command and control. Continued to develop mitigation strategies for Army forces to operate effectively in contested space, missile defense and cyber environments. Developed effective Integrated Missile Defense (IMD) concepts for Army support to the Phased Adaptive Approach (PAA) being implemented within each regional COCOM. Based on a successful evaluation of Air/Event Information Sharing Services into NORTHCOM J6 decision support systems supported the transition of the application to a Joint Capabilities Technical Demonstration (JCTD). Supported TRADOC proponents with their responsibilities relative to doctrine, organization, training, material, leader development and education, personnel, and facilities plus related matters to continue leveraging space, missile defense, and high altitude proponent input to Joint Capabilities Integration and Development System, Science and Technology, Concept Development, Capability Development for Rapid Transition, and Capability Gap Analysis Army. Designed, fabricated and tested component to develop a test-bed for enhanced thermal management technologies supporting missiles/Tactical Operation Centers (TOCs)/shelters and other systems utilizing mobile thermal management in realistic operating environments Based on successful component selection and evaluation, significant improvements in projected efficiencies have been demonstrated with these enhanced thermal management technologies. ***FY 2014 Plans:*** Take the lessons learned from the FY13 efforts to continue to evaluate new technologies in realistic operating environments. This is accomplished by participating in and providing support to Unified Quest wargames and experiments to analyze and integrate technology to identify the feasibility integration into Army space, missile defense, and high altitude systems. The Space and Missile Defense Command will participate and support biennial rewrites of Army Capstone, Operational and Functional Concepts. Continue to provide operational manager support to STRATCOM, NORTHCOM and SOCOM Joint Technical Capability Demonstrations to ensure Army space, missile defense, and high altitude equities are represented in advanced technology developments by demonstrating military utility when applied to military equipment and techniques. Examples include: supporting multi service experiments and capability development of the national-directed Phased Adaptive Approach (PAA) for Ballistic Missile Defense (BMD) as it is applied to each of the regional COCOMs; and experimenting with operationally responsive space, space control, and high altitude capabilities to ensure the broader Army enterprises can leverage the advantages of these platforms for communications, Intelligence Surveillance and Reconnaissance (ISR), position navigation, missile warning and command and control. Continue to develop mitigation strategies for Army forces to operate effectively in contested space, missile defense and cyber environments. Developing effective Integrated Missile Defense concepts for Army support to the Phased			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603305A / *Army Missle Defense Systems Integration*	**Project (Number/Name)** TR5 / *Missile Defense Battlelab*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Adaptive Approach (PAA) being implemented within each regional COCOM. Based on the successful evaluation of Air/Event Information Sharing Services into NORTHCOM J6 decision support systems, we will support the transition of the application to a Joint Capabilities Technical Demonstration (JCTD). Will support TRADOC proponents with their responsibilities relative to doctrine, organization, training, material, leader development and education, personnel, and facilities plus related matters to continue leveraging space, missile defense, and high altitude proponent input to Joint Capabilities Integration and Development System, Science and Technology, Concept Development, Capability Development for Rapid Transition, and Capability Gap Analysis Army We will sustain our core prototyping platforms, as outlined above. BC3 will be upgraded to more realistically address information flows related to Close Air Support. Continue fabrication and test of components to develop a test-bed for enhanced thermal management technologies supporting missiles/TOCS/shelters and other systems utilizing mobile thermal management in realistic operating environments. Selected components will be integrated with battlefield applications to support demonstrations of projected efficiencies with identified enhanced thermal management technologies.			
FY 2015 Plans: Take the lessons learned from the FY14 efforts to continue to evaluate new technologies in realistic operating environments. This is accomplished by participating in and providing support to Unified Quest wargames and experiments to analyze and integrate technology to identify the feasibility integration into Army space, missile defense, and high altitude systems. The Space and Missile Defense Command will participate and support biennial rewrites of Army Capstone, Operational and Functional Concepts. Continue to provide operational manager support to STRATCOM, NORTHCOM and SOCOM Joint Technical Capability Demonstrations to ensure Army space, missile defense, and high altitude equities are represented in advanced technology developments by demonstrating military utility when applied to military equipment and techniques. Examples include: supporting multi service experiments and capability development of the national-directed Phased Adaptive Approach (PAA) for Ballistic Missile Defense (BMD) as it is applied to each of the regional COCOMs; and experimenting with operationally responsive space, space control, and high altitude capabilities to ensure the broader Army enterprises can leverage the advantages of these platforms for communications, Intelligence Surveillance and Reconnaissance (ISR), position navigation, missile warning and command and control. Continue to develop mitigation strategies for Army forces to operate effectively in contested space, missile defense and cyber environments. Developing effective Integrated Missile Defense concepts for Army support to the Phased Adaptive Approach (PAA) being implemented within each regional COCOM. Will support TRADOC proponents with their responsibilities relative to doctrine, organization, training, material, leader development and education, personnel, and facilities plus related matters to continue leveraging space, missile defense, and high altitude proponent input to Joint Capabilities Integration and Development System, Science and Technology, Concept Development, Capability Development for Rapid Transition, and Capability Gap Analysis Army We will sustain our core prototyping platforms, as outlined above. Battlespace Command and Control Center (BC3) will be upgraded to more realistically address information flows related to Close Air Support.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603305A / *Army Missle Defense Systems Integration*	**Project (Number/Name)** TR5 / *Missile Defense Battlelab*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Support MDA to Army BMDS element transition and transfer efforts including BMDS sensor deployments. Develop/defend Army requirements development / documentation to MDA spiral/block development.			
Title: Analysis, and Models and Simulations (M&S)	5.844	6.195	5.169
Articles:	-	-	-
Description: Funding is provided for the following efforts ***FY 2013 Accomplishments:*** Took the lessons learned from the FY12 efforts to continue to evaluate new technologies in realistic operating environments. This was accomplished by supporting ongoing efforts that provided the most realistic operating environment available to perform technology gap and cost reduction analysis of space, missile defense, and high altitude systems. Realistic operating environments were available to determine the ability of the specific technologies to fill capability gaps in terms of utility to the warfighter. Support of technology demonstrations, Analysis and Demonstration Tools/Test Beds for evolving space superiority and operationally responsive space concepts addressed emerging needs and continued to be expanded to ensure that advanced technology development adequately enhanced address space, missile defense and high altitude systems. The Future Warfare Center (FWC) continued to provide program management for maintenance, sustainment, and development for Extended Air Defense Simulation (EADSIM), to provide the required fidelity for a synthetic operating environment and the capability to perform system and cost benefit analysis. ***FY 2014 Plans:*** Take the lessons learned from the FY13 efforts to continue to evaluate new technologies in realistic operating environments. This will be accomplished by supporting ongoing efforts that provide the most realistic operating environment available to perform technology gap and cost reduction analysis of space, missile defense, and high altitude systems. Realistic operating environments will be available to determine the ability of the specific technologies to fill capability gaps in terms of utility to the warfighter. Support of technology demonstrations, Analysis and Demonstration Tools/Test Beds for evolving space superiority and operationally responsive space concepts will address emerging needs and continue to be expanded to ensure that advanced technology development can adequately enhance space, missile defense and high altitude systems. The FWC will continue to provide program management for maintenance, sustainment, and development for Extended Air Defense Simulation (EADSIM), to provide the required fidelity for a synthetic operating environment to provide the capability to perform system and cost benefit analysis, operational planning, and exercise/experimentation support. ***FY 2015 Plans:*** : Take the lessons learned from the FY14 efforts to continue to evaluate new technologies in realistic operating environments. This will be accomplished by supporting ongoing efforts that provide the most realistic operating environment available to perform technology gap and cost reduction analysis of space, missile defense, and high altitude systems. Realistic operating			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603305A / *Army Missle Defense Systems Integration*	**Project (Number/Name)** TR5 / *Missile Defense Battlelab*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
environments will be available to determine the ability of the specific technologies to fill capability gaps in terms of utility to the warfighter. Support of technology demonstrations, Analysis and Demonstration Tools/Test Beds for evolving space superiority and operationally responsive space concepts will address emerging needs and continue to be expanded to ensure that advanced technology development can adequately enhance space, missile defense and high altitude systems. The FWC will continue to provide program management for maintenance, sustainment, and development for EADSIM delivering the required high fidelity synthetic operating environment to provide the capability to perform system and cost benefit analysis, operational planning, and exercise/ experimentation support			
Accomplishments/Planned Programs Subtotals	22.340	23.289	12.797

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable for this item.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603305A / *Army Missle Defense Systems Integration*	Project (Number/Name) TR5 / *Missile Defense Battlelab*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Experiments & technology enhancements of prototypes/tools and analysis.	Various	Various Colorado Springs CO and Huntsville AL : Alabama, Colorado Springs	52.902	14.675		13.314		3.772		-		3.772	Continuing	Continuing	Continuing
Govt Support and Support Contracts	Various	Various Colorado Springs CO and Huntsville AL : Alabama, Colorado Springs	85.112	7.665		9.975		9.025		-		9.025	Continuing	Continuing	Continuing
Small Business Innovation Research/Small Business Technology Transfer Program	Various	Various : Various	0.155	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	138.169	22.340		23.289		12.797		-		12.797	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	138.169	22.340		23.289		12.797		-		12.797	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603305A / *Army Missle Defense Systems Integration*	**Project (Number/Name)** TR5 / *Missile Defense Battlelab*

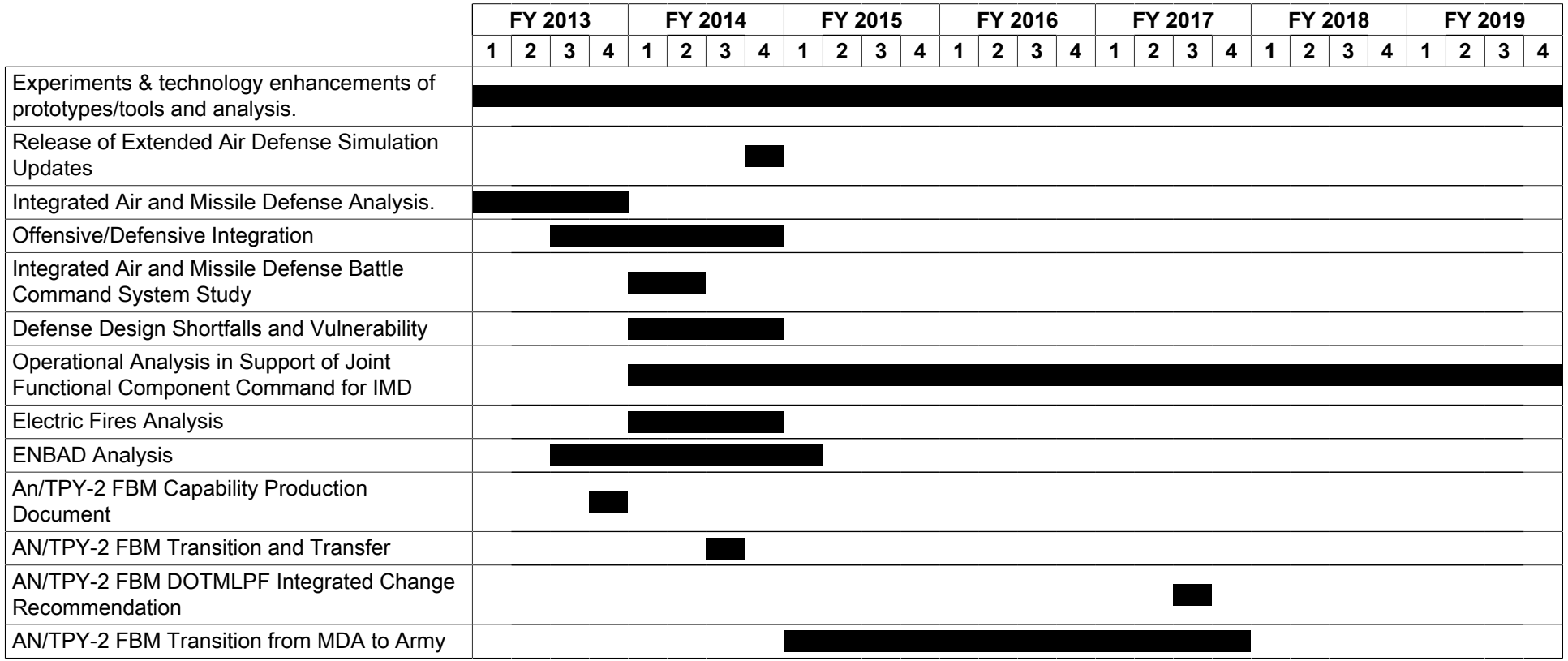

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603305A / *Army Missle Defense Systems Integration*	**Project (Number/Name)** TR5 / *Missile Defense Battlelab*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Experiments & technology enhancements of prototypes/tools and analysis.	1	2012	4	2019
Release of Extended Air Defense Simulation Updates	4	2014	4	2014
Integrated Air and Missile Defense Analysis.	1	2013	4	2013
Offensive/Defensive Integration	3	2013	4	2014
Integrated Air and Missile Defense Battle Command System Study	1	2014	2	2014
Defense Design Shortfalls and Vulnerability	1	2014	4	2014
Operational Analysis in Support of Joint Functional Component Command for IMD	1	2014	4	2019
Electric Fires Analysis	1	2014	4	2014
ENBAD Analysis	3	2013	1	2015
An/TPY-2 FBM Capability Production Document	4	2013	4	2013
AN/TPY-2 FBM Transition and Transfer	3	2014	3	2014
AN/TPY-2 FBM DOTMLPF Integrated Change Recommendation	3	2017	3	2017
AN/TPY-2 FBM Transition from MDA to Army	1	2015	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603308A / *Army Space Systems Integration*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	9.038	13.584	13.999	-	13.999	13.450	19.499	22.696	22.210	Continuing	Continuing
990: *Space And Missile Defense Integration*	-	9.038	11.585	10.557	-	10.557	9.412	15.358	18.454	22.205	Continuing	Continuing
EB7: *Army Space System Enhancement/Integration*	-	-	1.999	3.442	-	3.442	4.038	4.141	4.242	0.005	-	17.867

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The program element funds space systems integration efforts performed by the US Army Space and Missile Defense Command/ Army Forces Strategic Command (USASMDC/ARSTRAT) and the Program Executive Office for Intelligence, Electronic Warfare

USASMDC/ARSTRAT: Headquarters, Department of the Army General Order Number 37, dated 16 October 2006, designated USASMDC/ARSTRAT as the Army proponent for space and the Army Service Component Command of U.S. Strategic Command (USSTRATCOM). As such, USASMDC/ARSTRAT 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, Material, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize those space related capabilities. Army Regulation (AR) 10-87 Army Commands, Army Service Component Commands, and the Direct Reporting Units, dated 4 September 2007 and AR 5-22 The Army Force Modernization Proponent System dated 19 August 2009 designates USASMDC/ARSTRAT as the Army Force Modernization proponent for Space and High Altitude Capabilities.

Project 990 funds USASMDC/ARSTRAT to integrate warfighting concepts and technologies, validate concepts, and identify capabilities needed to implement the validated concepts, and develop DOTMLPF solutions to realize those space and high altitude related capabilities. Provide engineering support to the Joint Friendly Force Tracking (J-FFT) Mission Management Center (MMC) through an associated test-bed for both operational and developmental injection and integration of real-time J-FFT information into the Common Operating Picture (COP) for Combatant Commanders, Joint Task Forces (JTFs), and Coalition Partners. The MMC injects real-time J-FFT information into the Common Operating Picture for COCOMs, JTFs and Coalition partners. USSTRATCOM, in accordance with CJCSI 3910.01 (reference V.4.) is designated one of three coordinating agencies for J-FFT within DoD. CJCSI 3910.01 directs eight Force Modernization tasks to USSTRATCOM. USSTRATCOM SI 534-5 (reference V.6.) and annually published USSTRATCOM operations orders have designated USASMDC/ARSTRAT as the lead USSTRATCOM component command for Friendly Force Tracking (FFT).

Project EB7 funds classified research efforts. The details of the efforts may be provided upon request to appropriately cleared individuals.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*		R-1 Program Element (Number/Name) PE 0603308A / *Army Space Systems Integration*			
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	9.876	13.592	14.602	-	14.602
Current President's Budget	9.038	13.584	13.999	-	13.999
Total Adjustments	-0.838	-0.008	-0.603	-	-0.603
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.019	-			
• Adjustments to Budget Years	-	-	-0.603	-	-0.603
• Other Adjustments 1	-0.819	-0.008	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603308A / *Army Space Systems Integration*				Project (Number/Name) 990 / *Space And Missile Defense Integration*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
990: *Space And Missile Defense Integration*	-	9.038	11.585	10.557	-	10.557	9.412	15.358	18.454	22.205	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Project 990 funds United States Army Space and Missile Command/Army Strategic Command (USASMDC/ARSTRAT) efforts to develop, analyze and mature warfighting concepts, and conduct warfighting experiments for space and high altitude capabilities. The program also funds development and integration of new data sources and data services into the Joint Friendly Force Tracking Mission Management Center. The Mission Management Center (MMC) injects real-time Joint Friendly Force Tracking (J-FFT) information into the Common Operating Picture for Combatant Commands (COCOMs), Joint Task Forces (JTFs) and Coalition partners. USASMDC/ARSTRAT is the proponent for space / high altitude capabilities and is responsible for determining and integrating Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) for the Army.

USSTRATCOM, in accordance with CJCSI 3910.01 (reference V.4.) is designated one of three coordinating agencies for J-FFT within DOD. CJCSI 3910.01 directs eight Force Modernization tasks to USSTRATCOM. USSTRATCOM SI 534-5 (reference V.6.) and annually published USSTRATCOM operations orders have designated USASMDC/ARSTRAT as the lead USSTRATCOM component command for J-FFT.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Architecture Development, Wargames and Demonstrations	5.151	5.680	5.377
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2013 Accomplishments: Planned, developed, and executed architectures and combat development solutions for Army integration of space systems, space control capabilities, missile defense and high altitude systems. Represented Army positions and defended Army equities relative to Joint/DoD and inter-Service activities; e.g., Executive Agent for Space Program Assessments, etc. Participated and provided support to wargames and experiments where space and high altitude capabilities and technologies could be integrated and evaluated in the most realistic operating environment possible. This was necessary to ensure that space and high altitude capabilities gaps were identified and capabilities were correctly represented, so that the Army uses of these capabilities were validated. Conducted space and relied on cyber analysis to support the development of current CONPLANS and planning orders and to inform senior decisions on material development critical to the warfighter and homeland defense. Developed space			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603308A / *Army Space Systems Integration*	**Project (Number/Name)** 990 / *Space And Missile Defense Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
modernization strategies and sponsored exploration of future space and high altitude warfighting concepts. The USASMDC/ ARSTRAT continued efforts to enhance the resiliency and effectiveness of critical space-based assets. ***FY 2014 Plans:*** Will plan, develop, and execute architectures and combat development solutions for Army integration of space systems, space control capabilities and high altitude systems. Represent Army positions and defend Army equities relative in Joint/DoD and inter-Service activities; e.g., Executive Agent for Space Program Assessments, etc. Will participate and provide support to wargames and experiments, such as Jericho Thunder, where space and high altitude capabilities and technologies can be integrated and evaluated in the most realistic operating environment possible. This is necessary to ensure that space, high altitude, and cyber capability gaps are identified and capabilities are correctly represented so that the Army's use of these capabilities is explored and where possible, exploited. Develop and maintain One Semi-Automated Force (OneSAF) simulation space updates and provide to PEO STRI to be included in OneSAF baseline. Develop space modernization strategies and sponsor exploration of future space and high altitude warfighting concepts. Continue efforts to enhance the resiliency and effectiveness of critical space-based assets. These efforts will be documented in our FY14 task to develop the Space superiority Capability Development Document, requirements development for JTAGS P3I/Overhead Persistent Infrared; JCIDS requirements for defensive space control and support transition of RED DOT to an Army program of record. Other planned activities include: participation in OSD Space Experiment Review Board to prioritize Space Test Program launch opportunities and the "Army - Air Force Integration Forum 20"; Lead Space Capability Based Analysis on behalf of TRADOC; Participate in USAF Schriever Wargame 2014 focused on deployment in an Anti-Access / Area Denial environment. SMDC/ARSTRAT will lead Army Space 2020 & Beyond wargame seminar as part of Unified Quest 2014 and provide a subject matter expert to NASA's Phantom Eye high altitude / long endurance demonstrator program. Experiment with Global Visual Information System (GVIS), when it is integrated into Stryker vehicles and dismounted, at AEWE Spiral 1, and AFRICOM, USAF and Marine Expeditionary Force experiments. USASMDC/ARSTRAT will participate in Integrated Distributed Operations in Major Combat Operations SIMEX, hosted by the Fires Battlelab and take Winch Assisted Space Platform prototype to Network Integration Experiment 14.2. SMDC/ARSTRAT will transition Combat SkySat to 7th Special Forces Group and continue efforts developing Weather Rock (WxRock) with US Army AFRICOM. ***FY 2015 Plans:*** Will plan, develop, and execute architectures and combat development solutions for Army integration of space systems, space control capabilities, missile defense and high altitude systems. Represent Army positions and defend Army equities relative in Joint/DoD and inter-Service activities; e.g., Executive Agent for Space Program Assessments, etc. Will participate and provide support to wargames and experiments where space and high altitude capabilities and technologies can be integrated and evaluated in the most realistic operating environment possible. This is necessary to ensure that space, high altitude and cyber capability gaps are identified and capabilities are correctly represented so that the Army's use of these capabilities is explored and where possible, exploited. Will develop and maintain One Semi-Automated Force (OneSAF) simulation space updates and provide to PEO STRI to be included in OneSAF baseline. Will develop space modernization strategies and sponsor exploration			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603308A / *Army Space Systems Integration*	**Project (Number/Name)** 990 / *Space And Missile Defense Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
of future space and high and high altitude warfighting concepts. USASMDC/ARSTRAT will continue efforts to enhance the resiliency and effectiveness of critical space-based assets and JCIDS capability development activities for space superiority, high altitude persistent platforms, nano-satellites and tactical launch systems. Products scheduled to be delivered in FY15 include Overhead Persistence Infrared (OPIR) Analysis of Alternatives; Jericho Thunder Analysis Support; Nanosat Program Capability Development Document; Space Superiority Capability Production Document; Army Cyberspace Analysis; Kestrel Eye Military Utility Analysis; Space Superiority Joint Architecture Analysis, and Phase I Space Superiority Program Analysis of Alternatives and Cost-Benefit Analysis.			
Title: High Energy Laser Technolgy Program Support	0.785	0.770	0.750
Articles:	-	-	-
Description: Funding is provided for the following effort.			
FY 2013 Accomplishments: Continued to support the Solid State Laser Testbed (SSLT) - Coupled the 100 kW laser with the existing Tactical High Energy Laser (THEL) pointer-tracker subsystem and began the basic lethality program against a variety of static and dynamic targets of interest to the Army, Navy, Air Force, and OSD at tactical ranges of interest. Supported the initiation of propagation experiments with high power at 1.06Î¼m using the SSLT facility. Supported the completion of Option 2 phase of Robust Electric Laser Initiative (RELI) (risk reduction for 100 kW system) and began Option 1, i.e. the fabrication of 50 kW hardware for integration onboard the High Energy Laser Technology Demonstrator (HELMD) vehicle beginning in 2015. Provided technical support for the integration a Commercial off the shelf (COTS) 10kW class fiber laser onboard the HELMD platform to demonstrate high power operation of the HELMD beam control system and engage mortars and Unmanned Aerial Vehicles (UAVs). Supported risk-reduction activities for future upgrades to higher-power Solid State Laser (SSL) devices. Incorporated adaptive optics into the HELMD to improve performance and increase the range.			
FY 2014 Plans: Will support SSLT operations at High Energy Laser Systems Test Facility (HELSTF) to evaluate 100kW class SSL performance against a variety of static and dynamic targets of interest to the Army, Navy, Air Force, and OSD at tactical ranges of interest. Will support collection of propagation and lethality data with the SSLT and analyze results for model comparison. Will support the development of tactics, techniques, and procedures (TTPs) in support of future fielding of HEL weapon system. Will support the initiation of one the of RELI contractors to design and fabricate a 60kW laser for installation into the HELMD platform in the FY15/16 timeframe by evaluating and assessing the ruggedized efficient high power laser Preliminary Design Review (PDR) and Critical Design Review (CDR). Will provide technical support for the integrated testing of a COTS 10kW class fiber laser onboard			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603308A / *Army Space Systems Integration*	**Project (Number/Name)** 990 / *Space And Missile Defense Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
the HELMD platform to demonstrate high power operation of the HELMD beam control system and to engage mortars and UAVs. Will incorporate adaptive optics into the HELMD after the first round of tests to improve performance and increase the range. ***FY 2015 Plans:*** Will support the efficient rugged laser program as it goes into the fabrication phase of a 60kW laser system for installation into the HELMD mobile platform; attend efficient rugged laser reviews and technical interchange meetings; conduct trade analysis studies on current and future high power laser concepts; conduct technical assessments of advanced laser technologies; support power and thermal subsystems interface requirements definition and system engineering between the 60 kW class laser, power and thermal subsystem, and the HELMD platform/beam control system; support SSLT operations at High Energy Laser Systems Test Facility (HELSTF) to evaluate 1.06um SSL propagation and lethality experiments; support the development of tactics, techniques, and procedures (TTPs) of future fielding of HEL weapon system.			
Title: Joint Friendly Force Tracking (J-FFT) Testbed	3.102	5.135	4.430
Articles:	-	-	-
Description: Funding is provided for the following efforts ***FY 2013 Accomplishments:*** As enhancements were made to network-enabled command and control systems and other systems including KeyMaker were integrated into Combat Commanders friendly force tracking requirements, the J-FFT Testbed was used to integrate hardware and software prior to its deployment to the field. USASMDC/ARSTRAT continued to support development of FFT capabilities for deployed and collation forces. The Joint Friendly Force Tracking Division coordinated and executed USSTRATCOM-directed FFT tasks in order to assure continuous 24/7 FFT data services support to authorized users to include the Combatant Commands, the Services, agencies, allies, and coalition partners in order to improve their situational awareness (SA), enhance command and control (C2), and reduce fratricide in combat, homeland defense, civil and contingency operations. ***FY 2014 Plans:*** As enhancements are made to network-enabled command and control systems and other systems including KeyMaker are integrated into Combat Commanders friendly force tracking requirements, the J-FFT Testbed will be used to integrate hardware and software prior to its deployment to the field. USASMDC/ARSTRAT will continue to support development of FFT capabilities for deployed and coalition forces. The Joint Friendly Force Tracking Division coordinates and executes USSTRATCOM-directed FFT tasks in order to assure continuous 24/7 FFT data services support to authorized users to include the Combatant Commands, the Services, agencies, allies, and coalition partners in order to improve their situational awareness (SA), enhance command and control (C2), and reduce fratricide in combat, homeland defense, civil and contingency operations. ***FY 2015 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603308A / *Army Space Systems Integration*	**Project (Number/Name)** 990 / *Space And Missile Defense Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
As enhancements are made to network-enabled command and control systems and other systems including KeyMaker will be fully integrated into Combat Commanders friendly force tracking requirements the J-FFT Testbed will be used to integrate hardware and software prior to its deployment to the field. USASMDC/ARSTRAT will continue to support development of FFT capabilities for deployed and coalition forces. The Joint Friendly Force Tracking Division coordinates and executes USSTRATCOM-directed FFT tasks in order to assure continuous 24/7 FFT data services support to authorized users to include the Combatant Commands, the Services, agencies, allies, and coalition partners in order to improve their situational awareness (SA), enhance command and control (C2) to reduce fratricide in combat, homeland defense, civil and contingency operations. Will complete transition Force Tracking Advanced Management System (FTAMS) to FFT-MMC.			
Accomplishments/Planned Programs Subtotals	9.038	11.585	10.557

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable for this effort.

E. Performance Metrics

Experiments and projects are aligned to operations concepts and capability gaps.
SMDC/ARSTRAT is influencing the development critical enabling technologies.
Legacy or emerging systems have interoperability solutions identified.

F. Major Performer

BAE, as a Prime on contract W91260-06-D-0005, along with its team of sub-contractors, is responsible for the development of software to support integration of new tracking data services into the J-FFT and support special tracking capabilities. This ensures 24/7 J-FFT data is available to support Combatant Commanders as coalition forces and technology change.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603308A / *Army Space Systems Integration*	Project (Number/Name) 990 / *Space And Missile Defense Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Enhancement of J-FFT	C/CPFF	Colorado Springs : Colorado	20.129	3.102		5.135		4.430		-		4.430	Continuing	Continuing	Continuing
		Subtotal	20.129	3.102		5.135		4.430		-		4.430	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GOVT SUPPORT & SUPPORT CONTRACTS	C/CPFF	Various in Colorado Springs CO, Washington DC, and Huntsville AL : Various	99.397	5.936		6.450		6.127		-		6.127	Continuing	Continuing	Continuing
		Subtotal	99.397	5.936		6.450		6.127		-		6.127	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	119.526	9.038		11.585		10.557		-		10.557	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603308A / *Army Space Systems Integration*	**Project (Number/Name)** 990 / *Space And Missile Defense Integration*

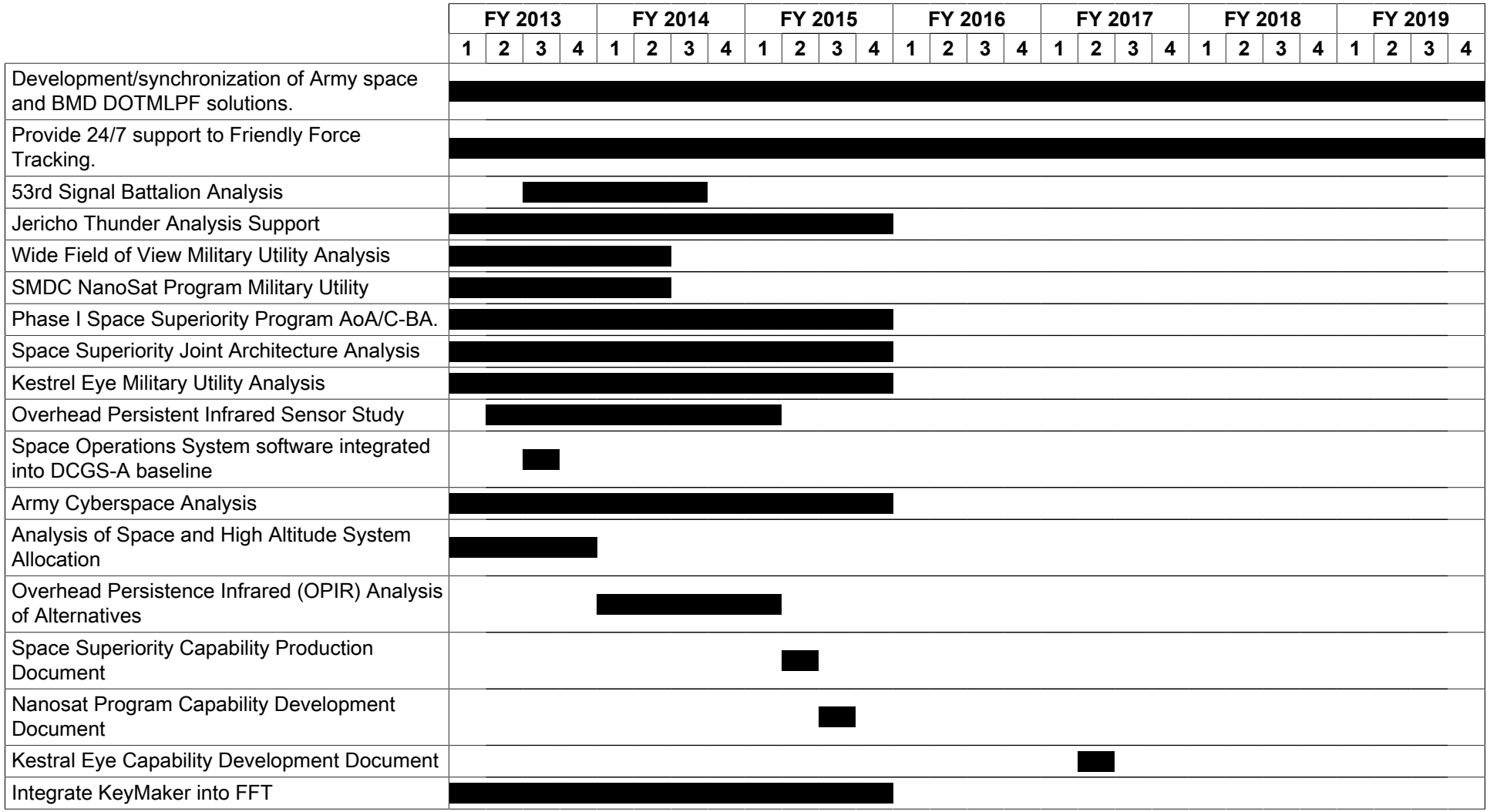

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603308A / *Army Space Systems Integration*	**Project (Number/Name)** 990 / *Space And Missile Defense Integration*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Development/synchronization of Army space and BMD DOTMLPF solutions.	1	2012	4	2019
Provide 24/7 support to Friendly Force Tracking.	1	2012	4	2019
53rd Signal Battalion Analysis	3	2013	3	2014
Jericho Thunder Analysis Support	1	2013	4	2015
Wide Field of View Military Utility Analysis	1	2013	2	2014
SMDC NanoSat Program Military Utility	1	2013	2	2014
Phase I Space Superiority Program AoA/C-BA.	1	2013	4	2015
Space Superiority Joint Architecture Analysis	1	2013	4	2015
Kestrel Eye Military Utility Analysis	1	2013	4	2015
Overhead Persistent Infrared Sensor Study	2	2013	1	2015
Space Operations System software integrated into DCGS-A baseline	3	2013	3	2013
Army Cyberspace Analysis	1	2013	4	2015
Analysis of Space and High Altitude System Allocation	1	2013	4	2013
Overhead Persistence Infrared (OPIR) Analysis of Alternatives	1	2014	1	2015
Space Superiority Capability Production Document	2	2015	2	2015
Nanosat Program Capability Development Document	3	2015	3	2015
Kestral Eye Capability Development Document	2	2017	2	2017
Integrate KeyMaker into FFT	1	2013	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603308A / *Army Space Systems Integration*	Project (Number/Name) EB7 / *Army Space System Enhancement/ Integration*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EB7: *Army Space System Enhancement/Integration*	-	-	1.999	3.442	-	3.442	4.038	4.141	4.242	0.005	-	17.867
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The purpose of the project is to conduct classified research efforts. The details of the efforts may be provided upon request to appropriately cleared individuals.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Classified	-	1.999	3.442
Articles:	-	-	-
Description: The purpose of this project is to conduct classified research			
FY 2014 Plans: The purpose of this project is to conduct classified research.			
FY 2015 Plans: The purpose of this project is to conduct classified research.			
Accomplishments/Planned Programs Subtotals	-	1.999	3.442

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603619A / *Landmine Warfare and Barrier - Adv Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	4.089	-	-	-	-	-	-	-	-	-	4.089
606: *Cntrmn/Barrier Adv Dev*	-	4.089	-	-	-	-	-	-	-	-	-	4.089

The FY 2015 OCO Request will be submitted at a later date.

Note

Note
FY 2015 Adjustment: The Forward Reconnaissance and Explosive Hazard Detection (FREHD) program was cancelled on the Budget Year and FY 2015 will be adjusted for this program.

A. Mission Description and Budget Item Justification

This project enables component development of new counter explosive hazard systems that focus on detecting, marking, and neutralizing mines and improvised explosive devices (IED). These capabilities will enhance the effectiveness of the Route Clearance Platoon within the Engineer Company, the Brigade Combat Team as well as other related Army missions.

The Forward Reconnaissance and Explosive Hazard Detection (FREHD) system will provide a suite of vehicle-mounted capabilities that enable route clearance patrols to achieve higher rates of advance by accurately detecting and adjudicating potential explosive hazards with reduced hazard interrogation time. The system will automatically nominate potential hazards on the move and at standoff distance, and then let route clearance teams decide whether to perform more detailed examinations and identification of those hazards using additional tools within the FREHD suite. FREHD will also provide threat visualization and control capabilities that enable route clearance and allow Explosive Ordnance Disposal (EOD) and related mission personnel to remotely view video feeds of the hazard and remotely control the apparatus. The increased rate of advance will improve route clearance time, while the increased standoff improves force protection.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	5.054	10.625	20.225	-	20.225
Current President's Budget	4.089	-	-	-	-
Total Adjustments	-0.965	-10.625	-20.225	-	-20.225
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-10.625			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-0.965	-	-20.225	-	-20.225

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603619A / *Landmine Warfare and Barrier - Adv Dev*	Project (Number/Name) 606 / *Cntrmn/Barrier Adv Dev*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
606: *Cntrmn/Barrier Adv Dev*	-	4.089	-	-	-	-	-	-	-	-	-	4.089
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project enables component development of new counter explosive hazard systems that focus on detecting, marking, and neutralizing mines and improvised explosive devices (IED). These capabilities will enhance the effectiveness of the Route Clearance Platoon within the Engineer Company, the Brigade Combat Team as well as other related Army missions.

The Forward Reconnaissance and Explosive Hazard Detection (FREHD) system will provide a suite of vehicle-mounted capabilities that enable route clearance patrols to achieve higher rates of advance by accurately detecting and adjudicating potential explosive hazards with reduced hazard interrogation time. The system will automatically nominate potential hazards on the move and at standoff distance, and then let route clearance teams decide whether to perform more detailed examinations and identification of those hazards using additional tools within the FREHD suite. FREHD will also provide threat visualization and control capabilities that enable route clearance and allow Explosive Ordnance Disposal (EOD) and related mission personnel to remotely view video feeds of the hazard and remotely control the apparatus. The increased rate of advance will improve route clearance time, while the increased standoff improves force protection.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Forward Reconnaissance and Explosive Hazard Detection (FREHD)	4.089	-	-
Articles:	-	-	-
Description: FREHD			
FY 2013 Accomplishments: Prepare for Materiel Development Decision (MDD); Materiel Solution Analysis and Technology Assessment; Milestone A Preparation			
Accomplishments/Planned Programs Subtotals	4.089	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Mine Neutralization and Detection: *Mine Neutralization and Detection*	24.099	65.051	47.028	-	47.028	48.143	24.305	5.377	1.014	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603619A / *Landmine Warfare and Barrier - Adv Dev*	**Project (Number/Name)** 606 / *Cntrmn/Barrier Adv Dev*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

654808/D415 Mine Neutralization and Detection is the engineering development follow on to this funding line. The above profile represents the total line, not only the follow on tasks within this program.

D. Acquisition Strategy

The Acquisition Strategy for the Forward Reconnaissance and Explosive Hazard Detection (FREHD) System will be developed in conjunction with program initiation.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603619A / *Landmine Warfare and Barrier - Adv Dev*	Project (Number/Name) 606 / *Cntrmn/Barrier Adv Dev*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PM Close Combat Systems : Picatinny, NJ/ Ft Belvoir, VA	0.000	1.048		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	1.048		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FREHD Tech Development	TBD	TBD : TBD	0.000	1.000		-		-		-		-	Continuing	Continuing	-
		Subtotal	0.000	1.000		-		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FREHD	MIPR	Various : TBD	0.000	2.041		-		-		-		-	-	2.041	-
		Subtotal	0.000	2.041		-		-		-		-	-	2.041	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	4.089		-		-		-		-	-	-	-

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	2.430	-	-	-	-	-	-	-	-	-	2.430
E79: *SMOKE/OBSCURANT SYSTEM*	-	2.430	-	-	-	-	-	-	-	-	-	2.430

The FY 2015 OCO Request will be submitted at a later date.

Note

Change Summary Explanation: Funding - FY 13: Funds realigned to higher priority Army programs.

A. Mission Description and Budget Item Justification

Project supports Screening Obscuration Module (SOM) in the development and improvement of an array of obscurant agents, and devices to improve survivability of the combined armed forces, support extended range capability, complement combined weapon systems, and enhance force effectiveness and combat power.SOM will be man portable with plug and play technology to facilitate quick mounting and dismounted. This program element supports critical management studies,operational assessments,testing, prototyping, and analyses that are conducted on a continuing basis. To ensure that Technology Development efforts are targeted against the emerging threat. US 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 using generated and launched smoke systems.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	2.725	-	-	-	-
Current President's Budget	2.430	-	-	-	-
Total Adjustments	-0.295	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-0.295	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	Project (Number/Name) E79 / *SMOKE/OBSCURANT SYSTEM*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
E79: *SMOKE/OBSCURANT SYSTEM*	-	2.430	-	-	-	-	-	-	-	-	-	2.430
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Project supports Screening Obscuration Module (SOM) in the development and improvement of an array of obscurant agents, and devices to improve survivability of the combined armed forces, support extended range capability, complement combined weapon systems, and enhance force effectiveness and combat power.SOM will be man portable with plug and play technology to facilitate quick mounting and dismounted. This program element supports critical management studies,operational assessments,testing, prototyping, and analyses that are conducted on a continuing basis. To ensure that Technology Development efforts are targeted against the emerging threat. US 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 using generated and launched smoke systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: SOM Development	1.659	-	-
Articles:	-	-	-
Description: SOM Development ***FY 2013 Accomplishments:*** SOM Development			
Title: Test and Evaluation of SOM systems	0.151	-	-
Articles:	-	-	-
Description: Test and Evaluation of SOM systems ***FY 2013 Accomplishments:*** Test and Evaluation of SOM systems.			
Title: SOM Engineering and Modeling	0.620	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	**Project (Number/Name)** E79 / *SMOKE/OBSCURANT SYSTEM*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Project Management ***FY 2013 Accomplishments:*** Project Management			
Accomplishments/Planned Programs Subtotals	2.430	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• SMOKE/OBSCURANT SYSTEM: *Project 200 Smoke, Obscurant and Target Defeating Sys - Eng Dev*	-	-	-	-	-	-	-	-	-	-	-
• Target Defeating System: *Project 198 Smoke, Obscurant and Target Defeating Sys - Eng Dev*	-	-	-	-	-	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Acquisition Strategy: Development of SOM systems to include design, construction, modeling and testing of prototypes.

SOM acquisition strategy is to develop a small smoke generator that degrades the visual through near infrared portion of the Electro-Magnetic Spectrum. SOM program will focus on replacing current smoke pots to provide the Joint Land Forces with a medium area screening obscuration device. The initial increment, Increment 1, will focus on developing a SOM system capable of obscuring the Visual through Near IR wavelengths of the electromagnetic spectrum. Future SOM Increments 2 and 3 will incorporate bi-spectral and multi-spectral effects. The SOM has the capability to quickly produce (less than 30 seconds) medium duration (12 minutes), medium area (204 meters length x 12 meters height) screening obscuration effects, screening an area equivalent to three times the size of a large combat vehicle. The individual Soldier or team will employ the SOM devices on open and complex terrain; excluding enclosed areas. SOM will be deployed to accomplish the following mission types: avoid observation, defense of a battle position, and assault position.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	Project (Number/Name) E79 / *SMOKE/OBSCURANT SYSTEM*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Personnel	MIPR	JPM : NBCCA	5.010	0.620		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	5.010	0.620		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SOM Hardware Development	C/CPFF	JPM NBCCA, APG MD : Edgewood. MD	20.355	1.196		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	20.355	1.196		-		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Modeling and Studies SOM	MIPR	Edgewood Chemical Biological Center : Edgewood, Md	0.000	0.463		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	0.463		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SOM Test & Evaluation	MIPR	OGA Various : Various	1.241	0.151		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	1.241	0.151		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	Project (Number/Name) E79 / *SMOKE/OBSCURANT SYSTEM*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.606	2.430		-		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	**Project (Number/Name)** E79 / *SMOKE/OBSCURANT SYSTEM*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
SOM Schedule	[redacted]																											
MS B Preparation	[redacted]																											

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	**Project (Number/Name)** E79 / *SMOKE/OBSCURANT SYSTEM*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SOM Schedule	2	2010	4	2014
MS B Preparation	1	2013	4	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	27.114	30.596	29.334	-	29.334	38.611	40.624	38.977	46.927	-	252.183
652: *M829E4 120mm Cartridge*	-	27.114	19.802	5.049	-	5.049	-	-	-	-	-	51.965
656: *120mm Cartridge (Advanced Multipurpose-AMP)*	-	-	-	14.748	-	14.748	27.578	25.637	25.655	39.518	-	133.136
694: *Medium Caliber Ammunition*	-	-	10.794	-	-	-	-	-	-	-	-	10.794
EB8: *OWL for Small Caliber Ammunition*	-	-	-	1.967	-	1.967	1.971	2.169	3.158	-	-	9.265
EB9: *Tunable Pyrotechnic Aircraft Countermeasure Flares*	-	-	-	0.884	-	0.884	0.985	4.043	1.085	3.556	-	10.553
EC2: *Advanced Armor-Piercing (ADVAP) for Small Cal Ammo*	-	-	-	4.916	-	4.916	6.205	5.324	6.414	-	-	22.859
EC3: *Ammunition Logistics Prototyping*	-	-	-	1.770	-	1.770	1.872	3.451	2.665	3.853	-	13.611

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY15 the following new start programs were added to PE 643639:
Project:656 Advanced Multipurpose Munition: $14.748 Million
Project:EB8 One Way Luminescence: $1.967 Million
Project:EC2 Advanced Armor-Piercing: $4.916 Million
Project:EB9 Tunable Pyrotechnic: $.884 Million
Project:EC3 Ammunition Logistics Prototyping: $1.770 Million
FY15 dollars were added to Project:652 M829E4: $5.049 Million
In FY15 $7.083 Million was moved from 643639 Day Night Thermal to 654802.EC1 High Velocity, Low Velocity Thermal Training

A. Mission Description and Budget Item Justification

The Weapons and Munitions Engineering Development Program Element (PE) encompasses a comprehensive program to develop, rapidly transition to production, and field advanced weapons and munitions. These programs will ensure continued battlefield overmatch and lethality of U.S. maneuver forces against the full range

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603639A *I Tank and Medium Caliber Ammunition*

of modern battlefield threats. To achieve this, Weapons and Munitions Engineering Development Program will identify and develop promising technologies through competitive development and streamlined acquisition procedures.

M829E4: The M829E4 cartridge is an Abrams delivered Line of Sight (LOS) munition that will provide capability for the current force Armored Brigade Combat Team's (ABCT) commander to conduct decisive operations and destroy current and future enemy Main Battle Tanks (MBTs) equipped with Explosive Reactive Armor (ERA) and Active Protective System (APS) at ranges from 0-2km (T) and 0-4km (O). The M829E4 equips ABCT commanders with a unique capability which will increase the ABCT's lethality and ability to seize the initiative during unified land operations. After an Engineering and Manufacturing Development (EMD) Phase I competitive shoot off in FY 2011, Alliant Techsystems (ATK) was awarded the option to continue with Phase II until its conclusion in FY 2015. FY 2012 supported the continuation of Phase II of the M829E4 cartridge. FY 2013 funding supported design finalization, design verification, fabrication and initial testing of Developmental Test and Evaluation (DT&E) hardware. The full performance of the M829E4 is obtained with an Abrams equipped Ammunition Data Link breech modification. FY 2014 supports conducting hardware and performance testing, mandated Live Fire Test & Evaluation (LFT&E) and completion of Milestone C. FY 2015 supports qualifying a second source for the composite sabot material. The current single source supplier for this material has significantly increased the cost for this material, more than doubled, and expressed intentions of possibly getting out of this business. Qualification of a second source will result in competitive pricing and driving down the unit price cost, as well as mitigate the risk of the current supplier exiting as a supplier of this material.

One Way Luminescence (OWL): Current legacy small caliber ammunition tracer rounds are comprised of a pyrotechnic tracer mix that allows enemy forces to visually see the trace round and track its trajectory back to the shooter. The objective of the OWL program is to develop and field a full day/night tracer technology to replace the current M62 pyrotechnic trace cartridge, with a new trace cartridge that is only visible to the shooter and those soldiers in close proximity.

Advanced Multi Purpose (AMP): The Advanced Multi Purpose (AMP) program is a direct fire line of sight 120mm large caliber munition to be developed for the Abrams Main Battle Tank. It has three modes of operation including point detonate, delay and airburst. AMP is the material solution for breaching reinforced concrete walls and defeating Anti Tank Guided Missile (ATGM) teams from 50m to 2000m (T) and 50m to 4500m (O), a validated gap that cannot currently be met with existing stockpiled ammunition. In addition to added capability, AMP will also consolidate the capabilities of four existing stockpiled 120mm munitions, thereby addressing the users' battlecarry dilemma by allowing them to load a single munition that is capable of defeating multiple targets including ATGM teams, reinforced walls, personnel, light armor, bunkers, and obstacles. The full performance of the AMP is obtained with an Abrams equipped Ammunition Data Link breech modification, the same required by the M829E4. FY 2015 supports multiple contract awards for competing prototypes in Phase I of II for Engineering and Manufacturing Development (EMD).

Medium Caliber Ammunition: The Target Practice Day Night Thermal (TP-DNT) cartridges are 40mm grenade training cartridges. The low velocity variant is for training with the M203/M320 grenade launchers; the high velocity variant is for training with the Mk19 grenade machine gun. Both cartridges will provide the Warfighter with a non-dud producing, environmentally friendly training cartridge that provides a visual impact signature seen day or night, by the naked eye, through night vision devices, and thermal weapon sights. These cartridges will replace the 40mm Target Practice, M918/M385A1 (Mixed Belt) cartridges and the 40mm M781 cartridges. It is expected that the unit price for high velocity cartridges will be lower than the Mixed Belt cartridges. Funding for FY 2015 activities transitions to PE 0604802/Project EC1.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*

Advanced Armor-Piercing (ADVAP): The overall program objective is to develop and field an Advanced Armor Piercing (ADVAP) 7.62mm cartridge in order to defeat threat targets and provide overmatch capability versus a broad spectrum of hard targets into the future.

Tunable Pyrotechnic Aircraft Countermeasure: This project will support research, development and testing to field new expendable countermeasure munitions that will protect Army aircraft from advanced and current guided-missile threats. Advances in the capability of threat systems to counter current decoys necessitate development of new expendable countermeasures. This program is considered essential to provide Army Aircraft protection against surface-to-air weapon systems.

Ammunition Logistics Prototyping: This project supports the future force by improving the distribution, management, reliability and survivability of ammunition through the advanced development, integration, and demonstration of logistics system enablers. These enablers will improve the efficiency and effectiveness of ammunition operations, to include retrograde, while reducing the logistics footprint on the battlefield. Technology areas addressed include handling, distribution, and management (strategic and tactical), prognostics, diagnostics, and asset visibility, explosives safety, and adaptive and environmentally friendly packaging and palletization. The efficient deployment and sustainment of reliable ammunition is vital to success on the battlefield. This project enhances the operational effectiveness of the ammunition logistics system to ensure the distribution of reliable ammunition to the warfighter.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	30.560	30.612	7.083	-	7.083
Current President's Budget	27.114	30.596	29.334	-	29.334
Total Adjustments	-3.446	-0.016	22.251	-	22.251
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-3.446	-0.016	22.251	-	22.251

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) 652 / *M829E4 120mm Cartridge*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
652: *M829E4 120mm Cartridge*	-	27.114	19.802	5.049	-	5.049	-	-	-	-	-	51.965
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The M829E4 cartridge is an Abrams delivered Line of Sight (LOS) munition that will provide capability for the current force Armored Brigade Combat Team's (ABCT) commander to conduct decisive operations and destroy current and future enemy Main Battle Tanks (MBTs) equipped with Explosive Reactive Armor (ERA) and Active Protective System (APS) at ranges from 0-2km (T) and 0-4km (O). The M829E4 equips ABCT commanders with a unique capability which will increase the ABCT's lethality and ability to seize the initiative during unified land operations. After an Engineering and Manufacturing Development (EMD) Phase I competitive shoot off in FY 2011, Alliant Techsystems (ATK) was awarded the option to continue with Phase II until its conclusion in FY 2015. FY 2012 supported the continuation of Phase II of the M829E4 cartridge. FY 2013 funding supported design finalization, design verification, fabrication and initial testing of Developmental Test and Evaluation (DT&E) hardware. The full performance of the M829E4 is obtained with an Abrams equipped Ammunition Data Link breech modification. FY 2014 supports conducting hardware and performance testing, mandated Live Fire Test & Evaluation (LFT&E) and completion of Milestone C. FY 2015 supports qualifying a second source for the composite sabot material. The current single source supplier for this material has significantly increased the cost for this material, more than doubled, and expressed intentions of possibly getting out of this business. Qualification of a second source will result in competitive pricing and driving down the unit price cost, as well as mitigate the risk of the current supplier exiting as a supplier of this material.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Phase II EMD	20.500	9.900	-
Articles:	-	-	-
Description: Funding is provided for the following effort:			
FY 2013 Accomplishments: Continued Phase II of EMD, the design was finalized, tested and evaluated to ensure all requirements were met/ exceeded. Cartridges were fabricated for DT&E testing. A Technical Data Package (TDP) was revised and a detailed specification was assembled. Production manufacturing fixtures and subsystem test equipment were established and qualified.			
FY 2014 Plans: Complete DT&E culminating at Milestone C. This includes completing the delivery of DT&E hardware and test, preparing and staffing Milestone C documentation, conducting performance analysis modeling and simulation, TDP review and staffing. Build			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 652 / *M829E4 120mm Cartridge*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
cartridges with alternate sabot material. Generate fire control solution for Abrams M1A2 SEP (System Enhancement Package) V2 integration, transfer and demilitarization of any residual R&D hardware on the program.			
Title: Developmental Test & Evaluation (DT&E)	6.614	9.902	-
Articles:	-	-	-
Description: Funding is provided for the following effort: ***FY 2013 Accomplishments:*** The Development Test & Evaluation (DT&E) is the testing and analysis at the conclusion of EMD. A single design will undergo a battery of tests in which the capability is proven/ demonstrated, performance quantified. This covers the Test and Evaluation, the analysis of the results and the documentation that supports Milestone C . Testing included safety, survivability, armor testing, insensitive munitions, ballistic testing, noise, toxic fumes, and terminal impact dispersion/ accuracy tests. This effort included the live fire tests, user excursion tests and Stationary Ammunition accuracy testing. ***FY 2014 Plans:*** Continue and complete DT&E integrated testing with Abrams. Conduct single shot ammunition accuracy test and conduct the mandated Live Fire Testing & Evaluation (LFT&E).			
Title: Sabot Composite Material Qualification	-	-	5.049
Description: Funding is provided for the following effort: ***FY 2015 Plans:*** FY 2015 supports qualifying a second source for the composite sabot material. The current single source supplier for this material has significantly increased the cost for this material, more than doubled, and expressed intentions of possibly getting out of this business. Qualification of a second source will result in competitive pricing and driving down the unit price cost, as well as mitigate the risk of the current supplier exiting as a supplier of this material.			
Accomplishments/Planned Programs Subtotals	27.114	19.802	5.049

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• M829E4: *M829E4*	-	30.168	41.235	-	41.235	42.033	42.606	43.503	44.429	-	243.974

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 652 / *M829E4 120mm Cartridge*

D. Acquisition Strategy

Milestone B Decision was obtained in 4Q FY 2009, and the program entered Engineering and Manufacturing Development (EMD) in FY 2010. EMD consists of two phases; the Phase I contract was awarded in 2Q FY 2010 and Phase II contract was awarded in 3Q FY 2011. During Phase I (15 months), the Government awarded two separate Cost Plus Fixed Fee (CPFF) contracts culminating in a demonstration test and competitive source selection to down select to one contractor for the 31 month Cost Plus Incentive Fee (CPIF) Phase II. The down select was based on the demonstrated performance of the cartridge design, proposed systems engineering and management approach for Phase II, and the total program cost estimate for each contractor at the time of the demonstration test. ATK was awarded the option to continue EMD Phase II until its conclusion in FY 2014. Upon successful completion of Milestone C, a Low Rate Initial Production (LRIP) option will be awarded to ATK in 3Q FY 2014. The contract also contains options for two additional production years. All production options are Firm Fixed Price (FFP).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) 652 / *M829E4 120mm Cartridge*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ATK Phase II	C/CPIF	ATK : MN	131.226	17.374		8.900		4.049		-		4.049	-	161.549	-
PM-MAS Labor and Travel	MIPR	PM-MAS Picatinny Arsenal : NJ	3.930	0.266		0.990		0.100		-		0.100	-	5.286	-
GD-OTS Phase 1	C/CPFF	GD-OTS : FL	2.068	-		-		-		-		-	-	2.068	-
ATK Phase 1	C/CPFF	ATK : MN	5.254	-		-		-		-		-	-	5.254	-
		Subtotal	142.478	17.640		9.890		4.149		-		4.149	-	174.157	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ARDEC	MIPR	Picatinny : New Jersey	10.832	2.614		2.400		0.450		-		0.450	-	16.296	-
		Subtotal	10.832	2.614		2.400		0.450		-		0.450	-	16.296	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Aberdeen Test Center (ATC)	MIPR	APG : Aberdeen, MD	7.860	1.500		2.100		-		-		-	-	11.460	-
Yuma Proving Ground	MIPR	YPG : Yuma, AZ	8.242	2.960		3.412		0.450		-		0.450	-	15.064	-
ATEC	MIPR	ATEC : Aberdeen, MD	0.400	-		0.100		-		-		-	-	0.500	-
Watervliet	MIPR	Watervliet : Troy, NY	0.868	-		-		-		-		-	-	0.868	-
JMC	MIPR	JMC : Rock Island, IL	2.100	0.900		0.400		-		-		-	-	3.400	-
Army Research Lab	MIPR	ARL : Aberdeen, Maryland	8.814	1.500		1.500		-		-		-	-	11.814	-
		Subtotal	28.284	6.860		7.512		0.450		-		0.450	-	43.106	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) 652 / *M829E4 120mm Cartridge*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	181.594	27.114		19.802		5.049		-		5.049	-	233.559	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 652 / *M829E4 120mm Cartridge*

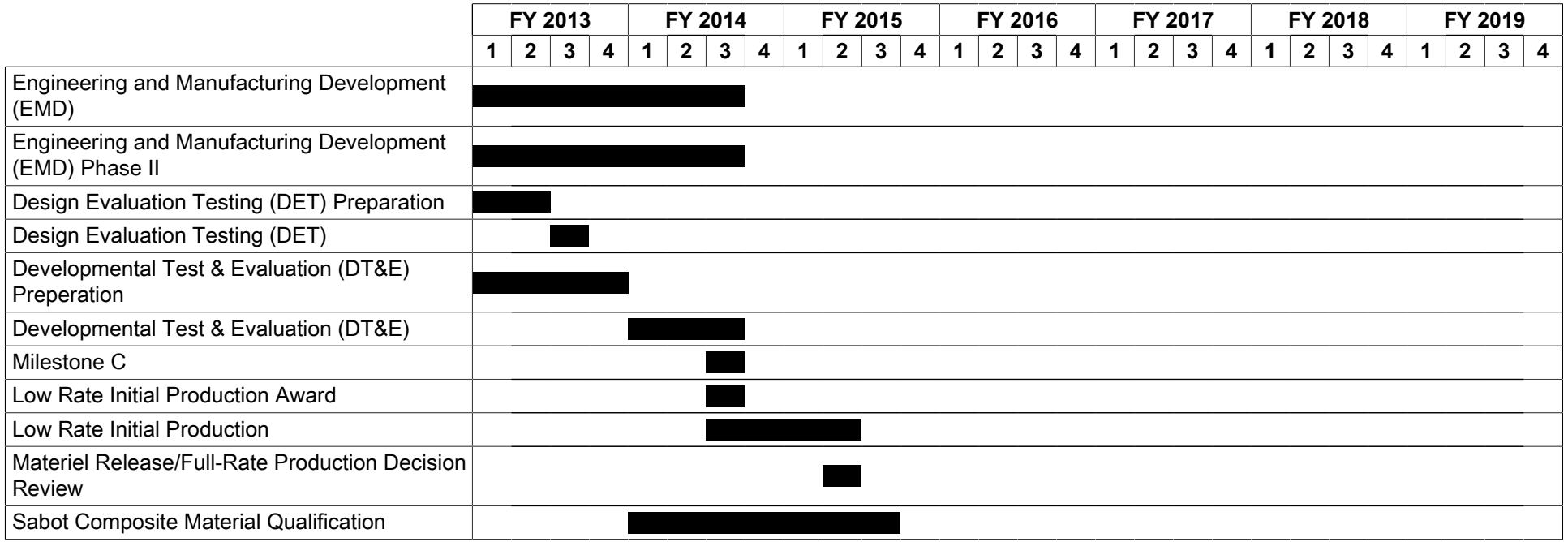

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 652 / *M829E4 120mm Cartridge*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Engineering and Manufacturing Development (EMD)	2	2010	3	2014
Engineering and Manufacturing Development (EMD) Phase II	3	2011	3	2014
Design Evaluation Testing (DET) Preparation	2	2012	2	2013
Design Evaluation Testing (DET)	3	2013	3	2013
Developmental Test & Evaluation (DT&E) Preperation	4	2012	4	2013
Developmental Test & Evaluation (DT&E)	1	2014	3	2014
Milestone C	3	2014	3	2014
Low Rate Initial Production Award	3	2014	3	2014
Low Rate Initial Production	3	2014	2	2015
Materiel Release/Full-Rate Production Decision Review	2	2015	2	2015
Sabot Composite Material Qualification	1	2014	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) 656 / *120mm Cartridge (Advanced Multipurpose-AMP)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
656: *120mm Cartridge (Advanced Multipurpose-AMP)*	-	-	-	14.748	-	14.748	27.578	25.637	25.655	39.518	-	133.136
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015 Project 656 is a new start.

A. Mission Description and Budget Item Justification

The Advanced Multi Purpose (AMP) program is a direct fire line of sight 120mm large caliber munition to be developed for the Abrams Main Battle Tank. It has three modes of operation including point detonate, delay and airburst. AMP is the material solution for breaching reinforced concrete walls and defeating Anti Tank Guided Missile (ATGM) teams from 50m to 2000m (T) and 50m to 4500m (O), a validated gap that cannot currently be met with existing stockpiled ammunition. In addition to added capability, AMP will also consolidate the capabilities of four existing stockpiled 120mm munitions, thereby addressing the users' battlecarry dilemma by allowing them to load a single munition that is capable of defeating multiple targets including ATGM teams, reinforced walls, personnel, light armor, bunkers, and obstacles. The full performance of the AMP is obtained with an Abrams equipped Ammunition Data Link breech modification, the same required by the M829E4. FY 2015 supports multiple contract awards for competing prototypes in Phase I of II for Engineering and Manufacturing Development (EMD).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Phase I Engineering and Manufacturing Development (EMD)	-	-	14.748
Description: Funding is provided for the following effort. ***FY 2015 Plans:*** Initiate EMD Phase I with two contract awards for competing prototypes. Contractors will conduct engineering efforts focused on demonstrating cartridge performance requirements. This will require hardware design and procurement along with initial component and cartridge level testing. Phase I efforts will extend into FY 2016 where a cartridge demonstration will be conducted.			
Accomplishments/Planned Programs Subtotals	-	-	14.748

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 656 / *120mm Cartridge (Advanced Multipurpose-AMP)*

D. Acquisition Strategy

The Advanced Multi Purpose EMD contract awards with competitive prototyping will occur in FY 2015. Two contracts will be awarded for EMD Demonstration Phase I. A cartridge demonstration test, conducted in late FY 2016, will be used to down select to a single contractor for EMD completion in Phase II, followed by Low Rate Initial Production (LRIP) in FY 2019 and two optional years of procurement in FY 2020 and FY 2021 respectively.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) 656 / *120mm Cartridge (Advanced Multipurpose-AMP)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor 1	TBD	TBD : TBD	0.000	-		-		5.325		-		5.325	Continuing	Continuing	Continuing
Contractor 2	TBD	TDB : TBD	0.000	-		-		5.325		-		5.325	Continuing	Continuing	Continuing
PM-MAS Labor and Travel	MIPR	Picatinny : NJ	0.009	-		-		0.748		-		0.748	Continuing	Continuing	Continuing
		Subtotal	0.009	-		-		11.398		-		11.398	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ARDEC	MIPR	Picatinny Arsenal : NJ	0.000	-		-		1.500		-		1.500	Continuing	Continuing	Continuing
Army Research Lab	MIPR	ARL Aberdeen : MD	0.000	-		-		0.600		-		0.600	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		2.100		-		2.100	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Yuma Test Center	MIPR	Yuma Proving Ground : AZ	0.000	-		-		0.750		-		0.750	Continuing	Continuing	Continuing
Aberdeen Test Center (ATC)	MIPR	Aberdeen Proving Ground : MD	0.000	-		-		0.500		-		0.500	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		1.250		-		1.250	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.009	-		-		14.748		-		14.748	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 656 / *120mm Cartridge (Advanced Multipurpose-AMP)*

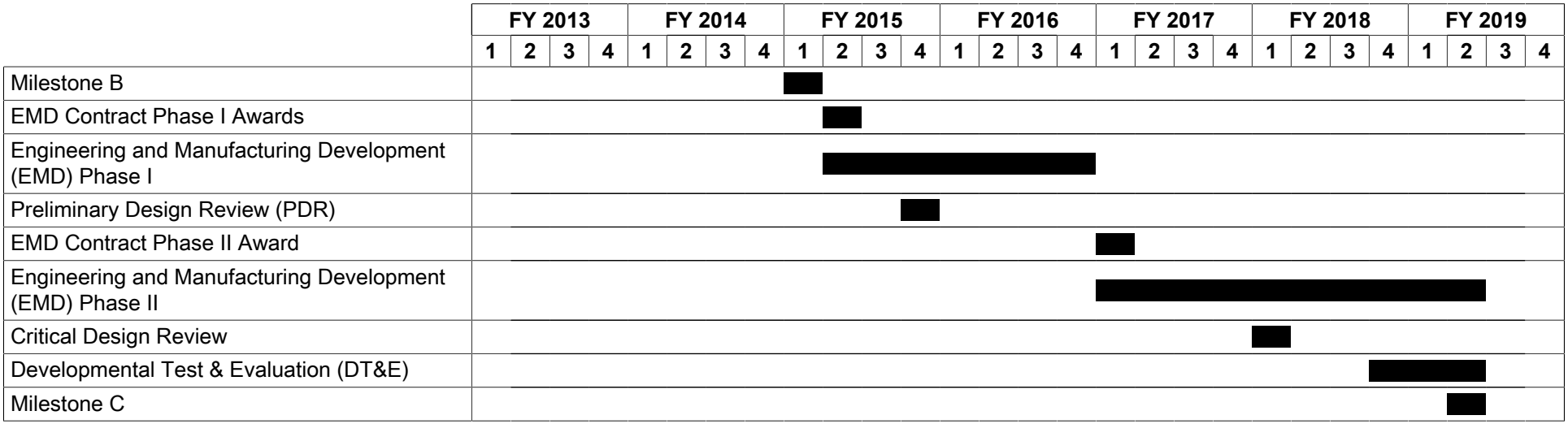

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 656 / *120mm Cartridge (Advanced Multipurpose-AMP)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone B	1	2015	1	2015
EMD Contract Phase I Awards	2	2015	2	2015
Engineering and Manufacturing Development (EMD) Phase I	2	2015	4	2016
Preliminary Design Review (PDR)	4	2015	4	2015
EMD Contract Phase II Award	1	2017	1	2017
Engineering and Manufacturing Development (EMD) Phase II	1	2017	2	2019
Critical Design Review	1	2018	1	2018
Developmental Test & Evaluation (DT&E)	4	2018	2	2019
Milestone C	2	2019	2	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) 694 / *Medium Caliber Ammunition*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
694: *Medium Caliber Ammunition*	-	-	10.794	-	-	-	-	-	-	-	-	10.794
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015 $6.964 Million is moved from 643639 Project 694 - Medium Caliber Ammunition to 654802 Project EC1-High Velocity, Low Velocity Thermal Training.

A. Mission Description and Budget Item Justification

The Target Practice Day Night Thermal (TP-DNT) cartridges are 40mm grenade training cartridges. The low velocity variant is for training with the M203/M320 grenade launchers; the high velocity variant is for training with the Mk19 grenade machine gun. Both cartridges will provide the Warfighter with a non-dud producing, environmentally friendly training cartridge that provides a visual impact signature seen day or night, by the naked eye, through night vision devices, and thermal weapon sights. These cartridges will replace the 40mm Target Practice, M918/M385A1 (Mixed Belt) cartridges and the 40mm M781 cartridges. It is expected that the unit price for high velocity cartridges will be lower than the Mixed Belt cartridges. Funding for FY 2015 activities transitions to PE 0604802/Project EC1.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Target Practice Day Night Thermal cartridges.	-	10.794	-
Articles:	-	-	-
Description: The Target Practice Day NightThermal (TP-DNT) cartridges are 40mm grenade training cartridges. ***FY 2014 Plans:*** FY14 primary activities consist of Milestone B approval, Source Selection Planning, and Bid Sample Test competition.			
Accomplishments/Planned Programs Subtotals	-	10.794	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Target Practice Day Night Thermal: *Target Practice Day Night/ Thermal cartridges*	-	40.466	1.972	-	1.972	34.830	61.277	78.442	75.682	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 694 / *Medium Caliber Ammunition*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

Production dollars will be used to procure 40mm training cartridges. If not 40mm DNT cartridges, 40mm mixed belt will be procured.

D. Acquisition Strategy

The TP-DNT cartridges will be developed through a competitive Engineering and Manufacturing Development (EMD) program. The EMD phase will develop both High Velocity (HV) and Low Velocity (LV) variants that will most likely utilize the same critical technologies, making concurrent acquisitions a logical approach to reduce overall acquisition costs. As part of the EMD source selection, a Bid Sample shoot-off competition will be conducted to evaluate potential designs. Within funding constraints, multiple contractor designs will be awarded EMD contracts with intent to down select to one contractor for the HV variant and one contractor for the LV variant. Following the down select, begin LRIP and two production year options. Milestone C scheduled for 1Q FY 2017.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) 694 / *Medium Caliber Ammunition*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor 1 Low Velocity	C/FFP	TBD : TBD	0.000	-		1.898		-		-		-	-	1.898	-
Contractor 2 Low Velocity	C/FFP	TBD : TBD	0.000	-		1.898		-		-		-	-	1.898	-
Contractor 1 High Velocity	C/FFP	TBD : TBD	0.000	-		1.898		-		-		-	-	1.898	-
Contractor 2 High Velocity	C/FFP	TBD : TBD	0.000	-		1.898		-		-		-	-	1.898	-
PM-MAS labor and travel	MIPR	Picatinny Arsenal : NJ	0.000	-		0.555		-		-		-	-	0.555	-
		Subtotal	0.000	-		8.147		-		-		-	-	8.147	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ARDEC	MIPR	Picatinny Arsenal : NJ	0.000	-		1.006		-		-		-	-	1.006	-
		Subtotal	0.000	-		1.006		-		-		-	-	1.006	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEC	MIPR	ATEC : Aberdeen, MD	0.000	-		0.127		-		-		-	-	0.127	-
YPG	MIPR	YPG : Yuma, AZ	0.000	-		1.514		-		-		-	-	1.514	-
		Subtotal	0.000	-		1.641		-		-		-	-	1.641	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		10.794		-		-		-	-	10.794	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 694 / *Medium Caliber Ammunition*

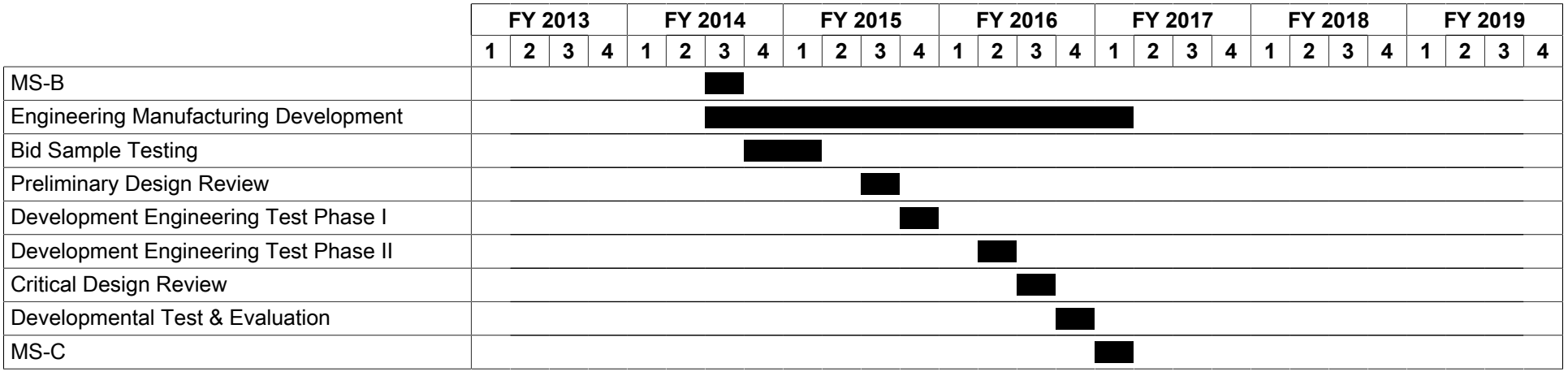

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** 694 / *Medium Caliber Ammunition*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
MS-B	3	2014	3	2014
Engineering Manufacturing Development	3	2014	1	2017
Bid Sample Testing	4	2014	1	2015
Preliminary Design Review	3	2015	3	2015
Development Engineering Test Phase I	4	2015	4	2015
Development Engineering Test Phase II	2	2016	2	2016
Critical Design Review	3	2016	3	2016
Developmental Test & Evaluation	4	2016	4	2016
MS-C	1	2017	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) EB8 / *OWL for Small Caliber Ammunition*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EB8: *OWL for Small Caliber Ammunition*	-	-	-	1.967	-	1.967	1.971	2.169	3.158	-	-	9.265
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015 Project EB8 is a new start.

A. Mission Description and Budget Item Justification

One Way Luminescence (OWL): Current legacy small caliber ammunition tracer rounds are comprised of a pyrotechnic tracer mix that allows enemy forces to visually see the trace round and track its trajectory back to the shooter. The objective of the OWL program is to develop and field a full day/night tracer technology to replace the current M62 pyrotechnic trace cartridge, with a new trace cartridge that is only visible to the shooter and those soldiers in close proximity. Additional benefits of the OWL program, depending on the technology that is selected, include a possible reduction in unit cost compared to the pyrotechnic trace round and the potential for every round to provide a both a trace and Enhanced Performance Round (EPR) capability, thereby increasing soldier survivability.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: One Way Luminescence (OWL)	-	-	1.967
Description: One Way Luminescence (OWL) will develop and demonstrate a full day/night tracer technology that eliminates the shortcomings of current legacy tracers. ***FY 2015 Plans:*** FY 2015 work will include concurrent government and contractor development efforts. The efforts will include procurement, development, and testing of competing material solutions to meet user requirements.			
Accomplishments/Planned Programs Subtotals	-	-	1.967

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EB8 / *OWL for Small Caliber Ammunition*

D. Acquisition Strategy

The OWL concept will be developed through multiple competitive prototyping efforts. An annual Technology Readiness Assessment (TRA) will be conducted in FY 2015, FY 2016, and FY 2017 to measure the progress of the designs. If the technology matures to a Technology Readiness Level of 6 (prototypes fired from the M240 machine gun) by FY 2017, there will be a down select to one design for Engineering and Manufacturing Development (EMD) program.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) EB8 / *OWL for Small Caliber Ammunition*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor 1	TBD	TBD : TBD	0.000	-		-		0.500		-		0.500	Continuing	Continuing	-
Contractor 2	TBD	TBD : TBD	0.000	-		-		0.500		-		0.500	Continuing	Continuing	-
PM MAS Labor & Travel	MIPR	Picatinny Arsenal : New Jersey	0.000	-		-		0.200		-		0.200	Continuing	Continuing	-
		Subtotal	0.000	-		-		1.200		-		1.200	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ARDEC	MIPR	Picatinny Arsenal : New Jersey	0.000	-		-		0.367		-		0.367	Continuing	Continuing	-
		Subtotal	0.000	-		-		0.367		-		0.367	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ARL	MIPR	Aberdeen : Maryland	0.000	-		-		0.200		-		0.200	Continuing	Continuing	-
Army Corps of Engineers	MIPR	Ft.Belvoir : Virginia	0.000	-		-		0.200		-		0.200	Continuing	Continuing	-
		Subtotal	0.000	-		-		0.400		-		0.400	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		1.967		-		1.967	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EB8 / *OWL for Small Caliber Ammunition*

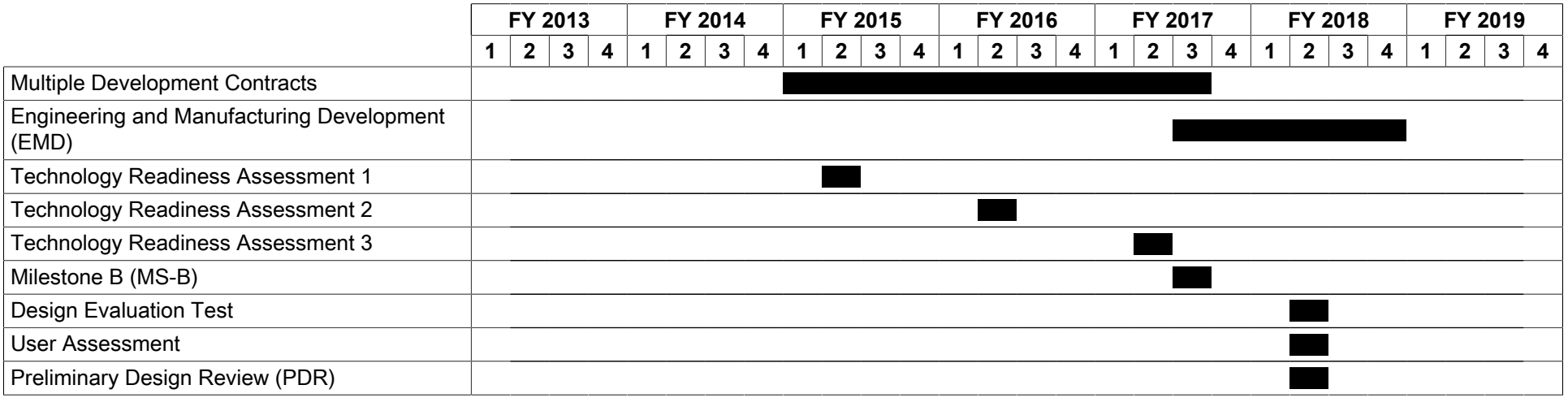

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EB8 / *OWL for Small Caliber Ammunition*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Multiple Development Contracts	1	2015	3	2017
Engineering and Manufacturing Development (EMD)	3	2017	4	2018
Technology Readiness Assessment 1	2	2015	2	2015
Technology Readiness Assessment 2	2	2016	2	2016
Technology Readiness Assessment 3	2	2017	2	2017
Milestone B (MS-B)	3	2017	3	2017
Design Evaluation Test	2	2018	2	2018
User Assessment	2	2018	2	2018
Preliminary Design Review (PDR)	2	2018	2	2018

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) EB9 / *Tunable Pyrotechnic Aircraft Countermeasure Flares*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EB9: *Tunable Pyrotechnic Aircraft Countermeasure Flares*	-	-	-	0.884	-	0.884	0.985	4.043	1.085	3.556	-	10.553
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY15 Project EB9 is a new start.

A. Mission Description and Budget Item Justification

This project will support research, development and testing to field new expendable countermeasure munitions that will protect Army aircraft from advanced and current guided-missile threats. Advances in the capability of threat systems to counter current decoys necessitate development of new expendable countermeasures. This program is considered essential to provide Army Aircraft protection against surface-to-air weapon systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Expendable Countermeasures to Guided Missile Threats	-	-	0.884
Description: This program will develop expendable countermeasure decoys which will protect Army aircraft from surface-to-air missiles. ***FY 2015 Plans:*** Develop and prepare documentation for MDD approval for the following countermeasure (CM) decoys. These decoys are designed to defeat specific threat types. Details of their operation are classified. a. Cloud CM b. Dazzler CM c. Advanced Seeker CM d. Radar Guided Threat Countermeasures to include improved Chaff and Active RF Expendable Decoy			
Accomplishments/Planned Programs Subtotals	-	-	0.884

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EB9 / *Tunable Pyrotechnic Aircraft Countermeasure Flares*

D. Acquisition Strategy

Strategy is under development and will be approved by the MDA once complete.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) EB9 / *Tunable Pyrotechnic Aircraft Countermeasure Flares*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	MIPR	PM Close Combat Systems : PICATINNY ARSENAL	0.000	-		-		0.277	Dec 2014	-		0.277	-	0.277	-
		Subtotal	0.000	-		-		0.277		-		0.277	-	0.277	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	MIPR	ARDEC : PICATINNY	0.000	-		-		0.607	Jan 2015	-		0.607	-	0.607	-
		Subtotal	0.000	-		-		0.607		-		0.607	-	0.607	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		0.884		-		0.884	-	0.884	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EB9 / *Tunable Pyrotechnic Aircraft Countermeasure Flares*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Material Development Decision												■																

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EB9 / *Tunable Pyrotechnic Aircraft Countermeasure Flares*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Material Development Decision	4	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) EC2 / *Advanced Armor-Piercing (ADVAP) for Small Cal Ammo*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EC2: *Advanced Armor-Piercing (ADVAP) for Small Cal Ammo*	-	-	-	4.916	-	4.916	6.205	5.324	6.414	-	-	22.859
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015 Project EC2 is a new start.

A. Mission Description and Budget Item Justification

The overall objective of the Advanced Armor Piercing (ADVAP) program is to develop and field a 7.62mm ADVAP cartridge that will provide overmatch capability to defeat lightly armored targets within typical medium caliber machine gun ranges. Current Armor Piercing ammunition performance has been stagnant over the last 20 years, which has led to known deficiencies against current and future hard target threats. The ADVAP cartridge will be designed specifically for use in the M240 Machine Gun and will replace the older M993 Armor Piercing cartridge.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Advanced Armor Piercing (ADVAP)	-	-	4.916
Description: Develop and demonstrate an Advanced Armor Piercing (ADVAP) 7.62mm cartridge in order to defeat threat targets and provide overmatch capability versus a broad spectrum of hard targets. ***FY 2015 Plans:*** FY 2015 work will include optimization of the projectile design through advanced modeling, simulation, and test iterations, along with alternate material studies, manufacturing studies and propellant requirement investigation. A Technology Readiness Assessment is planned for FY 2015 to determine the technology readiness level of the design.			
Accomplishments/Planned Programs Subtotals	-	-	4.916

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The 7.62mm ADVAP cartridge will be a Government design employing expertise from Armament Research, Development & Engineering Center (ARDEC) and the Army Research Laboratory (ARL). Multiple component contracts will be awarded to purchase raw materials and propellant. The 7.62mm ADVAP projectiles will

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EC2 / *Advanced Armor-Piercing (ADVAP) for Small Cal Ammo*

be manufactured and tested to demonstrate proof of concept in FY 2015. In FY 2016 design optimization and prototype manufacturing will occur. Upon successful Technology Readiness Level (TRL) 6 completion, Milestone B (MS-B) will occur at the end of FY 2016 to include fabrication and testing qualification of hardware.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) EC2 / *Advanced Armor-Piercing (ADVAP) for Small Cal Ammo*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Raw Materials Contract TBD	C/FFP	TBD : TBD	0.000	-		-		0.750		-		0.750	Continuing	Continuing	-
Propellant Contract TBD	C/FFP	TBD : TBD	0.000	-		-		0.250		-		0.250	Continuing	Continuing	-
PM-MAS Labor & Travel	MIPR	Picatinny Arsenal : New Jersey	0.000	-		-		0.200		-		0.200	Continuing	Continuing	-
		Subtotal	0.000	-		-		1.200		-		1.200	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ARDEC	MIPR	Picatinny Arsenal : New Jersey	0.000	-		-		1.316		-		1.316	Continuing	Continuing	-
ARL	MIPR	Aberdeen : Maryland	0.000	-		-		1.000		-		1.000	Continuing	Continuing	-
		Subtotal	0.000	-		-		2.316		-		2.316	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ARL	MIPR	Aberdeen : Maryland	0.000	-		-		1.400		-		1.400	Continuing	Continuing	-
		Subtotal	0.000	-		-		1.400		-		1.400	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		4.916		-		4.916	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EC2 / *Advanced Armor-Piercing (ADVAP) for Small Cal Ammo*

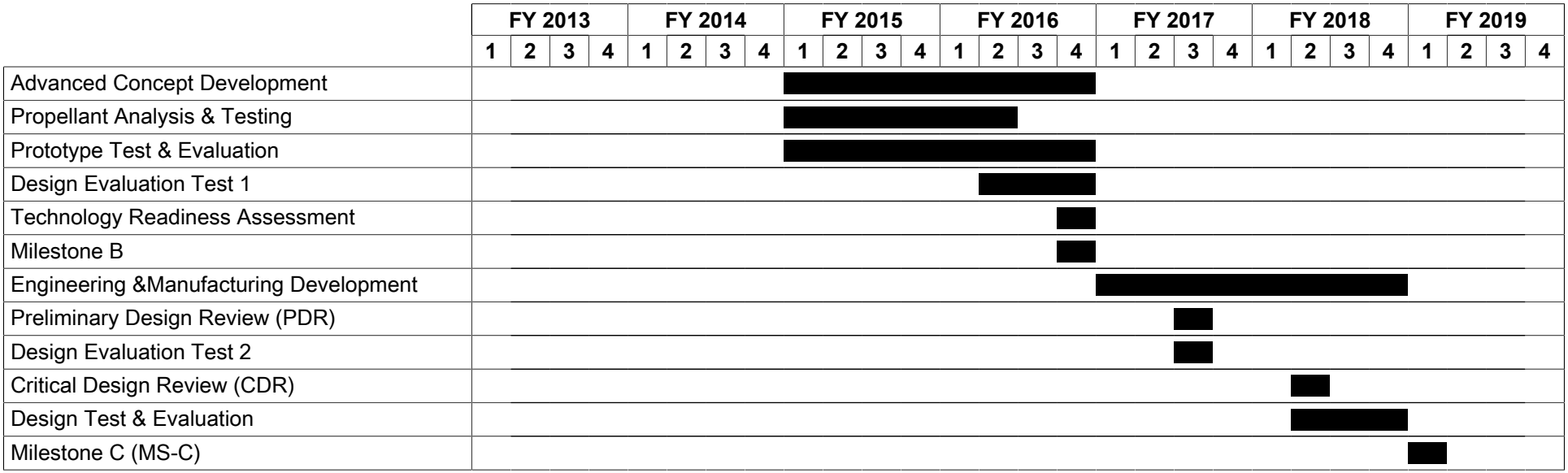

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EC2 / *Advanced Armor-Piercing (ADVAP) for Small Cal Ammo*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Advanced Concept Development	1	2015	4	2016
Propellant Analysis & Testing	1	2015	2	2016
Prototype Test & Evaluation	1	2015	4	2016
Design Evaluation Test 1	2	2016	4	2016
Technology Readiness Assessment	4	2016	4	2016
Milestone B	4	2016	4	2016
Engineering &Manufacturing Development	1	2017	4	2018
Preliminary Design Review (PDR)	3	2017	3	2017
Design Evaluation Test 2	3	2017	3	2017
Critical Design Review (CDR)	2	2018	2	2018
Design Test & Evaluation	2	2018	4	2018
Milestone C (MS-C)	1	2019	1	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603639A / *Tank and Medium Caliber Ammunition*	Project (Number/Name) EC3 / *Ammunition Logistics Prototyping*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EC3: *Ammunition Logistics Prototyping*	-	-	-	1.770	-	1.770	1.872	3.451	2.665	3.853	-	13.611
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY15 Project EC3 is a new start.

A. Mission Description and Budget Item Justification

This project supports the future force by improving the distribution, management, reliability and survivability of ammunition through the advanced development, integration, and demonstration of logistics system enablers. These enablers will improve the efficiency and effectiveness of ammunition operations, to include retrograde, while reducing the logistics footprint on the battlefield. Technology areas addressed include handling, distribution, and management (strategic and tactical), prognostics, diagnostics, and asset visibility, explosives safety, and adaptive and environmentally friendly packaging and palletization. The efficient deployment and sustainment of reliable ammunition is vital to success on the battlefield. This project enhances the operational effectiveness of the ammunition logistics system to ensure the distribution of reliable ammunition to the warfighter.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Munitions Health and Inventory Monitoring Systems ***Description:*** Performance & reliability of certain munitions can be degraded by the environmental exposure history they have experienced in their lifetime. This program will develop simple to complex environmental health and inventory monitoring systems to improve reliability and asset visibility and enable effective Condition Based Management for Ammunition. ***FY 2015 Plans:*** Integrate and test components of an embedded environmental health monitoring system that will facilitate improved ammunition management.	-	-	1.000
Title: Munitions Containerization Systems ***Description:*** For each family of munitions containers, optimize prototype container systems for automation compatibility, combat unit load quantity, sustainability/recyclability, Insensitive Munitions/explosives safety, environmental protection, load reconfiguration, unitization, and standardized interfaces. This will improve ammunition distribution efficiency while minimizing environmental and operational impacts. ***FY 2015 Plans:***	-	-	0.770

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603639A / *Tank and Medium Caliber Ammunition*	**Project (Number/Name)** EC3 / *Ammunition Logistics Prototyping*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Mature the design of advanced lightweight, environmentally friendly ammunition packaging and conduct an operational evaluation.			
Accomplishments/Planned Programs Subtotals	-	-	1.770

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	11.116	49.963	-	-	-	-	-	-	-	-	61.079
C03: *Interim Armored Vehicle (IAV) Family*	-	5.116	-	-	-	-	-	-	-	-	-	5.116
C51: *STRYKER MODERNIZATION*	-	6.000	49.963	-	-	-	-	-	-	-	-	55.963

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element (PE) supports the development of the Stryker Family of vehicles (FOV) in two projects:

The Interim Amored Vehicle Family Project (C03) supports the use of the common platform/common chassis design reducing requirements for repair parts and logistics support in the area of operations.

Engineering Change Proposal (ECP) (C51), will enable the Stryker FOV to host the future network without further degrading vehicle performance. The upgrade will increase available electrical power while ensuring adequate mechanical power, weight margin, and cooling. Combined with an in-vehicle network, this will ensure the FOV can host the future network while retaining its protection and mobility.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	14.347	49.989	58.600	-	58.600
Current President's Budget	11.116	49.963	-	-	-
Total Adjustments	-3.231	-0.026	-58.600	-	-58.600
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.433	-			
• Other Adjustments 1	-2.798	-0.026	-58.600	-	-58.600

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	Project (Number/Name) C03 / *Interim Armored Vehicle (IAV) Family*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
C03: *Interim Armored Vehicle (IAV) Family*	-	5.116	-	-	-	-	-	-	-	-	-	5.116
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY15, PE Number 0203735A/Project EE2 funds the Stryker ECP program, which was originally funded by PE Number 0603653A/Project C03 (FY13) and Project C51 (through FY14).

A. Mission Description and Budget Item Justification

The Interim Armored Vehicle (IAV) Family Project (C03) supports the development of the Stryker Family of Vehicles (FOV) consisting of 10 variants in the flat bottom configuration. The mission of the Stryker vehicle is to disrupt or destroy enemy military forces, control land areas including populations and resources and be prepared to conduct combat operations to protect US national interests(SRC 47100F400). The Stryker Brigade Combat Team (SBCT) while optimized for Small Scale Contingencies is capable of executing Unified Land operations across the Full Threat Spectrum with organic combined arms to company level and supporting Global Reaction Force contingencies in Force & Early Entry Operation.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Development Engineering	5.116	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Continuing development engineering for the Stryker ECP Phase II.			
Accomplishments/Planned Programs Subtotals	5.116	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• G85100: *Stryker Vehicle (G85100)*	242.439	419.100	385.110	-	385.110	455.484	396.631	99.038	-	484.028	2,481.830
• GM0100: *Stryker MOD (GM0100)*	60.801	20.522	39.683	-	39.683	66.159	170.823	503.552	603.906	1,709.838	3,175.284
• GE0180: *Spares and Repair Parts (WTCV) (GE0180)*	22.176	-	-	-	-	-	-	-	-	-	22.176

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	**Project (Number/Name)** C03 / *Interim Armored Vehicle (IAV) Family*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

AAE approval for a 3rd DVH SBCT Brigade of 337 Exchange Vehicles was given on July 26, 2013. Stryker Mod (GM0100) is for modifications for ECP retrofits to the Stryker fleet. Starting in FY 17 the modification line will fund both fleet modifications and ECP Retrofits.

D. Acquisition Strategy

The development of the Stryker Modernization capability will be acquired through a phased approach. Phase 1 requires the Original Equipment Manufacturer (OEM) to conduct a source selection to obtain a vendor that represents the best values for the capabilities described within the work directive based on user requirements. Phase 2 will encompass engineering design, prototype delivery and test support for the modernization effort. Beginning in FY15, PE Number 0203735A/Project EE2 funds the Stryker ECP program, which was originally funded by PE Number 0603653A/Project C03 (FY13) and Project C51 (through FY14).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	Project (Number/Name) C03 / *Interim Armored Vehicle (IAV) Family*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office (PMO) - Base (C03)	Various	TACOM, : MI	56.100	-		-		-		-		-	-	56.100	-
		Subtotal	56.100	-		-		-		-		-	-	56.100	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Stryker Development/ Engineering	Various	GDLS : MI	438.166	5.116	Nov 2013	-		-		-		-	-	443.282	-
TUA Development/ Engineering	Various	GDLS : MI	1.629	-		-		-		-		-	-	1.629	-
		Subtotal	439.795	5.116		-		-		-		-	-	444.911	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Stryker Development Testing	Various	Various Test Centers : Multiple	201.899	-		-		-		-		-	-	201.899	-
NBCRV Operational Test and Evaluation	Various	Various Test Centers : Various	5.738	-		-		-		-		-	-	5.738	-
Contractor Support to Test	Various	GDLS : MI	29.828	-		-		-		-		-	-	29.828	-
SRAT Testing	Various	Various Test Centers : Various	8.302	-		-		-		-		-	-	8.302	-
		Subtotal	245.767	-		-		-		-		-	-	245.767	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	741.662	5.116		-		-		-		-	-	746.778	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	Project (Number/Name) C03 / *Interim Armored Vehicle (IAV) Family*	

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	Project (Number/Name) C51 / *STRYKER MODERNIZATION*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
C51: *STRYKER MODERNIZATION*	-	6.000	49.963	-	-	-	-	-	-	-	-	55.963
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY15, PE Number 0203735A/Project EE2 funds the Stryker ECP program, which was originally funded by PE Number 0603653A/Project C03 (FY13) and Project C51 (through FY14).

A. Mission Description and Budget Item Justification

Stryker Modernization (C51) will enable the Stryker FOV to host the future network without further degrading vehicle performance. The upgrade will increase available electrical power while ensuring adequate mechanical power, weight margin, and cooling. Combined with an in-vehicle network, this will ensure the FOV can host the future network while retaining its protection and mobility. Beginning in FY15 funding for this effort was moved to Program Element 0273735/Project EE2.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Stryker ECP Development (Engineering / Prototypes)	5.100	46.020	-
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2013 Accomplishments: Continue develpment engineering for the Stryker ECP upgrades.			
FY 2014 Plans: Continue development engineering for the Stryker ECP upgrades. Begin prototype procurement for the engine, suspension, alternator and in-vehicle network of the DVH variants.			
Title: Stryker ECP Testing	-	0.833	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	**Project (Number/Name)** C51 / *STRYKER MODERNIZATION*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Begin the development test planning and execution for the ECP upgrade technologies, including tests for safety and human factors, automotive, communications, command and control (C3) live fire and operational testing.			
Title: Contractor Support to Test	-	0.319	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2014 Plans:*** Begin the contractor support of the test planning and execution. Support the Stryker platforms to include test preparation, vehicle mainenance/repair and overall test support for development tests, live fire testing and operational testing.			
Title: Government Engineering and Program Management	0.900	2.791	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Continue Government Systems Engineering and Program Management which includes labor, travel, training, supplies and equipment. ***FY 2014 Plans:*** Continue Government Systems Engineering and Program Management which includes labor, travel, training, supplies and equipment.			
Accomplishments/Planned Programs Subtotals	6.000	49.963	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• G85100: *Stryker Vehicle (G85100)*	242.439	419.100	385.110	-	385.110	455.484	396.631	99.038	-	484.028	2,481.830
• GM0100: *Stryker MOD (GM0100)*	60.801	20.522	39.683	-	39.683	66.159	170.823	503.552	603.906	1,709.838	3,175.284
• GE0180: *Spares (Initial) Stryker*	22.176	-	-	-	-	-	-	-	-	-	22.176

Remarks

AAE approval for a 3rd DVH SBCT Brigade of 337 Exchange Vehicles was given on July 26, 2013. Stryker MOD (GM0100) is for modifications for ECP retrofits to the Stryker fleet. Starting in FY17 the modification line will fund both fleet modifications and ECP retrofits.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	**Project (Number/Name)** C51 / *STRYKER MODERNIZATION*

D. Acquisition Strategy

The Stryker ECP effort will buy back the vehicle space, weight, and power margin lost due to the addition of numerous kits in response to eleven years of war (20-combat rotations & 30+ million total miles), in order to allow integration of the future network (as directed by VCSA in August 2011) without further degrading the performance of the platform. In May 2012, Phase I (Design) of the Stryker ECP program was approved, permitting preliminary design and integration efforts on both the Flat Bottom (FB) and Double-V Hull (DVH) variants (completed). In March 2013, Phase II approved upgrading the mechanical power, electrical power generation, chassis upgrades and the in-vehicle network for the DVH vehicles. ECP Phase II contract awarded in Novermber 2013, which continues development engineering, prototype build test and evaluation. The Phase III (Production) decision point will determine the production requirements of the technologies selected in Phase II. Beginning in FY15, PE Number 0203735A/Project EE2 funds the Stryker ECP program, which was originally funded by PE Number 0603653A/Project C03 (FY13) and Project C51 (through FY14).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	Project (Number/Name) C51 / *STRYKER MODERNIZATION*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office (PMO)	Various	TACOM : MI	4.610	0.900	Oct 2013	2.791	Mar 2014	-		-		-	-	8.301	-
		Subtotal	4.610	0.900		2.791		-		-		-	-	8.301	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Stryker ECP Development	SS/CPIF	GDLS : MI	256.870	5.100	Nov 2013	46.020	Apr 2014	-		-		-	-	307.990	-
		Subtotal	256.870	5.100		46.020		-		-		-	-	307.990	-

Remarks

Funding for the Engineering Change Proposal (ECP) beginning in FY15 was moved to Program Element 0203735A/Project EE2

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Stryker ECP Testing	Various	Various Test Centers : Various	0.905	-		0.833	Apr 2014	-		-		-	-	1.738	-
Contractor Support to Test	SS/CPFF	GDLS, MI : Various	0.000	-		0.319	Apr 2014	-		-		-	-	0.319	-
		Subtotal	0.905	-		1.152		-		-		-	-	2.057	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	262.385	6.000		49.963		-		-		-	-	318.348	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	**Project (Number/Name)** C51 / *STRYKER MODERNIZATION*

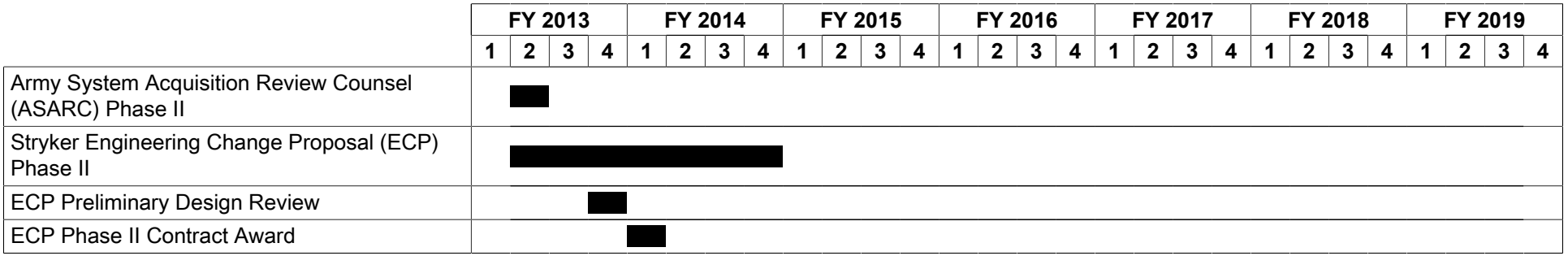

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603653A / *ADVANCED TANK ARMAMENT SYSTEM (ATAS)*	**Project (Number/Name)** C51 / *STRYKER MODERNIZATION*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Army System Acquisition Review Counsel (ASARC) Phase II	2	2013	2	2013
Stryker Engineering Change Proposal (ECP) Phase II	2	2013	4	2014
ECP Preliminary Design Review	4	2013	4	2013
ECP Phase II Contract Award	1	2014	1	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603747A / *Soldier Support and Survivability*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	15.936	11.685	9.602	-	9.602	10.582	10.774	11.368	9.689	Continuing	Continuing
610: *Food Adv Development*	-	3.576	5.185	3.482	-	3.482	4.818	4.904	5.499	5.080	Continuing	Continuing
C08: *Rapid Equipping Force*	-	12.360	6.500	6.120	-	6.120	5.764	5.870	5.869	4.609	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Note: FY 2013 Previous President's Budget (FY 2014) amount shown in B. Program Change Summary is an electronic error and should be $10,073.

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.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	29.933	6.703	14.468	-	14.468
Current President's Budget	15.936	11.685	9.602	-	9.602
Total Adjustments	-13.997	4.982	-4.866	-	-4.866
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-13.997	4.982	-4.866	-	-4.866

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603747A / *Soldier Support and Survivability*	Project (Number/Name) 610 / *Food Adv Development*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
610: *Food Adv Development*	-	3.576	5.185	3.482	-	3.482	4.818	4.904	5.499	5.080	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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.

This PE/Project supports Field Feeding Programs for all the services.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Fielded Individual Ration Improvement Project (FIRIP)	0.925	1.034	0.850
Articles:	-	-	-
Description: Continuous product improvement project for the Meal, Ready to Eat (MRE)			
FY 2013 Accomplishments: Continue to conduct in-house product development of food components and identify suitable COTS/NDI candidate items for fielded individual operational rations (e.g., Meal, Ready-to-Eat 2016 date of pack (DOP)) to enhance Warfighter acceptability, increase consumption and improve nutritional intake; Conduct pilot scale in-house production to support engineering design, technology insertion, and commercial producibility; Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness; Optimize food component processing and packaging to introduce targeted items/capabilities into individual ration platforms for enhanced acceptability, nutrition and performance; Transition to 6.5 for testing.			
FY 2014 Plans: Continue to conduct in-house product development of food components and identify suitable COTS/NDI candidate items for fielded individual operational rations (e.g., Meal, Ready-to-Eat 2016 date of pack (DOP)) to enhance Warfighter acceptability,			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
increase consumption and improve nutritional intake; Conduct pilot scale in-house production to support engineering design, technology insertion, and commercial producibility; Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness; Optimize food component processing and packaging to introduce targeted items/capabilities into individual ration platforms for enhanced acceptability, nutrition and performance; Transition to 6.5 for testing. ***FY 2015 Plans:*** Continue to conduct in-house product development of food components and identify suitable COTS/NDI candidate items for fielded individual operational rations (e.g. MRE™ 2017 date of pack) to enhance Warfighter acceptability, increase consumption and improve nutritional intake; conduct pilot scale in-house production to support engineering design, technology insertion, and commercial producibility; develop, integrate and validate state-of-the art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness; optimize food component processing and packaging to introduce targeted items/capabilities into individual ration platforms for enhanced acceptability, nutrition and performance; transition to 6.5 for testing.			
Title: Assault/Special Purpose Ration Improvement Project (ASPIP) ***Articles:*** ***Description:*** Continuous product improvement of special purpose rations by the insertion of new technologies in nutrition, processing and packaging. ***FY 2013 Accomplishments:*** Continue to identify COTS/NDI components for the Meal, Cold Weather/Long Range Patrol and First Strike Ration to enhance acceptability, variety, consumption and nutritional value of combat rations. Identify new components based upon user feedback, focus groups, emerging products and technologies and user requirements. Conduct accelerated and long term storage studies on candidate components. Work with industry partners to facilitate producibility and technology transition. Transition to 6.5 for Warfighter testing. ***FY 2014 Plans:*** Continue to identify COTS/NDI components for the Meal, Cold Weather/Long Range Patrol and First Strike Ration to enhance acceptability, variety, consumption and nutritional value of combat rations. Identify new components based upon user feedback, focus groups, emerging products and technologies and user requirements. Conduct accelerated and long term storage studies on candidate components. Work with industry partners to facilitate producibility and technology transition. Transition to 6.5 for Warfighter testing.	0.350 -	0.413 -	- -
Title: Fielded Group Ration Improvement Project (FGRIP) ***Articles:***	0.855 -	1.019 -	0.824 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Continuous product improvement project to continuously update/improve group ration components, menus, and packaging by integrating state-of-the-art military/commercial packaging and technology base transitions. ***FY 2013 Accomplishments:*** Continue efforts to update/improve components, menus and packaging to increase consumption and overall nutritional intake of the family of Unitized Group Rations (UGRs) for UGR-A (FY15 menus), B, E and H&S (2015/16 DOP). Identify COTS/NDIs and/or develop new food components in-house, conduct in-house testing, down-select items and develop test menus for Warfighter evaluation. Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into group ration platforms to increase operational effectiveness, functionality and improve logistics. Transition to 6.5 for Warfighter testing. ***FY 2014 Plans:*** Continue efforts to update/improve components, menus and packaging to increase consumption and overall nutritional intake of the family of Unitized Group Rations (UGRs) for UGR-A (FY15 menus), B, E and H&S (2015/16 DOP). Identify COTS/NDIs and/or develop new food components in-house, conduct in-house testing, down-select items and develop test menus for Warfighter evaluation. Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into group ration platforms to increase operational effectiveness, functionality and improve logistics. Transition to 6.5 for Warfighter testing. ***FY 2015 Plans:*** Continue efforts to update/improve components, menus and packaging to increase consumption and overall nutritional intake of the family of UGRs for UGR-A (FY16 menus), B, E and H&S (2015/16 DOP). Identify COTS/NDIs and/or develop new food components in-house, conduct in-house testing, down-select items and develop test menus for Warfighter evaluation. Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into group ration platforms to increase operational effectiveness, functionality and improve logistics. Transition to 6.5 for Warfighter testing.			
Title: US Navy Standard Core Menu Continuous Product Improvement Project (NSCM) ***Articles:*** ***Description:*** Provide recommendations for upgrading/improving Navy Standard Core Menu components by introducing new preparation techniques to enhance menu acceptance and effectiveness while reducing labor requirements. ***FY 2013 Accomplishments:*** Continue to identify and validate COTS and NDI candidate enhancements to the NSCM. Provide recommendations for improving menu components by introducing new commercial items and state-of-the-art food preparation and feeding techniques to enhance	0.162 -	0.220 -	0.155 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
menu acceptance and reduce labor requirements. Transition product summaries and results/recommendations to Naval Supply Systems Command (NAVSUP) for adoption and procurement. ***FY 2014 Plans:*** Continue to identify and validate COTS and NDI candidate enhancements to the NSCM. Provide recommendations for improving menu components by introducing new commercial items and state-of-the-art food preparation and feeding techniques to enhance menu acceptance and reduce labor requirements. Transition product summaries and results/recommendations to Naval Supply Systems Command (NAVSUP) for adoption and procurement. ***FY 2015 Plans:*** Continue to identify and validate COTS/NDI candidate enhancement to the NSCM. Provide recommendations for improving menu components by introducing new commercial items and state-of-the-art food preparation and feeding techniques to enhance menu acceptance and reduce labor requirements. Transition product summaries and results/recommendations to NAVSUP for adoption and procurement.			
Title: Integration of Performance Optimizing Compounds in Individual Rations. ***Description:*** Transition advanced development of performance optimizing compounds in individual ration platforms and/or enhancement packs. Validate commercial viability for productions and develop protocols for use. Demonstrate efficacy and dosage to address specific user needs and environmental constraints. Finalize acquisition strategy for integration of selective performance optimizing compounds into ration platforms. ***FY 2015 Plans:*** Work with industry to initiate commercial scale producibility; conduct sensory exam and storage studies; revise technical data and inspection plan; field test products in an operational environment.	-	-	0.108
Title: Recovery Nutrition Components ***Description:*** Collaborate with the Office of the Surgeon General (OTSG), DoD Nutrition Committee, and United States Army Research Institute of Environmental Medicine (USARIEM) on the optimal nutritional profile for recovery food components to be developed. Develop highly acceptable, low weight/cube, shelf stable ration components that meet the desired nutritional profile for enhancing recovery after missions and high intensity training as well as enhancing performance in subsequent bouts of intense activity. ***FY 2015 Plans:***	-	-	0.076

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Complete evaluation of components; present results and recommendations for approval; develop and transition tech data packages.			
Title: Quality Kinetics/Rapid Fielding of Ration Components	0.052	0.100	-
Articles:	-	-	-
Description: Confirm or optimize current accelerated storage protocols. Validate a predictive model for food degradation. ***FY 2013 Accomplishments:*** Continue development of baseline predictive model. Complete storage studies, data collection and analysis. Validate model and implement updated storage protocols for operational ration components where feasible. Transfer updated protocols to food technologists to support future in-house product development efforts. Generate tech report summarizing results and facilitating tech transfer of model to food technologists and developers of COTS/NDI components. ***FY 2014 Plans:*** Transition and implement quantitative kinetics models utilizing analytical markers (fat oxidation calorimetry, etc) to 6.4 Assault/ Special Purpose Ration Improvement Program (ASPIP) and Fielded Individual Ration Improvement Program (FIRIP). Integrate optimized quality kinetics models into current sensory evaluation system and adjust and optimize storage protocols and conditions using analytical testing/temperature kinetics and defined and recommended guidelines for conduction accelerated storage studies equivalent to Military storage requirements. Streamline and enhance evaluation process for identified new ration components (entrees, sides, snacks, bakery items) that fall within guidelines specified by the quality kinetics model, accelerate rapid fielding of specific ration component, decrease/minimize engineering support cases for quality related issues, and enhance development efficiency. Modify and transition technical data to Defense Logistics Agency - Troop Support.			
Title: Barrier Coating for Optimized Package Performance	-	0.140	-
Articles:	-	-	-
Description: Provides low-cost, non-foil, high performance packaging materials for incorporation into existing and future combat ration packaging systems, such as the Unitized Group Ration (UGR) and Meal, Ready-to-Eat (MRE). ***FY 2014 Plans:*** Determine optimal barrier structure and scale-up to pilot-scale production of prototype samples. Evaluate prototype packaging system for barrier and mechanical properties, and shelf life and rough handling.			
Title: Autonomous Shipboard Cleaning System (ASDS)	0.255	-	-
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: There is a need to develop an automated and innovative foodservice cleaning system for Navy legacy and future ships due to the planned reductions of Food Service Attendants (FSA), and Culinary Specialists (CS), required under the Navy Transformation Goal of optimized crewing. ***FY 2013 Accomplishments:*** Accept delivery of the contractor developed ASDS Phase II Small Business Innovation Research (SBIR) prototype, initiate a Phase III development effort. Conduct land-based testing at Natick Soldier Research Development and Engineering Center (NSRDEC) and coordinate enhanced simulation testing and demonstrations of the upgraded prototypes at Naval Surface Warfare Center's test facilities.			
Title: Integration of Selected Ration Components Using Novel Food Processing Technology to Individual Ration Platforms	0.083	0.103	-
Articles:	-	-	-
Description: Develop operational concept for integration of specific novel processed ration components into individual (as well as group and assault/special purpose) ration platforms. Establish baselines for nutrition retention, producibility and package utility. Evaluate baselines for novel processed components against key performance parameters of known thermally processed ration components. Generate draft technical requirements and/or revised documents for novel processed ration components. ***FY 2013 Accomplishments:*** Develop operational concept for integration of specific novel processed ration components into individual (as well as group and assault/special purpose) ration platforms. Establish baselines for nutrition retention, producibility and package utility. Evaluate baselines for novel processed components against key performance parameters of known thermally processed ration components. Generate draft technical requirements and/or revised documents for novel processed ration components. ***FY 2014 Plans:*** Develop operational concept for integration of specific novel processed ration components into individual (as well as group and assault/special purpose) ration platforms. Establish baselines for nutrition retention, producibility and package utility. Evaluate baselines for novel processed components against key performance parameters of known thermally processed ration components.			
Title: Containerized Ice Making System	0.225	0.440	0.285
Articles:	-	-	-
Description: Develop a containerized ice making system to support a 600 person base camp for cooling drinking water in extreme arid conditions and support other ice requirements for those on the base camp and for soldiers going out on missions/ patrols.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Conduct evaluations on available technologies that demonstrate that available systems were not satisfactory to meet the stated requirements of the user community. Develop a strategy to prototype a system that shall meet all of the stated performance requirements. Procure prototype from industry. ***FY 2014 Plans:*** Receive procured prototype(s) for production quality testing (PQT) at the Aberdeen Test Center. Use multiple prototypes and modified commercially available equipment to validate the current state of the technology to the user community. ***FY 2015 Plans:*** Conduct evaluation of integrated technologies in a realistic operating environment to include: modified commercial items, developmental prototypes and commercial industry technology demonstrators.			
Title: Co-Extruded Alternate Nutrient System (CANS)	0.080	0.157	-
Articles:	-	-	-
Description: Provide the Warfighter with functional multi-component bars and single matrices? pastes that serve as vehicles for optimizing nutrient delivery. Develop matrices that are best suited to deliver nutrients/performance optimizers that are stable, functional and organoleptically appealing. Increase quality and variety of performance bars utilizing co-extrusion technologies. ***FY 2013 Accomplishments:*** Validate producibility; finalize development of mature products (based on sensory analysis, accelerated shelf life test and testing in a relevant environment) and finalize packaging requirements. ***FY 2014 Plans:*** Finalize FDA approval of selected performance optimizers. Coordinate remaining field testing with Individual Ration program. Validate manufacturing base and long term shelf life studies in coordination with production base. Generate draft technical requirements.			
Title: Alternative Polymer Processing Technology (APPT)	0.177	0.100	-
Articles:	-	-	-
Description: Improve ration packaging by enhancing package performance through the use of advanced polymer processing technologies, such as orientation, co-extrusion, and layer multiplying co-extrusion. Reduce packaging weight and waste. Improve packaging performance through enhanced mechanical and barrier properties. ***FY 2013 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Prototype packages will be fabricated and storage stability and rough handling studies will be conducted to demonstrate performance in a simulated environment. Contracts will be initiated for insect infestation studies. The technical risk associated with this project is minimized, given that several congressionally funded programs have laid the ground work for this research through current and past projects. Producibility studies and field testing will be performed on prototype packaging structures. ***FY 2014 Plans:*** Continued producibility studies. Field testing to document Warfighter approval. Pending approval Joint Services Operational Rations Forum, procurement documents will be modified/produced and provided to DLA for inclusion in the MRE™, UGR® and/or FSR®.			
Title: Transition of Advanced Appliances for Field Kitchens	0.412	0.490	0.360
Articles:	-	-	-
Description: Provide the Warfighter with JP-8 fueled appliances that save fuel, are simple to use, provide a safe kitchen environment, and can easily be moved into buildings when necessary. Warfighters benefit from a safer, healthier, more comfortable kitchen environment, and equipment that facilitates preparation of quality A-ration meals. Existing appliances are only about 15-40% efficient; new burner technologies have demonstrated 75% efficiency, typical of stationary gas-fired equipment. ***FY 2013 Accomplishments:*** Validate producibility and finalize development of mature JP-8 appliances which have been successfully demonstrated in a relevant environment in a 6.3 technical demonstration; finalize performance requirements. Perform cost evaluation of relevant appliances and JP-8 burner technologies. Finalize integration of appliances into modular cabinet interface for kitchen platforms. ***FY 2014 Plans:*** Continue development, integration and test of JP-8 powered burner and appliance interfaces. Develop clear platform requirements for Battlefield Kitchen and continue testing modular appliances for legacy system compatibility. ***FY 2015 Plans:*** Perform comprehensive evaluation of appliances integrated with newly developed heating technologies. Verify performance and compatibility with multiple platforms and in dismounted operation. Complete evaluation of appliances mounted on dedicated kitchen platform to prove out component and subsystem maturity.			
Title: Permeability Modeling of Advanced Packaging Systems (PMAPS)	-	0.140	-
Articles:	-	-	-
Description: Expand upon the current film based permeability prediction model to allow for permeability prediction of packaging systems. Determine the total barrier effect of combined packaging technologies developed under research programs.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2014 Plans: Conduct pilot-scale production runs to produce packaging films for conversion into pouches and filling with selected food items. Conduct storage study to include sensory and analytical testing such as water activity and headspace analysis to validate model. A validation report will be prepared at the end of the storage study.			
Title: Packaging Optimization with Polymeric Microspheres (POPM)	-	0.100	-
Articles:	-	-	-
Description: Develop production base for polymeric films containing expandable microspheres for use in reduced-weight, high-performance ration packaging applications which will provide reduced density, enhanced thermal properties and cost savings. ***FY 2014 Plans:*** Collaboration will occur with industrial partners (material suppliers and converters) to produce material at the pilot-scale level, and to fabricate Flameless Ration Heater pouches and Meal Ready-to-Eat® entree bags. Collaboration will also occur between technical teams, DLA-Troop Support, and industrial partners. Cost validation analyses will be performed to confirm affordability.			
Title: Navy Food Service Analysis Tool	-	0.349	0.232
Articles:	-	-	-
Description: Develop a software analysis tool for Navy Foodservice that performs the following tasks: Automatically calculate all storage space factors and requirements for naval vessels based off the specific Navy Standard Core Menu (NSCM), crew size, Naval Ship's Technical Manual 096, Weights and Stability, Naval Vessel Requirements Food Service Facility Design Manual, Build Specifications 671, 672, and Type Commander established endurance levels. ***FY 2014 Plans:*** Develop automated subsistence inventory management, tracking and direct routing for all storage areas with mobile scanning technology capability; Conduct in-house tests & evaluation; Coordinate software Navy AIT approval/certification ***FY 2015 Plans:*** Coordinate and conduct shipboard user evaluations with the Navy; complete software Navy AIT approval/certification; transition information to Navy.			
Title: Integrate Commercial Appliances with Jet Propellant 8 (JP8) Fired Burners.	-	-	0.228
Description: Use currently available or modified JP-8 fired burners to operate commercially available griddles, ovens, skillets and other cooking appliances. Increase military kitchen reliability and mobility by eliminating the need to operate on military unique			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
fuel-fired equipment. Increase system maintainability by leveraging the logistical support of the highly matured commercial kitchen equipment industry. ***FY 2015 Plans:*** Use available or modified JP-8 fired burners to operate commercial food service equipment for Marine Corp field feeding operations. Identify candidate burner technologies for their potential integration into commercial food service equipment; design the combustion chamber for each appliance and integrate burner with appliance controls and exhaust.			
Title: Block Upgrades and Operational Improvements for Expeditionary Field Feeding Equipment. ***Description:*** Eliminate the sole sourcing of tray ration heater component parts. Reduce overall water consumption through the use of non-immersive cooking technologies and more efficient ware-washing equipment. Increase Kitchen flexibility through appliance upgrades. To reduce the overall fuel consumption of Expeditionary Field Feeding Equipment by minimizing the production of and making use of the waste heat produced through JP-8 combustion. ***FY 2015 Plans:*** Enhance the ability of the USMC to prepare all operational rations during expeditionary operations. Identify, procure, and evaluate candidate burners for tray ration reset; develop kit and procedures for install in Tray Ration Heater (TRH); conduct technical evaluation for heat exchangers in Efficiency Field Kitchen (EFK).	-	-	0.224
Title: Joint Inter-service Field Feeding Burner ***Articles:*** ***Description:*** Develop a Joint-Service, government owned JP-8 fuel fired burner for field kitchen appliances. Government will control configuration, procurement, and support decisions. Establish parts list using widely supportable supply chain in field operations. ***FY 2014 Plans:*** Build Design Validation (DV) units using a supportable, commercial bill of materials. Test in a high fidelity, realistic operating environment and conduct supportability validation. Prepare Technical Data Package. ***FY 2015 Plans:*** Use the burner baseline developed in this program to qualify acceptable appliance designs that interface properly with the burner. Integrate tech data package into appliance configuration control documentation.	- -	0.380 -	0.140 -
Accomplishments/Planned Programs Subtotals	3.576	5.185	3.482

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603747A / *Soldier Support and Survivability*	Project (Number/Name) 610 / *Food Adv Development*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RDT&E 654713.548: *Military Subsistence System*	1.901	1.938	1.335	-	1.335	2.239	2.207	2.442	2.448	Continuing	Continuing
• OPA M65801: *Refrigerated Containers*	17.833	28.376	10.290	-	10.290	11.970	12.832	15.642	14.128	Continuing	Continuing

Remarks

D. Acquisition Strategy

Project development will transition to Engineering & Manufacturing Development and production.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603747A / *Soldier Support and Survivability*	Project (Number/Name) 610 / *Food Adv Development*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Combat Feeding Program Management	Various	RDECOM, Natick, MA : Natick, MA	4.484	0.428	Jan 2013	0.532	Apr 2014	0.357	Dec 2014	-		0.357	Continuing	Continuing	Continuing
SBIR+STTR	TBD	Various : Various	0.117	-		-		-		-		-	-	0.117	-
		Subtotal	4.601	0.428		0.532		0.357		-		0.357	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	Various	RDECOM, Natick, MA : Natick, MA	34.425	1.364	Nov 2013	1.952	Mar 2014	1.307	Dec 2014	-		1.307	Continuing	Continuing	Continuing
Joint Service Food/Combat Feeding Equipment	Various	Various : Various	22.664	1.266	Nov 2013	2.066	Mar 2014	1.385	Dec 2014	-		1.385	Continuing	Continuing	Continuing
		Subtotal	57.089	2.630		4.018		2.692		-		2.692	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	Various	DTC/AEC : National Capitol Region	9.128	0.518	Nov 2013	0.635	May 2014	0.433	May 2015	-		0.433	Continuing	Continuing	Continuing
		Subtotal	9.128	0.518		0.635		0.433		-		0.433	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	70.818	3.576		5.185		3.482		-		3.482	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

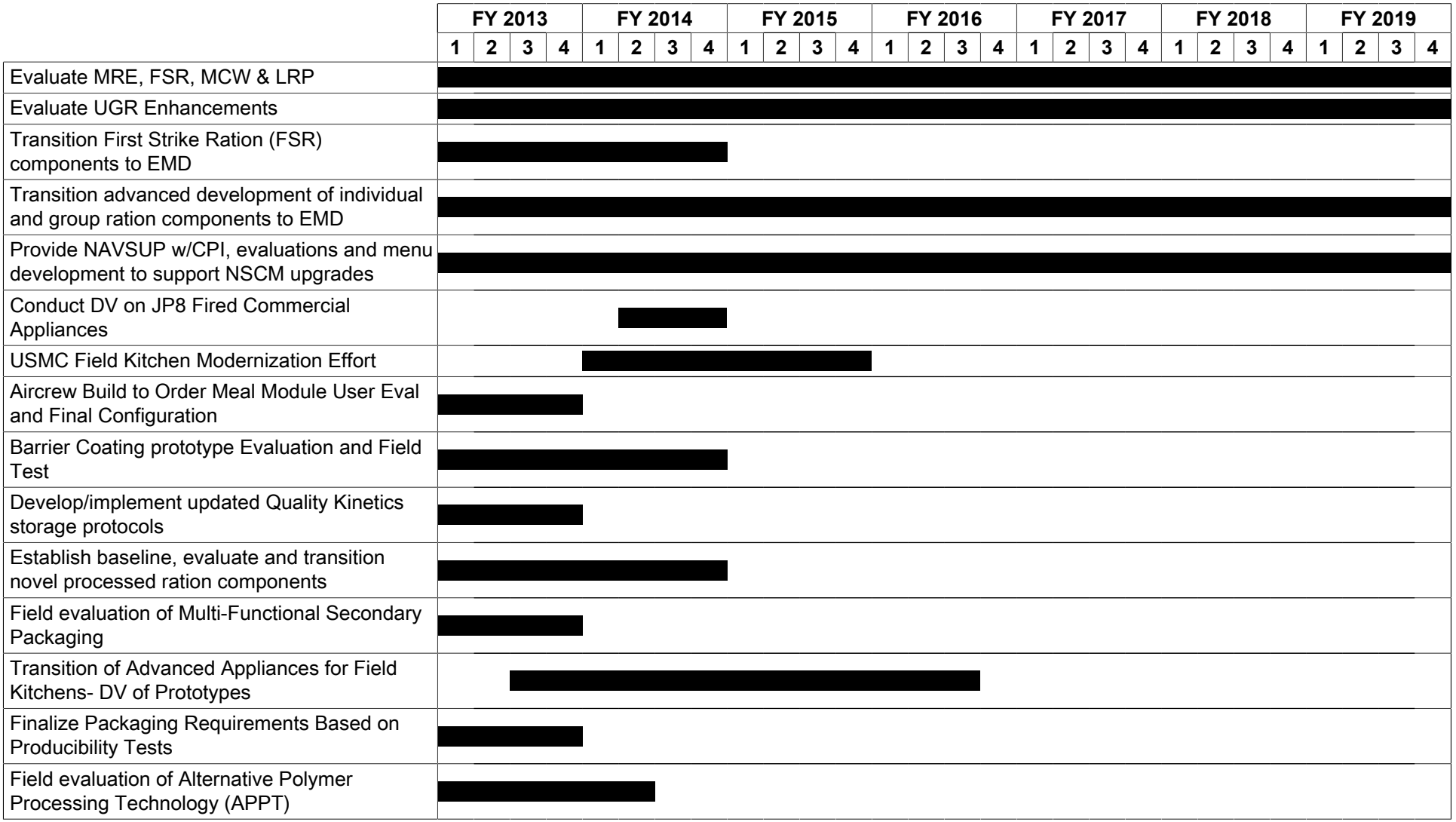

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

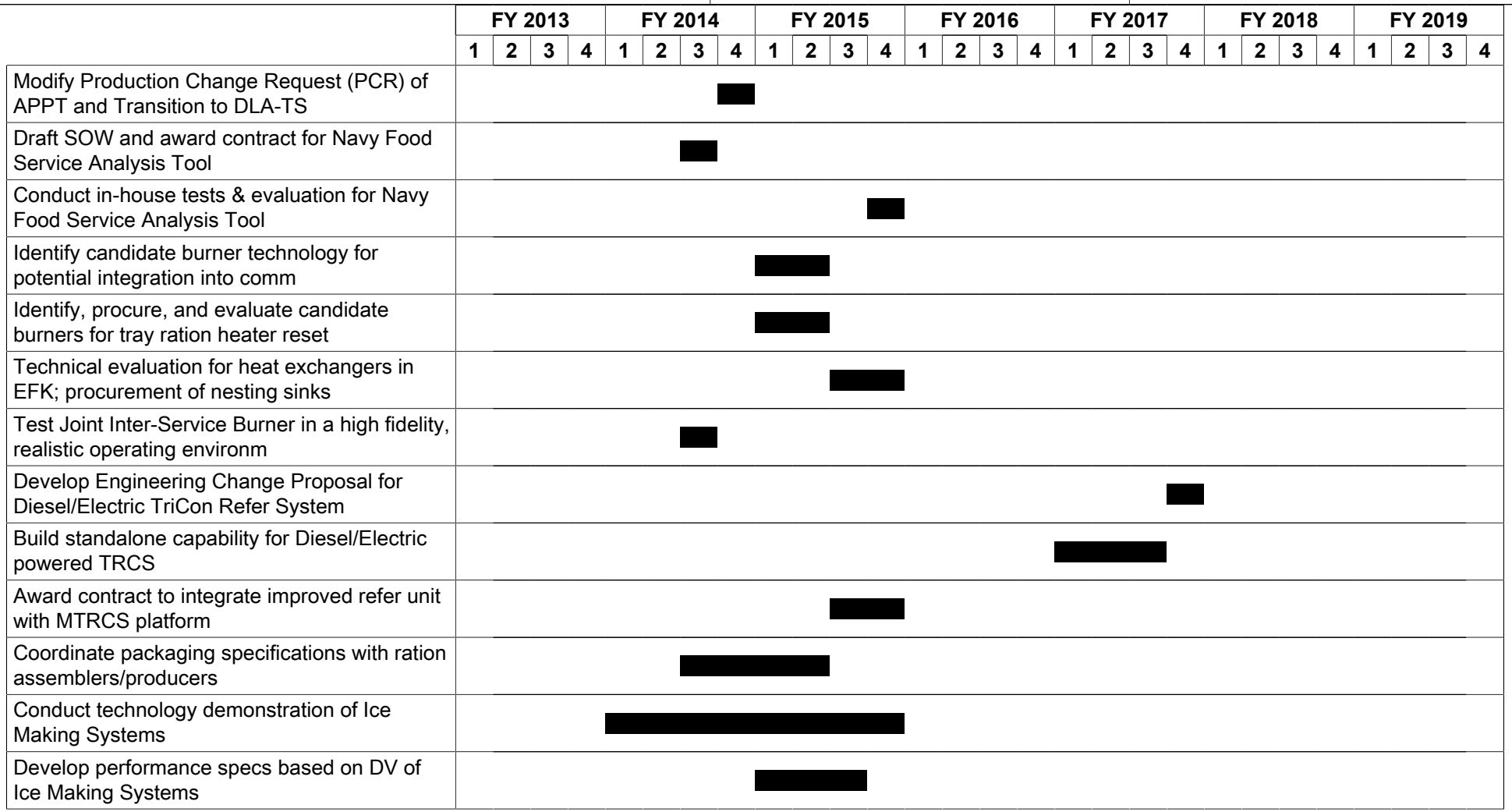

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Evaluate MRE, FSR, MCW & LRP	1	2009	4	2021
Evaluate UGR Enhancements	1	2009	4	2021
Transition First Strike Ration (FSR) components to EMD	1	2009	4	2014
Transition advanced development of individual and group ration components to EMD	1	2009	4	2021
Provide NAVSUP w/CPI, evaluations and menu development to support NSCM upgrades	1	2010	4	2021
Conduct DV on JP8 Fired Commercial Appliances	2	2014	4	2014
USMC Field Kitchen Modernization Effort	1	2014	4	2015
Aircrew Build to Order Meal Module User Eval and Final Configuration	1	2012	4	2013
Barrier Coating prototype Evaluation and Field Test	1	2012	4	2014
Develop/implement updated Quality Kinetics storage protocols	1	2012	4	2013
Establish baseline, evaluate and transition novel processed ration components	1	2013	4	2014
Field evaluation of Multi-Functional Secondary Packaging	4	2012	4	2013
Transition of Advanced Appliances for Field Kitchens- DV of Prototypes	3	2013	3	2016
Finalize Packaging Requirements Based on Producibility Tests	1	2013	4	2013
Field evaluation of Alternative Polymer Processing Technology (APPT)	1	2013	2	2014
Modify Production Change Request (PCR) of APPT and Transition to DLA-TS	4	2014	4	2014
Draft SOW and award contract for Navy Food Service Analysis Tool	3	2014	3	2014
Conduct in-house tests & evaluation for Navy Food Service Analysis Tool	4	2015	4	2015
Identify candidate burner technology for potential integration into comm	1	2015	2	2015
Identify, procure, and evaluate candidate burners for tray ration heater reset	1	2015	2	2015
Technical evaluation for heat exchangers in EFK; procurement of nesting sinks	3	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** 610 / *Food Adv Development*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Test Joint Inter-Service Burner in a high fidelity, realistic operating environm	3	2014	3	2014
Develop Engineering Change Proposal for Diesel/Electric TriCon Refer System	4	2017	4	2017
Build standalone capability for Diesel/Electric powered TRCS	1	2017	3	2017
Award contract to integrate improved refer unit with MTRCS platform	3	2015	4	2015
Coordinate packaging specifications with ration assemblers/producers	3	2014	2	2015
Conduct technology demonstration of Ice Making Systems	1	2014	4	2015
Develop performance specs based on DV of Ice Making Systems	1	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603747A / *Soldier Support and Survivability*	Project (Number/Name) C08 / *Rapid Equipping Force*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
C08: *Rapid Equipping Force*	-	12.360	6.500	6.120	-	6.120	5.764	5.870	5.869	4.609	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Equipment mix and configuration may change based on changes in operational environment and circumstances.

A. Mission Description and Budget Item Justification

The United States Army Rapid Equipping Force (REF) harnesses current and emerging technologies to provide rapid solutions to the urgently required capabilities of US Army forces employed globally. The REF combines and integrates functions that cross several Army staff elements and Army Service Component Commands (ASCC) to accelerate materiel solutions and technology insertion to forces on a global scale. The REF provides the Army's rapid response capability to develop, prototype, acquire, integrate and sustain Commercial-Off-The-Shelf (COTS) and Government Off-The-Shelf (GOTS) solutions to meet urgent combat requirements for deployed forces. It develops and inserts selected future force technologies, capabilities and surrogate material solutions into committed, deploying and transformational forces for operational evaluation, assessment and spiral development. It plans and executes assessments and studies of Army practices and issues concerning operational needs, desired future force capabilities and relevant Army business practices to provide feedback to Senior Army Leaders.

The REF bridges the gap between the lengthy acquisition process and immediate equipping needs. We pursue tangible solutions that can be equipped within a goal of 90 days. The REF focuses on finding effective game-changing capabilities to increase Soldier effectiveness, protection and lethality in any operational environment. The REF process provides the mechanism to respond rapidly to an adaptive enemy who changes in days and months, not years. The REF Headquarters Operations team will coordinate in theater work with Army Service Component Commands of the Combatant Commands (COCOMs) to understand their urgent needs, for which the REF acquisition capability may identify, procure, deliver and sustain solutions to the deployed units. A key element of this process is fiscal flexibility, permitting the REF to allocate funds against emerging threats and requirements in the year of fiscal execution.

As the REF procures the COTS and GOTS solutions in the future that are not Type Classified or an Army Program of Record (POR), there will be a substantial logistics/ sustainment tail that accompanies these capabilities, particularly as these solutions are being employed in immature or austere theaters where the logistics infrastructure is not already established.

The REF works directly with Operational Commanders at Brigade and below to find solutions to identified equipping requirements. These solutions may result in procurement of new or existing military/commercial materiel equipment, or accelerated development of a Future Force materiel solution for insertion into the current force now.
The REF key tasks are:

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** C08 / *Rapid Equipping Force*

- Partner with Army Service Component Commands and be responsive to tactical unit commanders in a global operating environment
- Bridge specific Operational Needs Statement/Joint Urgent Operational Needs Statement/Joint Emergent Operational Needs Statement (ONS/JUONS/JEONS) Gaps to meet urgent needs
- Develop material solutions to counter emerging global Asymmetric Threats with reduced Soldiers in the operational environment
- Ensure training, transportation, and sustainment are provided with every capability
- Cultivate and rapidly insert emerging technologies into Soldiers hands
- Conduct operational assessments to provide useful operator feedback to the Army
- Transition effective projects through Capability Development for Rapid Transition (CDRT) to support long-term sustainment
- Be aggressive and push the acquisition envelope, but operate within the law
- Integrate with existing Army organizations and systems to enable them to recognize and solve problems for tactical units

The REF Integrated Priority list (RIPL) consists of the REF top seven priorities based on requirements received from deployed units, and drives all REF efforts. The priorities with associated metrics as of 31 January 2014:

1. Dismounted Improvised Explosive Device (IED) Defeat (24 Requirements/13 Projects)
2. Small Combat Outpost (COP)/Patrol Base (PB) Sustainment (35 Requirements/32 Projects)
3. Small Combat Outpost (COP)/Patrol Base (PB) Force Protection (47 Requirements/32 Projects)
4. Dismounted Operations Support (60 Requirements/43 Projects)
5. Intelligence, Surveillance, and Reconnaissance (ISR) Shortfalls in Environmentally Inhospitable Operational Environments (OEs) (49 Requirements/30 Projects)
6. Dismounted Blue Force Tracking and Mission Command (12 Requirements/7 Projects)
7. Other (43 Requirements/24 Projects)

Total: 270 Requirements/181 Projects

FY12 metric shows the REF average procurement unit cost of $1.1 million per requirement.

The REF FY15 RDT&E Request of $6.120 million (Base) integrates, coordinates, deploys and provides urgent material capabilities to deployed and pre-deploying units in support of Joint and Army Forces Commanders to enhance the combat effectiveness of the operating force and enable the defeat of asymmetric threats. The emphasis for RDT&E funding is on Testing and Evaluation that supports projects in the areas of Force Protection; Improvised Explosive Device (IED) Detection and Defeat; Intelligence, Surveillance and Reconnaissance (ISR) capabilities; and Tactical Command; Control and Communication tools.

RDT&E funding also provides the REF the flexibility to invest in near-term, innovative solutions. RDT&E funds are necessary in the vast majority of all REF projects. REF uses RDT&E funds to work with industry and Other Governmental Agencies (OGAs) in order to further develop high (>6) Technology Readiness Level (TRL) or advanced technologies that often only need small amounts of funding in order to help them achieve a maturity level that is suitable to solve deployed US Army Forces

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** C08 / *Rapid Equipping Force*

problems with low investments for high payoffs. REF requires RDT&E funds to integrate several different Commercial-Off-The-Shelf/Government-Off-The-Shelf (COTS/GOTS) technologies into one capability that solves the tougher and more complex problems. REF uses RDT&E funds to conduct demonstrations and tests to validate technology solutions. REF requires RDT&E funds in order to modify existing technologies that were developed for one purpose but now may be suitable to solve another problem. REF Expeditionary Labs use RDT&E funds to develop and adapt technologies that meet immediate requirements forward in the theaters of operation with the active assistance of the Soldier in the solution development process. REF requires RDT&E funds to test technologies in order to ensure suitability and safety before equipping the Soldier- any modified Commercial-Off-The-Shelf/Government-Off-The-Shelf (COTS/GOTS) item has to be tested.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Rapid Equipping Force	12.360	6.500	6.120
Articles:	-	-	-

Description: Funding is provided for the following effort

FY 2013 Accomplishments:
The demand for REF 10-liner requirements has continued at FY12 levels based on the increased tempo of transitioning brigades in Operation Enduring Freedom (OEF) with 9 month deployments; the expansion of brigades' operational environments (OE's) that required smaller units to operate in more isolated areas; the expansion of Army Special Operations Forces Village Stability Operations (VSO) efforts; and the introduction of Security Force Advisory Assistance Teams (SFAATs) - a new force structure and role in Operation Enduring Freedom (OEF).

FY 2014 Plans:
REF mission expands to perform Direct Support (DS) to globally deployed Soldiers, Army Service Component Commands of the Combatant Commands, regionally aligned Brigade Combat Teams and other Department of Defense (DoD) organizations. During the same period we expect to see an increase in requirements submitted by Army Special Operations Forces (SOF) in other areas of the world as well as from brigades employed in more global roles, such as the regionally aligned Brigade Combat Teams, and their logistical support elements. REF's Expeditionary Labs are deployed to provide engineer support directly to Battalion and Brigade Forward Operating Bases/Combat Outposts/Patrol Bases and work side-by-side with Soldiers as they execute their missions. Engineers connect directly to Army, Department of Defense (DoD) and National Labs to conduct prototype design while including the users' immediate feedback. We also expect to play a much more deliberate role in providing support to the Army's Global Response Force (GRF) as they prepare for a wider range of response missions.

FY 2015 Plans:
The REF partners with the Army Service Component Commands (ASCC) and Army SOF community to perform Direct Support (DS) to globally deployed Soldiers and regionally aligned Brigade Combat Teams. We anticipate an increased need for flexibility to develop technological solutions supporting the reduced numbers of Soldiers operating globally in order to fill force protection gaps in the face of a smaller and more lethal terrorism threat. We expect to increase our engagement within the Army Service Component Commands (ASCC) in order to address capability gaps generated by geographical and environmental constraints

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603747A / *Soldier Support and Survivability*	**Project (Number/Name)** C08 / *Rapid Equipping Force*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
and improve our understanding of evolving threats and operating conditions within the respective ASCC areas of operations. REF's Expeditionary Labs are deployed to provide engineer support directly to Soldiers as they execute their missions in austere environments within a smaller logistical footprint. Engineers connect directly to Army, DoD and National Labs to conduct prototype design while including the user's immediate feedback. We expect to insert emerging technologies into ASCC level exercises in order to validate concept of operations (CONOPS) and Tactics, Techniques and Procedures (TTP). We also expect to play a much more deliberate role in providing support to the Army's Global Response Force (GRF) as they prepare for a wider range of response missions. We anticipate increased coordination with Army Technology enabled Capabilities Demonstrations (TeCD) and Joint Capabilities Technology Demonstrations in order to leverage developed residual technologies to rapidly address indentified critical capability gaps and gain immediate feedback through limited user evaluations.			
Accomplishments/Planned Programs Subtotals	12.360	6.500	6.120

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• M08101: *Other Procurement Army*	128.235	25.000	2.380	-	2.380	4.245	4.320	4.323	3.396	Continuing	Continuing
• 121018000: *Operations and Maintenance, Army*	115.130	32.048	20.358	-	20.358	20.626	20.687	20.826	20.975	Continuing	Continuing

Remarks

D. Acquisition Strategy

The United States Army Rapid Equipping Force harnesses current and emerging technologies to provide rapid solutions to the urgently required capabilities of US Army Forces employed globally. The REF focus is on rapidly placing game-changing capabilities into Soldiers' hands. This mission is accomplished in one of two ways: rapidly adapting Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) equipment to meet operational needs and developing emerging deployable capability via interaction with research and development organizations and academia. All capabilities are safety tested prior to insertion into operational environments. Training and sustainment is provided for every capability until it is transitioned to an approved program of record or terminated through the Capabilities Development for Rapid Transition (CDRT) process. Operational assessments are conducted to provide feedback in support of Army equipping and fielding decisions. REF capabilities routinely serve to bridge specific Operational Needs Statement (ONS), Joint Urgent Operational Needs Statement (JUONS) and Joint Emergent Operational Needs Statement (JEONS) gaps to meet urgent requirements.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603747A / *Soldier Support and Survivability*	Project (Number/Name) C08 / *Rapid Equipping Force*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dismounted Improvised Explosive Device (IED) Defeat	C/FFP	Various : Various	1.022	0.894		0.444		0.444		-		0.444	Continuing	Continuing	Continuing
Dismounted Operations Support	C/FFP	Various : Various	1.086	0.969		1.113		1.113		-		1.113	Continuing	Continuing	Continuing
Intelligence, Surveillance, and Reconnaissance (ISR) Shortfalls in Environmentally Inhospitable OE's	C/FFP	Various : Various	1.885	1.923		0.907		0.907		-		0.907	Continuing	Continuing	Continuing
Small Combat Outpost (COP) / Patrol Base (PB) Force Protection and Sustainment	C/FFP	Various : Various	1.853	1.885		-		-		-		-	Continuing	Continuing	Continuing
Other-REF RIPL Priorities (5-10)	C/FFP	Various : Various	4.154	4.624		-		-		-		-	Continuing	Continuing	-
Other	C/FFP	Various : Various	0.000	-		0.796		0.796		-		0.796	-	1.592	-
Base: Various Projects-Protect the Force in Counter Insurgency	C/FFP	Various : Various	11.841	-		-		-		-		-	-	11.841	-
Small Combat Outpost (COP)/Patrol Base (PB) Sustainment	C/FFP	Various : Various	0.000	-		0.648		0.648		-		0.648	-	1.296	-
Base: Various Projects-Enhance Intelligence Surveillance Recon	C/FFP	Various : Various	9.009	-		-		-		-		-	-	9.009	-
Small Combat Outpost (COP)/Patrol Base (PB) Force Protection	C/FFP	Various : Various	0.000	-		0.870		0.870		-		0.870	-	1.740	-
Dismounted Blue Force Tracking and Mission Command	C/FFP	Various : Various	0.000	-		0.222		0.222		-		0.222	-	0.444	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603747A / *Soldier Support and Survivability*	Project (Number/Name) C08 / *Rapid Equipping Force*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Base: Various Projects-Logistics/Medical in Counterinsurgency Ops	C/FFP	Various : Various	1.639	-		-		-		-		-	-	1.639	-
Base: Various Projects-Timeliness of Analysis and Information Dissemination	C/FFP	Various : Various	6.961	-		-		-		-		-	-	6.961	-
Congressional Add-Squad Mission Support System (SMSS)	C/FFP	Various : Various	1.600	-		-		-		-		-	-	1.600	-
SSTR/Economic Assumptions/FFRDC and SBIR	C/FFP	Various : Various	1.090	-		-		-		-		-	-	1.090	-
OCO: Rapid Equipping Force	C/FFP	Various : Various	19.190	-		-		-		-		-	-	19.190	-
		Subtotal	61.330	10.295		5.000		5.000		-		5.000	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEC (REF Integrated Priority List 1-10)	C/FFP	Various : Various	7.779	2.065		1.500		-		-		-	Continuing	Continuing	Continuing
ATEC (REF Integrated Priority List 1-7)	C/FFP	Various : Various	0.000	-		-		1.120		-		1.120	-	1.120	-
		Subtotal	7.779	2.065		1.500		1.120		-		1.120	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	69.109	12.360		6.500		6.120		-		6.120	-	-	-

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	7.960	6.890	8.953	-	8.953	8.938	9.079	9.181	12.048	Continuing	Continuing
907: *Tactical Exploitation Of National Capabilities-MIP*	-	7.960	6.890	8.953	-	8.953	8.938	9.079	9.181	12.048	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Tactical Exploitation of National Capabilities (TENCAP) program serves as the Army's centralized lead to perform National Intelligence cross-agency engineering to evaluate, enhance, prototype, and transition Intelligence, Surveillance, and Reconnaissance (ISR) technologies/capabilities developed by Science and Technology (S&T) and other activities across the National Intelligence Community (IC) into Army systems and architectures. TENCAP (1) ensures continued access to current National and Theater sensors and supporting tactical architectures; and (2) exploits new developments that focus on improving the analysis and tasking, collection, processing, exploitation, and dissemination (TCPED) of intelligence data. This includes efforts to: (1) shorten targeting timelines down to Platoon level; (2) enhance target identification; (3) provide better target location (accuracy); (4) provide continued coverage of a target; and (5) develop in-theater analytic tools to enable data exploitation in near-real-time support to contingency operations.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	8.660	6.894	9.102	-	9.102
Current President's Budget	7.960	6.890	8.953	-	8.953
Total Adjustments	-0.700	-0.004	-0.149	-	-0.149
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-0.004	-0.149	-	-0.149
• Other Adjustments 1	-0.700	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) 907 / *Tactical Exploitation Of National Capabilities-MIP*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
907: *Tactical Exploitation Of National Capabilities-MIP*	-	7.960	6.890	8.953	-	8.953	8.938	9.079	9.181	12.048	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

0603766A - Tactical Electronic Surveillance System program element develops advanced prototypes and capabilities to meet Army intelligence and operational requirements while protecting Army equity and ensuring continued interoperability through changes and improvements in the National Intelligence Community (IC) systems and architectures.

A. Mission Description and Budget Item Justification

The Tactical Exploitation of National Capabilities (TENCAP) program serves as the Army's centralized lead to perform National Intelligence cross-agency engineering to evaluate, enhance, prototype, and transition Intelligence, Surveillance and Reconnaissance (ISR) technologies/capabilities developed by Science and Technology (S&T) and other activities across the National Intelligence Community (IC) into Army systems and architectures. TENCAP (1) ensures continued access to current National and Theater sensors and supporting tactical architectures; and (2) exploits new developments that focus on improving the analysis and tasking, collection, processing, exploitation, and dissemination (TCPED) of intelligence data. This includes efforts to: (1) shorten targeting timelines down to Platoon level; (2) enhance target identification; (3) provide better target location (accuracy); (4) provide continued coverage of a target; and (5) develop in-theater analytic tools to enable data exploitation in near-real-time support to contingency operations.

FY2015 Base funding in the amount of $8.953 million provides for: (1) engineering and Collaborative Development on multiple validated National Intelligence Community (IC) advancements to ensure continuous Army interoperability with those Intelligence Community (IC) assets and architectures; (2) advanced development of more effective intelligence collection, processing, exploitation and dissemination (PED); and (3) advanced development of sensor capabilities for Air Vigilance (AV) Army Program of Record.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: TENCAP Cross-agency Core Engineering activities	5.842	6.370	8.453
Articles:	-	-	-
Description: Collaborate, develop and exploit emerging multi-intelligence and Space-based technologies to satisfy/accelerate Army Intelligence, Surveillance, Reconnaissance (ISR), Battle Command and Force Protection requirements.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities-MIP*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Ensure Army requirements in National developments; Ensure Army continued access to sensors and Space-based capabilities; Monitor emerging technologies and systems; Continue to develop and/or exploit advancements for integration and standardization in Army processing, exploitation and data dissemination (PED) and theater net-centric geolocation (TNG) capabilities; Exploit advances in commercial imagery, specific emitter identification and full motion video technologies; Develop prototypes that improve Army intelligence products. ***FY 2014 Plans:*** Ensure Army requirements in National developments; Ensure Army continued access to sensors and Space-based capabilities; Monitor emerging technologies and systems; Continue to develop and centrally manage the theater net-centric geolocation (TNG) capabilities; Exploit advances in commercial imagery and specific emitter identification technologies; Develop prototypes that improve Army intelligence products. ***FY 2015 Plans:*** Ensure Army requirements in National developments; Ensure Army continued access to sensors and Space-based capabilities; Monitor emerging technologies and systems; Exploit advances in commercial imagery and specific emitter identification technologies; Develop prototypes that improve Army intelligence products.			
Title: Air Vigilance ***Articles:*** ***Description:*** Enanced intelligence, force protection, and indications and warning capability initiated under Army TENCAP program. ***FY 2013 Accomplishments:*** Establish new Air Vigilance (AV) Army Program of Record. Development of remote and airborne capabilities. ***FY 2014 Plans:*** Advanced sensor development and enhancements for Air Vigilance (AV) Army Program of Record ingest and continued effectiveness. ***FY 2015 Plans:*** Advanced sensor development and enhancements for Air Vigilance (AV) Army Program of Record ingest and continued effectiveness.	2.118 -	0.520 -	0.500 -
Accomplishments/Planned Programs Subtotals	7.960	6.890	8.953

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities-MIP*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0605766A RDTE: *National Integration To Tactical Systems (MIP), 0605766A*	-	21.132	15.212	-	15.212	8.639	3.770	4.500	5.026	Continuing	Continuing
• W60001 OPA: *Air Vigilance (AV), OPA2 (W60001)*	-	-	7.000	-	7.000	6.000	2.120	2.457	2.507	Continuing	Continuing

Remarks

W60001 OPA2 Line renamed to "Air Vigilance" in FY15 to provide better operational security of system capabilities.

D. Acquisition Strategy

The Army Tactical Exploitation of National Capabilities (TENCAP) mission is a Congressionally mandated and chartered enduring requirement to leverage National intelligence capabilities useful to the tactical Army. The Army TENCAP acquisition strategy is driven by an annual TENCAP General Officer Steering Group (TGOSG), co-chaired by the Army G2; Army G8; and the Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology [ASA(ALT)]; and includes representatives from the Army G3; Army G6; Army Training and Doctrine Command (TRADOC); and the Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S). The TGOSG reviews, validates, prioritizes, and guides Army TENCAP efforts, according to Army and Defense strategy. Based on this TGOSG guidance, Army TENCAP invests BA 6.4 RDTE in Intelligence Community (IC) developments during the more cost-effective advanced development phase to ensure Army requirements are met with minimal redundancy. Army TENCAP then uses BA 6.5 RDTE to manage the transition of these advanced development efforts through system development and integration into Army Programs of Record (POR). This strategy ensures these leveraged investments remain viable through multiple budget cycles, significantly increasing successful transition to recipient Army POR. With acquisition discipline and oversight provided by PEO IEW&S, Army TENCAP executes the TGOSG approved efforts through use of multiple contracts and agreements with the military, National agencies, Labs, Industry Partners and Academia for the full duration required to complete development and transition these National capabilities into enduring Army programs.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) 907 / *Tactical Exploitation Of National Capabilities-MIP*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Intelligence Engineers (SETA)	C/FFP	TASC, Inc. : Alexandria, VA	2.375	2.426	Dec 2012	3.041	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Intelligence Engineers (SETA)	C/CPFF	TBD : TBD	0.000	-		-		3.011	Dec 2014	-		3.011	Continuing	Continuing	Continuing
Intelligence Engineers(Matrix Gov)	MIPR	AGC : Alexandria, VA	0.870	0.950	Dec 2012	0.950	Dec 2013	1.005	Dec 2014	-		1.005	Continuing	Continuing	Continuing
		Subtotal	3.245	3.376		3.991		4.016		-		4.016	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TENCAP Core (Focus) Areas	Various	Multiple : Multiple	0.000	-		-		1.787	Dec 2013	-		1.787	Continuing	Continuing	-
Air Vigilance	MIPR	Classified : MIPR	0.090	1.838	Dec 2012	0.400	Dec 2013	0.400	Dec 2014	-		0.400	Continuing	Continuing	-
		Subtotal	0.090	1.838		0.400		2.187		-		2.187	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prgm Mgmt-Dir Gov,travel,etc.	Allot	Army TENCAP : Alexandria, VA	2.422	2.466	Oct 2012	1.611	Oct 2013	1.850	Oct 2014	-		1.850	Continuing	Continuing	Continuing
Secured Facilities	MIPR	Army Geospatial : Ft. Belvoir, VA	0.000	-		0.768	Dec 2013	0.800	Oct 2014	-		0.800	Continuing	Continuing	Continuing
		Subtotal	2.422	2.466		2.379		2.650		-		2.650	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) 907 / *Tactical Exploitation Of National Capabilities-MIP*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Lab Tests, Exercises, Simulations	MIPR	Multiple : Multiple	0.000	0.280	Jan 2013	0.120	Dec 2013	0.100	Dec 2014	-		0.100	Continuing	Continuing	Continuing
		Subtotal	0.000	0.280		0.120		0.100		-		0.100	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.757	7.960		6.890		8.953		-		8.953	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities-MIP*

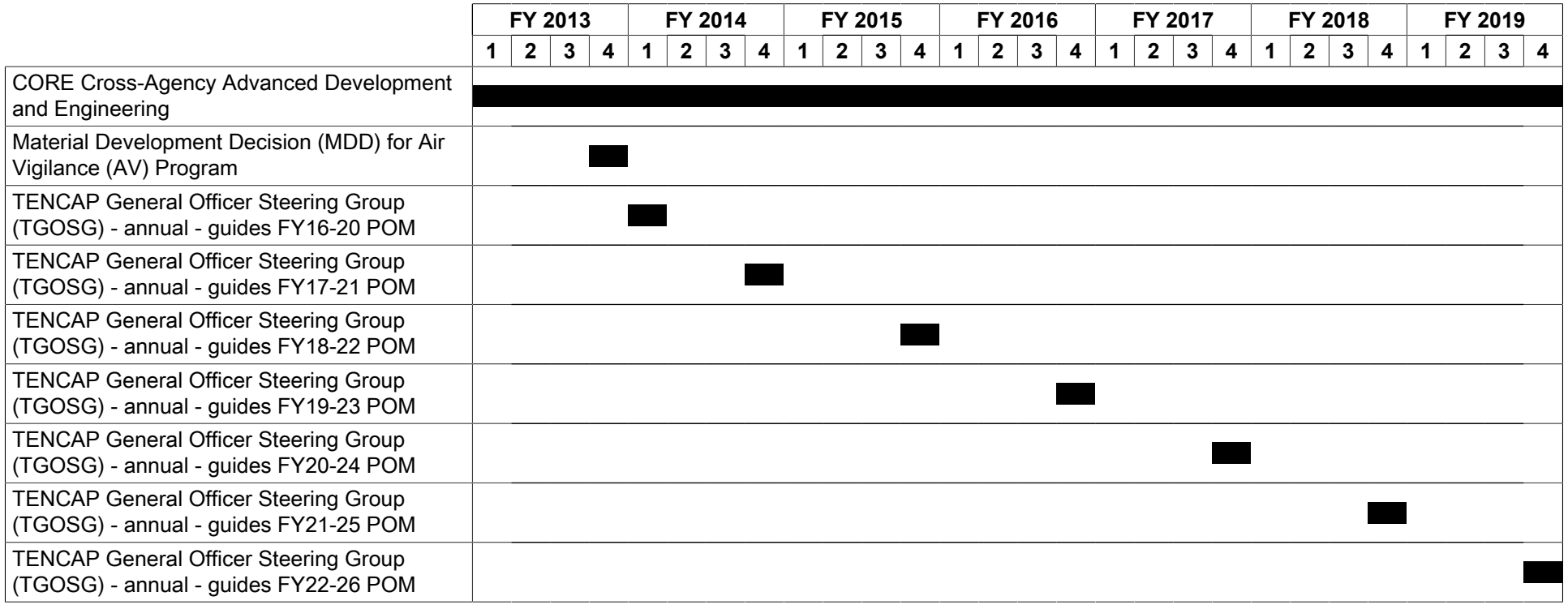

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities-MIP*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CORE Cross-Agency Advanced Development and Engineering	4	2006	4	2020
Material Development Decision (MDD) for Air Vigilance (AV) Program	4	2013	4	2013
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY16-20 POM	1	2014	1	2014
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY17-21 POM	4	2014	4	2014
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY18-22 POM	4	2015	4	2015
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY19-23 POM	4	2016	4	2016
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY20-24 POM	4	2017	4	2017
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY21-25 POM	4	2018	4	2018
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY22-26 POM	4	2019	4	2019

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603774A / *Night Vision Systems Advanced Development*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	9.556	9.061	3.052	-	3.052	5.181	5.120	4.934	4.944	Continuing	Continuing
VT7: *Soldier Maneuver Sensors - Adv Dev*	-	9.556	9.061	3.052	-	3.052	5.181	5.120	4.934	4.944	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Change Summary Explanation:

A. Mission Description and Budget Item Justification

This program element focuses on efforts to evaluate and integrate technologies and representative prototype systems that facilitate the development of Soldier-borne sensor devices transitioning from the laboratory to operational use. Efforts focus on proving out commonality across as broad a spectrum of users as possible to provide enhanced Soldier products, giving them superiority on the battlefield.

Project VT7 (Soldier Maneuver Sensors-Advanced Development): Efforts focus on proving out commonality across as broad a spectrum of users as possible to provide enhanced Soldier products, giving them superiority on the battlefield. Near term efforts include the integration of goggles with the weapon sights for Rapid Target Acquisition (RTA) in a realistic operating environment, thereby increasing Soldier lethality. This project also develops a Family of Weapon Sights (FWS) with fused electro-optical performance, including focal plane arrays and high resolution micro-displays. FWS enabling technologies increase product resolution, range, and imaging performance. New technologies will improve Soldier lethality, survivability, reduce weight, and improve affordability, mobility and comfort to combat and training environments. In addtion this project will explore insertion of technology that improves the Soldier's ability to detect Improvised Explosive Devices (IED) Detection.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	10.715	9.066	6.208	-	6.208
Current President's Budget	9.556	9.061	3.052	-	3.052
Total Adjustments	-1.159	-0.005	-3.156	-	-3.156
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-3.156	-	-3.156
• Other Adjustments 1	-1.159	-0.005	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603774A / *Night Vision Systems Advanced Development*	Project (Number/Name) VT7 / *Soldier Maneuver Sensors - Adv Dev*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VT7: *Soldier Maneuver Sensors - Adv Dev*	-	9.556	9.061	3.052	-	3.052	5.181	5.120	4.934	4.944	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports efforts to evaluate and integrate technologies and representative prototype systems for the development of Soldier-borne sensor devices, transitioning from the laboratory to operational use. Efforts focus on proving out commonality across as broad a spectrum of users as possible to provide enhanced products that give Soldiers superiority on the battlefield. Near term efforts include the integration of Helmet Mounted Displays (HMDs) with weapon sights for a Rapid Target Acquisition (RTA) capability in a realistic environment, increasing Soldier situational awareness and lethality and integrating technology, which detects enemy snipers using precise target information to mitigate operational risk before sniper fire occurs. This project also integrates high resolution thermal focal plane arrays, integrated ballistic solutions for auto-adjusting reticles, and wireless technology with weapon sights, increasing range, performance, and capability, while decreasing system size and weight. These integration efforts improve Soldier situational awareness, lethality, survivability, mobility, and comfort in combat and training environments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Family of Weapons Sights (FWS)	9.049	7.961	1.438
Articles:	-	-	-
Description: FWS is a family of weapon sights that utilize advances in thermal and low light level sensor to produce Individual (I), Crew-Served (CS), and Sniper (S) weapon sights operable in-line with a day optic or in stand-alone mode. FWS-CS includes fused multi-band imagery and rapid target acquisition with ballistic equations, providing the Soldier with improved situational awareness and more rapid target detection and engagement during day and night operations. This program integrates smaller pixel (12 micron) uncooled long-wave infrared focal plane arrays in multiple large format sizes to improve sensitivity, clarity, and range, while simultaneously reducing the size, weight and power consumption of the Crew-Served and Sniper variants.			
FY 2013 Accomplishments: Demonstrated technology for the FWS-I at an Early User Assessment (EUA) and funded develop FWS-CS technology including the build and testing of prototypes and evaluation of 12 micron Focal Plane Arrays (FPA).			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603774A / *Night Vision Systems Advanced Development*	**Project (Number/Name)** VT7 / *Soldier Maneuver Sensors - Adv Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continue development of FWS-CS including integration of 12 micron thermal focal plane arrays, integrated ballistic solutions for auto-adjusting reticles, wireless technology, and HMDs resulting in demonstration of these technologies at an EUA. ***FY 2015 Plans:*** Continue technology development of the FWS-CS. Continue technology development of the FWS-Sniper (FWS-S) to integrate sensor and system technologies into a sight that can be clipped onto high magnification sniper day sights and provide increased identification ranges.			
Title: Pre-Shot Threat Detection (PTD) ***Articles:*** ***Description:*** Pre-Shot Threat Detection (PTD) (previously named Pre-emptive Threat Detection) provides dismounted units with pre-shot counter sniper-counter shooter-counter surveillance capabilities. Detecting enemy weapon and surveillance optics increases the dismounted leader's situational awareness/understanding (SA/SU) in complex environments. The objective of PTD is to provide pre-shot threat detection and increase survivability for dismounted Soldiers through battle systems integration. ***FY 2013 Accomplishments:*** Completed the Materiel Development Decision (MDD) for Pre-Shot Threat Detection . Initiated activities for Materiel Solution Analysis Phase. ***FY 2014 Plans:*** Complete Analysis of Alternatives in support of proposed Milestone Decision planned for the 4th Quarter of FY14 ***FY 2015 Plans:*** Support completion of Performance Specification, multiple contract awards to build technology demonstrators for Pre-Shot Threat Detection.	0.507 -	1.100 -	1.614 -
Accomplishments/Planned Programs Subtotals	9.556	9.061	3.052

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Night Vision Systems -Eng Dev: *Night Vision Systems - Eng Dev (PE 604710 L67)*	-	11.265	15.256	-	15.256	12.422	12.710	19.654	24.722	Continuing	Continuing
• Helmet Mounted Enhanced Vision Devi: *Helmet Mounted*	118.698	129.111	134.365	-	134.365	137.769	88.683	63.241	77.503	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603774A / *Night Vision Systems Advanced Development*	**Project (Number/Name)** VT7 / *Soldier Maneuver Sensors - Adv Dev*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Enhanced Vision Devices (HMEVD) (SSN K36400)											
• Thermal Weapon Sight (TWS): *Thermal Weapon Sight (TWS) (SSN K22900)*	20.054	10.074	-	-	-	-	-	-	0.154	-	30.282
• Family of Weapon Sights (FWS) - I: *Family of Weapon Sights - Individual (FWS-I) (SSN K22002)*	-	-	49.205	-	49.205	45.898	71.610	66.690	86.239	Continuing	Continuing
• Family of Weapon Sights (FWS) - CS: *Family of Weapon Sights - Crew Served (FWS-CS) (SSN K22003)*	-	-	-	-	-	49.815	40.633	45.544	58.894	Continuing	Continuing
• Family of Weapon Sights (FWS) - S: *Family of Weapon Sights - Sniper (FWS-S) (SSN K22004)*	-	-	-	-	-	-	8.788	14.458	18.697	Continuing	Continuing
• Sniper Night Sight (SNS): *Sniper Night Sight (SNS) (SSN K41500)*	11.660	-	-	-	-	-	-	-	0.020	-	11.680
• Multi Function Aiming Light: *Multi Function Aiming Light (MFAL) (SSN K35000)*	-	-	-	-	-	-	-	9.860	7.903	Continuing	Continuing

Remarks

D. Acquisition Strategy

The various developmental programs in this project continue to exercise competitively awarded contracts using best value source selection procedures.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603774A / *Night Vision Systems Advanced Development*	Project (Number/Name) VT7 / *Soldier Maneuver Sensors - Adv Dev*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Allot	Various : Various	0.000	0.336	Jan 2013	1.001	Jan 2014	0.331	Jan 2015	-		0.331	Continuing	Continuing	-
		Subtotal	0.000	0.336		1.001		0.331		-		0.331	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Family of Weapon Sights-Crew Served (FWS-CS)	Various	NVESD : FT BELVOIR, VA	0.000	7.591	Jul 2013	-		-		-		-	Continuing	Continuing	-
Family of Weapon Sights-Sniper (FWS-S)	MIPR	NVESD : FT BELVOIR, VA	0.000	-		6.063	Mar 2014	0.123	Jun 2015	-		0.123	Continuing	Continuing	-
Pre-Shot Threat Detection (PTD)	MIPR	NVESD : FT BELVOIR, VA	0.000	0.500	Sep 2013	0.581	Jan 2014	1.494	Apr 2015	-		1.494	Continuing	Continuing	-
		Subtotal	0.000	8.091		6.644		1.617		-		1.617	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	TBD	Various : Various	0.000	0.744	May 2013	0.830	Feb 2014	0.404	Feb 2015	-		0.404	Continuing	Continuing	-
		Subtotal	0.000	0.744		0.830		0.404		-		0.404	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Support Test Activity	MIPR	Army Test and Evaluation Command : Varrious	0.000	0.385	Feb 2013	0.586	Jun 2014	0.700	Jan 2015	-		0.700	Continuing	Continuing	-
		Subtotal	0.000	0.385		0.586		0.700		-		0.700	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603774A / *Night Vision Systems Advanced Development*	Project (Number/Name) VT7 / *Soldier Maneuver Sensors - Adv Dev*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	9.556		9.061		3.052		-		3.052	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603774A / *Night Vision Systems Advanced Development*	**Project (Number/Name)** VT7 / *Soldier Maneuver Sensors - Adv Dev*

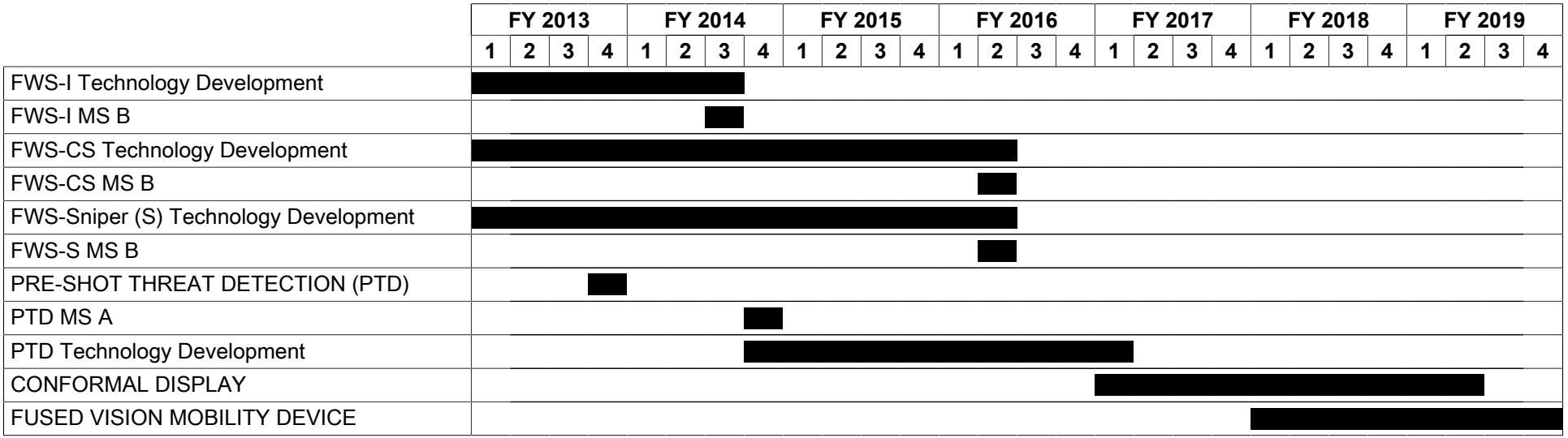

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603774A / *Night Vision Systems Advanced Development*	**Project (Number/Name)** VT7 / *Soldier Maneuver Sensors - Adv Dev*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
FWS-I Technology Development	4	2011	3	2014
FWS-I MS B	3	2014	3	2014
FWS-CS Technology Development	4	2011	2	2016
FWS-CS MS B	2	2016	2	2016
FWS-Sniper (S) Technology Development	4	2011	2	2016
FWS-S MS B	2	2016	2	2016
PRE-SHOT THREAT DETECTION (PTD)	4	2013	4	2013
PTD MS A	4	2014	4	2014
PTD Technology Development	4	2014	1	2017
CONFORMAL DISPLAY	1	2017	2	2019
FUSED VISION MOBILITY DEVICE	1	2018	2	2020

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	4.060	2.631	7.830	-	7.830	9.988	8.938	7.383	10.139	Continuing	Continuing
035: *National Defense Cntr For Enviro Excellence*	-	3.744	2.200	2.579	-	2.579	4.145	4.256	4.282	4.315	Continuing	Continuing
04E: *Environmental Restoration Tech Validation*	-	0.316	0.431	-	-	-	-	-	-	-	-	0.747
E21: *POLLUTION PREVENTION TECHNOLOGY DEM/VAL*	-	-	-	5.251	-	5.251	5.843	4.682	3.101	5.824	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY13 adjustments attributed to Congressional General Reductions (-5 thousand); SBIR/STTR transfers (-132 thousand); Sequestration reductions (-433 thousand) and internal Army reprogrammings (-1 thousand).

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 demonstrated and validated (total ownership cost and performance data identified) before potential users will consider exploiting it. 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., vehicles 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 Army environmental quality technology pillars (military materials in the environment, sustainable ranges and lands, compliance, and pollution prevention). All work must be endorsed by potential users and supported by a state-of-the-art assessment (i.e., "technology is heading for user to implement").

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	4.631	2.633	5.835	-	5.835
Current President's Budget	4.060	2.631	7.830	-	7.830
Total Adjustments	-0.571	-0.002	1.995	-	1.995
• Congressional General Reductions	-0.005	-0.002			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.001	-			
• SBIR/STTR Transfer	-0.132	-			
• Adjustments to Budget Years	-	-	1.995	-	1.995
• Other Adjustments	-0.433	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*				Project (Number/Name) 035 / *National Defense Cntr For Enviro Excellence*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
035: *National Defense Cntr For Enviro Excellence*	-	3.744	2.200	2.579	-	2.579	4.145	4.256	4.282	4.315	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

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. In May 2008, the program name was redesignated from the National Defense for Environmental Excellence to the National Defense Center for Energy and Environment to ensure that the Center's mission recognizes and addresses the strategic interdependence of energy and environmental technology requirements within an overall sustainability framework in support of our installations, weapons systems and war fighters. This name change also directly supports the DoD's proactive implementation of Executive Order 13423, "Strengthening Federal Environmental, Energy and Transportation Management."

Our broadly encompassing and growing mobile, personal and stationary advanced energy technology requirements include infrastructure, alternative and synthetic fuels, surety, renewables, storage, distribution, advanced power, micro-grids, transportation, systems integration and others. Further, to train as we fight, validated energy and environmental technologies need to be available and implemented at our installations. The NDCEE will continue to demonstrate, validate, and transfer these technologies supporting our integrated environment, safety, occupational health and energy objectives with full consideration of the triple bottom line of mission, environment and community.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Management and operations of the NDCEE by the prime contractor.	1.299	0.330	0.386
Articles:	-	-	-
Description: Consists of the management and operation expenses required by the prime contractor to operate the NDCEE program.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603779A / *Environmental Quality Technology - Dem/Val*	**Project (Number/Name)** 035 / *National Defense Cntr For Enviro Excellence*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Management and operations of the NDCEE by the prime contractor. ***FY 2014 Plans:*** Management and operations of the NDCEE by the prime contractor. ***FY 2015 Plans:*** Will consist of management and operations of the NDCEE by the prime contractor.			
Title: Industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis. ***Articles:*** ***Description:*** Funds the industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis by the NDCEE prime contractor. ***FY 2013 Accomplishments:*** Industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis. ***FY 2014 Plans:*** Industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis. ***FY 2015 Plans:*** Will fund industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis.	0.442 -	0.250 -	0.293 -
Title: Conduct demonstration/validation of environmentally acceptable technologies that enhance military readiness and reduce production, operating, and/or disposal costs. ***Articles:*** ***Description:*** Supports the demonstration and validation of environmental, safety, occupational health, and energy technologies that support the Army's Environmental Quality Technology mission. The objective is to determine if the technology is ready for implementation that will enhance military readiness and reduce production, operating, and/or disposal costs. ***FY 2013 Accomplishments:*** Conduct demonstration/validation of environmentally acceptable technologies that enhance military readiness and reduce production, operating, and/or disposal costs. ***FY 2014 Plans:***	1.645 -	0.846 -	0.992 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603779A / *Environmental Quality Technology - Dem/Val*	**Project (Number/Name)** 035 / *National Defense Cntr For Enviro Excellence*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Conduct demonstration/validation of environmentally acceptable technologies that enhance military readiness and reduce production, operating, and/or disposal costs. ***FY 2015 Plans:*** Will conduct demonstration/validation of environmentally acceptable technologies that enhance military readiness and reduce production, operating, and/or disposal costs. Technologies to be demonstrated will consist of technologies selected by the NDCEE Technical Working Group and approved by the NDCEE Executive Advisory Board.			
Title: NDCEE Government program management during contract negotiations and during project formulation, execution, and technology transfer. ***Articles:*** ***Description:*** Funds the government program management office for the NDCEE. This consists of personnel assisting in contract negotiations and during project formulation, execution, and technology transfer. ***FY 2013 Accomplishments:*** NDCEE Government program management during contract negotiations and during project formulation, execution, and technology transfer. ***FY 2014 Plans:*** NDCEE Government program management during contract negotiations and execution and during project formulation, execution, and technology transfer. ***FY 2015 Plans:*** Will fund NDCEE Government program management during contract negotiations and during project formulation, execution, and technology transfer.	0.358 -	0.774 -	0.908 -
Accomplishments/Planned Programs Subtotals	3.744	2.200	2.579

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. 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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603779A / *Environmental Quality Technology - Dem/Val*	**Project (Number/Name)** 035 / *National Defense Cntr For Enviro Excellence*

Agent on behalf of the Assistant Deputy Under Secretary of Defense for Environment 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 that addresses the details of NDCEE program execution. The Army's Environmental Quality Technology Program also assists in the formulation of suggested technology projects to be demonstrated within the NDCEE Program. 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 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) when applicable Congressionally directed and funded tasks.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*	Project (Number/Name) 035 / *National Defense Cntr For Enviro Excellence*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	MIPR	RDECOM : Aberdeen, MD	22.355	0.358	Aug 2013	0.774	Aug 2014	0.907	Aug 2015	-		0.907	Continuing	Continuing	Continuing
		Subtotal	22.355	0.358		0.774		0.907		-		0.907	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
To Be Determined	TBD	To Be Determined : To Be Determined	8.797	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	8.797	-		-		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Data	Various	Concurrent Technologies Corporation (CTC) : Johnstown, PA	21.147	1.741	Mar 2013	0.580	May 2014	0.680	May 2015	-		0.680	Continuing	Continuing	Continuing
		Subtotal	21.147	1.741		0.580		0.680		-		0.680	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Testing and Evaluation	Various	Concurrent Technologies Corp. : Johnstown, PA	23.977	1.645	Mar 2013	0.846	Mar 2014	0.992	Mar 2015	-		0.992	Continuing	Continuing	Continuing
		Subtotal	23.977	1.645		0.846		0.992		-		0.992	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*	Project (Number/Name) 035 / *National Defense Cntr For Enviro Excellence*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	76.276	3.744		2.200		2.579		-		2.579	-	-	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*	Project (Number/Name) 04E / *Environmental Restoration Tech Validation*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
04E: *Environmental Restoration Tech Validation*	-	0.316	0.431	-	-	-	-	-	-	-	-	0.747
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

The funding of Environmental Restoration Tech Validation will be transferred to 0205412A - Environmental Quality Technology - Operational System project EE6 titled Environmental Information Tech Modernization starting in FY15.

A. Mission Description and Budget Item Justification

Environmental Information Technology Management (EITM) includes support for Knowledge Based Corporate Reporting system (KBCRS) and Defense Environmental Network Information Exchange (DENIX). This new request for research, development, test and evaluation (RDTE) is to enhance KBCRS to a net-centric all services transactional system of record and reporting tool set. Also includes EITM upgrades to incorporate new security and other requirements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Environmental Restoration Technology Validation	0.316	0.431	-
Articles:	-	-	-
Description: Conducts system enhancements as required to meet data management requirements for the Knowledge Based Corporate Reporting System and the Defense Environmental Network Information Exchange components.			
FY 2013 Accomplishments: Provide system upgrades to support users with reporting requirements, for example the Annual Report to Congress.			
FY 2014 Plans: To provide system upgrades to support users with reporting requirements, for example the Annual Report to Congress and Chemical Management Enterprise Information Integration.			
Accomplishments/Planned Programs Subtotals	0.316	0.431	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603779A / *Environmental Quality Technology - Dem/Val*	**Project (Number/Name)** 04E / *Environmental Restoration Tech Validation*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0205412A: *Environmental Information Tech Modernization (EE6)*	-	-	0.280	-	0.280	-	-	0.277	-	-	0.557

Remarks

D. Acquisition Strategy

The Environmental Information Technology Management (EITM) Program is an Office of the Secretary of Defense sponsored program that was assigned to the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health as the Department of Defense (DoD) Executive Agent by the Under Secretary of Defense for Acquisition, Technology and Logistics in 2001. The DoD Directive 4715.1E defined EITM mission is to ensure efficient use of enterprise environment, safety and occupational health (ESOH) corporate information management processes by providing and sustaining requirement-driven ESOH corporate data management, Congressional-reporting and public outreach tools to the DoD, and other DoD stakeholders. Funding provided for this program will allow EITM to develop a Deputy Under Secretary of Defense for Installations and Environment directed Chemical Management Enterprise Information Integration capability that will allow Army net-centric hazardous material and ESOH 2.0 NetCentric data management capabilities per the Secretary of the Army Directive 2009-03 "Army Data Management" and DoD Directive 8320.2 "Data Sharing in a Net-Centric Department of Defense." Prior to funding being committed, Army and DoD environmental information technology stakeholders meet to determine which high priority EITM interface requirements need upgrades to incorporate new security and other information technology requirements.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*	Project (Number/Name) 04E / *Environmental Restoration Tech Validation*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental testing and evaluation for required network interfaces.	C/FFP	Delta Resources : Arlington, VA	0.412	0.316	Mar 2013	0.431	Mar 2014	-		-		-	-	1.159	-
		Subtotal	0.412	0.316		0.431		-		-		-	-	1.159	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.412	0.316		0.431		-		-		-	-	1.159	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*	Project (Number/Name) E21 / *POLLUTION PREVENTION TECHNOLOGY DEM/VAL*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
E21: *POLLUTION PREVENTION TECHNOLOGY DEM/VAL*	-	-	-	5.251	-	5.251	5.843	4.682	3.101	5.824	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 2015: $5.251 million increase in reopened Project E21 is to fund the demonstration and validation of three Army Environmental Quality Technology programs.

A. Mission Description and Budget Item Justification

This project supports Advanced Component Development and Prototypes of environmental quality technologies developed within the Army Environmental Quality Technology program. The project increases operational sustainment and warfighter training capabilities by reducing soldier and worker health risks and environmental quality impacts that would otherwise result in restoration needs and compliance enforcement actions against installations while simultaneously increasing performance and standardization across the Army. The project expedites technology transition from the laboratory to operational use by demonstrating new materials and processes to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals, Drawings and other technical data. Materials and processes demonstrated under this project are inherently more sustainable than the baseline with respect to environmental, safety and occupational health concerns, thereby reducing life cycle costs incurred by acquisition, industrial base and installation end users.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Environmental quality technology demonstration and validation: Toxic Metal Reduction in Surface Finishing of Army Weapon Systems ***Description:*** Increase readiness and environmental sustainability of Army depots and maintenance facilities by reducing or eliminating the use of hexavalent chromium, cadmium and associated toxic or carcinogenic materials used in surface finishing processes. ***FY 2015 Plans:*** Will conduct large-scale demonstrations of sustainable alternatives for mixed metal pretreatment, aluminum anodizing and hard chrome electroplating processes.	-	-	3.832
Title: Environmental quality technology demonstration and validation: Airborne Lead Reduction from Army Weapon Systems ***Description:*** Sustain soldier training readiness and ensure compliance at Army installations by reducing or eliminating the use of lead compounds in rocket and missile propellants and primary explosives (primers/detonators/initiators).	-	-	0.930

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603779A / *Environmental Quality Technology - Dem/Val*	**Project (Number/Name)** E21 / *POLLUTION PREVENTION TECHNOLOGY DEM/VAL*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2015 Plans: Will demonstrate large-scale producibility of a promising lead-free primary explosive composition and will demonstrate a lead-free stab detonator in a relevant end item configuration.			
Title: Demonstration and validation of environmental quality technology project - SafePort ***Description:*** Demonstrate and validate rapid detection capability of the SafePort portable water analysis system for quantitation of lead, cadmium, and perchlorate as well as dispersed oil detection and pathogenic water organism detection in laboratory and field usage greatly reducing environmental compliance costs using verified techniques. ***FY 2015 Plans:*** Will fund the initial field demonstration and performance testing of perchlorate and heavy metal technologies along with data to evaluate comparative costs and compliance detection thresholds.	-	-	0.489
Accomplishments/Planned Programs Subtotals	-	-	5.251

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0605857A: *Pollution Prevention Tech Support (06I)*	-	-	0.272	-	0.272	0.347	0.388	0.517	0.392	Continuing	Continuing

Remarks

D. Acquisition Strategy

The project ultimately transitions successfully demonstrated environmental quality technologies to Army acquisition, industrial base and installation end users. As part of the Army's Environmental Quality Technology Program, all technology efforts address a valid Army Environmental Requirements and Technology Assessments (AERTA) requirement. The Army's Environmental Technology Integrated Product Team conducts a thorough assessment and makes funding recommendations to senior Army environmental leadership. Efforts approved by senior Army environmental leadership receive Advanced Component Development and Prototype funding to fully demonstrate and validate the technology for transition to end users for follow on implementation.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603779A / *Environmental Quality Technology - Dem/Val*	Project (Number/Name) E21 / *POLLUTION PREVENTION TECHNOLOGY DEM/VAL*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Conduct Demonstrations	MIPR	Varies : Varies	0.000	-		-		5.251	Oct 2014	-		5.251	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		5.251		-		5.251	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		5.251		-		5.251	-	-	-

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	161.505	122.319	-	-	-	-	-	-	-	Continuing	Continuing
367: *Win-T Increment 2 -Initial Networking*	-	2.706	1.100	-	-	-	-	-	-	-	-	3.806
372: *WIN-T Increment 3 - Full Networking*	-	158.799	121.219	-	-	-	-	-	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY13 and FY14 decrements are due to Congressional reductions to the Inc 3 program.

Inc 2 and Inc 3 efforts were realigned to new PEs in FY15 and out to reflect correct level of RDTE effort.
Inc 2 PE 0603782/367 has been realigned to a new PE starting in FY15. The FY15 and out PE 0300349/EE7
Inc 3 PE 0603782/372 has been realigned to a new PE starting in FY15. For FY15 and out PE 0605350/EE8

A. Mission Description and Budget Item Justification

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments: Inc 1, Inc 2, Inc 3, and Inc 4.

WIN-T is key to the Army's Network Modernization program. The WIN-T program's focus is to provide tactical network capability that supports the Army's Capability Set fielding.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	278.018	272.384	325.584	-	325.584
Current President's Budget	161.505	122.319	-	-	-
Total Adjustments	-116.513	-150.065	-325.584	-	-325.584
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-116.513	-150.065			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	-209.125	-	-209.125
• Other Adjustments 2	-	-	-116.459	-	-116.459

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	Project (Number/Name) 367 / *Win-T Increment 2 -Initial Networking*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
367: *Win-T Increment 2 -Initial Networking*	-	2.706	1.100	-	-	-	-	-	-	-	-	3.806
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Inc 2 effort is funded under PE 0603782 Project 367 through FY14. This effort is funded under PE 0300349 Project EE7 in FY15 and out.

A. Mission Description and Budget Item Justification

Warfighter Information Network (WIN-T) Increment (Inc) 2 provides the Army with On-The-Move (OTM) networking capability. The Inc 2 network retains capabilities delivered by WIN-T Inc 1 and by leveraging proven government and commercial technologies, adds greater network throughput and automated Network Management to optimize planning (to include spectrum use), initialization, monitoring and troubleshooting. WIN-T Inc 2 employs Satellite Communications (SATCOM) OTM to extend the network in maneuver Brigade Combat Teams (BCTs) to Company level for the first time. Using equipment mounted on combat platforms, WIN-T Increment 2 delivers a mobile capability that reduces reliance on fixed infrastructure and allows key leaders to move on the battlefield while retaining Situational Awareness and Mission Command capabilities. Using the Highband Networking Radio (HNR), with the Highband Networking Waveform (HNW) and high performance antennas, the WIN-T Inc 2 Line-of-Sight (LoS) network offers an adaptive 30 Megabit per second (Mbps) aggregate throughput to key leaders in their Command Post or in their vehicle. The WIN-T Inc 2 network is self-forming, which means that it automatically creates transmission paths based on terrain and environmental conditions; and self-healing, meaning that the paths will automatically re-route traffic to complete network transactions and calls even if one or more nodes break down or loses connectivity. This offers greater network reliability and better end-to-end connectivity than traditional point-to-point networks. WIN-T Inc 2 introduces the network management capability needed to keep the mobile and dispersed forces networked together through automated planning, initialization, monitoring, and troubleshooting. Finally, WIN-T adopts "Colorless Core" technology that encrypts both classified and unclassified user information in the network and minimizes the number of users on the "core" of the network. The Colorless Core allows commanders to utilize the tactical network without fear of the enemy intercepting information. Colorless Core is a technical insertion in the WIN-T Inc 1b network which enables information sharing between Inc 1b and Inc 2.

WIN-T Inc 3 mature NetOps technologies will be inserted into Increment 2 units.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Title: Test and Evaluation		2.503	1.033	-
	Articles:	-	-	-
Description: Testing and Evaluation				

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 367 / *Win-T Increment 2 -Initial Networking*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: WIN-T Inc 2 will support First Unit Equipped and Follow-On Test and Evaluation (FOT&E), Initial Operational Capability (IOC), Developmental Test (DT) and Full Rate Production (FRP) Decision Review (DR). ***FY 2014 Plans:*** WIN-T Inc 2 will support NIE 14.1 and NIE 14.2 tests.			
Title: Management Services	0.203	0.067	-
Articles:	-	-	-
Description: System Engineering and Program Management Support ***FY 2013 Accomplishments:*** Program Management support. ***FY 2014 Plans:*** Program Management support.			
Accomplishments/Planned Programs Subtotals	2.706	1.100	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• WIN-T Inc 2: *Procurement*	384.248	476.438	460.709	-	460.709	632.615	616.100	645.400	265.009	Continuing	Continuing
• Inc 2 Spares: *Procurement Spares*	54.792	2.365	40.100	-	40.100	39.865	41.372	50.750	96.919	-	326.163
• RDTE Inc 3 PE 370349/ EE7: *RDTE PE 370349/EE7*	-	-	3.249	-	3.249	18.209	-	-	-	-	21.458
• OMA OCO Inc 2: *OMA OCO*	-	6.540	-	-	-	-	-	-	-	-	6.540

Remarks

D. Acquisition Strategy

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments: Incs 1, 2, 3, and 4.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 367 / *Win-T Increment 2 -Initial Networking*

The ADM of September 27, 2013 authorized the procurement of 98 additional communications nodes for Low Rate Initial Production (LRIP), bringing the total LRIP quantity to 1030 communications nodes. The Program Manager (PM) procured the authorized quantities on the current initial production contract (W15P7T-10-D-C007). This contract was awarded in 2010 as a three year contract with three option years. Lots 1, 2, 3 and 4 of the LRIP contract have been procured, and Lot 5 is anticipated to be awarded in March 2014.

Inc 2 provides the Army with On-The-Move (OTM) networking capability. Inc 3 NetOps will be technically inserted into Inc 2 and these inserts will be tested in subsequent Network Integration Evaluation (NIE) events.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	Project (Number/Name) 367 / *Win-T Increment 2 -Initial Networking*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	Various : Various	26.616	0.203		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	26.616	0.203		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Platform Integration	Various	Various : Various	19.641	-		-		-		-		-	Continuing	Continuing	Continuing
WIN-T Contract	Various	General Dynamics C4 Systems Inc : Taunton, MA	138.598	-		0.067		-		-		-	Continuing	Continuing	Continuing
		Subtotal	158.239	-		0.067		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services adn Research Studies	Various	General Dynamics C4 Systems Inc : Taunton, MA	7.086	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	7.086	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test	Various	Various : Various	60.792	2.503		1.033		-		-		-	Continuing	Continuing	Continuing
		Subtotal	60.792	2.503		1.033		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	Project (Number/Name) 367 / *Win-T Increment 2 -Initial Networking*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	252.733	2.706		1.100		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 367 / *Win-T Increment 2 -Initial Networking*

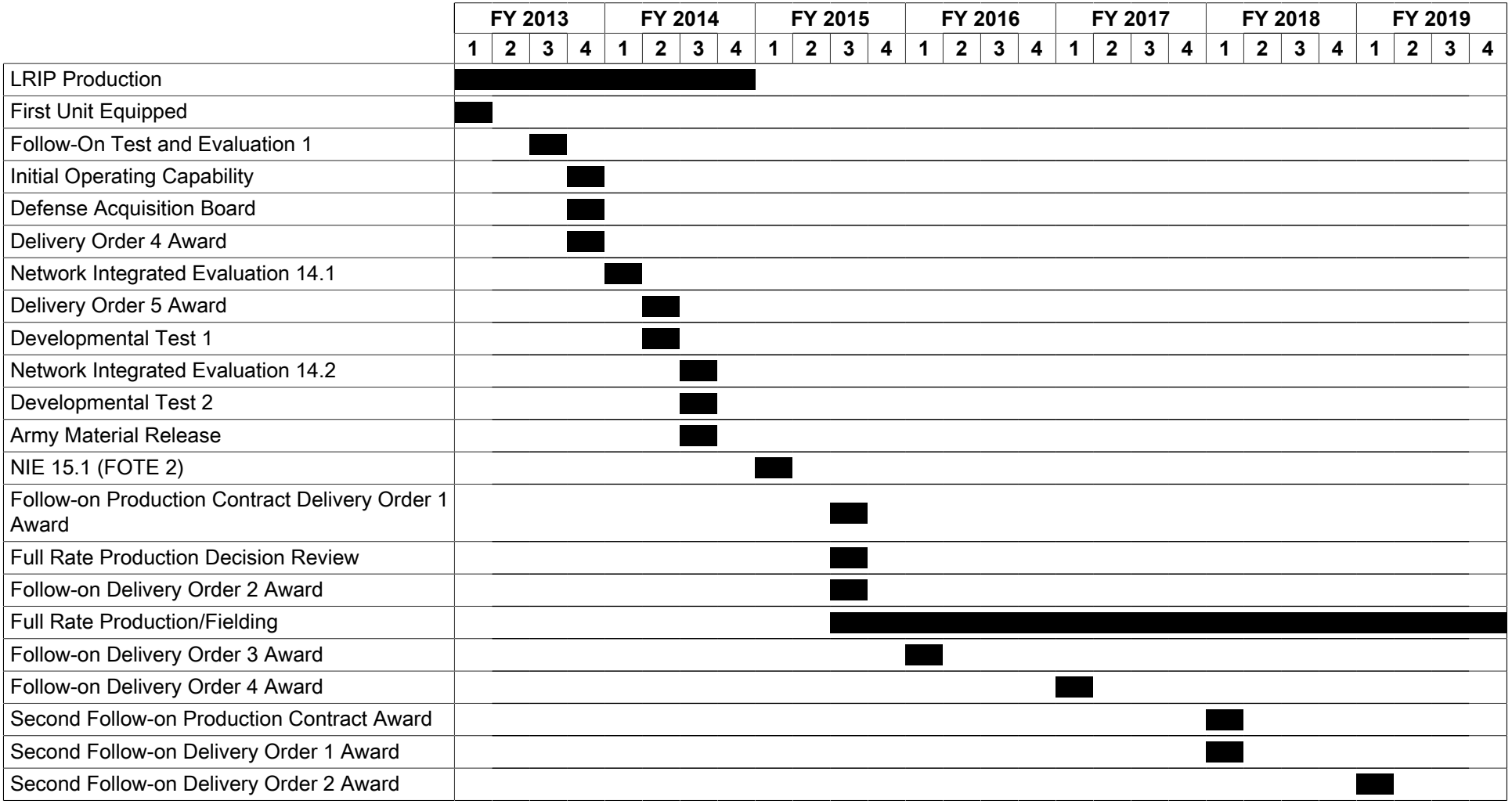

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 367 / *Win-T Increment 2 -Initial Networking*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
LRIP Production	2	2010	4	2014
First Unit Equipped	1	2013	1	2013
Follow-On Test and Evaluation 1	3	2013	3	2013
Initial Operating Capability	4	2013	4	2013
Defense Acquisition Board	4	2013	4	2013
Delivery Order 4 Award	4	2013	4	2013
Network Integrated Evaluation 14.1	1	2014	1	2014
Delivery Order 5 Award	2	2014	2	2014
Developmental Test 1	2	2014	2	2014
Network Integrated Evaluation 14.2	3	2014	3	2014
Developmental Test 2	3	2014	3	2014
Army Material Release	3	2014	3	2014
NIE 15.1 (FOTE 2)	1	2015	1	2015
Follow-on Production Contract Delivery Order 1 Award	3	2015	3	2015
Full Rate Production Decision Review	3	2015	3	2015
Follow-on Delivery Order 2 Award	3	2015	3	2015
Full Rate Production/Fielding	3	2015	4	2020
Follow-on Delivery Order 3 Award	1	2016	1	2016
Follow-on Delivery Order 4 Award	1	2017	1	2017
Second Follow-on Production Contract Award	1	2018	1	2018
Second Follow-on Delivery Order 1 Award	1	2018	1	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 367 / *Win-T Increment 2 -Initial Networking*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Second Follow-on Delivery Order 2 Award	1	2019	1	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	Project (Number/Name) 372 / *WIN-T Increment 3 - Full Networking*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
372: *WIN-T Increment 3 - Full Networking*	-	158.799	121.219	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Inc 3 effort is funded under PE 0603782 Project 372 through FY14. This effort is funded under PE 0605350 Project EE8 in FY15 and out.

A. Mission Description and Budget Item Justification

Warfighter Information Network – Tactical (WIN-T) Increment (Inc) 3 develops the Network Operations (NetOps) software to meet the Army's Network Convergence goals. NetOps provides the monitoring, control and planning tools to ensure management of the voice, data and internet transport networks. The NetOps software will also provide Information Assurance and Network Centric Enterprise Services. This allows for seamless integration of the tactical network planning, management, monitoring, and defense for the Signal staff. These NetOps improvements simplify the management of the network and increase the automation of tools and reporting. The developed NetOps software enhancements will be provided as a technical insertion to WIN-T Incs 1 and 2.

Inc 3 also develops the enhanced Net Centric Waveform (NCW) version 10.x for increased throughput capability beyond the line of sight satellite communication and the Highband Networking Waveform (HNW) version 3.0 for line of sight communications. NCW version 10.x will support Army Strategic Command certification of the waveform for use on Wideband Global Satellites. HNW version 3.x will be inserted into the Joint Tactical Networking Center Information Repository. Both NCW and HNW provide improved network capacity and robustness.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Product Development	133.237	93.894	-
Articles:	-	-	-
Description: Inc 3 Engineering Manufacturing Development (EMD) continues development of Inc 3 system, hardware and software development, prototype manufacturing of test assets for the Inc 3 system.			
FY 2013 Accomplishments: Inc 3 completes detailed design of network architecture, waveform, radio, Aerial Tier Payload and continues software coding of waveform and NetOps.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 372 / *WIN-T Increment 3 - Full Networking*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Completion of NetOps Build 3.0 and Waveform Build. Start of NetOps Build 4.0 and HNW integration. Completes initial Condition Based Maintenance Plus (CBM+) effort. Starts further CBM+ integration with NetOps.			
Title: Support Cost	4.566	5.878	-
Articles:	-	-	-
Description: Technical Engineering Services and Research Studies ***FY 2013 Accomplishments:*** Technical Engineering Services and Research Studies ***FY 2014 Plans:*** Technical Engineering Services and Research Studies			
Title: Test and Evaluation	4.654	9.697	-
Articles:	-	-	-
Description: Testing and Evaluation ***FY 2013 Accomplishments:*** Increment 3 continues analysis of multi node network. Conducts component level development tests and continues testing of Network Operations Build and Modular Communications Node Advanced Enclave (MCN-AE) for insertion of mature technology. ***FY 2014 Plans:*** Increment 3 continues planning for testing of NetOps, HNW, NIE 14.2 will be conducted to evaluate NetOps build 3.0 and demonstrate initial capabilities of CBM+.			
Title: Management Services	16.342	11.750	-
Articles:	-	-	-
Description: Provides System Engineering and Program Management Support. ***FY 2013 Accomplishments:*** Continues System Engineering and Program Management Support. ***FY 2014 Plans:*** Continues System Engineering and Program Management Support.			
Accomplishments/Planned Programs Subtotals	158.799	121.219	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 372 / *WIN-T Increment 3 - Full Networking*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• INC 3: *PE 655350/EE8*	-	-	113.210	-	113.210	39.700	9.000	-	-	-	161.910
• WIN-T Inc 3: *Procurement*	-	-	-	-	-	-	61.692	534.323	551.511	-	1,147.526

Remarks

D. Acquisition Strategy

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments: Incs 1, 2, 3, and 4.

An evolutionary acquisition strategy is being utilized to provide for the timely insertion of new technologies into Army communication systems by adhering to the basic principles of the DoD Modular Open Systems Approach (MOSA). This allows the Army to keep pace with changing commercial technology and maintain required interoperability with other joint, strategic and commercial standards-based networks. Applying integrated Network Operations (NetOps) capability, WIN-T provides the capability to manage, prioritize, and protect information. It ensures NetOps commonality with Joint, Allied, Coalition, Current Force, and Commercial voice and data networks.

The program is presently in its Engineering, Manufacturing, and Development (EMD) phase, as WIN-T Inc 3 technology is being tested and released over time and will be inserted into WIN-T Inc 1 and Inc 2.

ADM issued 24 Jun 13 required: Delay of follow on contract award until Key Performance Parameters (KPP) and Key System Attributes (KSA) are approved and traced to contract specifications. KPP memo signed 13 Aug 13 (JROCM 143-13) KSAs approved via Army memo 22 Aug 13. Delivery of System Engineering Plan (SEP), Test and Evaluation Master Plan (TEMP), Acquisition Strategy (30 Aug 13). Deliver Reliability Growth Plan and Curves Delivery of Flight Test Plan and Procedures (25 Jun 13). Brief Defense Acquisition Executive (DAE) on proposed strategy based on FY2015 budget (5 Aug 13). 27 Oct 13 ADM approved contract award and proceeding to Critical Design Review (CDR) and directed Inc 3 to return to the DAE for approval of the updated program strategy. Army Configuration Steering Board (CSB) program de-scope occurred on 7 Nov 13, with approval memorandum signed 16 Jan 14.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	Project (Number/Name) 372 / *WIN-T Increment 3 - Full Networking*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	Various : Various	85.870	16.342		11.750		-		-		-	Continuing	Continuing	Continuing
		Subtotal	85.870	16.342		11.750		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Inc 3 Engineering Manufacturing and Development	Various	General Dynamics C4 Systems Inc : Taunton, MA	797.239	100.848		93.894		-		-		-	Continuing	Continuing	Continuing
Inc 3 Data Rights	Various	Harris GCSD : Melbourne, FL	4.417	-		-		-		-		-	-	4.417	-
Platform Integration	Various	Various : Various	12.725	32.389		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	814.381	133.237		93.894		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services and Research Studies	Various	General Dynamics C4 Systems Inc : Taunton, MA	22.963	4.566		5.878		-		-		-	Continuing	Continuing	Continuing
		Subtotal	22.963	4.566		5.878		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	Various	Various : Various	3.826	4.654		9.697		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	Project (Number/Name) 372 / *WIN-T Increment 3 - Full Networking*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			3.826	4.654		9.697		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	927.040	158.799		121.219		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 372 / *WIN-T Increment 3 - Full Networking*

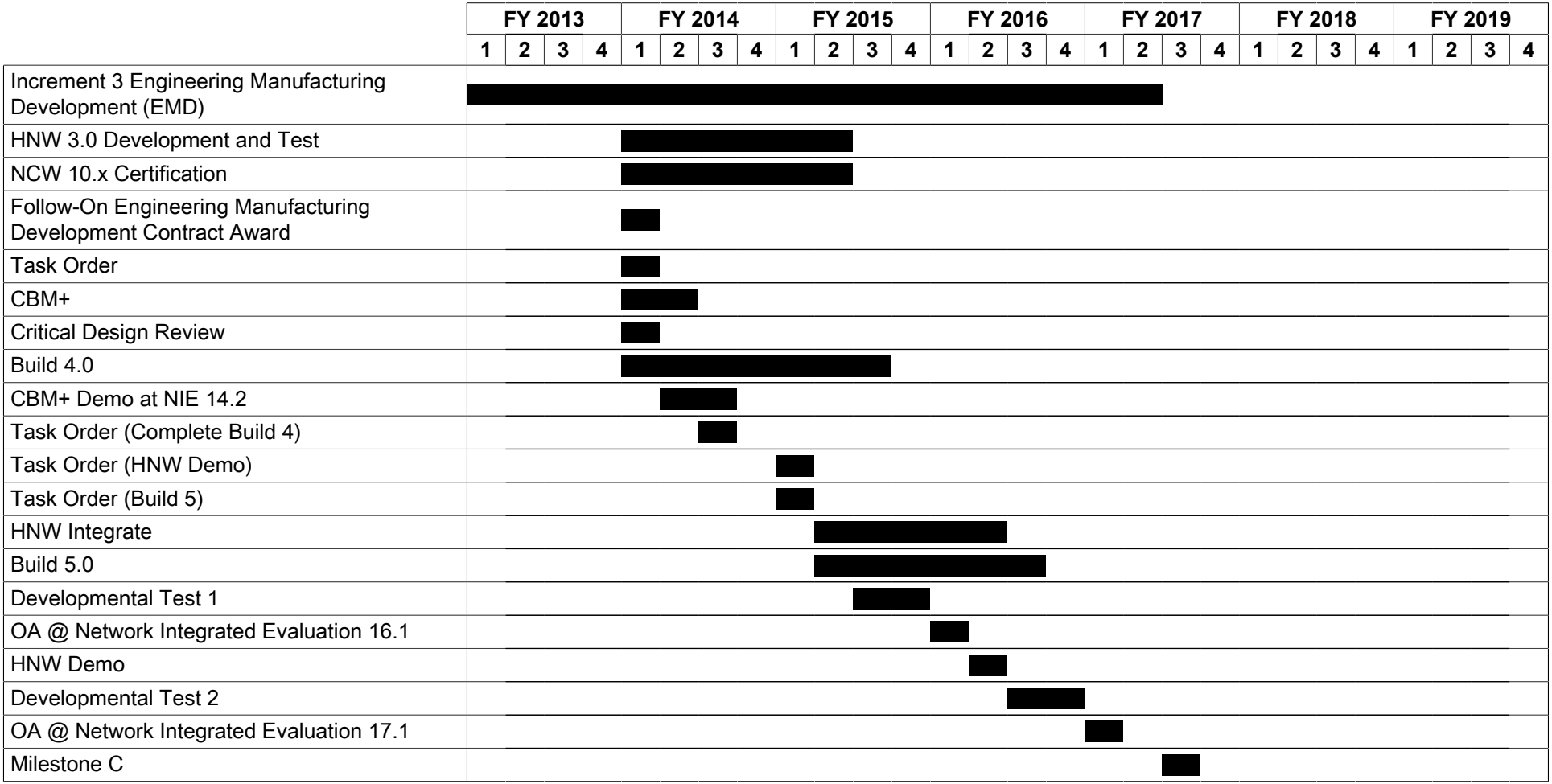

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603782A / *WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL*	**Project (Number/Name)** 372 / *WIN-T Increment 3 - Full Networking*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Increment 3 Engineering Manufacturing Development (EMD)	4	2007	2	2017
HNW 3.0 Development and Test	1	2014	2	2015
NCW 10.x Certification	1	2014	2	2015
Follow-On Engineering Manufacturing Development Contract Award	1	2014	1	2014
Task Order	1	2014	1	2014
CBM+	1	2014	2	2014
Critical Design Review	1	2014	1	2014
Build 4.0	1	2014	3	2015
CBM+ Demo at NIE 14.2	2	2014	3	2014
Task Order (Complete Build 4)	3	2014	3	2014
Task Order (HNW Demo)	1	2015	1	2015
Task Order (Build 5)	1	2015	1	2015
HNW Integrate	2	2015	2	2016
Build 5.0	2	2015	3	2016
Developmental Test 1	3	2015	4	2015
OA @ Network Integrated Evaluation 16.1	1	2016	1	2016
HNW Demo	2	2016	2	2016
Developmental Test 2	3	2016	4	2016
OA @ Network Integrated Evaluation 17.1	1	2017	1	2017
Milestone C	3	2017	3	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603790A / *NATO Research and Development*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	4.393	3.872	2.954	-	2.954	6.593	6.011	5.169	5.276	Continuing	Continuing
691: *NATO Rsch & Devel*	-	4.393	3.872	2.954	-	2.954	6.593	6.011	5.169	5.276	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY13 adjustments attributed to Congressional General Reductions (-7 thousand); SBIR/STTR transfers (-31 thousand); Sequestration reductions (-430 thousand).
FY15 reduction attributed to realignment to other higher priority Army programs.

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. contractor facilities.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	4.961	3.874	6.069	-	6.069
Current President's Budget	4.393	3.872	2.954	-	2.954
Total Adjustments	-0.568	-0.002	-3.115	-	-3.115
• Congressional General Reductions	-0.007	-0.002			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.131	-			
• Adjustments to Budget Years	-	-	-3.115	-	-3.115
• Other Adjustments	-0.430	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603790A / *NATO Research and Development*	Project (Number/Name) 691 / *NATO Rsch & Devel*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
691: *NATO Rsch & Devel*	-	4.393	3.872	2.954	-	2.954	6.593	6.011	5.169	5.276	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Projects formerly titled Multi-National Network Enabled Capabilities, Low Level Air Defense Interoperability, JTRS, Combat Identification, and Multilateral Interoperability Program will be included under Communications, Interoperability, and Electronics Technologies.
New bullets for FY 2015 will include: Missile and Rocket Technologies, Aviation Systems Technologies, Soldier Technologies, Chemical and Biological Defense Technologies, Ground Systems Technologies, Weapons and Munitions Technologies and Armaments Cooperation Enterprise Support.

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. contractor facilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Scientific and Technology Enterprise Management	0.774	0.699	-
Articles:	-	-	-
Description: Scientific and Technology Enterprise Management (STEM)/International Online (IOL) Development and Implementation NATO/International Cooperative R&D (AR 70-41) and International Acquisition (AR 70-1, AR 70-3)			
FY 2013 Accomplishments: The goal of this program is to expand worldwide allied standardization and interoperability through cooperative research and development (R&D) and technology sharing per SECDEF guidance and especially in support of the U.S. Army. This program funds the travel costs and administrative support (studies, analysis, interpretation, equipment, etc.) required to participate in			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
internationally, such as the North Atlantic Treaty Organization (NATO) Army Armaments Group (NAAG), Defense Against Terrorism (DAT) and to pursue new cooperative R&D initiatives and international cooperative agreements such as memoranda of understanding. This program also includes: the United States' share of costs of the NATO Civil Budget, Chapter IX, which funds the NATO Industrial Advisory Group (NIAG) and the Special Fund for Cooperative Planning (U. S. Army is Executive Agent for this NATO bill); partially funds the Five Power Senior National Representatives, Army [SNR (A)], the Technical Cooperative Program, Bilateral SNR(A)s, and Army armaments working groups with many nations. ***FY 2014 Plans:*** The goal of this program is to expand worldwide allied standardization and interoperability through cooperative research and development (R&D) and technology sharing per SECDEF guidance and especially in support of the U.S. Army. This program will fund the travel costs and administrative support (studies, analysis, interpretation, equipment, etc.) required to participate in internationally, such as the North Atlantic Treaty Organization (NATO) Army Armaments Group (NAAG), Defense Against Terrorism (DAT) and to pursue new cooperative R&D initiatives and international cooperative agreements such as memoranda of understanding. This program will also include: the United States' share of costs of the NATO Civil Budget, Chapter IX, which funds the NATO Industrial Advisory Group (NIAG) and the Special Fund for Cooperative Planning (U. S. Army is Executive Agent for this NATO bill); partially will fund the Five Power Senior National Representatives, Army [SNR (A)], the Technical Cooperative Program, Bilateral SNR(A)s, and Army armaments working groups with many nations. Effective FY15, efforts in this area will be move to Armaments Cooperation Enterprise Support.			
Title: Armaments Cooperation Enterprise Support ***Description:*** Armaments Cooperation Enterprise Support/ International Online (IOL) Development and Implementation NATO/ International Cooperative R&D (AR 70-41) and International Acquisition (AR 70-1, AR 70-3). Prior to FY15, efforts in this area were covered under the area entitled Scientific and Technology Enterprise Management. ***FY 2015 Plans:*** The goal of this program is to expand worldwide allied standardization and interoperability through cooperative research and development (R&D) and technology sharing per SECDEF guidance and especially in support of the U.S. Army. This program will fund the travel costs and administrative support (studies, analysis, interpretation, equipment, etc.) required to participate internationally, such as the North Atlantic Treaty Organization (NATO) Army Armaments Group (NAAG), Defense Against Terrorism (DAT) and to pursue new cooperative R&D initiatives and international cooperative agreements such as memoranda of understanding. This program will also include: the United States' share of costs of the NATO Civil Budget, Chapter IX, which	-	-	1.176

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
funds the NATO Industrial Advisory Group (NIAG) and the Special Fund for Cooperative Planning (U. S. Army is Executive Agent for this NATO bill); the Technical Cooperation Program, and Army armaments cooperation working groups with many nations.			
Title: Multilateral Interoperability Program	0.605	0.538	-
Articles:	-	-	-
Description: 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 (e.g. AFATDS, FADC2).			
FY 2013 Accomplishments: Continued integration work from the Command and Control Systems Interoperability Program 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 (e.g. AFATDS, FADC2).			
FY 2014 Plans: Continue integration work from the Command and Control Systems Interoperability Program into an Advanced Concept Technology Demonstration (ACTD) to achieve NATO levels four (messaging) and five (database) interoperability and will also extend the effort into a sustainable program to incorporate lessons learned into national systems (e.g. AFATDS, FADC2). Effective FY15, MIP efforts will be under Communications, interoperability, and electronics technologies			
Title: Multi-National Network Enabled Capabilities (MNNEC)	0.607	0.449	-
Articles:	-	-	-
Description: Multi-National Network Enabled Capabilities (MNNEC) related Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR) (Potential Partners: United Kingdom, France, Italy, Germany and major NATO Allies) MNNEC would focus on developing a single solutions standard avoiding development of multiple unique solutions and leverage existing interoperability standards developed by NATO as well as other international forums such as the Five Power Net Centrick PA. A single solution standard will include common doctrine, technical and procedural specifications to make better use of existing information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. The MNNEC is more than interoperability of information systems; it is the complete networking of information systems with sensors and shooters focusing on building Net-Centric interoperability among coalition tactical land components operating in a Joint Environment, focused at the Brigade and Below level, but not excluding using the services provided at higher echelons. The MNNEC has a future force focus, endeavoring to define migration strategies for Net-Centric capabilities in the 2010-2025 timeframe with part of the work to determine the time-phased implementations of a Multi-National Network Enabled Capability. The end results would be an			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
integration of national C2/C4ISR systems into an NCES environment to include the NATO Network Enabled Capabilities (NNEC) and the 5 Powers Net Centric Project Agreement. ***FY 2013 Accomplishments:*** Multi-National Network Enabled Capabilities (MNNEC) related Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR)(Potential Partners: United Kingdom, France, Italy, Germany and major NATO Allies) MNNEC would focus on developing a single solutions standard avoiding development of multiple unique solutions and leverage existing interoperability standards developed by NATO as well as other international forums such as the Five Power Net Centrick PA. A single solution standard includes common doctrine, technical and procedural specifications to make better use of existing information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. The MNNEC is more than interoperability of information systems; it is the complete networking of information systems with sensors and shooters focusing on building Net-Centric interoperability among coalition tactical land components operating in a Joint Environment, focused at the Brigade and Below level, but not excluding using the services provided at higher echelons. The MNNEC has a future force focus, endeavoring to define migration strategies for Net-Centric capabilities in the 2010-2025 timeframe with part of the work to determine the time-phased implementations of a Multi-National Network Enabled Capability. The end results would be an integration of national C2/ C4ISR systems into an NCES environment to include the NATO Network Enabled Capabilities (NNEC). ***FY 2014 Plans:*** Multi-National Network Enabled Capabilities (MNNEC) related Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR)(Potential Partners: United Kingdom, France, Italy, Germany and major NATO Allies) MNNEC would focus on developing a single solutions standard avoiding development of multiple unique solutions and leverage existing interoperability standards developed by NATO as well as other international forums such as the Five Power Net Centrick PA. A single solution standard will include common doctrine, technical and procedural specifications to make better use of existing information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. The MNNEC will be more than interoperability of information systems; it is the complete networking of information systems with sensors and shooters focusing on building Net-Centric interoperability among coalition tactical land components operating in a Joint Environment, focused at the Brigade and Below level, but not excluding using the services provided at higher echelons. The MNNEC will have a future force focus, endeavoring to define migration strategies for Net-Centric capabilities in the 2010-2025 timeframe with part of the work to determine the time-phased implementations of a Multi-National Network Enabled Capability. The end results would be an integration of national C2/C4ISR systems into an NCES environment to include the NATO Network Enabled Capabilities (NNEC). Effective FY15, efforts in this area will be part of Communications, interoperability, and electronics technologies.			
Title: Communications Interoperability, and Electronics Technologies	-	-	0.700

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: The goal of this project is to develop technologies that enable interoperability among partner countries' command, control, communications, sensors, and information systems. Efforts under this project include development of a single solution standard avoiding development of multiple unique solutions and leverage existing interoperability standards developed by NATO. Such standards include common doctrine, technical and procedural specifications to make better use of existing information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. Includes efforts from areas formerly titled Multi-National Network Enabled Capabilities, Low Level Air Defense Interoperability, JTRS, Combat Identification, and Multilateral Interoperability Program. ***FY 2015 Plans:*** The goal of this project is to develop technologies that enable interoperability among partner countries' command, control, communications, sensors, and information systems. Efforts under this project include development of a single solution standard avoiding development of multiple unique solutions and leverage existing interoperability standards developed by NATO. Such standards include common doctrine, technical and procedural specifications to make better use of existing information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. Includes projects formerly titled Multi-National Network Enabled Capabilities, Low Level Air Defense Interoperability, JTRS, Combat Identification, and Multilateral Interoperability Program.			
Title: Combat Identification	0.060	0.043	-
Articles:	-	-	-
Description: 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. ***FY 2013 Accomplishments:*** Combat ID pursues 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), pursues the NATO Staff Requirement and a STANAG for the Dismounted Soldier ID. ***FY 2014 Plans:*** 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			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
the NATO Staff Requirement and a STANAG for the Dismounted Soldier ID. Effective FY15, Combat ID efforts will be under Communications, Interoperability, and Electronics Technologies.			
Title: Technology Research and Development Projects	0.675	0.617	-
Articles:	-	-	-
Description: 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. ***FY 2013 Accomplishments:*** 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. ***FY 2014 Plans:*** The scope of this MOU will encompass R&D collaboration on basic, exploratory and advanced Land Warfare Concepts and Technologies that will be focused on Future Combat System enabling technologies, the maturation of which may lead to the development of technologically superior conventional weapon systems. Effective FY15, TRDP efforts will be moved under several other programs such as: Aviations Systems Technologies, Soldiers Technologies, Missile and Rocket Technologies, Chem/Bio Technologies, and Weapons and Munitions Technologies.			
Title: Senior National Representatives (Army) (SNR-(A))	0.568	0.597	0.060
Articles:	-	-	-
Description: 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. Technology Demonstrations hosted by the U.S. reps to Land Group 6, NATO Army Armaments Group (NAAG), will provide an 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. ***FY 2013 Accomplishments:*** Senior National Representatives (Army) (SNR-(A)) Projects with international partners: Supports harmonization of programs at various levels: exchanging information, identifying knowledge gaps and conducting feasibility studies to further promote			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
cooperative development; standardizing, fielding and roadmapping various processes; distributing the workload among the different nations. Technology Demonstrations hosted by the U.S. reps to Land Group, NATO Army Armaments Group (NAAG), provides an 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. ***FY 2014 Plans:*** 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. Technology Demonstrations hosted by the U.S. reps to Land Group, NATO Army Armaments Group (NAAG), will provide an 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. ***FY 2015 Plans:*** Senior National Representatives (Army) (SNR-(A)) Projects with international partners: Supports harmonization of programs at various levels: exchanging information, identifying knowledge gaps and conducting feasibility studies to further promote cooperative development; standardizing, fielding and road mapping various processes; distributing the workload among the different nations. Technology Demonstrations hosted by the U.S. reps to Land Group, NATO Army Armaments Group (NAAG), provides an 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.			
Title: Joint Tactical Radio System	0.263	0.202	-
Articles:	-	-	-
Description: 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. ***FY 2013 Accomplishments:*** The participants in these programs developes and implements Software-enabled radios as replacements to current radio systems. The projects focuses on maintaining interoperability as the countries pursue their own separate software radio programs. The			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
project agreements (PAs) includes 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. ***FY 2014 Plans:*** 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. Effective FY15, efforts in this area will be under Communications, Interoperability, and Electronics Technologies.			
Title: Artillery Command and Control Interoperability ***Articles:*** ***Description:*** 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. ***FY 2013 Accomplishments:*** The Participants in this program develops an automated software interface between their national field artillery command and control systems. The nations are able to receive and provide mutual fire support (i.e. cannon and rocket fire) in combined operations more rapidly and with minimal errors. ***FY 2014 Plans:*** 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. Effective FY15, efforts in this program will be move to Weapons and Munitions Technologies.	0.370 -	0.300 -	- -
Title: Weapons and Munitions Technologies ***Description:*** Weapons and munitions technologies (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. ***FY 2015 Plans:***	-	-	0.588

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly technologies to improve range, payloads, speed, survivability and lethality to maintain U.S. technical superiority and combat overmatch for Army weapons systems and associated munitions. Areas of cooperation include fuzing and warhead systems, guidance systems, counter improvised explosive device neutralization, directed energy, and fire control systems. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.			
Title: Low Level Air Defense Interoperability	0.204	0.170	-
Articles:	-	-	-
Description: 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. ***FY 2013 Accomplishments:*** 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. ***FY 2014 Plans:*** 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. Effective FY15, efforts in this program will be part of Communications, Interoperability, and Electronics Technologies			
Title: Force Protection Projects	0.267	0.257	-
Articles:	-	-	-
Description: Force Protection Projects (FPP) (Partners: United Kingdom, France, Germany, Italy, Sweden, Canada): Force Protection Projects will include R&D collaboration on technologies such as Counter Rocket and Mortar (C-RAM) and Counter Improvised Explosive Devices (C-IED). Programs include Military Operations in Urban Terrain (MOUT) and a variety of Defense Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS). ***FY 2013 Accomplishments:*** Force Protection Projects includes R&D collaboration on technologies such as Counter Rocket and Mortar (C-RAM) and Counter Improvised Explosive Devices (C-IED). Programs includes Military Operations in Urban Terrain (MOUT) and a variety of Defense			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS). ***FY 2014 Plans:*** Force Protection Projects will include R&D collaboration on technologies such as Counter Rocket and Mortar (C-RAM) and Counter Improvised Explosive Devices (C-IED). Programs will include Military Operations in Urban Terrain (MOUT) and a variety of Defense Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS). Effective FY15 efforts in this program will be under Soldier Technologies.			
Title: Soldier technologies ***Description:*** Soldier Technologies (Partners: United Kingdom, France, Germany, Italy, Sweden, Canada): Soldier Technologies will include R&D collaboration on technologies such as Counter Rocket and Mortar (C-RAM) and Counter Improvised Explosive Devices (C-IED). Programs include Military Operations in Urban Terrain (MOUT) and a variety of Defense Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS). ***FY 2015 Plans:*** The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly improved technologies to increase the effectiveness, health, and reliability of the individual soldier. Such technologies will maximize soldier survivability, sustainability, mobility, combat effectiveness, and field quality of life. Efforts under this project will also enable interoperability and standardization among partner country systems that support the individual soldier. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.	-	-	0.020
Title: Ground Systems Technologies ***Description:*** The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly technologies to improve survivability, weapons, ground platforms (manned and unmanned), and mobility and counter-mobility to provide soldiers with unmatched offensive and defensive capabilities in weapons and military vehicles. Areas of cooperation include ground systems design, propulsion, structures, robotics, alternative fuels and lubricants, systems integration, electronics, and power management. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries. ***FY 2015 Plans:*** The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly technologies to improve survivability, weapons, ground platforms (manned and unmanned), and mobility and counter-mobility to provide soldiers with unmatched offensive and defensive capabilities in weapons and military vehicles. Areas of cooperation include ground	-	-	0.200

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
systems design, propulsion, structures, robotics, alternative fuels and lubricants, systems integration, electronics, and power management. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.			
Title: Aviation Systems Technologies ***Description:*** The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly improved aerodynamics, aeromechanics, avionics, weapons and sensor integration, propulsion, and aviation autonomy technologies that improve range, payloads, speed, survivability and lethality to maintain U.S. technical superiority and combat overmatch for vertical lift aviation systems. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries. ***FY 2015 Plans:*** The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly improved aerodynamics, aeromechanics, avionics, weapons and sensor integration, propulsion, and aviation autonomy technologies that improve range, payloads, speed, survivability and lethality to maintain U.S. technical superiority and combat overmatch for vertical lift aviation systems. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.	-	-	0.180
Title: Chemical and Biological Defense Technologies ***Description:*** The goal of this project is to cooperate with partner countries to increase interoperability and standardization of chemical, biological, and radiological defense materiel and to develop jointly improved technologies to defend against weapons of mass destruction. Areas of cooperation include aerosol physics, toxicology, vaccinations, filtration science, agent detection and monitoring, handling, and demilitarization. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries. ***FY 2015 Plans:*** The goal of this project is to cooperate with partner countries to increase interoperability and standardization of chemical, biological, and radiological defense materiel and to develop jointly improved technologies to defend against weapons of mass destruction. Areas of cooperation include aerosol physics, toxicology, vaccinations, filtration science, agent detection and monitoring, handling, and demilitarization. Such cooperative development will be done under the auspices of international	-	-	0.030

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.			
Accomplishments/Planned Programs Subtotals	4.393	3.872	2.954

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

None

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.

Below is the list of the programs that were changed, combined or renamed.

Communications, Interoperability, and Electronics Technologies
The goal of this project is to develop technologies that enable interoperability among partner countries' command, control, communications, sensors, and information systems. Efforts under this project include development of a single solution standard avoiding development of multiple unique solutions and leverage existing interoperability standards developed by NATO. Such standards include common doctrine, technical and procedural specifications to make better use of existing information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. Includes projects formerly titled Multi-National Network Enabled Capabilities, Low Level Air Defense Interoperability, JTRS, Combat Identification, and Multilateral Interoperability Program.

Missile and Rocket Technologies
The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly improved missile and rocket technologies, such as propulsion, energetic materials, payloads, flight control systems, sensors, and seekers. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.

Aviation Systems Technologies
The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly improved aerodynamics, aeromechanics, avionics, weapons and sensor integration, propulsion, and aviation autonomy technologies that improve range, payloads, speed, survivability and lethality to maintain U.S. technical superiority and combat overmatch for vertical lift aviation systems. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

Soldier Technologies
The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly improved technologies to increase the effectiveness, health, and reliability of the individual soldier. Such technologies will maximize soldier survivability, sustainability, mobility, combat effectiveness, and field quality of life. Efforts under this project will also enable interoperability and standardization among partner country systems that support the individual soldier. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.

Chemical and Biological Defense Technologies
The goal of this project is to cooperate with partner countries to increase interoperability and standardization of chemical, biological, and radiological defense materiel and to develop jointly improved technologies to defend against weapons of mass destruction. Areas of cooperation include aerosol physics, toxicology, vaccinations, filtration science, agent detection and monitoring, handling, and demilitarization. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.

Ground Systems Technologies
The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly technologies to improve survivability, weapons, ground platforms (manned and unmanned), and mobility and counter-mobility to provide soldiers with unmatched offensive and defensive capabilities in weapons and military vehicles. Areas of cooperation include ground systems design, propulsion, structures, robotics, alternative fuels and lubricants, systems integration, electronics, and power management. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.

Weapons and Munitions Technologies
The goal of this project is to cooperate with partner countries to increase interoperability and develop jointly technologies to improve range, payloads, speed, survivability and lethality to maintain U.S. technical superiority and combat overmatch for Army weapons systems and associated munitions. Areas of cooperation include fuzing and warhead systems, guidance systems, counter improvised explosive device neutralization, directed energy, and fire control systems. Such cooperative development will be done under the auspices of international agreements established among the participating countries for the purposes of improving defense capabilities of the U.S. and partner countries.

Senior National Representative (Army) program
Senior National Representatives (Army) (SNR-(A)) Projects with international partners: Supports harmonization of programs at various levels: exchanging information, identifying knowledge gaps and conducting feasibility studies to further promote cooperative development; standardizing, fielding and road mapping various processes; distributing the workload among the different nations. Technology Demonstrations hosted by the U.S. reps to Land Group, NATO Army Armaments Group (NAAG), provides an 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.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603790A / *NATO Research and Development*	**Project (Number/Name)** 691 / *NATO Rsch & Devel*

Armaments Cooperation Enterprise Support

The goal of this program is to expand worldwide allied standardization and interoperability through cooperative research and development (R&D) and technology sharing per SECDEF guidance and especially in support of the U.S. Army. This program will fund the travel costs and administrative support (studies, analysis, interpretation, equipment, etc.) required to participate internationally, such as the North Atlantic Treaty Organization (NATO) Army Armaments Group (NAAG), Defense Against Terrorism (DAT) and to pursue new cooperative R&D initiatives and international cooperative agreements such as memoranda of understanding. This program will also include: the United States' share of costs of the NATO Civil Budget, Chapter IX, which funds the NATO Industrial Advisory Group (NIAG) and the Special Fund for Cooperative Planning (U. S. Army is Executive Agent for this NATO bill); the Technical Cooperation Program, and Army armaments cooperation working groups with many nations.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603790A / *NATO Research and Development*	Project (Number/Name) 691 / *NATO Rsch & Devel*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
STEM/IOL	TBD	RDECOM, : Ft. Belvoir, VA	0.451	0.087		0.067		-		-		-	Continuing	Continuing	-
ArmamentsCooperation Enterprise Support	TBD	RDECOM : Ft Belvoir, VA	0.000	-		-		0.006		-		0.006	-	0.006	-
Low Level Air Defense Interoperability (LLAPI)	TBD	AMCOM, : Redstone Arsenal, AL	0.407	-		-		-		-		-	Continuing	Continuing	-
MIP	Various	PEO C3S, : Aberdeen Proving Ground, MD	1.219	-		-		-		-		-	Continuing	Continuing	-
Combat Identification	TBD	CECOM, : Aberdeen Proving Ground, MD	0.571	-		-		-		-		-	Continuing	Continuing	-
SNR(A)	TBD	ARL, : APG, MD	0.642	-		-		-		-		-	Continuing	Continuing	-
TRDP	TBD	REDCOM, : Ft. Belvoir, VA	2.676	0.220		0.228		-		-		-	Continuing	Continuing	-
Artillery Command and Control Interoperability (ASCA)	TBD	CECOM, : Aberdeen Proving Ground, MD	0.139	-		-		-		-		-	Continuing	Continuing	-
Force Protection Projects (FPP)	TBD	RDECOM, : Ft. Belvoir, VA	0.099	0.035		0.028		-		-		-	-	0.162	-
Weapons and Munitions	TBD	CECOM : Aberdeen Proving Ground, MD	0.000	-		-		0.008		-		0.008	-	0.008	-
		Subtotal	6.204	0.342		0.323		0.014		-		0.014	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Multilateral Interoperability Program (MIP)	TBD	Various : Various	2.226	0.150		0.151		-		-		-	Continuing	Continuing	Continuing
STEM-IOL	TBD	LSS/GDIT, : Fairfax, VA	6.242	0.514		0.466		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603790A / *NATO Research and Development*	Project (Number/Name) 691 / *NATO Rsch & Devel*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Combat Identification	TBD	CECOM, : Aberdeen Proving Ground, MD	1.017	0.025		0.018		-		-		-	Continuing	Continuing	Continuing
Multi-National Network Enabled Capabilities (MNNEC)	TBD	CECOM, : Aberdeen Proving Ground, MD	3.935	0.500		0.366		-		-		-	Continuing	Continuing	Continuing
Communications, Interoperability, and Electronics Technologies	TBD	CECOM : Aberdeen Proving Ground, MD	0.000	-		-		0.400		-		0.400	-	0.400	-
Artillery Command and Control Interoperability (ASCA)	Various	CECOM, : Aberdeen Proving Ground, MD	2.201	0.180		0.154		-		-		-	Continuing	Continuing	Continuing
Weapons and Munitions	Various	CECOM : Aberdeen Proving Ground, MD	0.000	-		-		0.450		-		0.450	-	0.450	-
TRDP	Various	Battelle/LMI, : McLean, VA	2.567	0.205		0.159		-		-		-	Continuing	Continuing	Continuing
Aviation Systems Technologies	Various	Various : Various	0.000	-		-		0.100		-		0.100	-	0.100	-
Senior National Representatives (Army) (SNR[A])	Various	ARDEC, : Arlington, VA	8.644	0.368		0.440		-		-		-	Continuing	Continuing	Continuing
Ground Systems Technology	FFRDC	Various : Various	0.000	-		-		0.100		-		0.100	-	0.100	-
Joint Tactical Radio System (JTRS)-Interoperability Communications and Electronic Technologies	Various	PM JTRS, : San Diego, CA	1.125	0.163		0.127		-		-		-	Continuing	Continuing	Continuing
Force Protection Projects (FPP)	Various	RDECOM, : Ft Belvoir, VA	0.435	0.117		0.111		-		-		-	-	0.663	Continuing
Low Level Air Defense Interoperability (LLAPI)	TBD	AMCOM, : Redstone Arsenal, AL	1.413	0.100		0.093		-		-		-	Continuing	Continuing	Continuing
		Subtotal	29.805	2.322		2.085		1.050		-		1.050	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603790A / *NATO Research and Development*	Project (Number/Name) 691 / *NATO Rsch & Devel*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIP	Various	CECOM : Aberdeen Proving Ground, MD	1.634	0.225		0.172		-		-		-	Continuing	Continuing	Continuing
Low Level Air Defense Interoperability (LLAPI)	Various	AMCOM, : Redstone Arsenal, AL	0.707	0.104		0.077		-		-		-	Continuing	Continuing	Continuing
STEM/IOL	Various	GDIT : Fairfax, VA	1.422	0.110		0.116		-		-		-	Continuing	Continuing	Continuing
MNNEC	Various	CECOM : Aberdeen Proving Ground, MD	1.007	0.107		0.083		-		-		-	Continuing	Continuing	Continuing
Armaments Cooperation Enterprise Support	Various	LSS/GDIT : Fairfax, VA	0.000	-		-		1.170		-		1.170	-	1.170	-
Communications, Interoperability, and Electronics Technologies	TBD	CECOM : Aberdeen Proving Ground, MD	0.000	-		-		0.200		-		0.200	-	0.200	-
Combat Identification	Various	CECOM : Aberdeen Proving Ground, MD	0.638	0.035		0.025		-		-		-	Continuing	Continuing	Continuing
TRDP	Various	RDECOM, : Ft. Belvoir, VA	2.727	0.250		0.230		-		-		-	Continuing	Continuing	Continuing
Aviation Systems Technologies	Various	ARDECOM : Ft Belvoir, VA	0.000	-		-		0.050		-		0.050	-	0.050	-
SNR(A)	Various	ARL, : Aberdeen, MD	1.949	0.100		0.078		0.060		-		0.060	Continuing	Continuing	Continuing
Ground Systems Technology	MIPR	Various : Various	0.000	-		-		0.050		-		0.050	-	0.050	-
Joint Tactical Radio System (JTRS)	Various	PM JTRS, : San Diego, VA	0.712	0.100		0.075		-		-		-	Continuing	Continuing	Continuing
Artillery Command and Control Interoperability (ASCA)	Various	CECOM : Aberdeen Proving Ground, MD	0.678	0.100		0.076		-		-		-	Continuing	Continuing	Continuing
Weapons and Munitions	Various	CECOM : Aberdeen Proving Ground, MD	0.000	-		-		0.050		-		0.050	-	0.050	-
Force Protection Projects (FPP)	Various	RDECOM, : Fort Belvoir, VA	0.090	0.050		0.052		-		-		-	-	0.192	Continuing
Soldier Technologies	TBD	Various : Various	0.000	-		-		0.020		-		0.020	-	0.020	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603790A / *NATO Research and Development*	Project (Number/Name) 691 / *NATO Rsch & Devel*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Chemical & Biological Defense Technologies	MIPR	RDECOM : Edgewood, Aberdeen, MD	0.000	-		-		0.030		-		0.030	-	0.030	-
		Subtotal	11.564	1.181		0.984		1.630		-		1.630	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIP	Various	CECOM : Aberdeen Proving Ground, MD	1.434	0.230		0.215		-		-		-	Continuing	Continuing	-
STEM/IOL	Various	RDECOM, : Various	0.990	0.063		0.050		-		-		-	Continuing	Continuing	-
Communications, Interoperability, and Electronics Technologies	TBD	Various : Various	0.000	-		-		0.100		-		0.100	-	0.100	-
Low Level Air Defense Interoperability (LLAPI)	Various	AMCOM, : Redstone Arsenal, AL	0.244	-		-		-		-		-	Continuing	Continuing	-
SNR(A)	TBD	Various : Various	1.457	0.100		0.079		-		-		-	Continuing	Continuing	-
ASCA	TBD	CECOM : Aberdeen Proving Ground, MD	0.377	0.090		0.070		-		-		-	Continuing	Continuing	-
Weapons and Munitions	TBD	CECOM : Various	0.000	-		-		0.080		-		0.080	-	0.080	-
Aviation Systems Technologies	TBD	RDECOM, Ft Belvoir, VA : Various	0.000	-		-		0.030		-		0.030	-	0.030	-
Joint Tactical Radio System (JTRS)	TBD	CECOM : Aberdeen Proving Ground, MD	0.302	-		-		-		-		-	Continuing	Continuing	-
Ground Systems Technologies	MIPR	TARDEC : Various	0.000	-		-		0.050		-		0.050	-	0.050	-
Force Protection Projects (FPP)	TBD	RDECOM, : Ft. Belvoir, VA	0.090	0.065		0.066		-		-		-	-	0.221	-
		Subtotal	4.894	0.548		0.480		0.260		-		0.260	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603790A / *NATO Research and Development*	Project (Number/Name) 691 / *NATO Rsch & Devel*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	52.467	4.393		3.872		2.954		-		2.954	-	-	-

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603801A / *Aviation - Adv Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	7.227	5.015	-	-	-	-	-	-	-	-	12.242
B32: *Adv Maint Concepts/Eq*	-	7.227	5.015	-	-	-	-	-	-	-	-	12.242

The FY 2015 OCO Request will be submitted at a later date.

Note

NOTE: In FY2015, all funds on this PE/Project moves to PE 0605830A Project EE5 to realign to Budget Activity 05, System Development and Demonstration.

A. Mission Description and Budget Item Justification

This PE provides advanced development aviation support of programs that include advanced maintenance concepts and 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 project are: diagnostics/prognostic monitoring systems, Aviation Foot Locker (AFL), Aviation Ground Power Unit (AGPU) equipment familiarization software, redesign and incorporation of AGPU modularity capabilities, Aviation Light Utility Mobile Maintenance Cart (ALUMMC), Aviation Intermediate Maintenance Shop Set (AVIM SS), Aviation Unit Maintenance Shop Set (AVUM SS), Flexible Engine Diagnostic System (FEDS), Unit Maintenance Aerial Recovery Kit (UMARK) and development support for tools needed to provide maintenance support to modernized/future force aircraft.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	8.602	5.018	10.041	-	10.041
Current President's Budget	7.227	5.015	-	-	-
Total Adjustments	-1.375	-0.003	-10.041	-	-10.041
• Congressional General Reductions	-0.012	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.100	-			
• SBIR/STTR Transfer	-0.263	-0.003			
• Adjustments to Budget Years	-	-	-10.041	-	-10.041

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603801A / *Aviation - Adv Dev*	Project (Number/Name) B32 / *Adv Maint Concepts/Eq*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
B32: *Adv Maint Concepts/Eq*	-	7.227	5.015	-	-	-	-	-	-	-	-	12.242
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY 2015, funding on this Project was realigned to PE/Project 0605830A/EE5 to reflect the program's development efforts in Budget Activity 05, System Development and Demonstration.

A. Mission Description and Budget Item Justification

This Project provides advanced development aviation support of programs that include advanced maintenance concepts and 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 project are: Aviation Foot Locker (AFL), Aviation Ground Power Unit (AGPU) equipment familiarization software, redesign and incorporation of AGPU modularity capabilities, Aviation Light Utility Mobile Maintenance Cart (ALUMMC), Aviation Intermediate Maintenance Shop Set (AVIM SS), Aviation Unit Maintenance Shop Set (AVUM SS), Flexible Engine Diagnostic System (FEDS), Non-Destructive Test Equipment (NDTE), Swaging Tool Kits (SWTK), and Unit Maintenance Aerial Recovery Kit (UMARK) and development support for tools needed to provide maintenance support to modernized/future force aircraft.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Aviation Foot Locker (AFL)	0.100	-	-
Articles:	-	-	-
Description: The AFL provides a standard Aviation Mainenance capability in a durable outer shell which augments the aviation maintainers' individual tool kits to maintain Army aircraft.			
FY 2013 Accomplishments: Completed the Product Item Desciption (PID).			
Title: Aviation Ground Power Unit (AGPU)	1.871	1.250	-
Articles:	-	-	-
Description: The AGPU provides the capability to meet Army helicopter servicing requirements into the next decade by providing a modular, diagnostic/prognostic monitoring system with external hydraulic, pneumatic, and AC/DC electrical power to all Modernized Force Aircraft.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603801A / *Aviation - Adv Dev*	**Project (Number/Name)** B32 / *Adv Maint Concepts/Eq*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Performed AGPU Hydraulic Module redesign, electrical upgrade, and Auxiliary Power Unit (APU) replacement analysis to meet requirements of updated Capability Production Document, developed and integrated AGPU diagnostic system, and prepared test plans for n ewly integrated capabilities. ***FY 2014 Plans:*** Complete AGPU Hydraulic Module redesign, electrical upgrade, and APU replacement analysis and begin testing of newly integrated capabilities.			
Title: Aviation Light Utility Mobile Maintenance Cart (ALUMMC) ***Articles:*** ***Description:*** ALUMMC will enhance mission performance of current forces by reducing the burden on Army Aviation units currently using TDA and TOE tactical vehicles to support flight line operations and providing a standardized and sustainable vehicle to move personnel and equipment along the flight line. ***FY 2013 Accomplishments:*** Performed product evaluation and operational test plans, procured test samples for evaluation. ***FY 2014 Plans:*** Complete product evaluation and operational test.	0.588 -	0.600 -	- -
Title: Aviation Intermediate Maintenance Shop Set (AVIM SS) ***Articles:*** ***Description:*** The AVIM Shop Set complex is comprised of ten (10) Class 7 shop sets in new or refurbished One Side Expandable (OSE) International Standardization Organization (ISO) shelters. These shops include the: Power Train, Non-Destructive Inspection, Engine, Pneudraulic, Composite, Tool Crib, Production Control / Quality Control, Sheet Metal, Machine Weld, and Armament & Electrical shops. ***FY 2013 Accomplishments:*** Provided support for continuous composite repair procedure and tooling development.	0.150 -	- -	- -
Title: Aviation Unit Maintenance Shop Set (AVUM SS) ***Articles:*** ***Description:*** The AVUM SS consists of three deployable shelters which provide deployable tool loads required for unit-level aviation maintenance tasks. ***FY 2014 Plans:***	- -	1.000 -	- -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603801A / *Aviation - Adv Dev*	**Project (Number/Name)** B32 / *Adv Maint Concepts/Eq*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Begin development of a Modification Work Order to replace current AVUM SS shelter with an ISO compliant shelter which will standardize Aviation Intermediate and Unitl Level Maintenance Shop Set shelters, increasing workspace and providing an adaptable platform to accomodate emerging requirements for aviation maintenance tools and procedures. Includes preparation of Statement of Work, preparation of the contract requirements package, technical review of proposals, and load planning and testing.			
Title: Flexible Engine Diagnostic System (FEDS) ***Articles:*** ***Description:*** The FEDS is an engine test system designed to test and veriify flight readiness of T-55 and T-700 series engines which have been removed from aircraft for maintenance. ***FY 2013 Accomplishments:*** Completed User and Maintenance Assessment and finalized the Technical Data Package (TDP).	2.080 -	- -	- -
Title: Unit Maintenance Aerial Recovery Kit (UMARK) ***Articles:*** ***Description:*** UMARK provides Aviation Support Company and Aviation Maintenance Company units with the ability to quickly rig for transport crash-damaged non-flyable modernized aircraft or aircraft undergoing maintenance for evacuation. ***FY 2013 Accomplishments:*** Continued ground and flight testing verification. ***FY 2014 Plans:*** Complete ground and flight testing and verification.	1.534 -	1.091 -	- -
Title: Management Support Services ***Articles:*** ***Description:*** Management Support Services in Support of the Aviation Ground Support Equipment Product Management Office. ***FY 2013 Accomplishments:*** Management Support Services. ***FY 2014 Plans:*** Management Support Services.	0.468 -	0.297 -	- -
Title: RDTE Project Test Support ***Articles:***	0.287 -	0.250 -	- -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603801A / *Aviation - Adv Dev*	**Project (Number/Name)** B32 / *Adv Maint Concepts/Eq*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: RDTE Project Test Support for the Aviation Ground Support Equipment Product Management Office. ***FY 2013 Accomplishments:*** RDTE Project Test Support. ***FY 2014 Plans:*** RDTE Project Test Support.			
Title: Technical Engineering Services	0.149	0.527	-
Articles:	-	-	-
Description: Technical Engineering Services in support of Aviation Ground Support Equipment Product Management Office. ***FY 2013 Accomplishments:*** Technical Engineering Services. ***FY 2014 Plans:*** Technical Engineering Services.			
Accomplishments/Planned Programs Subtotals	7.227	5.015	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Aviation Ground Support Equipment: *Aviation Ground Support Equipment, SSN AZ3520*	82.412	57.499	-	-	-	-	-	-	-	-	139.911

Remarks

D. 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.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603801A / *Aviation - Adv Dev*	Project (Number/Name) B32 / *Adv Maint Concepts/Eq*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support Services	Various	PM AGSE : RSA, AL	1.149	0.468	Feb 2013	0.297	Jan 2014	-		-		-	-	1.914	-
		Subtotal	1.149	0.468		0.297		-		-		-	-	1.914	-

Remarks

None

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AFL	Various	AMCOM, RSA; TRADOC : Fort Rucker, AL	0.000	0.100	Apr 2014	-		-		-		-	-	0.100	-
AGPU	Various	RTTC, Redstone Arsenal (RSA), AL; AMRDEC, RSA, AL; Aberdeen Test Center (ATC), : Aberdeen Proving Ground, MD	11.351	1.871	Feb 2013	1.250	Jun 2014	-		-		-	-	14.472	-
ALUMMC	Various	ATTD, Ft. Eustis, VA, Aberdeen Test Center (ATC), : Aberdeen Proving Ground MD	0.872	0.588	Sep 2013	0.600	Jul 2014	-		-		-	-	2.060	-
AVIM SS	Various	AMRDEC, (RSA), AL, Aberdeen Test Center (ATC), : Aberdeen, MD	0.000	0.150	Apr 2014	-		-		-		-	-	0.150	-
AVUM SS	Various	AMRDEC, RSA, RTTC, RSA, Aberdeen Test Center (ATC), :	0.000	-		1.000	Jul 2014	-		-		-	-	1.000	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603801A / *Aviation - Adv Dev*	Project (Number/Name) B32 / *Adv Maint Concepts/Eq*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Aberdeen Proving Ground, MD													
FEDS	Various	AMRDEC, RAPTR; Redstone Test Center : Redstone Arsenal, AL	0.000	2.080	Oct 2012	-		-		-		-	-	2.080	-
UMARK	Various	AMRDEC, (RSA), AL, Aberdeen Test Center (ATC), : Aberdeen Proving Ground, MD	5.330	1.534	Jan 2013	1.091	Feb 2014	-		-		-	-	7.955	-
		Subtotal	17.553	6.323		3.941		-		-		-	-	27.817	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services	MIPR	AATD, : Ft. Eustis, VA	6.976	0.089	Jan 2013	0.388	Mar 2014	-		-		-	-	7.453	-
Technical Engineering Services	MIPR	AED : Redstone Arsenal, AL	0.000	0.060	Jun 2013	0.139	Mar 2014	-		-		-	-	0.199	-
		Subtotal	6.976	0.149		0.527		-		-		-	-	7.652	-

Remarks

None

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RDTE Project Test Support	MIPR	ATC, : Aberdeen Proving Ground, MD	1.618	0.248	Feb 2013	0.250	Mar 2014	-		-		-	-	2.116	-
RDTE Project Test Support	Various	AMCOM : Redstone Arsenal, AL	0.000	0.039	May 2013	-		-		-		-	-	0.039	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603801A / *Aviation - Adv Dev*	Project (Number/Name) B32 / *Adv Maint Concepts/Eq*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	1.618	0.287		0.250		-		-		-	-	2.155	-

Remarks

None

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	27.296	7.227		5.015		-		-		-	-	39.538	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603801A / *Aviation - Adv Dev*	**Project (Number/Name)** B32 / *Adv Maint Concepts/Eq*

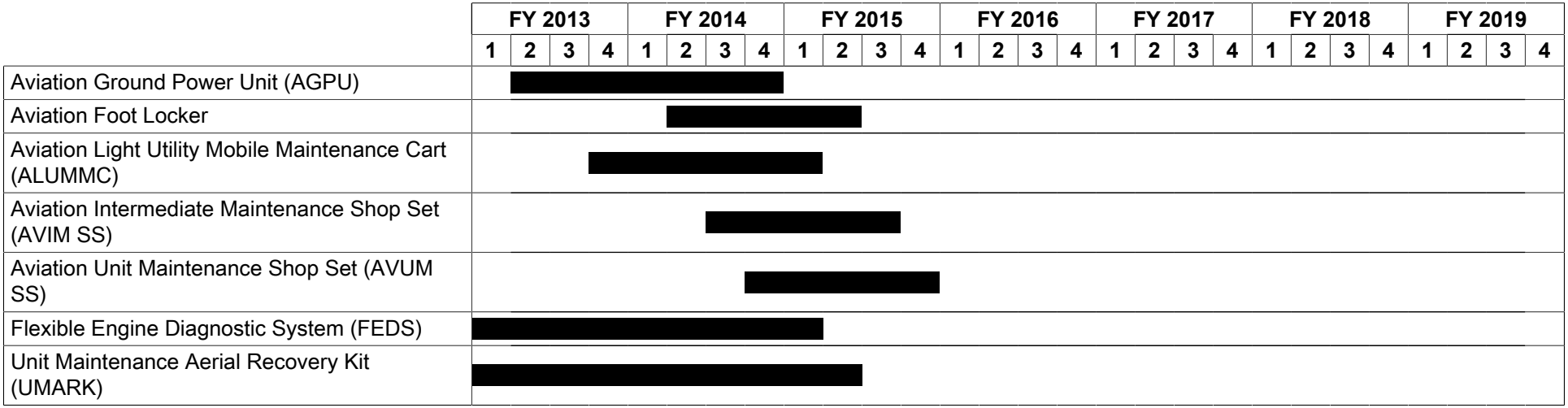

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603801A / *Aviation - Adv Dev*	**Project (Number/Name)** B32 / *Adv Maint Concepts/Eq*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Aviation Ground Power Unit (AGPU)	2	2013	4	2014
Aviation Foot Locker	2	2014	2	2015
Aviation Light Utility Mobile Maintenance Cart (ALUMMC)	4	2013	1	2015
Aviation Intermediate Maintenance Shop Set (AVIM SS)	3	2014	3	2015
Aviation Unit Maintenance Shop Set (AVUM SS)	4	2014	4	2015
Flexible Engine Diagnostic System (FEDS)	2	2007	1	2015
Unit Maintenance Aerial Recovery Kit (UMARK)	1	2007	2	2015

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	13.028	11.549	13.386	-	13.386	31.903	37.087	30.892	19.111	Continuing	Continuing
526: *Marine Orien Log Eq Ad*	-	2.526	2.368	2.603	-	2.603	13.269	21.856	18.289	3.461	Continuing	Continuing
G11: *Adv Elec Energy Con Ad*	-	3.512	2.499	4.013	-	4.013	9.559	5.933	3.748	8.218	Continuing	Continuing
G14: *Materials Handling Equipment - Ad*	-	0.137	0.648	-	-	-	-	-	-	-	-	0.785
K39: *Field Sustainment Support Ad*	-	2.649	2.160	0.534	-	0.534	0.558	1.155	-	-	Continuing	Continuing
K41: *Water And Petroleum Distribution - Ad*	-	2.413	2.262	3.545	-	3.545	3.935	3.757	4.465	4.847	Continuing	Continuing
VR8: *Combat Service Support Systems - Ad*	-	1.791	1.612	2.691	-	2.691	4.582	4.386	4.390	2.585	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Change Summary Explanation: Decrease is due to several PROJECTs.

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, 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.

Decrease from FY14 PB to FY15 PB reflects decrease of several projects.

For FY14, Joint Light Tactical Vehicle (JLTV) moved to PE: 655812/Project: VU9

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*		R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*			
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	14.605	11.556	14.559	-	14.559
Current President's Budget	13.028	11.549	13.386	-	13.386
Total Adjustments	-1.577	-0.007	-1.173	-	-1.173
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-1.577	-0.007	-1.173	-	-1.173

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) 526 / *Marine Orien Log Eq Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
526: *Marine Orien Log Eq Ad*	-	2.526	2.368	2.603	-	2.603	13.269	21.856	18.289	3.461	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The FY15 dollars in the amount of $2.603 million supports project advanced component development, and prototype of equipment and sub-systems supporting the Army Watercraft mission to provide critical capabilities in support of full-spectrum land combat operations, by extending the Commander's available maneuver space into and throughout the littorals, inland waterways and near coastal regions. Army watercraft equipment supports the conduct of riverine, Logistics Over The Shore (LOTS), Joint Logistics Over The Shore (JLOTS), inter and intratheater transport, movement and maneuver, mission command and sustainment, as identified in DODD 5100.01 (Functions of the Department of Defense and its Major Components). Army Watercraft exploit the inland waterways and littoral regions as waterborne maneuver and supply routes, conducting operations through littoral entry points (developed, undeveloped, and austere access points) and in non-permissive, and/or denied access scenarios. The Army uses a spectrum of lighterage and floating craft, from heavy sustainment ocean going landing craft capable of intratheater and ship to shore transport and undeveloped beach or harbor access, to ocean-going and harbor utility tug boats and barge derricks for transport and denied port/salvage operations, and modular causeway systems to support LOTS/JLOTS. The development of the Maneuver Support Vessel-Light (MSV-L) Capabilities Production Document (CPD) will ensure the Army addresses the most glaring capability gaps within the Army Watercraft fleet.

Funding will also be used to enhance the maturation of equipment, systems and sub-systems into Army Watercraft for the purposes of improved performance, energy efficiency, environmental, and regulatory compliance. The funding supports initiatives to enhance the seaworthiness, safety, survivability, supportability, and reliability of existing systems. Funded efforts will advance critical gaps in these areas for the current fleet, while at the same time researching, developing and testing emergent technologies in a manner to support future acquisitions and future fleet planning, as informed by the Army Watercraft Systems Board of Directors (AWS BOD).

Fleet wide funding requirements will complete core requirements for development, prototype operational testing, and military unit assessment of several projects. Core requirements include: externally-mounted accommodation units in support of crew and supercargo berthing; integration of Escalation of Force (EoF) force protection enhancements (both lethal and non-lethal); and development of Battle Command on the Move (BCOTM) and Common Operating Picture (COP)/interoperability aspects of existing Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR). The development of environmental and energy efficiency technologies will also be addressed, to ensure continued compliance with increasingly stringent regulatory requirements. Funding also furthers the development of digital technology integration in the areas of near and real time logistics management, area situational awareness, trend analysis, Condition Based Maintenance Plus (CBM+), equipment monitoring and diagnostics/prognostics and related functional areas, as well as development of ship to shore (at sea transfer), Economic Useful Life (EUL) and corrosion technologies.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Landing Craft Mechanized (LCM8)/Maneuver Support Vessel-Light(MSV-L)	0.150	0.125	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Landing Craft Mechanized 8 ***FY 2013 Accomplishments:*** Watercraft - Landing Craft Mechanized (LCM8) Study Development ***FY 2014 Plans:*** Watercraft - Landing Craft Mechanized (LCM8) Development			
Title: Maneuver Support Vessels (MSV) Capabilities Production Document (CPD) Capabilities and Feasability Development	0.230	0.055	-
Articles:	-	-	-
Description: VSB - Vessel to Shore Bridging Development ***FY 2013 Accomplishments:*** Family Maneuver Support Vessels (FMSV) Initial Capabilities Document (ICD) support. ***FY 2014 Plans:*** Maneuver Support Vessels (MSV) Capabilities Production Document (CPD) support.			
Title: Heavy Lift Vessel Development	0.200	-	-
Articles:	-	-	-
Description: AWS Heavy Lift Vessel ***FY 2013 Accomplishments:*** Heavy Lift Vessel Development			
Title: Army Watercraft Module Berthing (AWMB) Development	0.300	0.500	-
Articles:	-	-	-
Description: AWS - Army Watercraft Module, Berthing (AWMB) ***FY 2013 Accomplishments:*** People Pods Study/Development ***FY 2014 Plans:*** People Pod development			
Title: Force Protection; lethal and non-lethal Escalation of Force (EoF) Development	0.350	0.600	0.500

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: AWS - Force Protection ***FY 2013 Accomplishments:*** Force Protection Study/Development ***FY 2014 Plans:*** Force Protection Development ***FY 2015 Plans:*** New Title: Force Protection; lethal and non-lethal Escalation of Force (EoF) Development Old Title: WATERCRAFT - FORCE PROTECTION DEVELOPMENT			
Title: C4ISR Improvements	0.150	0.150	0.207
Articles:	-	-	-
Description: AWS - C4ISR ***FY 2013 Accomplishments:*** C4ISR Study/Development ***FY 2014 Plans:*** C4ISR ***FY 2015 Plans:*** New Title: C4ISR Improvements Old Title: WATERCRAFT - C4ISR DEVELOPMENT			
Title: Army Watercraft Program Support	0.156	0.050	0.062
Articles:	-	-	-
Description: SALARY SUPPORT ***FY 2013 Accomplishments:*** Support ***FY 2014 Plans:*** Support ***FY 2015 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Salary Support			
Title: Watercraft Market Surveys and Business Analysis	0.150	0.050	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Continues Watercraft Market Surveys and Business Analysis ***FY 2014 Plans:*** Watercraft Market Surveys and Business Analysis			
Title: Riverine Craft Development	-	0.050	-
Articles:	-	-	-
Description: Riverine Craft Development ***FY 2014 Plans:*** Riverine Craft Development			
Title: Tug and Barge Development	0.150	0.313	-
Articles:	-	-	-
Description: Tug and Barge Development ***FY 2013 Accomplishments:*** Tug and Barge Study/Development ***FY 2014 Plans:*** MEDIUM TUG AND BARGE DEVELOPMENT			
Title: Terminal Operations and Ship to Shore Development	0.040	0.075	-
Articles:	-	-	-
Description: Terminal Operations and Ship to Shore Development ***FY 2013 Accomplishments:*** Terminal Operations and Ship to Shore Study/Development ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Terminal Operations and Ship to Shore Development			
Title: Port/Harbor Utility Development	0.150	0.050	-
Articles:	-	-	-
Description: Port/Harbor Utility Development ***FY 2013 Accomplishments:*** Port/Harbor Utility and Light Landing Craft Study/Development ***FY 2014 Plans:*** Old Title: WATERCRAFT - PORT/HARBOR UTILITY DEVELOPMENT New Title: Port/Harbor Utility Development			
Title: Amphibious Craft Development	0.100	-	-
Articles:	-	-	-
Description: Amphibious Craft Development ***FY 2013 Accomplishments:*** Amphibious Craft Study/Development			
Title: Digital Integration Development	0.150	0.050	0.250
Articles:	-	-	-
Description: Digital Integration Development ***FY 2013 Accomplishments:*** Digital Integration Study/Development ***FY 2014 Plans:*** Digital Integration Development ***FY 2015 Plans:*** Will help with the maintenance of the Digital Intergration. Old Title: WATERCRAFT - DIGITAL INTEGRATION DEVELOPMENT New Title: Digital Integration Development			
Title: At Sea Transfer Development	0.100	-	0.500
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: At Sea Transfer Development ***FY 2013 Accomplishments:*** At Sea Transfer Study/Development ***FY 2015 Plans:*** New Title: At Sea Transfer Development Old Title: WATERCRAFT - AT SEA TRANSFER DEVELOPMENT			
Title: Energy Compliance	0.150	0.300	0.348
Articles:	-	-	-
Description: Energy Efficiency ***FY 2013 Accomplishments:*** Energy Efficiency and Environmental Compliance ***FY 2014 Plans:*** New title: Energy Compliance. Old Title: WATERCRAFT - ENERGY EFFICIENCY DEVELOPMENT ***FY 2015 Plans:*** New title: Energy Compliance. Old Title: WATERCRAFT - ENERGY EFFICIENCY DEVELOPMENT			
Title: Environmental Compliance	-	-	0.736
Description: Environmental Compliance Development ***FY 2015 Plans:*** New Title: Environmental Compliance. Technologies IAW evolving regulatory requirements. Old Title: Energy Efficiency and Environmental Compliance.			
Accomplishments/Planned Programs Subtotals	2.526	2.368	2.603

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MA4500 Modification on In-Service: *MA4500 Modification on In-Service Equipment (OPA3)*	41.903	31.955	43.268	-	43.268	10.639	9.918	9.924	12.434	Continuing	Continuing

Remarks

RDTE funds used in FY14/15 for the Mauever Support Vessels (MSV) line support projects Manuever Support Vessel-Light (MSV-L), which has not been included in the POM to date.

D. Acquisition Strategy

NA

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Army Watercraft Systems Program Support	SS/LH	Program Management Office : TACOM	3.129	0.156	Oct 2012	0.050	Oct 2013	0.062	Oct 2014	-		0.062	Continuing	Continuing	Continuing
Small Business Incentive Research (SBIR); Technology Transfer Research	TBD	Various : Various	0.072	-		-		-		-		-	-	0.072	0.083
		Subtotal	3.201	0.156		0.050		0.062		-		0.062	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Landing Craft Mechanized (LCM8) Maneuver Support	C/ FFPLOE	Various : Various	0.441	0.150	Dec 2012	0.125	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Maneuver Support Vessels (MSV) Capabilites Production Document (CPD)Development	C/ FFPLOE	Various : Various	0.502	0.230	Dec 2012	0.055	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Heavy Lift Vessel Development	C/ FFPLOE	Various : Various	0.441	0.200	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
Army Watercraft Module, Berthing (AWMB) Development	C/ FFPLOE	PM Force Sustainment Systems : Natick, MA	0.441	0.300	Dec 2012	0.500	Apr 2014	-		-		-	Continuing	Continuing	Continuing
Force Protection, Escalation of Force (EoF) Development	C/ FFPLOE	NSWCDD : Crane, IN	0.391	0.350	Dec 2012	0.600	Jul 2014	0.500	Mar 2015	-		0.500	Continuing	Continuing	Continuing
C4ISR Improvements	C/ FFPLOE	SPAWAR : Charleston, SC	0.276	0.150	Dec 2012	0.150	May 2013	0.207	Nov 2014	-		0.207	Continuing	Continuing	Continuing
Market Surveys/Business Analysis	C/FP	TBD : TBD	0.000	0.150	Dec 2012	0.050	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Riverine Craft Development	C/ FFPLOE	Various : Various	0.000	-		0.050	Dec 2013	-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Tug and Barge Development	C/ FFPLOE	ARO - Battelle : Columbus. OH	0.000	0.150	Dec 2012	0.313	Apr 2014	-		-		-	Continuing	Continuing	Continuing
Terminal Operations & Ship to Shore Development	C/ FFPLOE	Various : Various	0.000	0.040	Dec 2012	0.075	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Port/Harbor Utility Development	C/ FFPLOE	Various : Various	0.000	0.150	Dec 2012	0.050	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Amphibious Craft Development	C/ FFPLOE	Various : Various	0.000	0.100	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
Digital Integration Development	C/ FFPLOE	SPAWAR : Charleston, SC	0.000	0.150	Dec 2012	0.050	Dec 2013	0.250	Jan 2014	-		0.250	Continuing	Continuing	Continuing
At Sea Transfer Development	C/ FFPLOE	Various : Various	0.000	0.100	Mar 2013	-		0.500	Apr 2014	-		0.500	-	0.600	-
Energy Compliance	C/ FFPLOE	Various : Various	0.000	0.150	Dec 2012	0.300	Mar 2014	0.348	Mar 2014	-		0.348	Continuing	Continuing	Continuing
Environmental Compliance	C/ FFPLOE	Various : Various	0.348	-		-		0.736	Apr 2014	-		0.736	-	1.084	-
		Subtotal	2.840	2.370		2.318		2.541		-		2.541	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.041	2.526		2.368		2.603		-		2.603	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

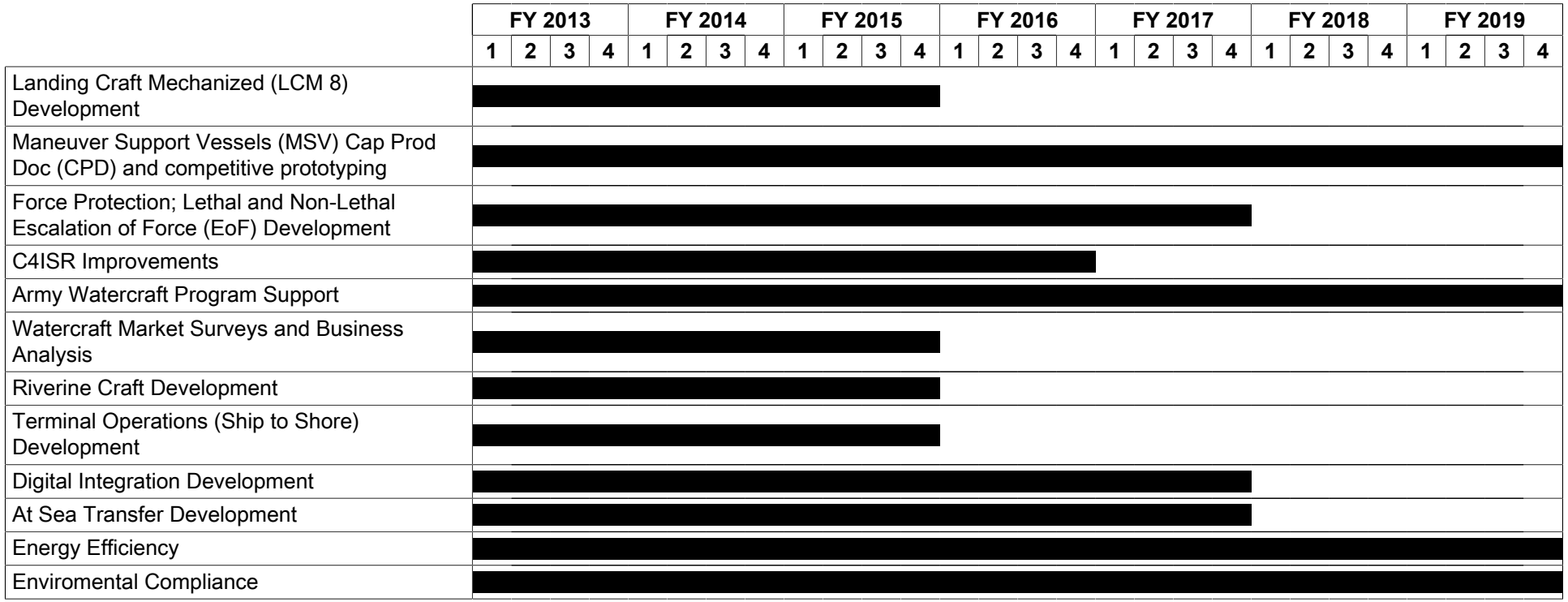

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** 526 / *Marine Orien Log Eq Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Landing Craft Mechanized (LCM 8) Development	1	2010	4	2015
Maneuver Support Vessels (MSV) Cap Prod Doc (CPD) and competitive prototyping	1	2010	4	2019
Force Protection; Lethal and Non-Lethal Escalation of Force (EoF) Development	1	2010	4	2017
C4ISR Improvements	1	2010	4	2016
Army Watercraft Program Support	1	2013	4	2019
Watercraft Market Surveys and Business Analysis	1	2010	4	2015
Riverine Craft Development	1	2013	4	2015
Terminal Operations (Ship to Shore) Development	1	2013	4	2015
Digital Integration Development	1	2013	4	2017
At Sea Transfer Development	1	2013	4	2017
Energy Efficiency	1	2013	4	2019
Enviromental Compliance	1	2013	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) G11 / *Adv Elec Energy Con Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
G11: *Adv Elec Energy Con Ad*	-	3.512	2.499	4.013	-	4.013	9.559	5.933	3.748	8.218	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not Applicable for this item.

A. Mission Description and Budget Item Justification

The Tactical Electric Power (TEP) program was established by the Department of Defense to develop modernized, standard families of mobile electric power sources and power distribution systems for all Services throughout the Department of Defense. Project Manager Mobile Electric Power (PM MEP) derives concept and technology developments that will improve the performance, mobility, readiness and survivability of the next generation of tactical power sources in support of all Services. It supports initiatives that are essential to the development and fielding of modernized TEP sources from Watts to Megawatts level that comply with environmental statues and provide noise and signature-suppressed, energy-efficient, lightweight, deployable and reliable equipment. FY14 and FY15 funding will support the test and evaluation of technologies for Small Tactical Electric Power (STEP), Mobile Electric Hybrid Power Sources (MEHPS), and Intelligent Power Management and Distribution Systems (IPMDS). In addition, FY15 funding will support a holistic approach to the evaluation of Operational Energy (OE)-related impacts, systems, and improvements; with the vision of reducing Army energy dependency and demand, increasing systems and facilities' energy efficiency, seeking alternative energy sources and creating a culture of energy responsibility while sustaining or enhancing operational capabilities. Out years will support investigation of general advancements in engine, power equipment and power distribution equipment that are applicable to current equipment and emerging requirements. Programs include costs for developing concept hardware and executing system evaluations at the Network Integration Evaluation (NIE) events at Ft. Bliss.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Contract Activity	2.000	1.500	0.800
Articles:	-	-	-
Description: Continue development of technology supporting the STEP program, IPMDS, and MEHPS.			
FY 2013 Accomplishments: Procure various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include STEP components, hybrid/alternative energy power sources, and IPMDS.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G11 / *Adv Elec Energy Con Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Procure various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include STEP components, MEHPS components, and IPMDS. ***FY 2015 Plans:*** Procure various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include STEP components, MEHPS components and IPMDS. Develop tools, systems and capability to provide holistic analysis of Operational Energy impacts, systems and improvements.			
Title: Government System Test and Evaluation ***Articles:*** ***Description:*** Continue development of technology supporting the STEP program, IPMDS, and MEHPS. Evaluate systems at Network Integration Evaluation (NIE). ***FY 2013 Accomplishments:*** Continue evaluation and testing of various technologies related to tactical electric power and power distribution and management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the Tactical Electric Power Capabilities Production Document (TEP CPD). Specific efforts will include performance testing of small generator sets, hybrid/alternative energy power sources, and intelligent power distribution/management systems. Program also supports Rapid Equipping Force deployments of alternative energy systems in support of Village Stability Operation. Program supports new equipment and concept demonstrations at NIE 14.1. ***FY 2014 Plans:*** Continue evaluation and testing of various technologies related to tactical electric power and power distribution and management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the TEP CPD. Specific efforts will be limited to small generator system testing due to limited funding. Program supports new equipment and concept demonstrations at NIE 14.2. ***FY 2015 Plans:*** Continue evaluation and testing of various technologies related to tactical electric power and power distribution and management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the TEP CPD. Specific efforts will include performance testing of small generator sets, hybrid/alternative energy power sources, and intelligent power distribution/management systems. Program also supports Rapid Equipping Force deployments of MEHPS concepts in support of Village Stability Operation. Program supports new equipment and concept demonstrations at NIE 15.x.	0.291 -	0.350 -	0.300 -
Title: Other Contracts and Gov't agencies	0.994	0.400	1.693

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G11 / *Adv Elec Energy Con Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Continue development of technology supporting the STEP program, IPMDS, and MEHPS. ***FY 2013 Accomplishments:*** Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include development of STEP, and evaluation of MEHPS and intelligent power distribution/management systems as well as support of NIE 14.1. ***FY 2014 Plans:*** Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will be limited to the development of STEP given limited funding and support of NIE 14.2 ***FY 2015 Plans:*** Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include development of STEP, and evaluation of MEHPS and intelligent power systems, as well as support of NIE 15.x. Develop tools, systems and capability to provide holistic analysis of Operational Energy impacts, systems and improvements.			
Title: Government Program Management	0.227	0.249	1.220
Articles:	-	-	-
Description: Continue development of technology supporting the STEP program, IPMDS and MEHPS. ***FY 2013 Accomplishments:*** Oversight and management of various technology projects related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the STEP program and the TEP CPD. Specific efforts will include development of large sets, MEHPS and intelligent power systems. ***FY 2014 Plans:*** Oversight and management of various technology projects related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the STEP program and the TEP CPD. Specific efforts will be limited to small power sources given limited funding. ***FY 2015 Plans:*** Oversight and management of various technology projects related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G11 / *Adv Elec Energy Con Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
will support the STEP program and the TEP CPD. Specific efforts will include development of small sets, MEHPS and intelligent power systems. Oversight, analysis and management of Operational Energy-related impacts, systems and improvements to reduce Army's energy dependence and improve operational capabilities.			
Accomplishments/Planned Programs Subtotals	3.512	2.499	4.013

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 654804.194: *Logistics and Engineer Equipment - Eng Dev 194*	11.195	5.025	5.875	-	5.875	9.785	4.927	4.158	6.552	Continuing	Continuing
• MA9800: *OPA 3, Generators and Associated Eq.*	60.223	40.129	115.190	-	115.190	216.293	237.171	341.209	354.470	Continuing	Continuing

Remarks

D. Acquisition Strategy

Complete advanced development pre-milestone B technology assessments and analysis, and transition of tactical electric power and power distribution products to Engineering and Manufacturing Development (EMD) phase (Milestone B) and subsequent transition to production (Milestone C).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) G11 / *Adv Elec Energy Con Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Tactical Electric Power (STEP) Components	Various	PM-MEP : Fort Belvoir, VA	0.216	0.100	Nov 2012	0.200	Feb 2014	0.100	Nov 2014	-		0.100	Continuing	Continuing	Continuing
Mobile Electric Hybrid Power Sources (MEHPS) Components	Various	PM MEP : Ft. Belvoir, VA	0.146	0.067	Nov 2012	0.049	Feb 2014	0.070	Nov 2014	-		0.070	Continuing	Continuing	Continuing
Intelligent Power Management and Distribution Systems	Various	PM MEP : Ft. Belvoir, VA	0.125	0.060	Nov 2012	-		0.050	Nov 2014	-		0.050	Continuing	Continuing	Continuing
Operational Energy	MIPR	PM-MEP : Fort Belvoir, VA	0.000	-		-		1.000		-		1.000	Continuing	Continuing	Continuing
		Subtotal	0.487	0.227		0.249		1.220		-		1.220	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Tactical Electric Power (STEP) Components	Various	CERDEC : Fort Belvoir, VA	0.590	1.091	Mar 2013	1.000	Apr 2014	0.100	Mar 2015	-		0.100	Continuing	Continuing	Continuing
Mobile Electric Hybrid Power Sources (MEHPS) Components	Various	Multiple Vendors : TBD	0.815	0.500	Mar 2013	0.250	Apr 2014	0.100	Mar 2015	-		0.100	Continuing	Continuing	Continuing
Intelligent Power Management and Distribution Systems	Various	CERDEC : Fort Belvoir, VA	0.250	0.409	Mar 2013	0.250	Apr 2014	0.100	Mar 2015	-		0.100	Continuing	Continuing	Continuing
Operational Energy	TBD	TBD (FY15) : TBD (FY15)	0.000	-		-		0.500		-		0.500	-	0.500	-
		Subtotal	1.655	2.000		1.500		0.800		-		0.800	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) G11 / *Adv Elec Energy Con Ad*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Tactical Electric Power (STEP) Components	MIPR	CERDEC : Fort Belvoir, VA	0.406	0.500	Nov 2012	0.400	Feb 2014	0.200	Nov 2014	-		0.200	Continuing	Continuing	Continuing
Mobile Electric Hybrid Power Sources (MEHPS) Components	MIPR	CERDEC : Fort Belvoir, VA	0.665	0.300	Nov 2012	-		0.164	Nov 2014	-		0.164	Continuing	Continuing	Continuing
Intelligent Power Management and Distribution Systems	MIPR	CERDEC : Fort Belvoir, VA	0.674	0.194	Nov 2012	-		0.329	Nov 2014	-		0.329	Continuing	Continuing	Continuing
Operational Energy	MIPR	Dept of Energy Sandia National Labs : Washington DC	0.000	-		-		1.000		-		1.000	-	1.000	-
		Subtotal	1.745	0.994		0.400		1.693		-		1.693	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Tactical Electric Power (STEP) Components	MIPR	CERDEC : Fort Belvoir,VA	0.180	0.200	Nov 2012	0.250	Feb 2014	0.100	Nov 2014	-		0.100	Continuing	Continuing	Continuing
Mobile Electric Hybrid Power Sources (MEHPS) Components	MIPR	CERDEC : Fort Belvoir, VA	0.165	0.050	Nov 2012	0.050	Mar 2014	0.100	Nov 2014	-		0.100	Continuing	Continuing	Continuing
Intelligent Power Management and Distribution Systems	MIPR	CERDEC : Fort Belvoir, VA	0.306	0.041	Nov 2012	0.050	Mar 2014	0.100	Nov 2014	-		0.100	Continuing	Continuing	Continuing
		Subtotal	0.651	0.291		0.350		0.300		-		0.300	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) G11 / *Adv Elec Energy Con Ad*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	4.538	3.512		2.499		4.013		-		4.013	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G11 / *Adv Elec Energy Con Ad*

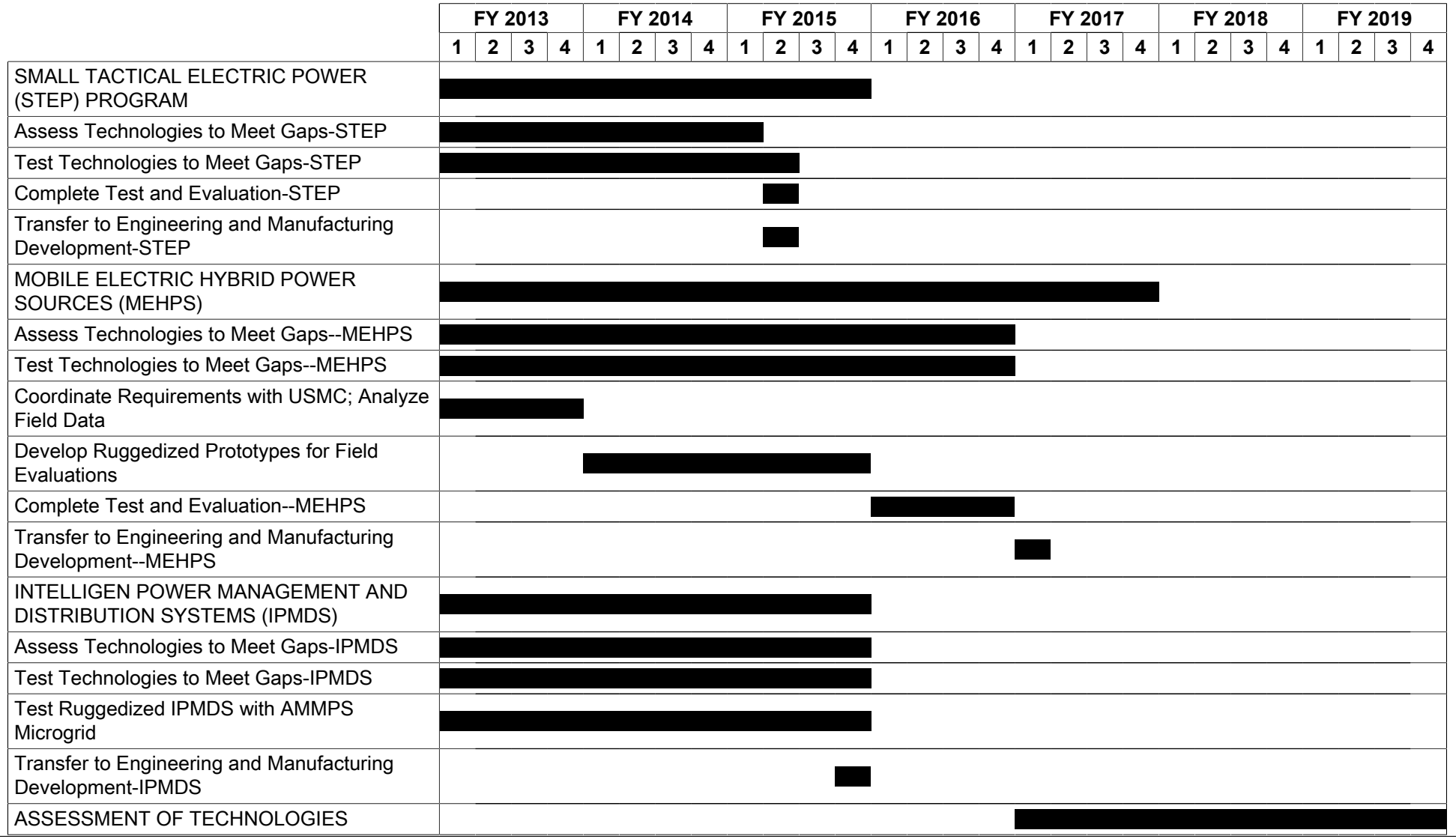

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G11 / *Adv Elec Energy Con Ad*

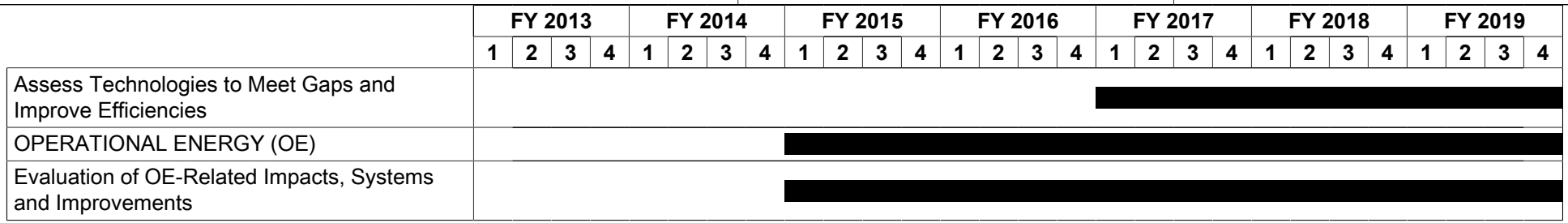

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G11 / *Adv Elec Energy Con Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SMALL TACTICAL ELECTRIC POWER (STEP) PROGRAM	1	2008	4	2015
Assess Technologies to Meet Gaps-STEP	1	2008	1	2015
Test Technologies to Meet Gaps-STEP	1	2008	2	2015
Complete Test and Evaluation-STEP	2	2015	2	2015
Transfer to Engineering and Manufacturing Development-STEP	2	2015	2	2015
MOBILE ELECTRIC HYBRID POWER SOURCES (MEHPS)	1	2010	4	2017
Assess Technologies to Meet Gaps--MEHPS	1	2010	4	2016
Test Technologies to Meet Gaps--MEHPS	1	2010	4	2016
Coordinate Requirements with USMC; Analyze Field Data	1	2013	4	2013
Develop Ruggedized Prototypes for Field Evaluations	1	2014	4	2015
Complete Test and Evaluation--MEHPS	1	2016	4	2016
Transfer to Engineering and Manufacturing Development--MEHPS	1	2017	1	2017
INTELLIGEN POWER MANAGEMENT AND DISTRIBUTION SYSTEMS (IPMDS)	1	2010	4	2015
Assess Technologies to Meet Gaps-IPMDS	1	2010	4	2015
Test Technologies to Meet Gaps-IPMDS	1	2010	4	2015
Test Ruggedized IPMDS with AMMPS Microgrid	1	2013	4	2015
Transfer to Engineering and Manufacturing Development-IPMDS	4	2015	4	2015
ASSESSMENT OF TECHNOLOGIES	1	2017	4	2019
Assess Technologies to Meet Gaps and Improve Efficiencies	1	2017	4	2019
OPERATIONAL ENERGY (OE)	1	2015	4	2019
Evaluation of OE-Related Impacts, Systems and Improvements	1	2015	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) G14 / *Materials Handling Equipment - Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
G14: *Materials Handling Equipment - Ad*	-	0.137	0.648	-	-	-	-	-	-	-	-	0.785
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports component development and Material Handling Equipment (MHE) prototyping and stays abreast of emerging and available technologies to be integrated into military MHE to address identified capability gaps and warfighter objectives. This project enables the development of selected technologies and transition to system integration and development or production of MHE products. MHE includes Rough Terrain Forklifts, Rough Terrain Container Handlers (RTCH) and Cranes, as well as ancillary MHE equipment, to support distribution of critical supplies in the theater of operations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Field Maintenance and Training Aids for Material Handling Equipment (MHE)	0.137	0.400	-
Articles:	-	-	-
Description: Field Maintenance and Training Aids for Material Handling Equipment (MHE) ***FY 2013 Accomplishments:*** Evaluate the efficacy of proposed devices to improve diagnostic tasks and to prevent spillage of hazardous materials. ***FY 2014 Plans:*** Develop a solution to eliminate the physical insertion of system faults for maintenance training.			
Title: Baseline Fuel Efficiency of Material Handling Equipment (MHE)	-	0.248	-
Articles:	-	-	-
Description: Develop standard duty cycles for fielded system, investigate training/technology for improving efficiency and validate performance of proposed changes. ***FY 2014 Plans:*** Instrument and Test MHE equipment to baseline fuel consumption during standard operations.			
Accomplishments/Planned Programs Subtotals	0.137	0.648	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G14 / *Materials Handling Equipment - Ad*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RDT&E: *0604804A, Logistics and Engineer Equipment, Engineering Development (H14)*	1.265	0.298	0.283	-	0.283	0.972	0.951	0.607	0.627	Continuing	Continuing

Remarks

D. Acquisition Strategy

Procure prototype component items for engineering tests and demonstrations with subject matter experts. Conduct trades between cost and improved maintainability and environmental risk reduction. Process engineering change proposals, update technical manuals and training materials, and prepare supporting acquisition documents and data to procure new training aids.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) G14 / *Materials Handling Equipment - Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/ Program Management	MIPR	TARDEC : Warren, MI	0.000	0.022	Dec 2012	0.185	Dec 2013	-		-		-	-	0.207	-
		Subtotal	0.000	0.022		0.185		-		-		-	-	0.207	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Field Maintenance Aids for MHE	SS/FFP	Kalmar RT Center : Cibolo, TX	0.000	0.087	Mar 2013	0.340	Feb 2014	-		-		-	-	0.427	-
		Subtotal	0.000	0.087		0.340		-		-		-	-	0.427	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Field Maintenance Aids for MHE	SS/FFP	Kalmar RT Center : Cibolo, TX	0.000	0.028	Mar 2013	-		-		-		-	Continuing	Continuing	-
Baseline Fuel Efficiency of MHE Equipment	TBD	TBD : TBD	0.000	-		0.123	Jan 2014	-		-		-	-	0.123	-
		Subtotal	0.000	0.028		0.123		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.137		0.648		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G14 / *Materials Handling Equipment - Ad*

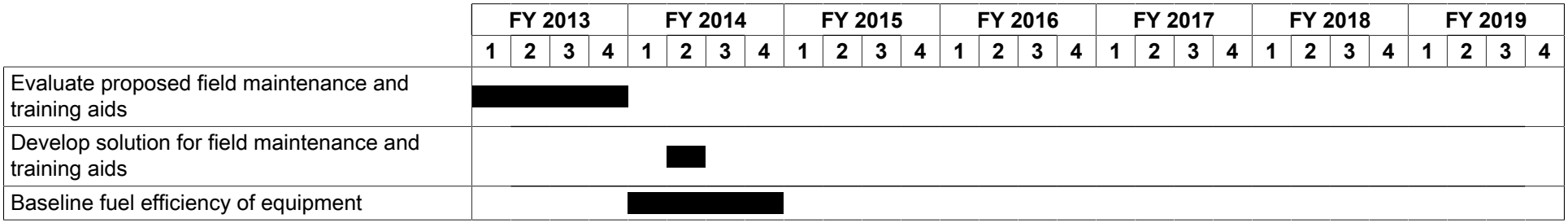

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** G14 / *Materials Handling Equipment - Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Evaluate proposed field maintenance and training aids	1	2013	4	2013
Develop solution for field maintenance and training aids	2	2014	2	2014
Baseline fuel efficiency of equipment	1	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) K39 / *Field Sustainment Support Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
K39: *Field Sustainment Support Ad*	-	2.649	2.160	0.534	-	0.534	0.558	1.155	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports development of critical soldier support and sustainment systems for cargo aerial delivery capabilities. These systems will fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. This project supports Advanced Component Development and Prototyping of Critical Distribution Capabilities which provide improved safety and accuracy while increasing survivability of aircraft, personnel, and equipment. 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.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Advanced Low Velocity Airdrop System Light and Heavy (ALVADS-L or ALVADS-H)	2.649	2.160	-
Articles:	-	-	-
Description: ALVADS - Light and Heavy are capable of airdrop operations at an altitude of 500-ft Above Ground Level (AGL) with increased aircraft survivability, and improved accuracy. Light Gross rigged weight of 2,520-22,000 pounds (lbs) and Heavy Gross rigged weight of 22,001-42,000 lbs.			
FY 2013 Accomplishments: Complete ALVADS-L Design Validation (DV), initiate Developmental Testing (DT) and complete Milestone A for ALVADS-H.			
FY 2014 Plans: Complete ALVADS Design Validation and system downselect.			
Title: Extracted High and Low High Speed Container Delivery System (EHLSCDS)	-	-	0.534
Description: Provides a high speed (250 knot), low altitude (250 ft AGL) capability for up to eight Container Delivery Systems (CDS) containers to enhance aircraft and aircrew safety while improving accuracy and reducing dispersion for receiving ground units.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** K39 / *Field Sustainment Support Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Conduct EHLSCDS Design Validation (DV) testing.			
Accomplishments/Planned Programs Subtotals	2.649	2.160	0.534

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA MA7806: *Precision Airdrop MA7806*	6.577	9.500	2.198	-	2.198	2.208	1.947	2.210	2.217	Continuing	Continuing
• RDT&E 654804.L39: *Field Sustainment Support ED 654804.L39*	-	1.788	1.688	-	1.688	2.550	2.237	1.941	2.325	Continuing	Continuing

Remarks

D. Acquisition Strategy

Accelerate Joint Precision Aerial Delivery System (JPADS) product improvements to transition to Production.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) K39 / *Field Sustainment Support Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM Force Sustainment Sys (FSS), Natick : Natick, MA	4.634	0.470	Apr 2013	0.700	Apr 2014	0.070	Dec 2014	-		0.070	Continuing	Continuing	Continuing
SBIR+STTR	TBD	Various : Various	0.090	-		-		-		-		-	-	0.090	-
		Subtotal	4.724	0.470		0.700		0.070		-		0.070	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	PM Force Sustainment Sys (FSS), Natick : Natick, MA	15.934	-		-		-		-		-	Continuing	Continuing	Continuing
High Speed Container Delivery System (HSCDS)	Various	Various : Various	1.097	-		-		0.264	Mar 2015	-		0.264	Continuing	Continuing	Continuing
LCADS P3I Effort	Various	Various : Various	1.300	-		-		-		-		-	Continuing	Continuing	Continuing
ALVADS Development	Various	Various : Various	8.450	1.150	Jul 2014	-		-		-		-	Continuing	Continuing	Continuing
JPADS 2K and 10K product improvements	Various	Various : Various	5.900	-		-		-		-		-	Continuing	Continuing	Continuing
RRDAS Development	Various	Various : Various	2.200	-		-		-		-		-	Continuing	Continuing	Continuing
Next Generation Human Remains Transfer Case Development	Various	Various : Various	2.220	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	37.101	1.150		-		0.264		-		0.264	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) K39 / *Field Sustainment Support Ad*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ALVADS Development	C/FFP	Various : Various	0.000	-		0.060	May 2014	-		-		-	-	0.060	-
		Subtotal	0.000	-		0.060		-		-		-	-	0.060	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ALVADS-Light Testing Design Validation(DV). ALVADS-Heavy S&T Test	Various	YPG, AZ : YPG, AZ	8.002	1.029	Apr 2013	1.400	May 2014	-		-		-	Continuing	Continuing	Continuing
RRDAS Design Validation (DV) Testing	Various	YPG, AZ : YPG, AZ	0.150	-		-		-		-		-	Continuing	Continuing	Continuing
High Speed Container Delivery System (HSCDS)	C/FFP	YPG, AZ : Arizona	0.000	-		-		0.200	Mar 2015	-		0.200	-	0.200	-
ACPRS	Various	Ft Bragg, NC : NC	0.220	-		-		-		-		-	-	0.220	-
LCADS P3I	Various	DTC, YPG, OTC, FT Bragg : Various	4.307	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	12.679	1.029		1.400		0.200		-		0.200	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	54.504	2.649		2.160		0.534		-		0.534	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** K39 / *Field Sustainment Support Ad*

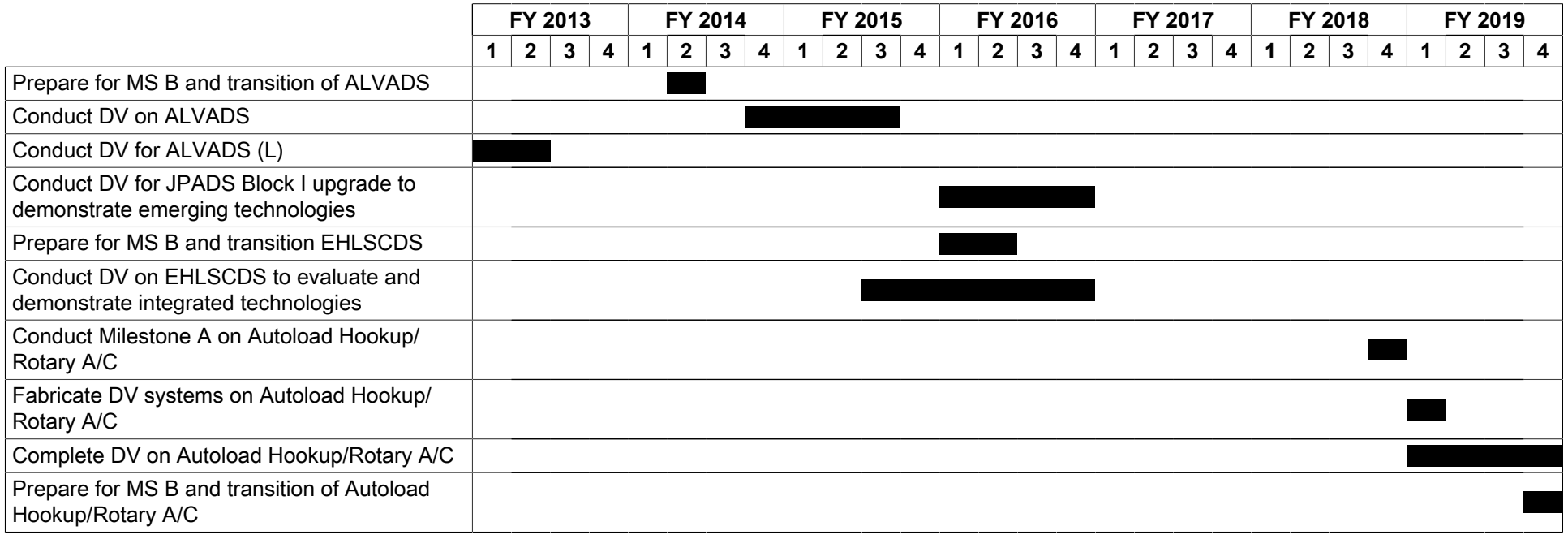

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** K39 / *Field Sustainment Support Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Prepare for MS B and transition of ALVADS	2	2014	2	2014
Conduct DV on ALVADS	4	2014	3	2015
Conduct DV for ALVADS (L)	1	2013	2	2013
Conduct DV for JPADS Block I upgrade to demonstrate emerging technologies	1	2016	4	2016
Prepare for MS B and transition EHLSCDS	1	2016	2	2016
Conduct DV on EHLSCDS to evaluate and demonstrate integrated technologies	3	2015	4	2016
Conduct Milestone A on Autoload Hookup/Rotary A/C	4	2018	4	2018
Fabricate DV systems on Autoload Hookup/Rotary A/C	1	2019	1	2019
Complete DV on Autoload Hookup/Rotary A/C	1	2019	4	2019
Prepare for MS B and transition of Autoload Hookup/Rotary A/C	4	2019	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) K41 / *Water And Petroleum Distribution - Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
K41: *Water And Petroleum Distribution - Ad*	-	2.413	2.262	3.545	-	3.545	3.935	3.757	4.465	4.847	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project develops and demonstrates the potential of prototype equipment and technologies to satisfy petroleum storage, distribution, and quality surveillance system requirements. The Technology Development programs support the development and enhancement of rapidly deployable Petroleum and Water equipment. The mission includes developing onboard fuel quality analysis systems; achieving greater capabilities in the removal of Nuclear, Biological, Chemical (NBC) and other contaminants from water sources; reducing the logistics footprint; developing water reutilization systems to reduce the requirement for transport of water into the theater; and material systems to decrease the logistics footprint and employment time for the transfer of liquid logistics in joint operations area. This vital equipment enables the Army to achieve its mission by providing the Army with the means to be highly mobile and self-sustaining in very hostile joint operations areas. 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.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Water Systems Capability Improvements	0.300	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Evaluate water monitoring equipment for insertion into Tactical Water Purification Systems (TWPS) and Lightweight Water Purifier (LWP).			
Title: 3K Tactical Water Purification System (3K TWPS)	1.719	0.500	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Fabricate and integrate breadboard components for the 3K Tactical Water Purification System (TWPS).			
FY 2014 Plans: Test 3K TWPS breadboard components and use results to start preparation of detailed system design.			
Title: Fuel System Supply Points (FSSP)	0.394	0.400	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** K41 / *Water And Petroleum Distribution - Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Market investigation for family of meters for fuel dispensing systems and commercial on-board truck meters. ***FY 2014 Plans:*** Address the capability gap for automated gauging to capture fuel quantities in collapsible tanks in the FSSP. This includes the development of a data device that will transmit and store the data internally for the system and externally to other command networks and systems. Assist the Army and Capability Developer in the Limited Objective Experiment mission conducted in FY14.			
Title: Early Entry Fluid Distribution System (E2FDS)	-	1.362	2.795
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2014 Plans:*** Complete the development of six performance specifications for the E2FDS; System Level, Command and Control, Hose Reel Assembly, Hose Assembly, Pumping Assembly and Pump Station Accessories. Develop Milestone B documentation and initiate Engineering and Manufacturing Development (EMD) contract action in parallel with Milestone B documentation. ***FY 2015 Plans:*** Achieve Milestone B approval. Release Request for Proposal (RFP) for (EMD) contract. Source Selection Evaluation Board (SSEB) for EMD contract. EMD Contract award.			
Title: Modular Fuel System (MFS)	-	-	0.750
Description: Funding is provided for the following effort ***FY 2015 Plans:*** Conduct Operational Testing on the MFS. Test will include the MFS Pump Rack Module (PRM) and the MFS Tank Rack Module (TRM). Funding provides support for Soldiers to conduct Operational Tests of the MFS system.			
Accomplishments/Planned Programs Subtotals	2.413	2.262	3.545

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** K41 / *Water And Petroleum Distribution - Ad*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PM PAWS Project L41 654804: *Logistics and Engineer Equipment - Engineering Development*	3.418	2.648	3.195	-	3.195	4.013	4.733	4.632	4.622	Continuing	Continuing
• Distribution Sys Petroleum & Water: *Distribution Systems Petroleum & Water*	36.218	42.288	40.692	-	40.692	38.518	38.875	28.001	26.631	Continuing	Continuing

Remarks

D. Acquisition Strategy

Develop engineering prototypes for the 3K TWPS and MTRRS and select Non-Development Item based on market surveys and proposals from industry for the E2FDS and other water and fuel systems. Based on market research, will award either competitive or sole source contracts.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) K41 / *Water And Petroleum Distribution - Ad*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Water System Capability Improvements	Various	TBD : TBD	0.745	0.100	Feb 2013	-		-		-		-	Continuing	Continuing	Continuing
3K Tactical Water Purification System (3K TWPS)	Various	TARDEC : Warren, MI	0.161	0.519	Mar 2013	0.200	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Water Quality Monitoring	Various	TARDEC : Warren, MI	0.270	-		-		-		-		-	Continuing	Continuing	Continuing
Fuel Gauging Improvements	MIPR	NFESC : Port Hueneme, CA	0.424	0.394	Mar 2013	0.237	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Early Entry Fluid Distribution System (E2FDS)	C/FFP	TARDEC & PM, PAWS : Warren, MI	0.000	-		0.972	Jan 2014	2.000	May 2015	-		2.000	Continuing	Continuing	Continuing
3K Tactical Water Purification System (3K TWPS)	Various	NFESC : Port Hueneme, CA	0.689	0.300	Mar 2013	-		-		-		-	Continuing	Continuing	Continuing
Bulk Fuel Distribution	Various	TBD : TBD	1.404	-		-		-		-		-	Continuing	Continuing	Continuing
Expeditionary Water Packaging System (EWPS)	C/FFP	TARDEC : Warren, MI	1.177	-		-		-		-		-	Continuing	Continuing	Continuing
Modular Tactical Refueling System (MTRS)	RO	TARDEC : Warren, MI	0.100	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	4.970	1.313		1.409		2.000		-		2.000	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Water System Capability Improvements	Various	TARDEC : Warren, MI	0.853	0.200	Mar 2013	-		-		-		-	Continuing	Continuing	Continuing
Fuel Gauging Improvements	Various	TARDEC & PM, PAWS : Warren, MI	0.000	-		0.163	Jan 2014	-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) K41 / *Water And Petroleum Distribution - Ad*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Early Entry Fluid Distribution System (E2FDS)	Various	TARDEC & PM, PAWS : Warren, MI	0.000	-		0.390	Jan 2014	0.795	Dec 2014	-		0.795	Continuing	Continuing	Continuing
3K Tactical Water Purification System (TWPS)	Various	TARDEC : Warren, MI	0.000	0.500	Mar 2013	0.100	Feb 2014	-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.853	0.700		0.653		0.795		-		0.795	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Water Systems Capability Improvements	Various	TARDEC : Warren, MI	1.181	-		-		-		-		-	Continuing	Continuing	Continuing
Water Quality Monitoring	Various	Aberdeen Proving Ground,MD : APG, MD	0.030	-		-		-		-		-	Continuing	Continuing	Continuing
Water Quality Monitoring	Various	TARDEC : Warren, MI	0.300	-		-		-		-		-	Continuing	Continuing	Continuing
Modular Fuel System (MFS)	Various	Yuma Proving Ground : Yuma, AZ	0.000	-		-		0.750	Mar 2015	-		0.750	Continuing	Continuing	Continuing
3K Tactical Water Purification System (3K TWPS)	RO	TARDEC : Warren, MI	0.422	0.400	Mar 2013	0.200	Apr 2014	-		-		-	Continuing	Continuing	Continuing
Fuel Pumping Assembly Improvements	Various	TARDEC : Warren, MI	0.700	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.633	0.400		0.200		0.750		-		0.750	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8.456	2.413		2.262		3.545		-		3.545	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) K41 / *Water And Petroleum Distribution - Ad*	

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** K41 / *Water And Petroleum Distribution - Ad*

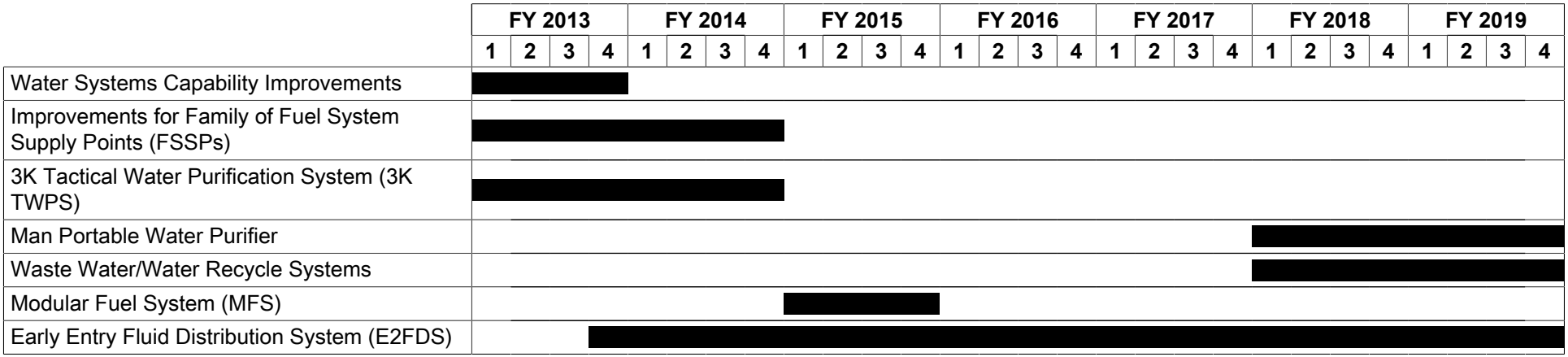

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** K41 / *Water And Petroleum Distribution - Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Water Systems Capability Improvements	1	2013	4	2013
Improvements for Family of Fuel System Supply Points (FSSPs)	1	2013	4	2014
3K Tactical Water Purification System (3K TWPS)	4	2012	4	2014
Man Portable Water Purifier	1	2018	4	2019
Waste Water/Water Recycle Systems	1	2018	4	2019
Modular Fuel System (MFS)	1	2015	4	2015
Early Entry Fluid Distribution System (E2FDS)	4	2013	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) VR8 / *Combat Service Support Systems - Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VR8: *Combat Service Support Systems - Ad*	-	1.791	1.612	2.691	-	2.691	4.582	4.386	4.390	2.585	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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), base camp subsystems, field service systems, mortuary affairs equipment, heaters, camouflage systems to counter emerging enemy threat technologies, and other combat service support equipment. These systems will fill identified theater distribution and services capability gaps, improve unit sustainability, improve resource and energy efficiency and increase combat effectiveness. This project supports Advanced Component Development and Prototyping of Critical tactical support systems that support mobile Joint Service command and control, medical, and maintenance platforms. 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 and reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands in lift, combat zone footprint, and costs for logistical support.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Zero-Footprint Base Camp	-	-	0.482
Description: Zero-Footprint Base Camp reduces the operational energy and logistics footprint of the expeditionary base camp system, with the goal being a significant reduction in fuel, water, and power requirements to sustain operations in the field. Operating a base camp such as Force Provider requires a significant amount of logistics support and also produces an enormous amount of by products, both of which cost money, human effort (that means a risk in the form of soldiers on the road), and represents a potential vulnerability.			
FY 2015 Plans: Conduct evaluation and demonstration of novel technologies with focus on producing suitable technology demonstration prototypes and reducing technical risk. Prepare for transition of Zero-Footprint Base Camp technologies into EMD in support of the OSD Joint Expeditionary Basing Work Group initiative for Joint base camp systems.			
Title: Net-Zero Energy Efficiency Solutions	1.791	0.885	0.964
Articles:	-	-	-
Description: Net-Zero Energy Efficiency Solutions reduce the logistics footprint of the expeditionary base camp system, with the goal being a significant reduction in fuel, water, material and power requirements to sustain operations in the field. The effort			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** VR8 / *Combat Service Support Systems - Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
includes reducing site preparation, maintenance and spare parts requirements. Operating a base camp such as Force Provider requires a significant amount of logistics support and also produces an enormous amount of by products, both of which cost money, human effort (that means a risk in the form of soldiers on the road), and represents a potential vulnerability. ***FY 2013 Accomplishments:*** Continue evaluation of Net-Zero energy efficiency solutions for Force Provider. In early FY 13 transition Energy Efficiency (E2) shelter kit solutions into Engineering and Manufacturing Development (EMD) for Developmental Testing (DT). ***FY 2014 Plans:*** Conduct evaluation of integrated technologies that are transitioning from the RDECOM 6.3 programs in a realistic operating environment at the Ft Devens Base Camp Integration Laboratory (BCIL). Efforts are focused on proving out subsystem maturity and the potential of these technologies before transitioning into Engineering and Manufacturing Development (EMD) and putting them into operational use within the Army Force Provider base camps as a Pre-Planned Product Improvements (P3I). Focus will be on evaluating technologies that will improve upon the environmental and energy efficiency performance of the base camp. Specifically: 1) Integration and evaluation of micro-grid / smart power / renewable energy/ power storage solutions developed under separate DoD and industry programs that can be incorporated into Force Provider modules to complement existing Tactical Quiet Generators (TQGs) and the Advanced Medium-sized Mobile Power Source (AMMPS) for standard Army Force Provider modules; and 2) Integration and evaluation of energy efficient Expeditionary Rigid Wall Shelters with integrated Environmental Control Units / Heaters that will compliment improved shelter efficiencies and significantly reduce the fuel demand on base camp operations. ***FY 2015 Plans:*** Conduct evaluation of integrated technologies that are transitioning from the RDECOM 6.3 programs in a realistic operating environment at the Ft Devens Base Camp Integration Laboratory (BCIL). Efforts are focused on proving out subsystem maturity and the potential of these technologies before transitioning into Engineering and Manufacturing Development (EMD) and putting them into operational use within the Army Force Provider base camps as a Pre-Planned Product Improvements (P3I). Focus will be on evaluating technologies that will improve upon the environmental and energy efficiency performance of the base camp. Specifically the Integration and evaluation of energy efficient Expeditionary Rigid Wall Shelters with integrated Environmental Control Units / Heaters and energy saving appliances that will compliment improved shelter efficiencies and significantly reduce the fuel and resource demand on base camp operations.			
Title: Modular Ballistic Protection System (MBPS)	-	0.377	0.200
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** VR8 / *Combat Service Support Systems - Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: MBPS is a lightweight, rapidly deployable and reusable ballistic protection system that can be installed in commonly used military shelters in expeditionary and remote base camps and outposts where more robust forms of ballistic protection (i.e. sandbags, concrete barriers) are not readily available or logistically feasible. ***FY 2014 Plans:*** Conduct evaluation/demonstration of advanced ballistics protection technologies to support transition to EMD of MBPS Stand-alone. ***FY 2015 Plans:*** Prepare documentation to support Milestone B decision and initiate EMD development of MBPS Stand-alone.			
Title: Black Waste Elimination for Small Base Camps (150 personnel) ***Description:*** Provides the capability to reduce/eliminate the black water generated by small base camps. The objective capability will reduce our sustainment requirements for backhauling black water waste as well as our risk of contaminating the environment with biological contaminants. This capability will significantly reduce reliance on external support and is a key capability required to move toward zero footprint base camps. ***FY 2015 Plans:*** Transition black water waste elimination technologies from the laboratory and conduct evaluation and demonstration of these technologies to prove out component and subsystem maturity at the BCIL.	-	-	0.250
Title: Solid Waste Disposal for Small Base Camps ***Description:*** Provides an integrated waste management (reduction, treatment or disposal process) add-on capability that can safely process 1,000 lbs or more of mixed solid waste in a single day on site. Mixed solid waste produced on a single 150 person site must be properly managed through reduction, reuse, recycling, treatment, or disposal. Most of the waste is nonhazardous solid waste. Provides a substantial improvement over the current practice of burn pits that poses a health risk to Soldiers and/or the backhaul logistics burden. ***FY 2015 Plans:*** Complete the evaluation and demonstration of integrated waste management technologies. Prepare for Milestone B for the Small Base Waste Disposal System and transition technologies into EMD.	-	-	0.575
Title: Ultralightweight Camouflage Net System (ULCANS) ***Articles:***	- -	0.350 -	0.220 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** VR8 / *Combat Service Support Systems - Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: ULCANS is durable, robust, snag resistant state of the art camouflage system that provides increased survivability against multi-spectral visual, infrared and radar threats, thermal signature suppression and significant thermal/solar reduction capability. ULCANS utilizes a snag-free design and is capable of use in all types of weather and climatic conditions except in heavy snow and in winds greater than 46 MPH. ULCANS Desert Radar Scattering, Desert Radar Transparent, Woodland Radar Scattering, and Woodland Radar Transparent Variants are integrated systems that are very lightweight, easily deployable, versatile, user friendly and tailored to the equipment meeting the requirements of operations for combat systems, command and control equipment, logistic support sites, tactical facilities, and fixed facilities for mobile systems. RDT&E funding supports formal development of new ULCANS variants (snow, urban, aviation, 2 sided system) and necessary technology/signature enhancements for current ULCANS variants. ***FY 2014 Plans:*** Complete development and testing of ULCANS (Two-Sided) and initiate contract planning and Milestone B documentation to support EMD transition for ULCANS technology enhancements/new CDD variants. ***FY 2015 Plans:*** Conduct evaluation/demonstration of enhanced signature management technologies and initiate EMD transition. Prepare Milestone B documentation for ULCANS Arctic/Snow Variant.			
Accomplishments/Planned Programs Subtotals	1.791	1.612	2.691

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RDT&E 654804.VR7: *Combat Service Support Systems - RDTE 654804 VR7*	5.029	1.193	2.947	-	2.947	4.024	3.892	3.895	2.585	Continuing	Continuing

Remarks

D. Acquisition Strategy

Accelerate Base Camp efficiency and safety initiatives to incorporate in deployed camps and/or incorporate during reset of equipment.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	Project (Number/Name) VR8 / *Combat Service Support Systems - Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM Force Sustainment Systems : Natick, MA	0.203	0.199	Dec 2012	0.185	Jan 2014	0.314	Dec 2014	-		0.314	Continuing	Continuing	-
SBIR+STTR	TBD	various : Various	0.062	-		-		-		-		-	-	0.062	-
		Subtotal	0.265	0.199		0.185		0.314		-		0.314	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	Various : Various	0.780	0.920	Aug 2013	0.578	Apr 2014	1.281	Mar 2015	-		1.281	Continuing	Continuing	-
		Subtotal	0.780	0.920		0.578		1.281		-		1.281	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	Various : Various	0.932	0.672	Jun 2013	0.849	May 2014	1.096	May 2015	-		1.096	Continuing	Continuing	-
		Subtotal	0.932	0.672		0.849		1.096		-		1.096	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.977	1.791		1.612		2.691		-		2.691	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** VR8 / *Combat Service Support Systems - Ad*

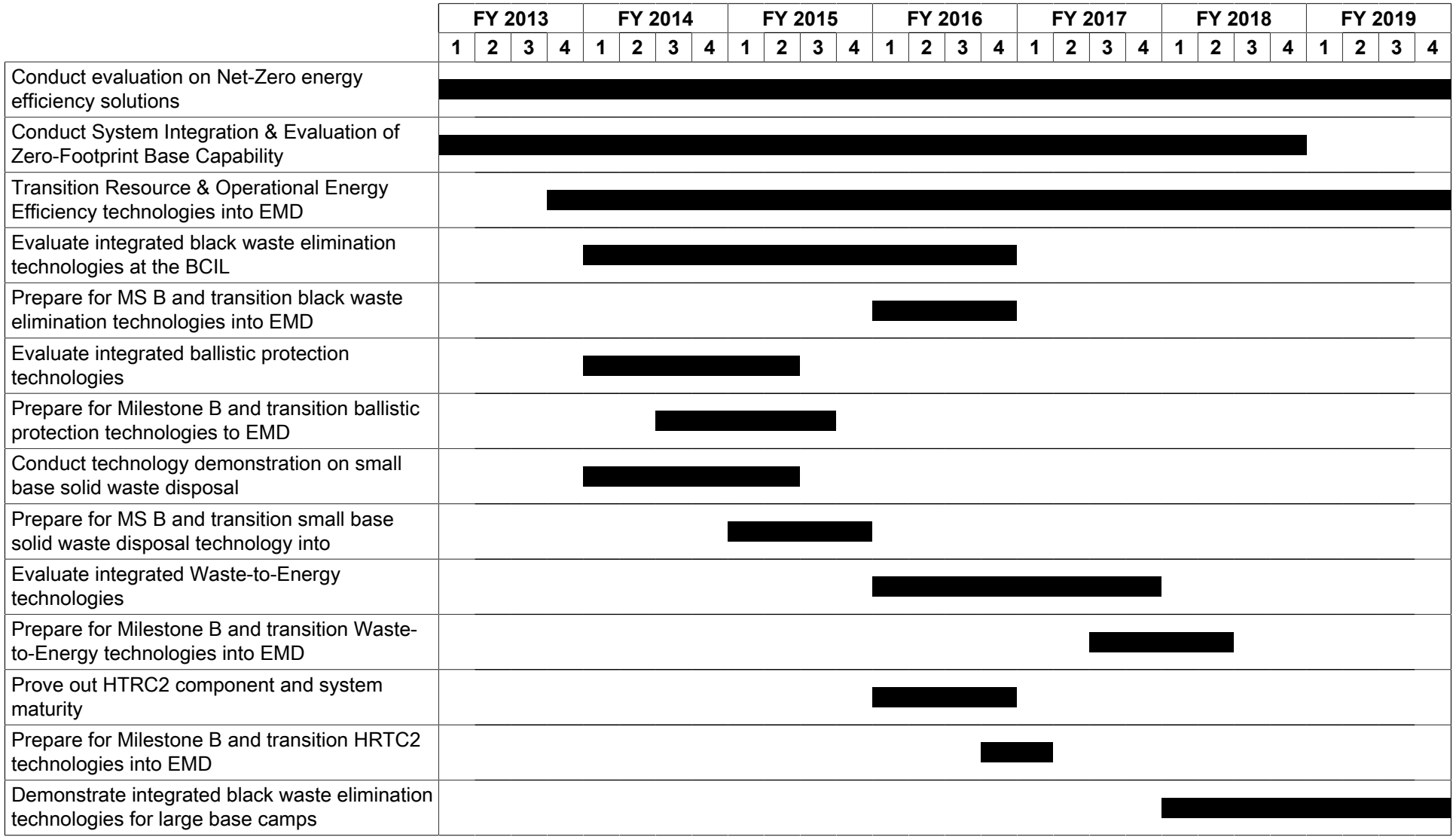

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** VR8 / *Combat Service Support Systems - Ad*

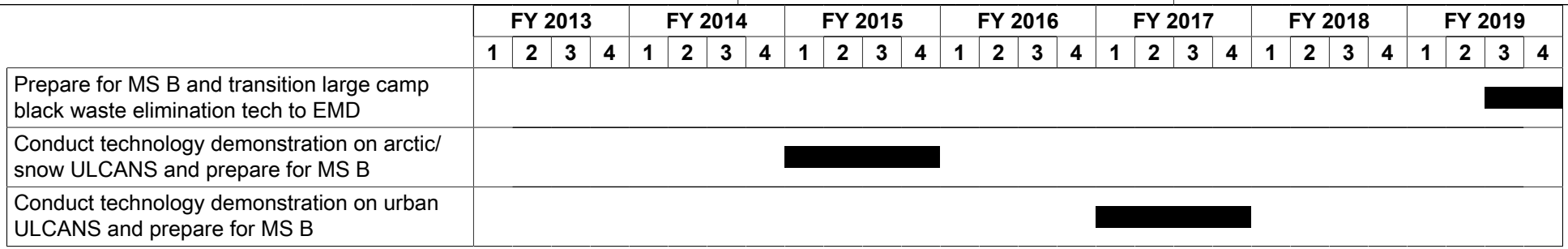

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603804A / *Logistics and Engineer Equipment - Adv Dev*	**Project (Number/Name)** VR8 / *Combat Service Support Systems - Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Conduct evaluation on Net-Zero energy efficiency solutions	1	2012	4	2021
Conduct System Integration & Evaluation of Zero-Footprint Base Capability	1	2012	4	2018
Transition Resource & Operational Energy Efficiency technologies into EMD	4	2013	4	2021
Evaluate integrated black waste elimination technologies at the BCIL	1	2014	4	2016
Prepare for MS B and transition black waste elimination technologies into EMD	1	2016	4	2016
Evaluate integrated ballistic protection technologies	1	2014	2	2015
Prepare for Milestone B and transition ballistic protection technologies to EMD	3	2014	3	2015
Conduct technology demonstration on small base solid waste disposal	1	2014	2	2015
Prepare for MS B and transition small base solid waste disposal technology into	1	2015	4	2015
Evaluate integrated Waste-to-Energy technologies	1	2016	4	2017
Prepare for Milestone B and transition Waste-to-Energy technologies into EMD	3	2017	2	2018
Prove out HTRC2 component and system maturity	1	2016	4	2016
Prepare for Milestone B and transition HRTC2 technologies into EMD	4	2016	1	2017
Demonstrate integrated black waste elimination technologies for large base camps	1	2018	4	2020
Prepare for MS B and transition large camp black waste elimination tech to EMD	3	2019	4	2019
Conduct technology demonstration on arctic/snow ULCANS and prepare for MS B	1	2015	4	2015
Conduct technology demonstration on urban ULCANS and prepare for MS B	1	2017	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603805A *I Combat Service Support Control System Evaluation and Analysis*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	4.499	-	-	-	-	-	-	-	-	-	4.499
091: *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*	-	4.499	-	-	-	-	-	-	-	-	-	4.499

The FY 2015 OCO Request will be submitted at a later date.

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 Integrated Battle Command Capabilities, training and support to the Joint Land Component Warfighter. It is the logistics/sustainment part of Mission Command. 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 acquire, scale and tailor critical logistics information in near-real time in order to enable the Warfighter in the planning and execution of operations. BCS3 provides an 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. It is an inherent part of the common operating environment (COE). It provides the sustainment functionality in the command post computing environment (CP/CE).

BCS3 has been adopted and integrated into Joint and strategic logistics (C2) 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 (C2) 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 sustainment/ logistics planning and execution. It is a core part of CP/CE.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0603805A / *Combat Service Support Control System Evaluation and Analysis*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	5.054	-	-	-	-
Current President's Budget	4.499	-	-	-	-
Total Adjustments	-0.555	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-0.555	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603805A / *Combat Service Support Control System Evaluation and Analysis*				Project (Number/Name) 091 / *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
091: *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*	-	4.499	-	-	-	-	-	-	-	-	-	4.499
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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 Integrated Battle Command Capabilities, training and support to the Joint Land Component Warfighter. It is the logistics/sustainment part of Mission Command (MC). 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 acquire, scale and tailor critical logistics information in near-real time in order to enable the Warfighter in the planning and execution of operations. BCS3 provides an 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. It is an inherent part of the common operating environment (COE). It provides the sustainment functionality in the command post computing environment (CP/CE).

BCS3 has been adopted and integrated into Joint and strategic logistics (C2) 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 (C2) 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 sustainment/ logistics planning and execution. It is a core part of CP/CE.

This program has no FY15 Base or OCO request.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Systems Engineering and Test	0.700	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Continues System Engineering and Testing			
Title: Program Office Management	0.450	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603805A / *Combat Service Support Control System Evaluation and Analysis*	**Project (Number/Name)** 091 / *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Funding is provided for the following efforts ***FY 2013 Accomplishments:*** Continues program management support.			
Title: MC Migration & SW Development	3.349	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Development efforts for National Data Portal, Logistics Web Services, and Thick & Thin clients.			
Accomplishments/Planned Programs Subtotals	4.499	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• SSN W34600: *Battle Command Sustainment Support System*	10.500	3.000	-	-	-	-	-	-	-	-	13.500

Remarks

D. Acquisition Strategy

The program provides essential logistical/sustainment capabilities to Tactical Operations Center utilizing a common platform (Mission Command Work Station), and will provide a complete set of capabilities via web enabled services.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603805A / *Combat Service Support Control System Evaluation and Analysis*	Project (Number/Name) 091 / *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	TBD	PMO Support : APG, MD	29.870	0.450	Jan 2013	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	29.870	0.450		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	TBD	Northrop Grumman : Carson, CA	166.871	-		-		-		-		-	-	166.871	-
Software Development - (National Enterprise Data Portal, Logistics Web Services)	C/CPFF	IBM : Bethesda, MD	12.228	1.053	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
Client Development - (Thick & Thin Clients)	C/CPFF	IBM : Bethesda, MD	2.467	2.296	Sep 2013	-		-		-		-	-	4.763	-
JUONS CC-0445 Development	SS/CPFF	IBM : Bethesda, MD	6.900	-		-		-		-		-	-	6.900	-
		Subtotal	188.466	3.349		-		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support	TBD	Technical Support : APG, MD	9.797	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	9.797	-		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603805A / *Combat Service Support Control System Evaluation and Analysis*	Project (Number/Name) 091 / *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering and Test	TBD	Northrop Grumman, : Carson, CA	5.083	-		-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering and Test	C/CPFF	IBM : Bethesda, MD	0.800	0.700	Dec 2012	-		-		-		-	-	1.500	-
		Subtotal	5.883	0.700		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	234.016	4.499		-		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603805A / *Combat Service Support Control System Evaluation and Analysis*	**Project (Number/Name)** 091 / *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*

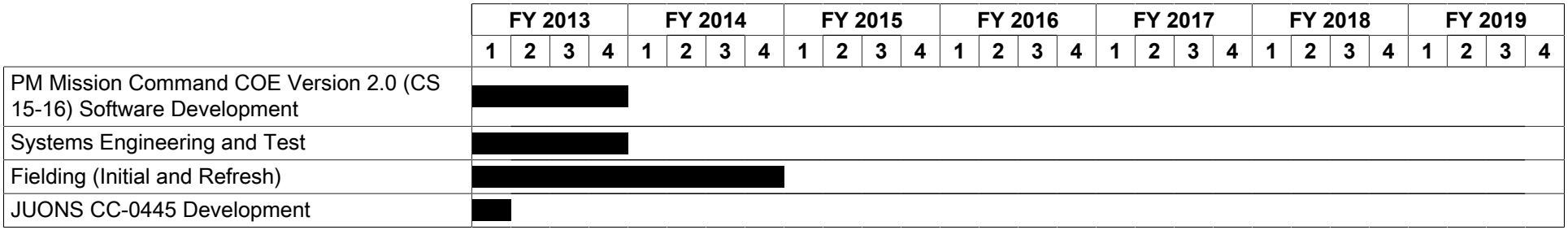

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603805A / *Combat Service Support Control System Evaluation and Analysis*	**Project (Number/Name)** 091 / *CBT Svc Spt Contrl Sy Svc Spt Contrll Sys*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
PM Mission Command COE Version 2.0 (CS 15-16) Software Development	2	2012	4	2013
Systems Engineering and Test	1	2008	4	2013
Fielding (Initial and Refresh)	1	2009	4	2014
JUONS CC-0445 Development	4	2011	1	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603807A *I Medical Systems - Adv Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	22.514	15.594	23.659	-	23.659	32.295	32.270	28.219	28.373	Continuing	Continuing
808: *DoD Drug & Vacc Ad*	-	8.956	6.888	8.970	-	8.970	17.138	15.825	14.282	14.585	Continuing	Continuing
811: *Mil HIV Vac&Drug Dev*	-	2.052	0.550	1.078	-	1.078	0.972	0.846	1.009	1.031	Continuing	Continuing
836: *Field Medical Systems Advanced Development*	-	11.102	7.595	13.332	-	13.332	14.185	15.599	12.928	12.757	Continuing	Continuing
VS7: *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*	-	0.404	0.561	0.279	-	0.279	-	-	-	-	-	1.244

The FY 2015 OCO Request will be submitted at a later date.

Note

FY15 reduction attributed to realignment to oher higher priority Army programs.

A. Mission Description and Budget Item Justification

This program element (PE) funds development of medical materiel within the early system integration portion of the System Development and Demonstration phase of the acquisition life cycle using 6.4 funding. Program efforts support transition of promising Science and Technology candidate medical technologies (drugs, vaccines, medical devices, diagnostics, and mechanisms for detection and control of disease carrying insects) to larger scale testing in humans for safety and effectiveness. Programs are aligned to meet future force requirements identified within concept documents and organizational structures. This Program Element also provides funding for Food and Drug Administration (FDA) regulated human clinical trials to gain additional information about safety and effectiveness on the path to licensure for use in humans. The Projects supported by this PE are:

(PROJ 808) funds development of candidate medical countermeasures for infectious diseases of military relevance. Efforts include vaccines, drugs, diagnostic kits/ devices, and insect control measures. These funds support human clinical efficacy trials of the drug/vaccine in a larger group that are designed to assess performance and to continue safety assessments in a larger group of volunteers. Products from this project will transition to 849.

(PROJ 811) funds the development of military relevant human immunodeficiency virus (HIV) medical countermeasures. It provides funding for planning and conducting of human clinical trials in a group of healthy volunteers to assess the drug/vaccine for safety, tolerability, how the drug/vaccine is distributed, metabolized, and excreted from the body, and investigate the appropriate dose for therapeutic use. Products from this project will transition to Project 812.

(PROJ 836) funds the demonstration and validation of medical products for enhanced combat casualty care and follow-on care, including rehabilitation. This project also funds the human clinical trials that test the safety and effectiveness of biologics, devices and demonstration. Clinical trials are conducted in accordance with U.S. Food and Drug Administration (FDA) regulations. Products from this project will transition to 832.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603807A *I Medical Systems - Adv Dev*

(PROJ VS7) funds program upgrades, retrofits, trains, and sustains the fleet of Medical Evacuation legacy helicopters that continue to play a major role in Iraq and Afghanistan. The approved force design increased the number of air frames in the force from 12 to 15 aircraft for 37 MEDEVAC companies. Products from this project will transition to VS8.

This program is managed by U.S. Army Medical Materiel Development Activity (USAMMDA) and U.S. Army Medical Materiel Agency (USAMMA) of the US Army Medical Research and Materiel Command.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	24.384	15.603	30.796	-	30.796
Current President's Budget	22.514	15.594	23.659	-	23.659
Total Adjustments	-1.870	-0.009	-7.137	-	-7.137
• Congressional General Reductions	-0.044	-0.009			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.700	-			
• SBIR/STTR Transfer	-0.489	-			
• Adjustments to Budget Years	-	-	-7.137	-	-7.137
• Other Adjustments	-2.037	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 808 / *DoD Drug & Vacc Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
808: *DoD Drug & Vacc Ad*	-	8.956	6.888	8.970	-	8.970	17.138	15.825	14.282	14.585	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project funds development of candidate medical countermeasures for infectious diseases of military relevance. These efforts are in: vaccines, drugs, diagnostic kits/devices, and determining if insects are infected with pathogenic organisms capable of infecting service members/preventive medicine measures. These funds support human clinical effectiveness (capacity to produce a desired size of an effect under ideal or optimal conditions) trials of the drug/vaccine in larger groups that are designed to assess how well the drug/vaccine works, and to continue safety assessments in a larger group of volunteers. Funding supports both technical evaluations and human clinical testing to assure the safety and effectiveness of medical diagnostic kits and devices. This work, which is performed in military laboratories or civilian pharmaceutical firms, is directed toward the prevention of disease, early diagnosis, and speeding recovery once diagnosed; to enhance battlefield readiness. All clinical trials are conducted in accordance with U.S. Food and Drug Administration (FDA) regulations, a mandatory obligation for all military products placed into the hands of medical providers or service members. Product development priorities are determined based upon four major factors: (1) the extent and threat 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).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: DoD Drug and Vaccine Advanced Development	8.956	6.888	8.970
Articles:	-	-	-
Description: Funding is provided for the following effort in the development of candidate medical countermeasures for military relevant infectious disease.			
FY 2013 Accomplishments: New Standard Military Insect Repellant: Testing for this product transitioned to advanced development in FY 2011, and funded with Defense Health Program Budget Activity 7 funding as the potential candidates are all commercially available. Topical Antileishmanial Cream: Reviewed evaluations, and data from the Phase 2 safety/effectiveness clinical trials completed in FY12 for the Topical Antileishmanial Cream; completed preparation for Phase 3 Pivotal clinical trials. Dengue Tetravalent Vaccine: Finalized analysis and evaluation of Phase 2 effectiveness and safety data for the vaccine candidate for Dengue with industry partner Sanofi Pasteur. Continued global phase 3 clinical study in 10 countries with 30,000+ enrollees. Joint Biological Agent identification and Diagnostic System (JBAIDS): Transitioned Joint Biological Agent identification and Diagnostic System (JBAIDS) assay planned to advanced development and begin developmental testing. Leishmania Rapid Diagnostic Device (LRDD):			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 808 / *DoD Drug & Vacc Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Completed final process validation for Leishmania Rapid Diagnostic Device (LRDD). Antimalarial Drug, Artesunate Intravenous: Completed FDA approval and transition to Project 849 (Drugs and Vaccines - 6.5) for Antimalarial Drug, Artesunate Intravenous. ***FY 2014 Plans:*** Topical Antileishmanial Cream: Complete site development efforts for Phase 3 New World pivotal safety and effectiveness clinical trial on a diverse population. Dengue Tetravalent Vaccine: Continue volunteer follow up and subsequent analysis of data from pivotal Phase 3 (safety and effectiveness in 10 countries, over 30000 volunteers) endemic region studies of Dengue Tetravalent Vaccine with commercial partner Sanofi Pasteur, provide Go/No Go decision for pursuit of compressed vaccination schedule for US traveler/military indication. Joint Biological Agent identification and Diagnostic System (JBAIDS): Completed Analysis of Alternatives (AoA) and requirements analysis helped to determine that The Dengue JBAIDS capability does not meet user needs; therefore, the project has been terminated. Leishmania Rapid Diagnostic Device (LRDD): Transition LRDD to Project 849 (Drugs and Vaccines - 6.5) after completion of the analytical testing and Good Manufacturing Practices manufacturing reviews. Preventive Medicine Products: These products for the control/mitigation of arthropod (insect) borne diseases field testing and evaluation will be delayed for several product candidates to include: field deployable detection devices for Chikungunya, Rift Valley Fever, Sand Fly Fever, Crimean-Congo Fever, advanced arthropod collection devices, Saliva Capture RTA card, spatial repellents, and advanced pesticides. Infectious Disease Diagnostic: These products field testing and evaluation will be delayed for several product candidates to include: Scrub Typhus, Rickettsiae, and Sand Fly Fever based on decrement due to poor disbursements in FY2012. ***FY 2015 Plans:*** Topical Antileishmanial Cream is expected to transition in FY14 to Project 849 (Drugs and Vaccines - 6.5) after completion of the site development efforts for Phase 3 New World clinical trial. Expanded Access Treatment Program will continue until FDA approved product is available. Will continue to compile existing documentation from previous clinical and non-clinical studies in FDA format necessary for supplemental New Drug Application (sNDA) for prophylaxis while Glaxo-Smith Kline decision to file a supplemental New Drug Application (sNDA) for prophylaxis is pending. Dengue Tetravalent Vaccine transitioned in FY14 to Project 849 after completion of volunteer follow up and data analysis on pivotal Phase 3 safety and effectiveness clinical trials. Preventive Medicine Products: These products for the control/mitigation of arthropod (insect) borne diseases field testing and evaluation will transition into Advanced Development for several product candidates to begin process validation: field deployable detection devices for Chikungunya, Rift Valley Fever, Sand Fly Fever, Crimean-Congo Fever, advanced arthropod collection devices, Saliva Capture RTA card, spatial repellents, and advanced pesticides. Infectious Disease Diagnostic: Will begin assays process validation of enteric point-of-care disease diagnostic assays. Dengue Vaccine Block II: Will transition from Military Infectious Diseases S&T funding and prepare for Phase 2 safety and efficacy trial (24 to 300 subjects) of vaccine candidate in an adult/military population. Treatment for Resistant Wound Infections: Will transition from Military Infectious Diseases S&T funding			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 808 / *DoD Drug & Vacc Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
and prepare for Phase 2 safety and efficacy trial (24 to 300 subjects) of drug candidate for the Treatment for Resistant Wound Infections.			
Accomplishments/Planned Programs Subtotals	8.956	6.888	8.970

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. 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.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 808 / *DoD Drug & Vacc Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Management Services Cost	Various	Not Applicable : Not applicable	13.532	1.919		1.939		0.965		-		0.965	Continuing	Continuing	Continuing
Medical Product Development Management Services Cost	PO	General Dynamics Information Technology, Frederick MD : Frederick MD	0.000	-		-		1.365		-		1.365	-	1.365	-
		Subtotal	13.532	1.919		1.939		2.330		-		2.330	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Cost	Various	Not applicable : Not applicable	20.778	2.049		2.066		1.374		-		1.374	Continuing	Continuing	Continuing
Product Development of Malaria Prophylaxis	Various	Walter Reed Army Institute of Research : Silver Spring, MD	0.000	3.000		-		-		-		-	-	3.000	-
Product Development of Malaria Prophylaxis	Allot	Armed Forces Research Institute of Medical Sciences : Cambodia	0.000	-		2.111		-		-		-	-	2.111	-
Product Development of Malaria Prophylaxis	Allot	TBD : TBD	0.000	-		-		1.010		-		1.010	-	1.010	-
		Subtotal	20.778	5.049		4.177		2.384		-		2.384	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cost	Various	Not Applicable : Not applicable	7.816	1.388		0.448		1.097		-		1.097	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 808 / *DoD Drug & Vacc Ad*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	7.816	1.388		0.448		1.097		-		1.097	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development T&E Cost	Various	Not applicable : Not applicable	44.118	0.600		0.324		1.160		-		1.160	Continuing	Continuing	Continuing
Malaria Prophylaxis clinical trial	TBD	TBD : TBD	0.000	-		-		1.999		-		1.999	-	1.999	-
		Subtotal	44.118	0.600		0.324		3.159		-		3.159	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	86.244	8.956		6.888		8.970		-		8.970	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 808 / *DoD Drug & Vacc Ad*

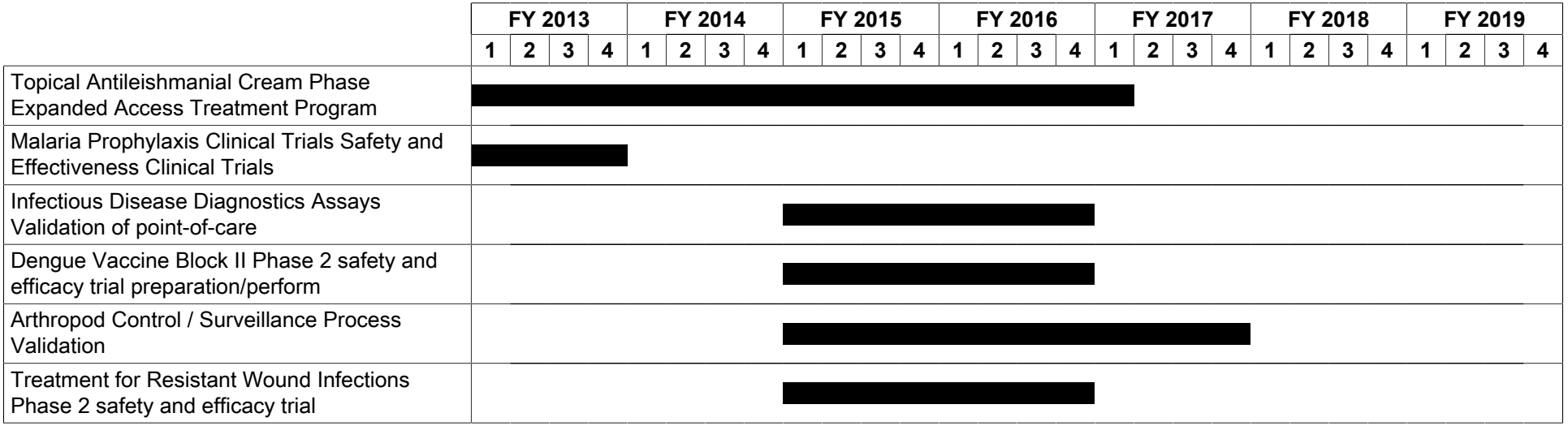

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 808 / *DoD Drug & Vacc Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Topical Antileishmanial Cream Phase Expanded Access Treatment Program	2	2011	1	2017
Malaria Prophylaxis Clinical Trials Safety and Effectiveness Clinical Trials	3	2010	4	2013
Infectious Disease Diagnostics Assays Validation of point-of-care	1	2015	4	2016
Dengue Vaccine Block II Phase 2 safety and efficacy trial preparation/perform	1	2015	4	2016
Arthropod Control / Surveillance Process Validation	1	2015	4	2017
Treatment for Resistant Wound Infections Phase 2 safety and efficacy trial	1	2015	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 811 / *Mil HIV Vac&Drug Dev*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
811: *Mil HIV Vac&Drug Dev*	-	2.052	0.550	1.078	-	1.078	0.972	0.846	1.009	1.031	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project funds development of militarily relevant human immunodeficiency virus (HIV) medical countermeasures. It provides funding for the planning and conducting of human clinical trials in a group of healthy volunteers to assess the drug/vaccine for safety, tolerability, how the drug/vaccine is distributed, metabolized, and excreted from the body, and to investigate the appropriate dose for therapeutic use. Development efforts are focused on militarily unique needs effecting manning, mobilization, and deployment.

The major contractor is Henry M. Jackson Foundation for the Advancement of Military Medicine, Rockville, MD. Research efforts are coordinated with the National Institutes of Health.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Military HIV Vaccine & Drug Development	2.052	0.550	1.078
Articles:	-	-	-
Description: This project funds advanced development research to develop candidate HIV vaccines, assess their safety and effectiveness in evaluations with human subjects, and protect military personnel from risks associated with HIV infection.			
FY 2013 Accomplishments: Completed three inter-related previous clinical trials aimed at refining our understanding of immune responses elicited by the increment 1 HIV vaccine strategy. Analyzed laboratory interrogation of samples from trial participants.			
FY 2014 Plans: Continue the three inter-related clinical trials (RV305, RV306, RV328) aimed at refining our understanding of immune responses elicited by the increment 1 HIV regional vaccine strategy. Analyze laboratory interrogation of samples from trial participants. Refine vaccine administration schedule as well as clinical trial design based on data from clinical trials. Safety and effectiveness clinical trial RV305, examine the immune responses to secondary boost of increment 1 HIV regional vaccine. Safety and effectiveness clinical trial RV306, examine the intensive immune monitoring of Prime-Boost Vaccine. Safety and effectiveness clinical trial RV328, conduct intensive immune monitoring of AIDSVAXB/E Regional Vaccine with a large well controlled trial to test immunity of improved vaccine Boost Prime/Boost Regional study to confirm safety and effectiveness in a diverse population. Adjust plan for Regional well-controlled clinical trial large enough to demonstrate vaccine effectiveness to initiate in FY14.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 811 / *Mil HIV Vac&Drug Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Will begin analysis of samples from safety and effectiveness clinical trial RV305 including extensive evaluation of binding antibodies based on previously determined correlates of protection. In addition, novel findings in cellular immune responses in the stomach have driven new requirements for evaluation of cytotoxic T cell responses in the peripheral blood. During FY15 collection of late invasive samples for safety and effectiveness clinical trials RV306 and RV328 will be completed; those samples have a requirement for immediate processing and analysis. During FY15 RV306 and 328 should conclude, with closing costs associated with the 5 clinical trial sites associated with those protocols. Additional funding for analysis of safety and immunogenicity data by EMMES Corporation will be required. In addition, there will be costs in FY15 from analysis of new lots of the gp120 to be used in efficacy trials currently approved for FY16-17 . We anticipate these costs to be a) analysis of new immunogens in antigenicity assays; b) preclinical animal studies; c) safety and tox; d) bridging study against gp120 AIDSVAX B/E. In addition further support of stability of AIDSVAX will be required.			
Accomplishments/Planned Programs Subtotals	2.052	0.550	1.078

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Test and evaluate commercially developed drug/vaccine candidates in government-managed trials.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 811 / *Mil HIV Vac&Drug Dev*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Management Services Cost	TBD	Not Applicable : Not Applicable	1.497	0.456		0.165		0.146		-		0.146	Continuing	Continuing	Continuing
		Subtotal	1.497	0.456		0.165		0.146		-		0.146	-	-	-

Remarks

Not Applicable

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Cost	TBD	Not applicable : Not applicable	2.618	0.574		0.115		0.550		-		0.550	Continuing	Continuing	Continuing
		Subtotal	2.618	0.574		0.115		0.550		-		0.550	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cost	TBD	TBD : TBD	0.937	0.534		0.101		0.250		-		0.250	-	1.822	-
		Subtotal	0.937	0.534		0.101		0.250		-		0.250	-	1.822	-

Remarks

Not Applicable

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development T&E Cost	TBD	Not applicable : Not Applicable	15.119	0.488		0.169		0.132		-		0.132	-	15.908	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 811 / *Mil HIV Vac&Drug Dev*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	15.119	0.488		0.169		0.132		-		0.132	-	15.908	-

Remarks

Not Applicable

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.171	2.052		0.550		1.078		-		1.078	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 811 / *Mil HIV Vac&Drug Dev*

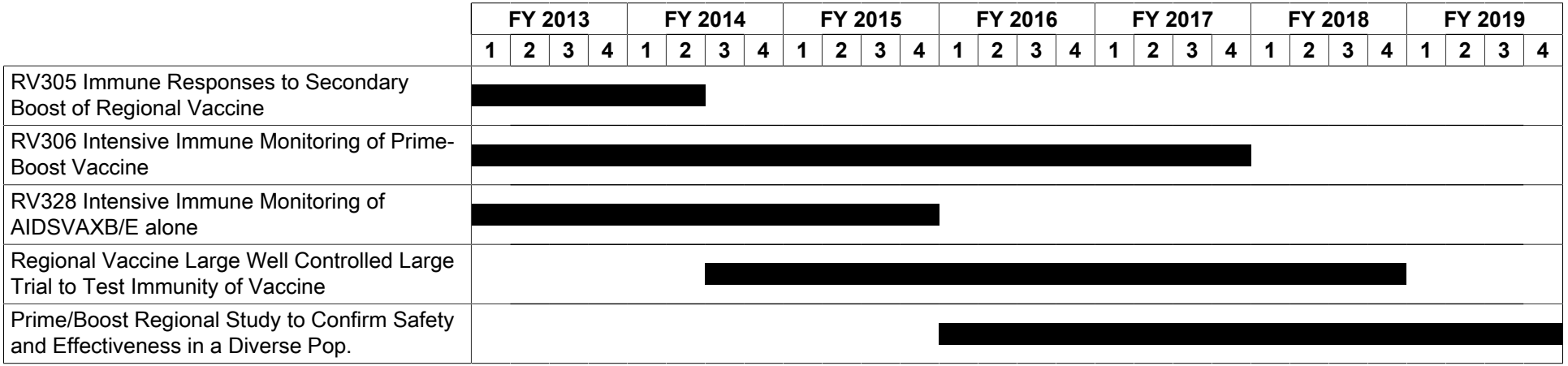

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 811 / *Mil HIV Vac&Drug Dev*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
RV305 Immune Responses to Secondary Boost of Regional Vaccine	1	2013	2	2014
RV306 Intensive Immune Monitoring of Prime-Boost Vaccine	2	2011	4	2017
RV328 Intensive Immune Monitoring of AIDSVAXB/E alone	1	2012	4	2015
Regional Vaccine Large Well Controlled Large Trial to Test Immunity of Vaccine	3	2014	4	2018
Prime/Boost Regional Study to Confirm Safety and Effectiveness in a Diverse Pop.	1	2016	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 836 / *Field Medical Systems Advanced Development*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
836: *Field Medical Systems Advanced Development*	-	11.102	7.595	13.332	-	13.332	14.185	15.599	12.928	12.757	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this PE.

A. Mission Description and Budget Item Justification

This project funds the demonstration and validation of medical products for enhanced combat casualty care and follow-on care, including rehabilitation. This project funds human clinical trials to test the safety and effectiveness of biologics (products derived from living organisms) and devices necessary to meet medical requirements. When available, commercial-off-the-shelf (COTS) medical products are also tested and evaluated for transition to engineering and manufacturing development. Consideration is also given to reducing the medical logistics footprint through smaller weight, volume, and equipment independence from supporting materials. All clinical trials are conducted in accordance with U.S. Food and Drug Administration (FDA) regulations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Field Medical Systems Advanced Development - PM Medical Devices	5.944	7.519	11.798
Articles:	-	-	-

Description: Advanced Concept Development funding is provided for the following development of medical devices in support of enhanced combat casualty care.

FY 2013 Accomplishments:

Total Intravenus Anesthesia (TIVA): This product transitioned to Tech Watch in FY 2012 and is not scheduled for further development in FY 2013. Auto Critical Care System (ACCLS): program cancelled as it is no longer a viable product. Urinary Facilitation Device: no further R&D funding required as this is now a commercial product. PEAK Plasmablade: no further R&D funding required as this is now a commercial product. Hydrosurgery System: no further R&D funding required as this is now a commercial product. Non-invasive Multi-Analyze Monitor: submission cancelled because the Small Business innovation Research (SBIR) Product failed to meet future need/requirement. Eye Tracking System for Assessing Concussions (system is a traumatic brain injury diagnostic tool): IPT for Smooth Pursuit Eye Tracking re-baseline plan in January 2012 for next steps to reach MSB in FY 2013-FY 2014. Fibrinogen Bandages: Phase I clinical trial to began in FY 2013. No further funding is planned after current contract. Product is a biologic and is transitioning back to S&T. Cardiopulmonary Enhancement: currently there no device requirement identified. Bandits Banyan Biomarkers (now called TBI Diagnostic Assay System _ Increment II and Increment

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 836 / *Field Medical Systems Advanced Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
III Handheld): enrollment for clinical trials continued and identified a handheld platform for independent testing in June 2012. Milestone B review scheduled. ***FY 2014 Plans:*** Eye Tracking System for Assessing Concussions (system is a traumatic brain injury diagnostic tool): Re-baseline, as a Request for Information (RFI) was submitted in FY12 to reevaluate the most current devices and no Research Development Test Evaluation (RDTE) funds will be needed in FY14. TBI Diagnostic Assay System Increment II Point of Care Device enter pivotal clinical trial for safety and effectiveness and transition to engineering and manufacturing funding in project 832. Increment III of the TBI Diagnostic Assay System will be delayed and will not reach milestone B (proof of concept) in FY14 based on the maturity of the technology. Impedance Threshold Device for the Treatment of TBI: Current device has a 510(k) (Premarket Notification) clearance for multiple indications. Submission of a new 510(k) to cover the expanded indications for the currently fielded device. Device will no longer be a stand-alone product, because the capability will be incorporated in existing ventilators. Plan to transition Hydration Status Monitor (HSM) from project MM3 6.3 funding to prepare for milestone B (proof of concept) and down-select. The HSM product will accurately detect the hydration status of Soldiers. ***FY 2015 Plans:*** Eye Tracking System for Assessing Concussions: Noninvasive neurodiagnostic technologies for TBI is multi-focused. The Eye Tracking System for Assessing Concussions (system is a traumatic brain injury diagnostic tool) is one of multiple systems to be evaluated. Efforts to collate all non-invasive technologies into one integrated IPT is currently in place. The 3 technologies currently involved are the Eye- Tracking System, the QEEG and Balance Platforms. Future components of the multi-focused approach will fall under the scope of this line item. No Research Development Test Evaluation (RDTE) funds are needed for FY15. This project line is being programmed in FY16-20 plan under non-invasive nuerodiagnostic line item. TBI Diagnostic Assay System: This effort has seen a dramatic realignment of effort and scope away from Banyan Technologies to Abbott Labs. The focus of this effort will be to use the current Biomarker technology developed by Banyan and cross-level all known technologies to Abbott Diagnostics. Contracting efforts will be developed to facilitate this path forward. Once contracting efforts are completed, a path forward will be developed. Impedance Threshold Device for the Treatment of TBI: Current device has a 510(k) (Premarket Notification) clearance for multiple indications. Will continue the submission of a new 510(k) is planned to cover the expanded indications for the currently fielded device. Device will no longer be a stand-alone product, because the capability will be incorporated in existing ventilators. Hydration Status Monitor (HSM) transition was delayed until FY15. Milestone B for this effort is scheduled for Feb 2015. Contract is planned to be a 4 year effort to develop the actual device and gain FDA approval for use. Compartment Syndrome Pressure Device: Will transition from project 840 6.3 funding and enroll patients in the pivotal trial for FDA clearance for anticipated FY15 start of the clinical trial.			
Title: Field Medical Systems Advanced Development - PM Pharmaceuticals	2.486	-	-
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 836 / *Field Medical Systems Advanced Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Funding is provided for advanced concept development of biologic medical products managed by PM Pharmaceuticals. ***FY 2013 Accomplishments:*** Blood Pathogen Reduction/Inactivation transitioned to advanced development in FY 2012, transitioning from Army to be funded with Defense Health Program RDT&E funding. Freeze-dried Plasma: Transitioned to Freeze-dried Plasma program to maintain current schedule and avoid delays. Conducted Milestone B decision reviews for both Cryopreserved Platelets and Freeze-Dried Plasma Programs (new high priority from DoD leadership) and transition to Project 832. Accelerated fielding of a FDA-approved Freeze-Dried Plasma was validated in the June 2011 Army Surgeon General's Report by the Blast Injury Task Force. Freeze-Dried Plasma program: completed Phase 2 clinical trial of safety and effectiveness through a Cooperative Agreement with industry partner. Cryopreserved Platelets: Conducted Milestone B decision reviews for both Cryopreserved Platelets and Freeze-Dried Plasma Programs (new high priority from DoD leadership) and transition to Project 832. Cryopreserved Platelets: start Phase 2 safety/effectiveness clinical trial in cancer patients with platelet deficiency.			
Title: Field Medical Systems Advanced Development - PM Medical Support Systems	2.672	0.076	1.534
Articles:	-	-	-
Description: Funding is provided for the following effort in the development of products that support the medical mission in combat casualty care and health care operations. ***FY 2013 Accomplishments:*** PM Heavy Brigade Combat Team (HBCT): Prepared and completed testing of the Treatment Table and Blood Refrigerator prototypes for PM Heavy Brigade Combat Team (HBCT). Product transitioned to Project 832 . Transitioned advanced cold chain technologies, trauma tiered medical bag, hoist aeromedical evacuation litter, and quad fold litter to Project 832 and continued development. ISO Panel: Transitioned ISO panel development and Force Provider soft walled module components to Project 832 to finalize development. Environmental Sentinel Biomonitor: Developed prototype for Environmental Sentinel Biomonitor, which transitioned from Science & Technology. Insecticide impregnated bed net: Applied funding from terminated project Shock and Vibration Litter System to this SBIR Phase II product. Acquired data for EPA approval. PEO Combat Support /Combat Service Support: Collaborated with PEO Combat Support/Combat Service Support on development efforts for emerging medical vehicle evacuation variants. ***FY 2014 Plans:*** Environmental Sentinel Biomonitor: Continue development of the Environmental Sentinel Biomonitor (ESB) and transition to project 832. The ESB will assist preventive medicine personnel certify water capabilities by providing a presumptive screening capability that can rapidly identify toxicity in water. PEO Combat Support /Combat Service Support: Continue collaboration with			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 836 / *Field Medical Systems Advanced Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Program Executive Office Combat Support/Combat Service Support (PEO CS&CSS) and Program Executive Office Ground Combat Systems (PEO GCS) on development efforts for emerging medical vehicle evacuation/casualty evacuation (CASEVAC) variants. Medical variants that will be collaborated on with PEO CS/CSS consist of medical shelters, Mine Resistant Ambush Protected (MRAP), Armored Multipurpose Vehicle (AMPV), and Joint Light Tactical Vehicle (JLTV). Collaborate with PEO GCS on medical variants for the Heavy Brigade Combat Team (HBCT). Improved Vector Tent Traps: Develop prototypes of Vector Tent Traps for testing after transition from S&T. The Vector Tent Trap allows researchers to safely conduct vector surveillance on insects that are attracted to humans and vector-borne diseases. Altitude Readiness Management System (ARMS): Begin the development of the Altitude Readiness Management System (ARMS). ARMS will transition from S&T MM3 funding line. The ARMS product is a handheld sensor and software decision device to plan, monitor, and manage unit altitude illness risk and task performance prediction. ***FY 2015 Plans:*** PEO Combat Support /Combat Service Support: Will continue collaboration with Program Executive Office Combat Support/ Combat Service Support (PEO CS&CSS) and Program Executive Office Ground Combat Systems (PEO GCS) on development efforts for emerging medical vehicle evacuation/casualty evacuation (CASEVAC) variants. Improved Vector Tent Traps: Continue prototype development of Vector Tent Traps and transition to project 832. Altitude Readiness Management System (ARMS): Will continue prototype development of the Altitude Readiness Management System (ARMS) and transition to project 832. Next Generation Uniform Repellent: Will begin development of the Next Generation Uniform Repellent (NGUR). The NGUR will transition from an S&T SBIR. The NGUR is an effort to develop new military uniform insect repellent formulations for the uniform materiel and the corresponding uniform treatment technology . Next Generation Immobilization System: Will transition from S&T SBIR. Will develop prototypes for initial developmental testing and FDA data collection. The Next Generation Immobilization System (NGIS) will provide advanced vibration dampening to allow for safer evacuation of spinal cord injury and traumatic brain injury casualties.			
Accomplishments/Planned Programs Subtotals	11.102	7.595	13.332

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Develop in-house or industrial prototypes in government-managed programs to meet military and regulatory requirements for production and fielding.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 836 / *Field Medical Systems Advanced Development*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Management Services Cost	Various	Not Applicable : Not applicable	39.609	0.622		0.024		0.933		-		0.933	Continuing	Continuing	Continuing
TBI Diagnostic Assay System - Increment II (benchtop/POC/ Bandits)	TBD	Banyan BioMarkers, Inc : Alachua FL	0.000	-		0.208		-		-		-	-	0.208	-
Impedance Threshold Device for the Treatment of Traumatic Brain Injury	TBD	Advance Circulatory Systems, Inc : Roseville, MN	0.000	-		0.154		-		-		-	-	0.154	-
		Subtotal	39.609	0.622		0.386		0.933		-		0.933	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	TBD	TBD : TBD	0.000	-		-		0.932		-		0.932	-	0.932	-
Product Development	TBD	Banyan BioMarkers, Inc : Alachua FL	27.000	4.514		-		-		-		-	Continuing	Continuing	Continuing
Product Development	TBD	HemCon Medical Technologies : Tigard, Oregon	9.720	-		-		-		-		-	Continuing	Continuing	Continuing
Development of Platelet Derived Hemostatic agent	TBD	Fast Track Drugs & Biologics : Frederick, MD	1.800	-		-		-		-		-	Continuing	Continuing	Continuing
Medical Product Development	TBD	ALL Product : Various	1.931	-		-		-		-		-	Continuing	Continuing	Continuing
Product Development of Freeze-dried plasma	TBD	TBD : TBD	0.000	2.400		-		6.884		-		6.884	Continuing	Continuing	Continuing
TBI Diagnostic Assay System - Increment II (benchtop/POC/ Bandits)	TBD	Banyan BioMarkers, Inc : Alachua FL	0.000	-		5.666		-		-		-	-	5.666	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 836 / *Field Medical Systems Advanced Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Impedance Threshold Device for the Treatment of Traumatic Brain Injury	TBD	Advance Circulatory Systems Inc. : Roseville, MN	0.000	-		1.250		-		-		-	-	1.250	-
Compartment Syndrome Pressure Device	TBD	Twinstar : Minniapolis, MN	0.000	-		-		1.878		-		1.878	-	1.878	-
Hydration Status Monitor	TBD	Gaia Medical : LaJolla CA	0.000	-		-		0.841		-		0.841	-	0.841	-
		Subtotal	40.451	6.914		6.916		10.535		-		10.535	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cost	Various	Not Applicable : Not applicable	42.799	1.066		0.200		0.932		-		0.932	Continuing	Continuing	Continuing
		Subtotal	42.799	1.066		0.200		0.932		-		0.932	-	-	-

Remarks

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

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development T&E Cost	TBD	Not applicable : Not applicable	33.468	2.500		0.093		0.932		-		0.932	Continuing	Continuing	Continuing
		Subtotal	33.468	2.500		0.093		0.932		-		0.932	-	-	-

Remarks

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) 836 / *Field Medical Systems Advanced Development*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	156.327	11.102		7.595		13.332		-		13.332	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 836 / *Field Medical Systems Advanced Development*

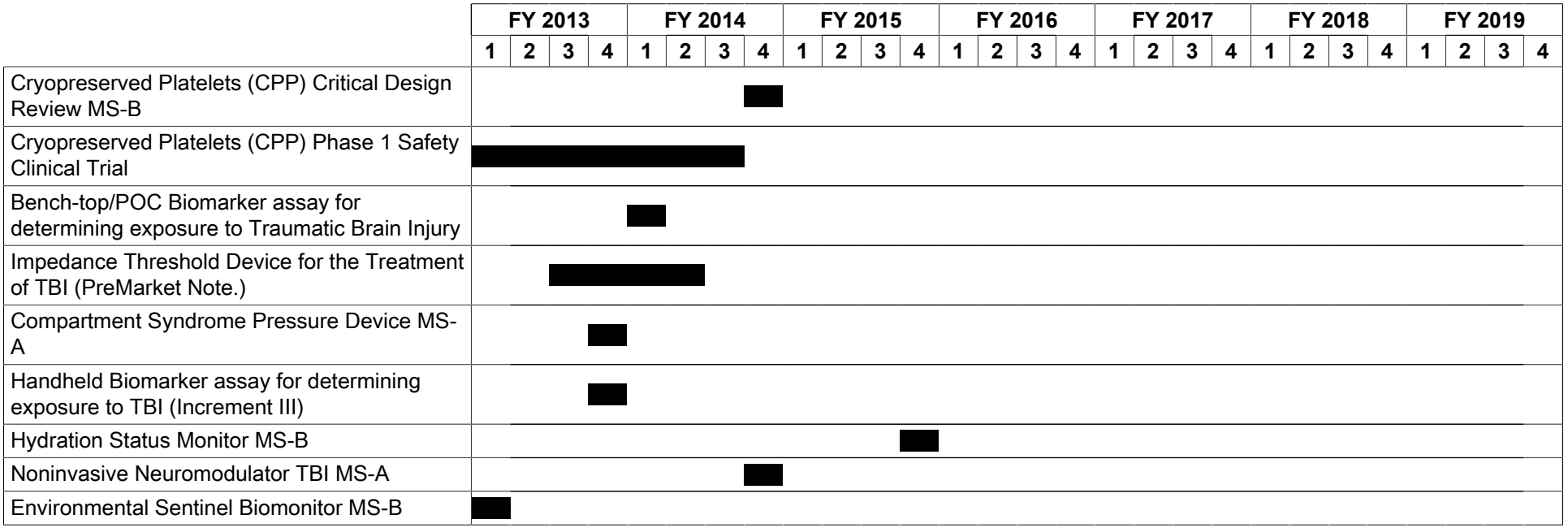

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** 836 / *Field Medical Systems Advanced Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Cryopreserved Platelets (CPP) Critical Design Review MS-B	4	2014	4	2014
Cryopreserved Platelets (CPP) Phase 1 Safety Clinical Trial	4	2011	3	2014
Bench-top/POC Biomarker assay for determining exposure to Traumatic Brain Injury	1	2014	1	2014
Impedance Threshold Device for the Treatment of TBI (PreMarket Note.)	3	2013	2	2014
Compartment Syndrome Pressure Device MS-A	4	2013	4	2013
Handheld Biomarker assay for determining exposure to TBI (Increment III)	4	2013	4	2013
Hydration Status Monitor MS-B	4	2015	4	2015
Noninvasive Neuromodulator TBI MS-A	4	2014	4	2014
Environmental Sentinel Biomonitor MS-B	1	2013	1	2013

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) VS7 / *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VS7: *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*	-	0.404	0.561	0.279	-	0.279	-	-	-	-	-	1.244
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Original models of Army Black Hawk MEDEVAC helicopters continue to play a major role in maintaining high US troop survival rates in Iraq and Afghanistan by evacuating wounded troops in less than one-hour. In 2009 a VCSA-approved force design update increased the number of air frames in the force from 12 to 15 aircraft for 37 MEDEVAC companies to better meet operational needs. In 2010, the AMEDD accepted life-cycle management of the MEDEVAC MEP from PEO Aviation. In order to achieve required operational capability and enhance commonality across the MEDEVAC fleet, the MEDEVAC MEP program upgrades, retrofits, trains, and sustains the 256 MEDEVAC legacy helicopters to achieve the medical capability provided by the HH-60M, which is factory built for the MEDEVAC mission.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Telemedicine for MEDEVAC aircraft	0.404	0.561	-
Articles:	-	-	-
Description: Effort is focused on requirement to provide enroute patient data to treatment facilities. ***FY 2013 Accomplishments:*** Designed, developed, and tested telemedicine systems in order to provide medics with state of the art capability to monitor and communicate patient data to ground crews at forward treatment facility ***FY 2014 Plans:*** Continue design, development, and testing of the telemedicine systems in order to provide medics with state of the art capability to monitor and communicate patient data to ground crews at forward treatment facility.			
Title: Medical Evacuation Enroute Care Validation Study	-	-	0.279
Description: Medical Evacuation Enroute Care Validation Study ***FY 2015 Plans:*** Interim MEDEVAC Mission Support System (IMMSS) will be modified to take into account the new paramedic skills being used by the flight paramedic.			
Accomplishments/Planned Programs Subtotals	0.404	0.561	0.279

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** VS7 / *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Develop in-house or industrial prototypes in government-managed programs to meet military MEDEVAC and regulatory requirements for production and fielding.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) VS7 / *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Management Services Cost	TBD	APM MEDEVAC : Huntsville, AL	0.152	0.037		-		-		-		-	-	0.189	-
		Subtotal	0.152	0.037		-		-		-		-	-	0.189	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Cost	TBD	APM MEDEVAC PEO Aviation : Huntsville AL	1.112	0.367		-		-		-		-	-	1.479	-
		Subtotal	1.112	0.367		-		-		-		-	-	1.479	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cost	TBD	APM MEDEVAC : Huntsville, AL	0.100	-		0.561		0.279		-		0.279	-	0.940	-
		Subtotal	0.100	-		0.561		0.279		-		0.279	-	0.940	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development T&E Cost	MIPR	APM MEDEVAC PEO Aviation : Huntsville, AL	0.199	-		-		-		-		-	-	0.199	-
		Subtotal	0.199	-		-		-		-		-	-	0.199	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603807A / *Medical Systems - Adv Dev*	Project (Number/Name) VS7 / *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.563	0.404		0.561		0.279		-		0.279	-	2.807	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** VS7 / *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*

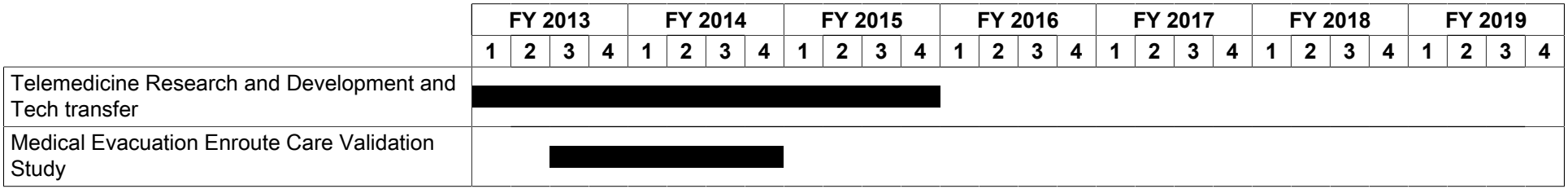

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603807A / *Medical Systems - Adv Dev*	**Project (Number/Name)** VS7 / *MEDEVAC Mission Equipment Package (MEP) - Adv Dev*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Telemedicine Research and Development and Tech transfer	1	2012	4	2015
Medical Evacuation Enroute Care Validation Study	3	2013	4	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	30.793	14.152	6.830	-	6.830	23.405	20.329	17.478	19.721	Continuing	Continuing
S51: *Aircrew Integrated Sys Ad*	-	0.141	0.164	0.161	-	0.161	0.153	0.158	0.155	0.200	Continuing	Continuing
S52: *Soldier Support Equipment - Ad*	-	4.510	0.410	0.845	-	0.845	-	-	-	-	-	5.765
S53: *Clothing And Equipment*	-	7.096	5.634	1.555	-	1.555	9.364	8.608	7.272	7.467	Continuing	Continuing
S54: *Small Arms Improvement*	-	4.533	4.258	1.579	-	1.579	8.441	6.296	5.624	7.613	Continuing	Continuing
VS4: *Soldier Protective Equipment*	-	14.513	3.686	2.690	-	2.690	5.447	5.267	4.427	4.441	-	40.471

The FY 2015 OCO Request will be submitted at a later date.

Note

Change Summary Explanation:

Fiscal Year 2012: Program Increase of $6.087 million to Project S53 for T11/C17 Drop Test and Program Decrease of $0.601 million to higher priority Army efforts.

Fiscal Year 2014: Program Decreases of $2.304 million to Project S52 Soldier Support Equipment AD, $1.585 million to Project S53, $1.172 million to Project S54 and $7.895 million to Project VS4 Soldier Protective Equipment were realigned to higher priority Army efforts.

Fiscal Year 2015: Program Decreases to $0.845 million to Project S52 Solder Support Equipment AD.

A. Mission Description and Budget Item Justification

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

Project S49 funding (Ground Soldier System) The Nett Warrior (NW) program leverages commercial smart devices and secure Army tactical radios to provide the dismounted leader an integrated mission command and situational awareness system for use during combat operations.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*

Project S52 funding (Soldier Support Equipment) supports design, manufacture and testing/evaluation of the Spark Gap (SG)-Shock Tube Initiator program as well as develop a technical data package. This funding will also support the preliminary testing of prototype hardware to begin any necessary modifications of design for the VBOT (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool) program.

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

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

Project VS4 funding (Soldier Protective Equipment) supports efforts to evaluate integrated technologies and representative or prototype systems that help expedite Individual Soldier Ballistic Protection technology transition from the laboratory to operational use.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	32.050	14.159	23.133	-	23.133
Current President's Budget	30.793	14.152	6.830	-	6.830
Total Adjustments	-1.257	-0.007	-16.303	-	-16.303
• Congressional General Reductions	-0.398	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.131	-			
• Adjustments to Budget Years	-	-	-5.459	-	-5.459
• Other Adjustments 1	-0.728	-0.007	-10.844	-	-10.844

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S51 / *Aircrew Integrated Sys Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S51: *Aircrew Integrated Sys Ad*	-	0.141	0.164	0.161	-	0.161	0.153	0.158	0.155	0.200	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports the Advanced Component Development and Prototyping of select Air Soldier System (Air SS) technologies. The Air SS provides improved safety, survivability, and human performance that amplifies the Warfighter's effectiveness and facilitates full-spectrum dominance of Army aircraft. The Air SS addresses capability gaps identified during combat operations in Iraq and Afghanistan including the effects of weight and bulk, limited situational awareness, and lack of functionally integrated aircrew member life support equipment. The Air SS follows an evolutionary acquisition approach that integrates mature technologies to build to the full capability. Air SS reduces overall weight and bulk of aircrew equipment, increases situational awareness, and enhances aircrew mobility. This funding provides advanced development for the Air SS in technology areas supporting improved environmental cooling, integrated power, wireless personal area networks, lightweight protective clothing, and miniaturized communication devices.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Aircrew Integrated Systems (ACIS) Advanced Development	0.141	0.164	0.161
Articles:	-	-	-
Description: Advanced Component Development and Prototyping (ACDP) of critical aircrew support systems technology improvements and Advanced Development (AD) and risk reduction efforts required for transition into the Engineering Manufacturing Development (EMD) phase.			
FY 2013 Accomplishments: Funded laboratories to monitor and influence Air SS technologies to include wireless personal area network technologies and lightweight protective clothing materials for transition into the EMD phase.			
FY 2014 Plans: Continue advanced component development of Air Soldier System technology improvements and advanced development effort transition to engineering development including advanced helmet mounted display technologies and miniaturized communication devices.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S51 / *Aircrew Integrated Sys Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Fund laboratories to monitor and influence Air SS technologies to include advanced wide field of view/high resolution helmet mounted display technologies and miniaturized communication devices for transition into Air SS preplanned product improvements EMD phase.			
Accomplishments/Planned Programs Subtotals	0.141	0.164	0.161

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• ACIS Engineering Development: *RDTE, A PE 0604601A PROJ S61-SDD*	10.178	14.049	1.742	-	1.742	3.935	3.838	3.894	3.963	Continuing	Continuing
• Aircrew Integrated Systems: *Aircraft Procurement, Army SSN AZ3110 - ACIS*	71.408	45.841	48.081	-	48.081	47.435	47.064	46.605	47.795	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Air SS follows an evolutionary acquisition approach which focuses on reducing weight and bulk while integrating capabilities including optimized survival equipment; an integrated Soldier-worn electronics suite; integrated wireless aircraft and survival communications capability; a digital day/night heads-up display for all Army aircraft platforms and reduced clothing layers with no loss of thermal protection. These funds resource various government agencies to transition critical technologies/products from the Advanced Component Development to the Engineering Manufacturing Development phase.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S51 / *Aircrew Integrated Sys Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	RO	Various Government : Huntsville, AL and Natick, MA	2.459	0.141		0.164		0.161		-		0.161	Continuing	Continuing	Continuing
		Subtotal	2.459	0.141		0.164		0.161		-		0.161	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.459	0.141		0.164		0.161		-		0.161	-	-	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S52 / *Soldier Support Equipment - Ad*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S52: *Soldier Support Equipment - Ad*	-	4.510	0.410	0.845	-	0.845	-	-	-	-	-	5.765
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Spark Gap (SG)-Shock Tube Initiator is a system/adapter that allows the Explosive Ordnance Detection (EOD) user to perform wireless/un-tethered standoff initiation of the Army shock tube. The adapter will accommodate shock tube that is cut in the field. The adapter will be the primary interface between Remote Activation Munitions System (RAMS) or similar firing device receivers and current shock tube used by U.S forces. The adapter must not possess any stored energy when emplace or enabled and be a reusable device. The adapter will provides the EOD technician means of rapidly emplacing demo to neutralize Improvised Explosive Devices (IEDs) and deliberate explosive devices reducing soldiers' time on target, and combat load.

The Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool (VBOT) will be a factory loaded explosive tool used by EOD units to defeat suspected VBIEDs while reducing likelihood of collateral damage caused by fire. The program will modify a government-off-the-shelf design to meet current requirements and qualify that system for fielding. This Program was directed by the Vice Chief of Staff of the Army via the Capability Development for Rapid Transition process as a follow on to the urgently fielded capability called the VBIED Modular Disruption System (VMODS). VMODS was urgently fielded to replace a previous urgent fielding of MAXI-CANDLE which was no longer producible due to obsolete materials.

The Gunshot Detection System (GDS) was identified by the Vice Chief of Staff of the Army for insertion into the Capabilities Development for Rapid Transition (CDRT) process. A Capabilities Production Document (CPD) was approved on 13 Feb 2009. The Active Protection System (APS)/Hostile Fire Detection (HFD) program intends to build off the Gunshot Detection System capabilities, and include additional vehicle threats and countermeasures.

The FY 2015 Base funding in the amount of $0.845 million will be in support of the Spark Gap (SG)-Shock Tube Initiator program and the VBOT (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool)programs.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Engineering Documentation for GDS	2.020	0.410	-
Articles:	-	-	-
Description: Development of required engineering documentation for this Program of Record (POR) and associated Program Management Office (PMO) support.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S52 / *Soldier Support Equipment - Ad*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
The FY2013 funds will provide for Performance Specification and Interface Control Documentation.. ***FY 2014 Plans:*** This will provide for performance specification and analysis in support of the Capability Development Document (CDD) for Active Protection System (APS) / Hostile Fire Detection (HFD) requirements..			
Title: Engineering Services and Test Support for GDS	2.490	-	-
Articles:	-	-	-
Description: Perform engineering analysis and provide test support to Technology Readiness Assessment (TRA). ***FY 2013 Accomplishments:*** The FY2013 funds will be used to test Electro-Optical systems and Engineering Services.			
Title: Engineering Documentation for SG-Shock Tube Initiator	-	-	0.423
Description: Develop and prepare documentation for MDD: Spark Gap (SG)-Shock Tube Initiator ***FY 2015 Plans:*** Develop and prepare documentation for MDD: Spark Gap (SG)-Shock Tube Initiator			
Title: Engineering Documentation for VBOT	-	-	0.422
Description: Develop and prepare documentation for MDD: (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool). ***FY 2015 Plans:*** Develop and prepare documentation for MDD: (Vehicle Borne Improvised Explosive Device (VBIED) Blast Overpressure Tool).			
Accomplishments/Planned Programs Subtotals	4.510	0.410	0.845

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Strategy is under development and will be approved by the MDA once complete.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S52 / *Soldier Support Equipment - Ad*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S52 / *Soldier Support Equipment - Ad*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management / Milestone Preparation for GDS	Various	PM FLIR : Ft. Belvoir, VA	0.947	0.449		-		-		-		-	Continuing	Continuing	Continuing
Engineering Documentation for SG-Shock Tube Initiator	MIPR	PM CCS : Picatinny Ar, NJ	0.000	-		-		0.088		-		0.088	-	0.088	-
Engineering Documentation for VBOT	MIPR	PM CCS : Picatinny Ar, NJ	0.000	-		-		0.087		-		0.087	-	0.087	-
		Subtotal	0.947	0.449		-		0.175		-		0.175	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Characterization Study for GDS	C/TBD	Night Vistion Electronics Sensors Directorate (NVESD) : FT Belvoir VA	1.939	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering Documentation for GDS	MIPR	PM Ground Sensors : Ft. Belvoir, VA	0.000	-		0.410		-		-		-	Continuing	Continuing	Continuing
		Subtotal	1.939	-		0.410		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Documentation for GDS	C/TBD	TBD : TBD	1.749	2.020		-		-		-		-	Continuing	Continuing	Continuing
Engineering Services and Test Support for GDS	C/TBD	TBD : TBD	1.276	2.041		-		-		-		-	-	3.317	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S52 / *Soldier Support Equipment - Ad*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Documentation for SG-Shock Tube Initiator	MIPR	ARDEC : Picatinny Ar, NJ	0.000	-		-		0.335		-		0.335	-	0.335	-
Engineering Documentation for VBOT	MIPR	ARDEC : Picatinny Ar, NJ	0.000	-		-		0.335		-		0.335	-	0.335	-
		Subtotal	3.025	4.061		-		0.670		-		0.670	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.911	4.510		0.410		0.845		-		0.845	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S52 / *Soldier Support Equipment - Ad*

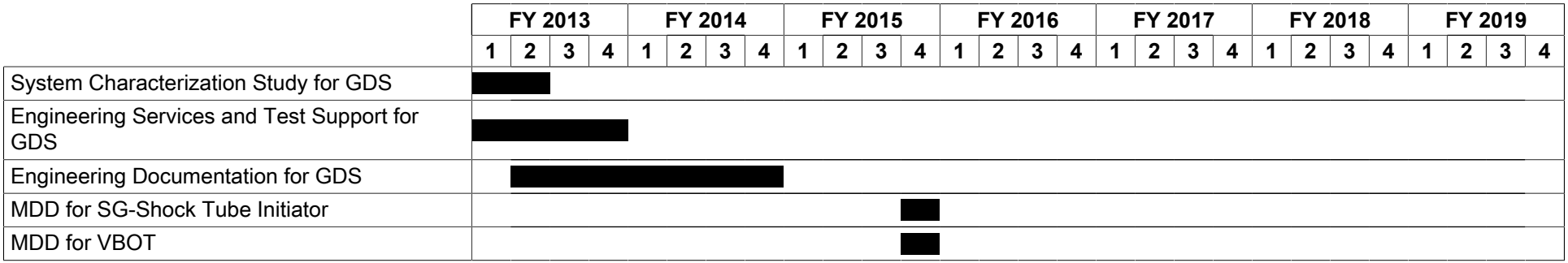

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S52 / *Soldier Support Equipment - Ad*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
System Characterization Study for GDS	2	2012	2	2013
Engineering Services and Test Support for GDS	1	2012	4	2013
Engineering Documentation for GDS	2	2013	4	2014
MDD for SG-Shock Tube Initiator	4	2015	4	2015
MDD for VBOT	4	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S53 / *Clothing And Equipment*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S53: *Clothing And Equipment*	-	7.096	5.634	1.555	-	1.555	9.364	8.608	7.272	7.467	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This funding supports efforts to evaluate and integrate technologies and representative or prototype systems that help expedite Soldier uniform and clothing technology transition from the laboratory to operational use. Efforts focus on proving 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. It funds efforts to investigate new technologies and domestically available fabrics with Flame Resistance, moisture wicking and insect protection and camouflage technologies. New technologies are investigated to monitor health and improve Soldier survivability, reduce weight, and improve affordability, mobility and comfort in combat and training/administrative environments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Soldier Uniforms and Clothing	3.907	3.119	1.555
Articles:	-	-	-

Description: Develop and provide superior and sustainable integrated clothing for the Soldier in a rapidly changing global environment.

FY 2013 Accomplishments:

Matured new technology to reduce Soldier load and weight. Improved concealment through integration of new fabric technologies to manage infrared signature. Will continue to test improvements in permethrin treatment and Flame Resistance (FR) capabilities for use in combat uniforms. Conducted initial evaluation of Military Free Fall (MFF) parachutist Extreme Environmental Protective Kit (gloves and face protection).

FY 2014 Plans:

Will continue to fund maturing of new technology to reduce Soldier load and weight. Will integrate new technologies and procure prototypes for environmental protection for MFF parachutists caused by higher altitudes and longer duration High Altitude, High Opening (HAHO) MFF operations. Will procure prototypes, conduct technical testing and cold weather chamber testing. Will continue to test improvements in Permethrin treatment and Flame Resistance (FR) capabilities for use in combat uniforms to adapt to improvements in textile technology. Initiated joint OSD/USMC/Army/ funded effort to develop and test spectral mitigation enhancements to combat uniforms.

FY 2015 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S53 / *Clothing And Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Tactical/Personal Clothing. Continue to develop alternate vector protection with lower toxicity for all combat uniform fabrics (i.e., Army Combat Shirt, Army Combat Pants, FR Army Combat Uniform). Continue to develop more durable FR fabrics for use in combat uniforms to improve service life of tactical uniforms.			
Title: Individual Equipment	3.189	2.515	-
Articles:	-	-	-
Description: Develop and provide superior and sustainable integrated individual equipment for the Soldier in a rapidly changing global environment. ***FY 2013 Accomplishments:*** Matured new technology to reduce Soldier load and weight. ***FY 2014 Plans:*** Conduct Limited User Evaluation and laboratory purification efficacy testing of the Individual Water treatment Device (Phase I, Filtration) after transition to MS B in 4QFY14. Obtain Material Development Decision (MDD) for Parachute Navigational System (PARANAVSYS), further development of Government owned software to be evaluated at Development Testing (DT) 1, DT 2 and Operational Testing (OT), if applicable			
Accomplishments/Planned Programs Subtotals	7.096	5.634	1.555

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0604601A S60: *RDTE, 0604601A.S60, Clothing and Equipment*	4.942	5.447	2.519	-	2.519	4.612	6.967	10.819	10.844	Continuing	Continuing
• 121017 CFF OMA: *OMA, 121017, Central Funding and Fielding*	51.773	103.460	127.085	-	127.085	126.907	179.862	172.351	188.833	Continuing	Continuing
• MA7801 OPA: *OPA, MA7801, Advanced Tactical Parachute System*	32.765	37.118	26.322	-	26.322	26.515	31.354	46.185	48.860	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S53 / *Clothing And Equipment*

D. Acquisition Strategy

Programs pursue normal transition through Engineering and Manufacturing Development (EMD) to production. This Project continues to exercise competitively awarded contracts using best value source selection procedures.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S53 / *Clothing And Equipment*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In-House Support	TBD	PM SPIE : Ft. Belvoir, VA	12.284	1.007		0.997		-		-		-	Continuing	Continuing	Continuing
		Subtotal	12.284	1.007		0.997		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	MIPR	NSRDEC : Natick, MA	12.278	1.034		1.048		0.200		-		0.200	Continuing	Continuing	Continuing
Development Contracts	C/TBD	Various : Various	21.917	3.155		3.167		1.100		-		1.100	Continuing	Continuing	Continuing
		Subtotal	34.195	4.189		4.215		1.300		-		1.300	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various : Various	6.177	0.500		0.400		-		-		-	Continuing	Continuing	Continuing
		Subtotal	6.177	0.500		0.400		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing Costs	TBD	various : Various	18.900	1.400		0.022		0.255		-		0.255	Continuing	Continuing	Continuing
		Subtotal	18.900	1.400		0.022		0.255		-		0.255	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	71.556	7.096		5.634		1.555		-		1.555	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S53 / *Clothing And Equipment*	

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S53 / *Clothing And Equipment*

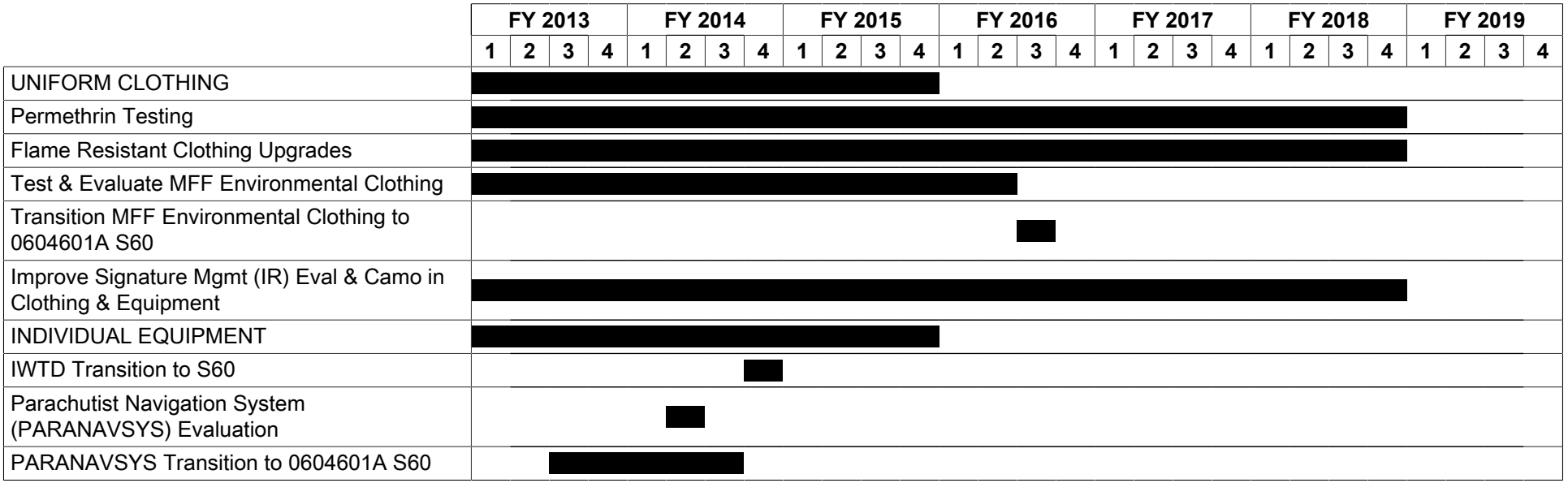

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S53 / *Clothing And Equipment*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
UNIFORM CLOTHING	1	2008	4	2015
Permethrin Testing	1	2011	4	2018
Flame Resistant Clothing Upgrades	1	2009	4	2018
Test & Evaluate MFF Environmental Clothing	1	2013	2	2016
Transition MFF Environmental Clothing to 0604601A S60	3	2016	3	2016
Improve Signature Mgmt (IR) Eval & Camo in Clothing & Equipment	2	2012	4	2018
INDIVIDUAL EQUIPMENT	1	2009	4	2015
IWTD Transition to S60	4	2014	4	2014
Parachutist Navigation System (PARANAVSYS) Evaluation	2	2014	2	2014
PARANAVSYS Transition to 0604601A S60	3	2013	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S54 / *Small Arms Improvement*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S54: *Small Arms Improvement*	-	4.533	4.258	1.579	-	1.579	8.441	6.296	5.624	7.613	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

New starts in FY 2015 include Additive Manufacturing (3D Printing), Recoil Reduction Mechanisms, Adaptive Lubricious Coatings, and Externally Powered Mounted Machine Gun.

A. Mission Description and Budget Item Justification

The Small Arms Improvement Advanced Component Development and Prototypes (ACD&P) program provides funds to mature, demonstrate, test and evaluate emerging technology from Joint Service Small Arms Program (JSSAP), Project 627, Program Element 0603607A, (Budget Activity 3), Defense Advanced Research Projects Agency (DARPA), Department of Energy National Laboratories, Research Development & Engineering Centers (RDECs) and other domestic and foreign sources for small arms weapons systems and technology. Small arms systems include weapons ranging up to 40 millimeter in caliber. Current and future efforts focus on improvements designed to enhance lethality, target acquisition and tracking, fire control, training effectiveness and reliability of weapons to include ammunition when developing and/or evaluating standard and non-standard weapons. Focus areas include the maturing of technology through testing and evaluation of sub-system or system prototypes which demonstrates light weight materials, wear resistant/protective/anti-reflective coatings, observation/situational awareness improvements and equipment enhancements. Benefits include continuous improvements to small arms weapons, fire control equipment, optics, gun barrels, training devices, suppressors, component mounts, weapon mounts, and weapon/ammunition interface.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: New Weapons	0.335	1.016	0.400
Articles:	-	-	-
Description: Description: Development of new small arms weapons			
FY 2013 Accomplishments: Acquisition community assisted the United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) in the development of a Lightweight Machine Gun requirement. Developed plan and schedule of Engineering Manufacturing Development (EMD) phase of the Lightweight Machine Gun.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Acquisition community continue to assist the United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) in the development of Lightweight Machine Gun requirements to include a potential Common Lightweight Automatic Weapon System (CLAWS). ***FY 2015 Plans:*** Acquisition community to continue to assist the United States Army Training and Doctrine Command (TRADOC) and Maneuver Center of Excellence (MCoE) in the development of Lightweight Machine Gun requirements to include a potential Common Lightweight Automatic Weapon System (CLAWS) to include configuration/caliber study. FY 2015 New Start Externally Powered Mounted Machine Gun: Will analyze and evaluate various externally powered weapons for adaptability and performance to be mounted on remote weapon stations.			
Title: Small Arms Weapons Enhancements	0.756	1.892	0.370
Articles:	-	-	-
Description: Description: Enhancements and developments of small arms weapons ***FY 2013 Accomplishments:*** Conducted weapons studies for small arms weapons and evaluated improved manufacturing technologies. Conducted characterization studies of standard and non-standard weapons. Conducted barrel studies to improve/enhance barrel life. Weapon Evaluation: Tested and evaluated foreign non-standard rifles. Weapons Reliability Study: Transitioned Weapons Reliability program to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5) and performed root cause analysis of weapon stoppages identified in baseline test firing from FY 2012. ***FY 2014 Plans:*** Continue to test, evaluate and analyze on-going and new activities to enhance small arms weapons including suppressor design/fabrication, recoil reduction methods and use of nanostructure materials. Test and demonstrate system coatings such as protective, water-repellant and lubricious coatings for weapon and optical systems. Based on prior studies continue weapon studies for small arms lethal and non-lethal weapons. Continue to evaluate on-going characterization studies of standard and non-standard weapons. Continue to conduct barrel studies to improve/enhance barrel life and eliminate chrome-lined weapon parts. Continue to conduct barrel twist optimization studies to apply to engineering and manufacturing development of weapon enhancements. Investigate weapon/electro-optics applicability and design for robotic platforms to assist in military missions from intelligence gathering to threat engagement. ***FY 2015 Plans:*** FY 2015 New Start Additive Manufacturing (3D Printing): Processes will be examined for potential fabrication of weapon components using metal, plastic and composite materials.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2015 New Start Recoil Reduction Mechanisms: Methods and techniques will be analyzed and evaluated to mitigate recoil encountered with the use of high performance ammunition. Will continue weapon studies for small arms lethal and non-lethal weapons. Will continue to evaluate on-going characterization studies of standard and non-standard weapons. Will continue to conduct barrel studies to improve/enhance barrel life and eliminate chrome-lined weapon parts. Will monitor contract progress in developing prototype barrel liners. Develop test plan for barrels, conduct testing at Government facility.			
Title: Ammunition	-	0.300	0.300
Articles:	-	-	-
Description: Description: Small arms ammunition improvement ***FY 2014 Plans:*** Initiate coordination/participation on an ongoing Science &Technology (S&T) effort of guided, extended range small arms projectiles/munitions for observation and target acquisition, and precision munitions with enhanced lethality. Participate in engineering tests to assess effects on weapon and warfighter. Evaluate results of munitions' maneuverability and on-target effects. Initiate coordination/participation in an ongoing S&T effort aimed at using small arms munitions to deploy mini-sensors. ***FY 2015 Plans:*** Will continue coordination/participation on an ongoing Science &Technology (S&T) effort of guided, extended range small arms projectiles/munitions for observation and target acquisition, and precision munitions with enhanced lethality. Participate in engineering tests to assess effects on weapon and warfighter. Evaluate results of munitions' maneuverability and on-target effects. Initiate coordination/participation in an ongoing S&T effort aimed at using small arms munitions to deploy mini-sensors.			
Title: Combat Optics	0.216	0.100	0.050
Articles:	-	-	-
Description: Description: Improvement of small arms combat optics ***FY 2013 Accomplishments:*** Transitioned the Squad Common Optics initiative to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5) and validated the concept of variable powered optics for multiple small arms platforms. ***FY 2014 Plans:*** Continue to perform, evaluate and analyze combat optics and upgrade research and development efforts to mature optic technology such as Dynamic Image Gun Sight Optic and precision optics. Provide engineering support and services to include engineering evaluations, verifications and validation of weapon system performance requirements. Conduct studies, evaluation,			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
and testing to include the Mounted Machine Gun Optic (MMO) and anti-reflection coatings, water-repellant coatings, laser protection devices/coatings and hyperspectral/multi-spectral imaging to include laser protection for optics. ***FY 2015 Plans:*** FY 2015 New Start Adaptive Lubricious Coatings: Will evaluate advanced coatings and film technology for application to optical surfaces for laser protection.			
Title: Fire Control ***Articles:*** ***Description:*** Description: Small arms fire control ***FY 2013 Accomplishments:*** Integrated Fire Control for Small Arms: Completed Phase II and initiated Phase III to finalize design, fabricate prototypes and conduct test and evaluation. Initiated transition of the Integrated Fire Control for small arms to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5). ***FY 2014 Plans:*** Evaluate and analyze advance approaches to acquire targets with the use of hyperspectral imaging and assess the effect on current fire control systems to include advanced hyperspectral target acquisition. Test and assess enhanced electro-optics for target detection, acquisition, identification, and projectile/munition guidance as required for extended range projectiles and munitions. Analyze and evaluate precision projectile/trajectory tracking approaches. ***FY 2015 Plans:*** Will continue to evaluate and analyze advance approaches to acquire targets with the use of hyperspectral imaging and assess the effect on current fire control systems to include advanced hyperspectral target acquisition. Will analyze and evaluate precision projectile tracking approaches including a method to monitor the true projectile flight path to a minimum range of one-mile.	3.226 -	0.950 -	0.359 -
Title: Research and Analysis ***Description:*** Research and analysis of small arms ***FY 2015 Plans:*** Conduct Market Research and Benefit Analysis of ongoing small arms initiatives to refine requirements and identify multiple solution sets. The following programs will be evaluated in FY 2015; Precision Projectile Tracking, Advanced Laser Protection for Optics, and Small Business Innovative Research enhancements.	-	-	0.100
Accomplishments/Planned Programs Subtotals	4.533	4.258	1.579

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Small Arms Improvement: *RDTE S63, Program Element 0604601A - Infantry Support Weapons*	13.201	17.836	4.393	-	4.393	14.294	14.408	14.496	17.805	Continuing	Continuing
• Joint Service Small Arms Program: *RDTE 627, Program Element 0603607A - Joint Service Small Arms Program (JSSAP)*	5.478	5.027	7.321	-	7.321	5.143	5.875	5.823	5.913	Continuing	Continuing

Remarks

In support of Small Arms Initial Capability and Capability Development Requirements, advanced technology of Small Arms Weapons is transitioned from Joint Service Small Arms Program (JSSAP), Project 627, Program Element 0603607A, (Budget Activity 3) to Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4). After the technology is demonstrated and/or validated the program transitions to Small Arms Improvement, Project S63, Program Element 0604601A, (Budget Activity 5) for engineering and manufacturing development.

D. Acquisition Strategy

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S54 / *Small Arms Improvement*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Allot	PM Soldier Weapons, : Picatinny Arsenal	1.826	0.400	May 2013	0.430	Mar 2014	0.054	Mar 2015	-		0.054	Continuing	Continuing	Continuing
		Subtotal	1.826	0.400		0.430		0.054		-		0.054	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	MIPR	Army Research Development Engineering Centers, : Multiple	7.335	1.188	May 2013	0.998	Mar 2014	-		-		-	Continuing	Continuing	Continuing
		Subtotal	7.335	1.188		0.998		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering	MIPR	Army Research Development Engineering Centers, : Multiple	9.080	1.725	Apr 2013	1.600	Mar 2014	0.900	Mar 2015	-		0.900	Continuing	Continuing	Continuing
		Subtotal	9.080	1.725		1.600		0.900		-		0.900	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	MIPR	Army Test and Evaluation Centers, : Multiple	5.157	1.220	Apr 2013	1.230	Mar 2014	0.625	Mar 2015	-		0.625	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) S54 / *Small Arms Improvement*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	5.157	1.220		1.230		0.625		-		0.625	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	23.398	4.533		4.258		1.579		-		1.579	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

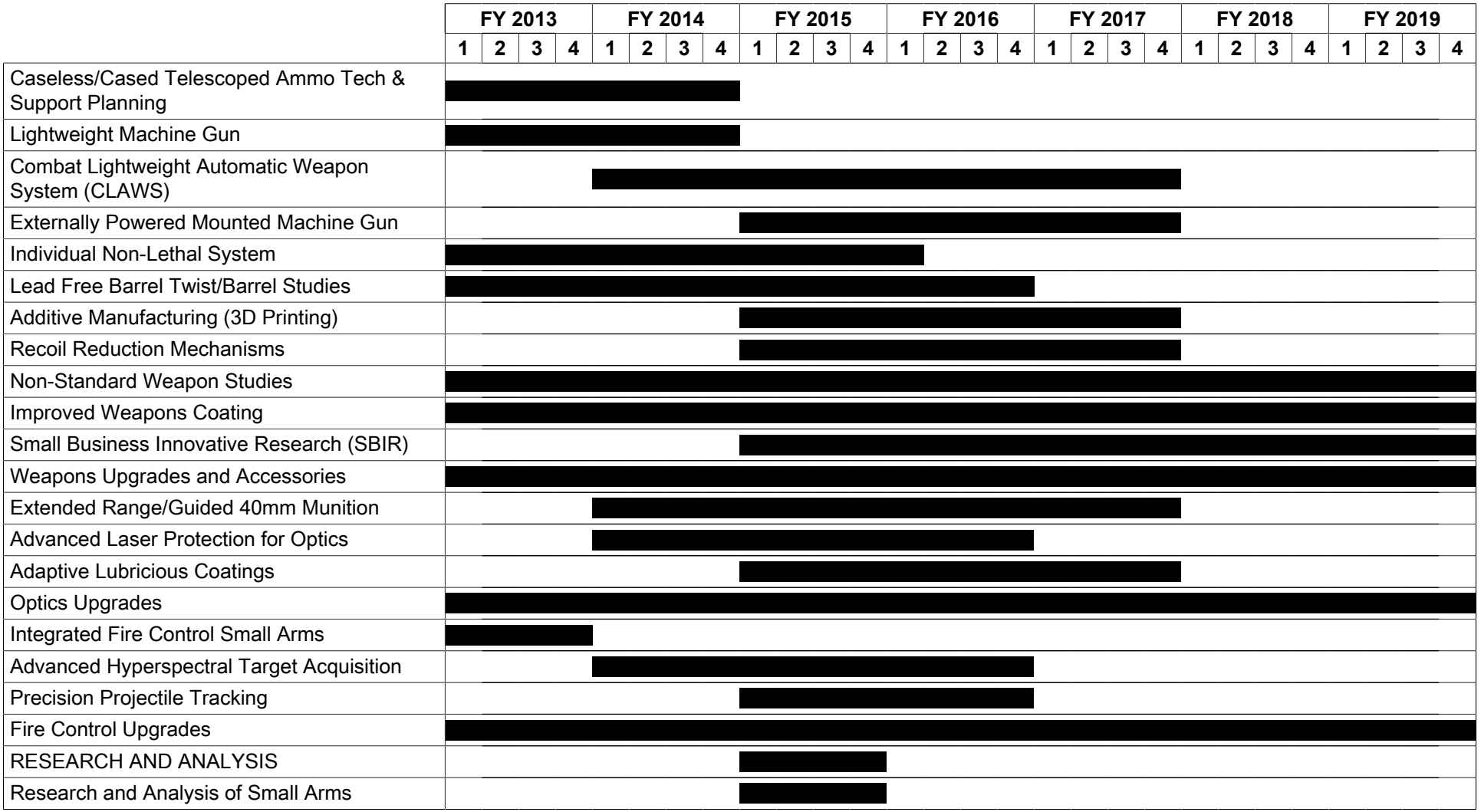

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** S54 / *Small Arms Improvement*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Caseless/Cased Telescoped Ammo Tech & Support Planning	3	2011	4	2014
Lightweight Machine Gun	3	2011	4	2014
Combat Lightweight Automatic Weapon System (CLAWS)	1	2014	4	2017
Externally Powered Mounted Machine Gun	1	2015	4	2017
Individual Non-Lethal System	1	2013	1	2016
Lead Free Barrel Twist/Barrel Studies	1	2011	4	2016
Additive Manufacturing (3D Printing)	1	2015	4	2017
Recoil Reduction Mechanisms	1	2015	4	2017
Non-Standard Weapon Studies	4	2011	4	2019
Improved Weapons Coating	1	2012	4	2019
Small Business Innovative Research (SBIR)	1	2015	4	2019
Weapons Upgrades and Accessories	1	2010	4	2019
Extended Range/Guided 40mm Munition	1	2014	4	2017
Advanced Laser Protection for Optics	1	2014	4	2016
Adaptive Lubricious Coatings	1	2015	4	2017
Optics Upgrades	1	2010	4	2019
Integrated Fire Control Small Arms	1	2010	4	2013
Advanced Hyperspectral Target Acquisition	1	2014	4	2016
Precision Projectile Tracking	1	2015	4	2016
Fire Control Upgrades	1	2008	4	2019
RESEARCH AND ANALYSIS	1	2015	4	2015
Research and Analysis of Small Arms	1	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) VS4 / *Soldier Protective Equipment*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VS4: *Soldier Protective Equipment*	-	14.513	3.686	2.690	-	2.690	5.447	5.267	4.427	4.441	-	40.471
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This funding supports the Integrated Systems Design (ISD) phase of Engineering and Manufacturing Development (EMD) efforts to evaluate and integrate technologies and prototype systems that help expedite Individual Soldier Ballistic Protection technology transition from the laboratory to operational use. It continues incremental improvement of body armor to reduce Soldier load and improve comfort/functionality based on operational feedback. It advances efforts to mature manufacturing readiness levels of advanced high performance fibers and composites for next-generation combat helmets, and supports transition to System Capability and Manufacturing Process Demonstration (SC&MPD) phase of EMD. It continues to increase eyewear ballistics/blast protection, and incorporates advancements in laser eye protection, as well as advancements in variable transition lens technology into ballistic goggles and spectacles.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Soldier Protective Equipment	14.513	3.686	2.690
Articles:	-	-	-

Description: Funding line established in FY12. Effort was previously executed in Program Element 0603827 S53. Effort is to increase the Warfighter lethality and mobility by optimizing Soldier protection while effectively managing all life cycle aspects of Personal Protective Equipment (PPE).

FY 2013 Accomplishments:

Obtained a Materiel Development Decision (MDD) for the Soldier Protection System (SPS) in 1QFY13 and a Milestone B Decision in 3QFY13. Initiated SPS Integrated System Design (ISD) phase, released five SPS subsystems solicitations in 2QFY13. Awarded SPS Integrated Soldier Sensor System (ISSS) and Vital Torso Protection System (VTPS) development contracts in 4QFY13. Completed seven FY12 Broad Agency Announcement (BAA) contracts and awarded eleven new BAA contracts/ contract options through 4QFY13 to continue ballistic and blast characterization testing of SPS Vital Torso, Extremity, Torso and Integrated head, face and eye protective subsystems. Continued efforts on reducing weight, and bulk and increasing durability in terms of functional service life. Incorporated the Self-diagnostic Smart Sensor into the Vital Torso Protection (VTP) solicitation released in 2QFY13 and awarded VTPS contract in 4QFY13. Initiated development of alternate shaped ballistic inserts for female and small statured Soldiers and will transition to System Capability & Manufacturing Process Demonstration (SC&MPD/VS 5) through FY15 as the components and subsystems mature. Completed development and accepted delivery of five sets (25 total)

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** VS4 / *Soldier Protective Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
multi-sized head forms in 3QFY13. Initiated testing to validate and secure accreditation of the multi-sized head forms as an Army standard test apparatus in 4QFY13. ***FY 2014 Plans:*** Continue FY13 efforts to develop SPS ISSS prototypes for characterization and human factors testing. Continue to refine SPS ISSS design, power management and component integration. Conduct Preliminary Design Review (PDR) of the SPS ISSS test candidates in 2QFY14 for FY15 user evaluation and characterization testing. Conduct CDR of the Vital Torso Protection System Self-diagnostic Smart Sensor and transition to SC&MPD/VS5 to procure prototypes for SPS Phase II characterization and Human Factors testing through 2QFY15. Continue SPS ISD efforts to integrate new and emerging technologies at the component and subsystem level. Initiate transition of mature components and subsystems to SC&MPD/VS 5 through 2QFY15. Continue to evaluate component and subsystem technologies across the PPE portfolio (extremities, torso and vital torso, head and face protection) from emerging ballistic/blast threats. Continue efforts to reduce SPS weight and bulk at the system, subsystem and component level. Continue efforts to increase durability and functional service life of existing personal protective systems. Continue development of ballistic inserts for female and small statured Soldiers and transition to SC&MPD/VS 5 through 2QFY15 as the components and subsystems mature. Complete validation/accreditation of multi-sized head forms and transition to Army and National Institute of Justice (NIJ) certified testing laboratories to support SPS helmet development and acceptance testing in FY15 and beyond. ***FY 2015 Plans:*** Conduct SPS ISSS limited user evaluations and characterization testing 1-2QFY15 and transition to SC&MPD/VS5 to buy DT/OT test items by 1QFY16. Continue FY14 SPS ISD efforts to integrate new and emerging technologies at the component and subsystem level. Continue to evaluate component and subsystem technologies across the PPE portfolio (extremities, torso and vital torso, head and face protection) from emerging ballistic/blast threats. Continue efforts to reduce SPS weight and bulk at the system, subsystem and component level. Continue efforts to increase durability and functional service life of existing personal protective systems. Continue to transition mature SPS subsystems and components to SC&MPD/VS 5 through 4QFY16.			
Accomplishments/Planned Programs Subtotals	14.513	3.686	2.690

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Soldier Protective Equipment VS5: *RDTE, 0604601A.VS5, Soldier Protective Equipment*	10.646	20.032	4.833	-	4.833	16.737	13.057	10.329	10.350	-	85.984

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** VS4 / *Soldier Protective Equipment*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Central Funding & Fielding: *OMA, 121017, Central Funding & Fielding*	51.773	103.460	127.085	-	127.085	126.907	179.862	172.351	188.833	-	950.271

Remarks

D. Acquisition Strategy

Programs pursue refinement and integration of new technology at the component and subsystem level, culminating in the transition of mature technologies (TRL 6-7) to EMD and production. This project continues to exercise competitively awarded contracts using best value source selection procedures.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) VS4 / *Soldier Protective Equipment*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SETA Support	TBD	PM SPE : Ft. Belvoir, VA	0.100	0.100		0.100		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.100	0.100		0.100		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev/Sys Engineering Spt	MIPR	Various : Various	0.375	2.284		1.500		1.000		-		1.000	Continuing	Continuing	-
Dev/Integ Contracts	TBD	Various : various	0.611	9.850		0.686		1.000		-		1.000	Continuing	Continuing	Continuing
		Subtotal	0.986	12.134		2.186		2.000		-		2.000	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various : various	0.300	0.500		0.400		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.300	0.500		0.400		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DT (Ballistic/Non-ballistic) Testing	MIPR	Various : Various	0.400	1.779		1.000		0.690		-		0.690	Continuing	Continuing	Continuing
		Subtotal	0.400	1.779		1.000		0.690		-		0.690	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.786	14.513		3.686		2.690		-		2.690	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603827A / *Soldier Systems - Advanced Development*	Project (Number/Name) VS4 / *Soldier Protective Equipment*	

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** VS4 / *Soldier Protective Equipment*

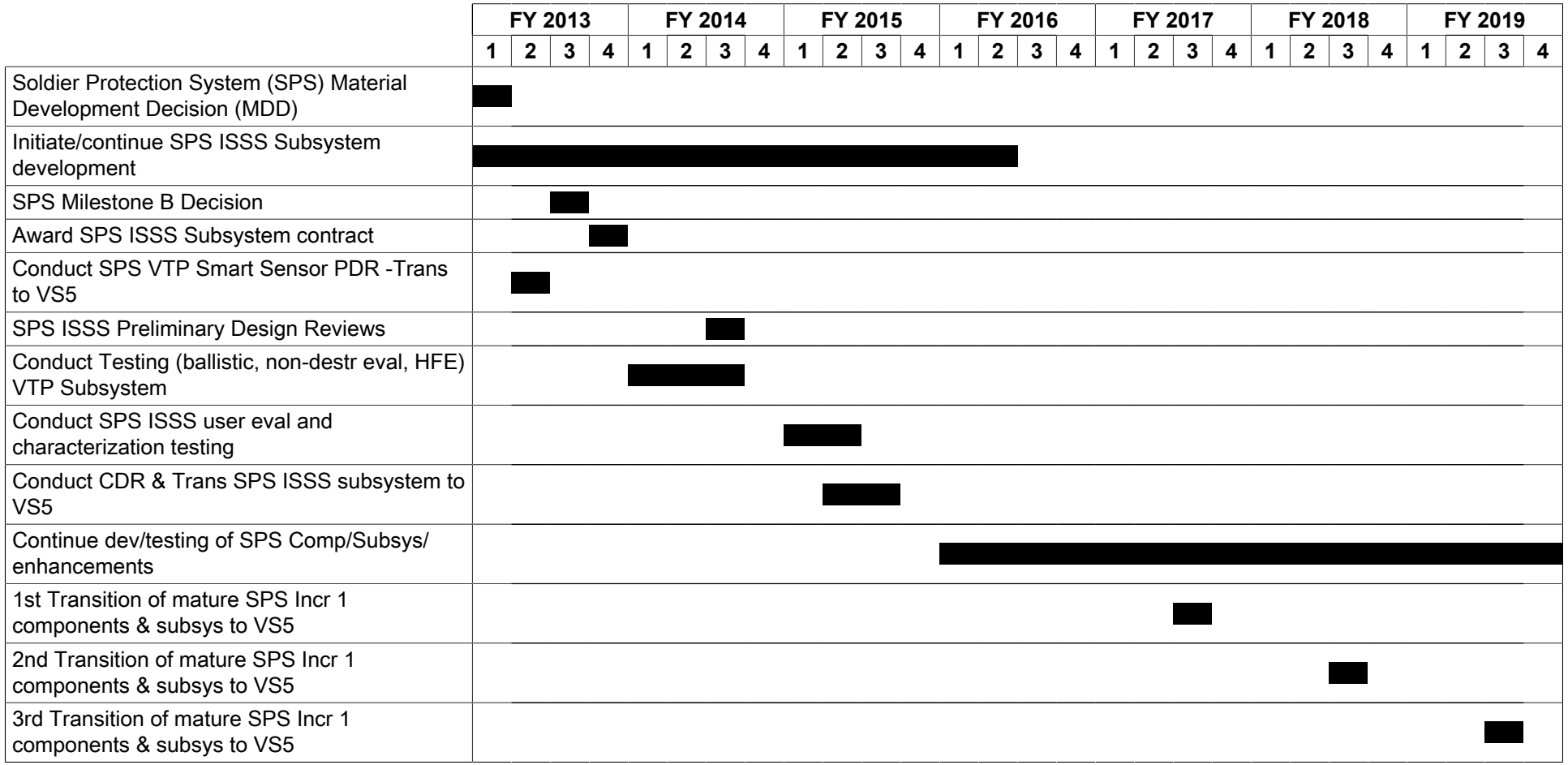

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603827A / *Soldier Systems - Advanced Development*	**Project (Number/Name)** VS4 / *Soldier Protective Equipment*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Soldier Protection System (SPS) Material Development Decision (MDD)	1	2013	1	2013
Initiate/continue SPS ISSS Subsystem development	1	2013	2	2016
SPS Milestone B Decision	3	2013	3	2013
Award SPS ISSS Subsystem contract	4	2013	4	2013
Conduct SPS VTP Smart Sensor PDR -Trans to VS5	2	2013	2	2013
SPS ISSS Preliminary Design Reviews	3	2014	3	2014
Conduct Testing (ballistic, non-destr eval, HFE) VTP Subsystem	1	2014	3	2014
Conduct SPS ISSS user eval and characterization testing	1	2015	2	2015
Conduct CDR & Trans SPS ISSS subsystem to VS5	2	2015	3	2015
Continue dev/testing of SPS Comp/Subsys/enhancements	1	2016	4	2019
1st Transition of mature SPS Incr 1 components & subsys to VS5	3	2017	3	2017
2nd Transition of mature SPS Incr 1 components & subsys to VS5	3	2018	3	2018
3rd Transition of mature SPS Incr 1 components & subsys to VS5	3	2019	3	2019

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603850A / *Integrated Broadcast Service*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.096	0.079	-	-	-	-	-	-	-	-	0.175
472: *Integrated Broadcast Service (MIP)*	-	0.096	0.079	-	-	-	-	-	-	-	-	0.175

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Joint Program Office (JPO) for IBS Terminals supports all of the Joint Services and Special Operations Command (SOCOM). The Integrated Broadcast Service (IBS) is the worldwide Department of Defense (DoD) standard network enterprise for disseminating time-sensitive tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The JPO's role is to complete consolidation and replacement of existing IBS terminal capability. The JTT family of systems currently consists of the JTT-Senior and JTT-IBS systems, and they satisfy RF Key Performance Parameters (KPPs) for the IBS Program. The JTT is the official IBS producer system, and ensures continued IBS interoperability to a variety of tactical producers/consumers across the Joint Services. JPO IBS Terminals performs JTT life cycle program management through fielding and sustainment of recently upgraded JTT equipment which includes technical fixes as needed in the newly upgraded IBS network that now uses new crypto, a new Common Interactive Broadcast (CIB), and the Common Message Format (CMF). Funds support continued technical fixes/enhancements, configuration management for JTT crypto/CIB/CMF capabilities after the FY14 Initial Operational Capability (IOC) of the newly upgraded IBS network enterprise.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	0.096	0.079	0.021	-	0.021
Current President's Budget	0.096	0.079	-	-	-
Total Adjustments	-	-	-0.021	-	-0.021
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.021	-	-0.021

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603850A / *Integrated Broadcast Service*	Project (Number/Name) 472 / *Integrated Broadcast Service (MIP)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
472: *Integrated Broadcast Service (MIP)*	-	0.096	0.079	-	-	-	-	-	-	-	-	0.175
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Joint Program Office (JPO) for IBS Terminals supports all of the Joint Services and Special Operations Command (SOCOM). The Integrated Broadcast Service (IBS) is the worldwide Department of Defense (DoD) standard network enterprise for disseminating time-sensitive tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The JPO's role is to complete consolidation and replacement of existing IBS terminal capability. The JTT family of systems currently consists of the JTT-Senior and JTT-IBS systems, and they satisfy RF Key Performance Parameters (KPPs) for the IBS Program. The JTT is the official IBS producer system, and ensures continued IBS interoperability to a variety of tactical producers/consumers across the Joint Services. JPO IBS Terminals performs JTT life cycle program management through fielding and sustainment of recently upgraded JTT equipment which includes technical fixes as needed in the newly upgraded IBS network that now uses new crypto, a new Common Interactive Broadcast (CIB), and the Common Message Format (CMF). Funds support continued technical fixes/enhancements, configuration management for JTT crypto/CIB/CMF capabilities after the FY14 Initial Operational Capability (IOC) of the newly upgraded IBS network enterprise.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: JTT IBS CIB Integration	0.096	0.079	-
Articles:	-	-	-
Description: Integration of the Common Interactive Broadcast (CIB) waveform for migration to the IBS Worldwide standard DoD Network and NSA Certification			
FY 2013 Accomplishments: JTT testing of the Common Interactive Broadcast (CIB) waveform for migration to the IBS Worldwide standard DoD Network			
FY 2014 Plans: Continue CIB performance evaluation in over-the-air, system-of-systems, SATCOM environment.			
Accomplishments/Planned Programs Subtotals	0.096	0.079	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603850A / *Integrated Broadcast Service*	**Project (Number/Name)** 472 / *Integrated Broadcast Service (MIP)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• V29600 Other Procurement, Army	1.638	0.824	0.870	-	0.870	0.888	0.900	0.915	0.932	Continuing	Continuing
- JT: *V29600 Other Procurement, Army - JTT/CIBS-M (Tiara)*											

Remarks

D. Acquisition Strategy

Funds support continued CIB performance evaluation in over-the-air, system-of-systems, SATCOM environment.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603850A / *Integrated Broadcast Service*	Project (Number/Name) 472 / *Integrated Broadcast Service (MIP)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Common Interactive Broadcast Integration JTT-IBS	Various	DRS : Dayton OH	0.873	0.096		0.079		-		-		-	-	1.048	12.451
		Subtotal	0.873	0.096		0.079		-		-		-	-	1.048	12.451

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Testing	Various	TBD : TBD	0.621	-		-		-		-		-	-	0.621	-
		Subtotal	0.621	-		-		-		-		-	-	0.621	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.494	0.096		0.079		-		-		-	-	1.669	12.451

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604100A / *Analysis Of Alternatives*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	9.913	-	9.913	9.877	10.057	10.098	10.044	-	49.989
EC7: *Analysis Of Alternatives*	-	-	-	9.913	-	9.913	9.877	10.057	10.098	10.044	-	49.989

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This PE provides funding for analytical support of AoAs. Based on Department of Defense Instruction (DoDI) 5000.02, AoAs are required to be completed for a new program start prior to its first Milestone (MS) Decision. AoAs are a statutory requirement for ACAT I and ACAT II programs and regulatory for ACAT III programs. The AoAs support the preparation of the Capability Development Document, Key Performance Parameters and Thresholds within the CDDs and tradeoff analysis. The Army must complete and approve an AoA prior to the MS A Decision in order to successfully achieve a MS A decision for new start programs. This PE provides central funding for new start programs prior to a materiel development decision and do not yet have a Program Manager assigned for materiel development. The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy and Plan. Work in this PE is performed by analytical agencies such as U.S. Army TRADOC Analysis Center and U.S. Army Materiel Systems Analysis Activity.

The Army is projecting to start work on several AoAs beginning in FY 2015, and will assess and fund the highest Army priorities during the year of execution.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	9.913	-	9.913
Total Adjustments	-	-	9.913	-	9.913
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	9.913	-	9.913

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604100A / *Analysis Of Alternatives*	Project (Number/Name) EC7 / *Analysis Of Alternatives*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EC7: *Analysis Of Alternatives*	-	-	-	9.913	-	9.913	9.877	10.057	10.098	10.044	-	49.989
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

This Program Element (PE) contains funding for Analysis of Alternatives (AoA) support in FY 2015 PE 0604100, AoA (project EC7), consistent with Congressional direction.

A. Mission Description and Budget Item Justification

This PE provides funding for analytical support of AoAs. Based on Department of Defense Instruction (DoDI) 5000.02, AoAs are required to be completed for a new program start prior to its first Milestone (MS) Decision. AoAs are a statutory requirement for ACAT I and ACAT II programs and regulatory for ACAT III programs. The AoAs support the preparation of the Capability Development Document, Key Performance Parameters and Thresholds within the CDDs and tradeoff analysis. The Army must complete and approve an AoA prior to the MS A Decision in order to successfully achieve a MS A decision for new start programs. This PE provides central funding for new start programs prior to a materiel development decision and do not yet have a Program Manager assigned for materiel development. The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy and Plan. Work in this PE is performed by analytical agencies such as U.S. Army TRADOC Analysis Center and U.S. Army Materiel Systems Analysis Activity.

The Army is projecting to start work on several AoAs beginning FY 15, and will assess and fund the highest Army priorities during the year of execution.

This effort, EC7-APE 644100 Analysis of Alternatives for FY15 and beyond, is a realignment from DX1-APE 644115 Technology Maturation Initiatives.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Acquisition Analysis of Alternatives	-	-	9.913
Description: Funds are to be used for the following effort. ***FY 2015 Plans:*** Centrally fund AoAs for new program starts that require a materiel development decision. These new programs do not yet have a Program Manager assigned.			
Accomplishments/Planned Programs Subtotals	-	-	9.913

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604100A / *Analysis Of Alternatives*	**Project (Number/Name)** EC7 / *Analysis Of Alternatives*

C. Other Program Funding Summary ($ in Millions)

Remarks

Not applicable for this item.

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	12.636	11.110	74.740	-	74.740	42.652	50.157	45.341	49.387	Continuing	Continuing
DS3: *TECHNOLOGY MATURATION INITIATIVES*	-	2.118	11.110	74.740	-	74.740	42.652	50.157	45.341	49.387	Continuing	Continuing
DX1: *Analysis of Alternatives*	-	10.518	-	-	-	-	-	-	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 13 decreases attributed to Congressional General Reductions (-17 thousand); Congressional Directed Reductions (-11.800 million); and SBIR/STTR transfers (-415 thousand)
FY 14 reductions attritbuted to FFRDC reduction (-6 thousand) and Congressional directed reductions (-44.489 million)

FY 2015 funding increased to support an expanded set of Technology Maturation Initiatives approved by the Executive Steering Group.

A. Mission Description and Budget Item Justification

This Program Element (PE) funds prototyping and demonstration of selected technology enabled capabilities to support advanced ground and aviation systems, precision weapons, and Soldier equipment. Funding facilitates maturation and demonstration of advanced technologies and systems in relevant environments and tactical/operational scenarios, taking technologies to a goal of Technology Readiness Level (TRL) 7 and reducing risk for acquisition programs of record. Efforts include competitive prototyping earlier in development to facilitate transition of new capabilities into acquisition programs. Efforts are directed by an Army Senior Executive Steering Group to ensure that demonstrations have high potential for filling capability gaps and transition. This PE provides the Army an improved mechanism for fulfilling the goals of the Weapon Systems Acquisition Reform Act (WSARA) of 2009 by enabling greater competition in the latter stages of technology maturation and establishes a closer alignment between Science and Technology (S&T) programs and acquisition programs. In FY 2013 this PE provided analytical support for Analysis of Alternatives (AoA) for new program starts that required a material development decision and did not yet have a Program Manager assigned for material development.

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this PE is performed by the Research, Development and Engineering Command (RDECOM), Engineering Research Development Center (ERDC), Space and Missile Defense Command (SMDC), U.S. Army TRADOC Analysis Center (TRAC), and/or U.S. Army Materiel Systems Analysis Activity (AMSAA).

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	24.868	55.605	64.088	-	64.088
Current President's Budget	12.636	11.110	74.740	-	74.740
Total Adjustments	-12.232	-44.495	10.652	-	10.652
• Congressional General Reductions	-0.017	-0.006			
• Congressional Directed Reductions	-11.800	-44.489			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.415	-			
• Adjustments to Budget Years	-	-	10.652	-	10.652

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*				Project (Number/Name) DS3 / *TECHNOLOGY MATURATION INITIATIVES*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
DS3: *TECHNOLOGY MATURATION INITIATIVES*	-	2.118	11.110	74.740	-	74.740	42.652	50.157	45.341	49.387	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

N/A

A. Mission Description and Budget Item Justification

This Project funds the prototyping and demonstration of selected technology enabled capabilities to support advanced Soldier, ground, aviation, and command, control, communication & reconnaissance systems and equipment. Demonstration of these advanced technologies and systems are conducted in relevant environments and performing tactical/operational scenarios, taking technologies to a goal of Technology Readiness Level (TRL) 7 and reducing risk for acquisition programs. Efforts are typically 1-3 years in duration, and may include early competitive prototyping to facilitate transition of new capabilities into acquisition programs of record. Efforts are directed by an Army Senior Executive Steering Group (ESG) based on program priority and opportunity, to ensure that demonstrations have high potential for filling capability gaps and transitioning. This Project provides the Army an improved mechanism for fulfilling the goals of the Weapon Systems Acquisition Reform Act (WSARA) of 2009 by enabling greater competition in the latter stages of technology maturation and establishing a closer alignment between Science and Technology (S&T) and acquisition programs.

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in the Project is performed by the Research, Development and Engineering Command (RDECOM), Engineering Research Development Center (ERDC), the Space and Missile Defense Command (SMDC), U.S Army TRADOC Analysis Center (TRAC) and/or U.S. Army Materiel Systems Analysis Activity (AMSAA).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Prototype, Evaluate, and Demonstrate	2.118	3.610	-
Articles:	-	-	-
Description: This effort selects technologies in advanced ground systems, aviation systems, precision navigation and weapons, and/or Soldier equipment that show high promise for advancing capabilities required under acquisition programs; prototypes, evaluates, and demonstrates integrated technologies within a high fidelity and realistic operating environment, and transitions them to a formal program of record at reduced cost and/or risk.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DS3 / *TECHNOLOGY MATURATION INITIATIVES*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Demonstrated three technology-enabled capability prototyping efforts initiated in FY 12: Tier 1 Soldier Battery Charger, Azimuth & Vertical Angle Module (AVAM) for Joint Effects Targeting System (JETS), and Advanced Weapons Sight Technology; developed test parameters and assessment criteria and transitioned these efforts to the Nett Warrior, Family of Weapons Sights-Crew Served, and JETS programs. ***FY 2014 Plans:*** Complete the Integrated Soldier Power and Data System-Enhanced technology maturation effort initiated in FY12; develop test parameters and assessment criteria and transition effort to the Soldier Power program of record. Evaluate current Government and contractor-developed ground vehicle subsystem prototypes and demonstrators; analyze prototypes and demonstrators to assess current state of the art of ground combat vehicle technologies and inform future requirements and prototyping efforts.			
Title: Maturation and Prototyping for Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems	-	7.500	35.500
Articles:	-	-	-
Description: This effort selects technologies that show high promise for advancing command, control, communication and reconnaissance capabilities required under acquisition programs; prototypes, evaluates, and demonstrates integrated technologies within a high fidelity and realistic operating environment, and transitions them to a formal program of record at reduced cost and/or risk. ***FY 2014 Plans:*** Demonstrate and validate critical technologies – Pseudolites – that provide a ground-based alternative for Positioning, Navigation and Timing (PNT) in a Global Positioning System (GPS) challenged or denied environment; prototype Pseudolite systems and develop a second source to enable competitive testing prior to the Assured PNT program's Milestone B; demonstrate Pseudolite software for six legacy GPS receiver variants that are widely used by the Army. This investment accelerates and reduces risk for the Assured PNT program. ***FY 2015 Plans:*** Will complete demonstration, validation and testing of Pseudolite prototypes and legacy receiver software, and transition to Assured PNT program of record; mature and prototype Assured PNT devices for mounted and dismounted applications, reducing size, weight and power for protection in all environments; accelerate integration and testing of dismounted capability with Nett Warrior end-user device and military GPS; develop and validate Anti-Jam GPS Antenna performance specifications and A-Kit to enable off-the-shelf, Assured PNT for mounted applications. Will demonstrate mature critical optical elements, coatings, and assembly technologies for prototype integration, addressing performance requirements of the Improved Forward-Looking Infrared (I-FLIR) at reduced cost and risk prior to program Engineering and Manufacturing Development (EMD) phase. Will demonstrate			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DS3 / *TECHNOLOGY MATURATION INITIATIVES*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
a next generation Command Post data foundation interoperable with the Mounted and Mobile Handheld Computing Environments and the tactical cloud to critically inform the implementation of the Army Common Operating Environment V3. Will mature and demonstrate spectrum assignment and frequency reuse software for incorporation into Joint Enterprise Network Manager to alleviate Software Radio Waveform spectrum congestion.			
Title: Maturation and Prototyping for Ground Systems ***Description:*** This effort selects ground maneuver technologies in areas such as mobility, survivability, vehicle architecture, lethality and systems integration, that show high promise for advancing capabilities required under acquisition programs; prototypes, evaluates, and demonstrates integrated technologies within a high fidelity and realistic operating environment, and transitions them to a formal program of record at reduced cost and/or risk. ***FY 2015 Plans:*** Will finalize and demonstrate VICTORY ground vehicle architecture and performance specifications in a realistic operational environment, reducing technology risk, non-recurring engineering, and production costs that hinder the transition of the VICTORY standards into ground vehicle platforms; mature and productize open-source VICTORY Adapter component for integration and evaluation in major vehicle systems. Will mature and demonstrate TRL 7 eye and camera protection in combat vehicle gunner's sight to prevent blinding by advanced wavelength-agile laser weapons; simplify hardware design and specifications to reduce production cost from $100k to $35k per unit under Abrams and Bradley Engineering Change Programs. Will prototype the remote, tele-operated and semi-autonomous control of the Route Clearance Interrogation System (RCIS) by integrating Autonomous Mobility Applique System (AMAS) hardware and developing Government Purpose Rights software and interface specifications, reducing RCIS program integration costs and technical risks for this capability. Will mature and demonstrate an improved Ground Penetrating Radar for the Husky Mounted Detection System (HMDS) for increased detection capability while addressing limitations caused by radio-frequency interference.	-	-	18.405
Title: Maturation and Prototyping for Soldier Systems ***Description:*** This effort selects technologies that show high promise for advancing required soldier system capabilities required under acquisition programs; prototypes, evaluates, and demonstrates integrated technologies within a high fidelity and realistic operating environment, and transitions them to a formal program of record at reduced cost and/or risk. ***FY 2015 Plans:*** Will accelerate, integrate and demonstrate targeting software for the Mobile Handheld Fires Application, providing a timely, advanced Government Purpose Rights software solution for the Pocket-sized Forward Entry Device (PFED) Inc 2 program. Will prototype and demonstrate a competitive materiel solution to meet Improved Military Combat Eye Protection objective requirements; transition specifications for improved transparent, ballistic fragmentation-resistant materials and coatings to materiel	-	-	7.950

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DS3 / *TECHNOLOGY MATURATION INITIATIVES*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
vendors. Will mature, prototype, and demonstrate advanced counter-defilade grenade to inform and expedite requirements for Increased Range Anti-Personnel (Low Velocity) and reduce future acquisition risks.			
Title: Maturation and Prototyping for Logistics and Sustainment Systems ***Description:*** This effort selects logistics and/or sustainment technologies that show high promise for advancing mobility capabilities required under acquisition programs; prototypes, evaluates, and demonstrates integrated technologies within a high fidelity and realistic operating environment, and transitions them to a formal program of record at reduced cost and/or risk. ***FY 2015 Plans:*** Will advance government-owned Transparent Armor 3a design to meet Rock Strike requirements; integrate and test on Joint Light Tactical Vehicle (JLTV) and transition to materiel vendors for increased competition. Will demonstrate an affordable, high-pressure fuel distribution hose for insertion into emerging program of record and reduction of in-theater footprint and manpower needs. Will qualify components and develop competitive procurement specification for a common Army Vehicle Fire Extinguisher, reducing procurement and life-cycle costs due to low-volume manufacturing of 50-plus unique configurations. Will prototype an Environmental Control Unit for upgrade of military refrigeration assets to extend shelf life of fresh fruits and vegetables from days to weeks; validate performance and high return-on-investment and transition specifications for competitive procurement. Will mature and qualify the Li-ion 6T size battery for Naval vessel transport and assignment of National Stock Number, enabling the storage and transport of the JLTV; introduce multiple manufacturers and enable the use of Li-ion 6T advanced batteries across military vehicles as drop-in replacements.	-	-	12.885
Accomplishments/Planned Programs Subtotals	2.118	11.110	74.740

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Multiple competitive contracts will be awarded based on selection of efforts from the Senior ESG. The various developmental programs in this project will continue to exercise competitively awarded contracts using best value source selection procedures.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	Project (Number/Name) DS3 / *TECHNOLOGY MATURATION INITIATIVES*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Azimuth and Vertical Angle Module (AVAM) for the Joint Effects Targeting System (JETS)	C/CPFF	Crossbow; Toyon Research/Sensor In Motion; Irvine Sensors : Milpitas, CA; Goleta, CA; Irvine, CA	1.925	0.750	Jun 2013	-		-		-		-	-	2.675	-
Tier 1 Soldier Battery Charger	C/FFP	DSCP; Thales Communications : Clarksburg, MD	1.121	0.830	Mar 2013	-		-		-		-	-	1.951	-
Advanced Weapon Sight Technology for Family of Weapon Sights (FWS)	C/CPFF	Alion; N2 : Alexandria, VA; Irvine, CA	1.925	0.460	Jun 2013	-		-		-		-	-	2.385	-
Integrated Soldier Power and Data System	C/CPFF	Ultra Electronics AMI : Ann Arbor, MI	1.443	0.078	Jun 2013	1.172	Oct 2013	-		-		-	-	2.693	-
Maturation and Prototyping for C4ISR Systems	Various	Various : Various	0.000	-		7.500	May 2014	35.500		-		35.500	-	43.000	-
Maturation and Prototyping for Ground Systems	Various	Various : Various	0.000	-		-		18.405		-		18.405	-	18.405	-
Maturation and Prototyping for Soldier Systems	Various	Various : Various	0.000	-		-		7.950		-		7.950	-	7.950	-
Maturation and Prototyping for Logistics and Sustainment Systems	Various	Various : Various	0.000	-		-		12.885		-		12.885	-	12.885	-
		Subtotal	6.414	2.118		8.672		74.740		-		74.740	-	91.944	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground Vehicle Subsystem Prototype Evaluations	TBD	Prototype Evaluation : Warren, MI	0.000	-		2.438		-		-		-	-	2.438	-
		Subtotal	0.000	-		2.438		-		-		-	-	2.438	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	Project (Number/Name) DS3 / *TECHNOLOGY MATURATION INITIATIVES*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.414	2.118		11.110		74.740		-		74.740	-	94.382	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DS3 / *TECHNOLOGY MATURATION INITIATIVES*

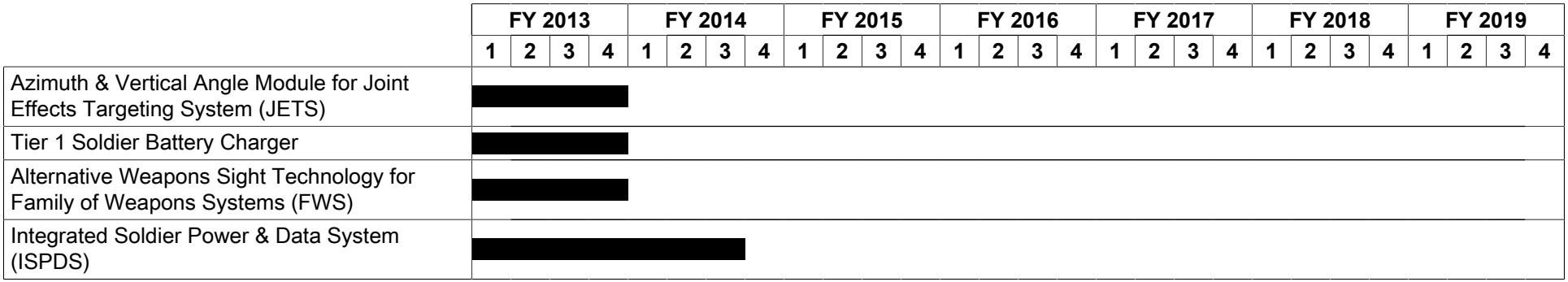

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DS3 / *TECHNOLOGY MATURATION INITIATIVES*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Azimuth & Vertical Angle Module for Joint Effects Targeting System (JETS)	2	2012	4	2013
Tier 1 Soldier Battery Charger	2	2012	4	2013
Alternative Weapons Sight Technology for Family of Weapons Systems (FWS)	2	2012	4	2013
Integrated Soldier Power & Data System (ISPDS)	2	2012	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	Project (Number/Name) DX1 / *Analysis of Alternatives*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DX1: *Analysis of Alternatives*	-	10.518	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This effort provides analytical support for Analysis of Alternatives (AoA). To qualify for funding a material development decision will be required and none of the funds can be obligated or expended to initiate an AoA without 30-day prior notification to the Congressional Defense Committees identifying the purpose of the AoA and certifying its full funding.

Work in the PE is performed by U.S. Army TRADOC Analysis Center (TRAC) and the U.S. Army Materiel Systems Analysis Activity (AMSAA).

Beginning in FY15, this effort moves to PE 0604100A. This reflects a realignment from DX1-APE 644115 Technology Maturation Initiatives to EC7-APE 644100 Analysis of Alternatives.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Analytical Support for Analysis of Alternatives	10.518	-	-
Articles:	-	-	-
Description: This effort provides analytical support for Analysis of Alternatives (AoA). ***FY 2013 Accomplishments:*** Provided analytical support for Analysis of Alternatives (AoA) for new program starts that required a material development decision and did not yet have a Program Manager assigned for material development.			
Accomplishments/Planned Programs Subtotals	10.518	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DX1 / *Analysis of Alternatives*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	Project (Number/Name) DX1 / *Analysis of Alternatives*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Analytical Support for Analysis of Alternatives	TBD	TBD : TBD	3.500	10.518		-		-		-		-	-	14.018	-
		Subtotal	3.500	10.518		-		-		-		-	-	14.018	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.500	10.518		-		-		-		-	-	14.018	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DX1 / *Analysis of Alternatives*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Identify Candidates for AoA funding	[redacted]																											
Issue Funding as Determined in the MDD	[redacted]																											
Conduct Analyses of Alternatives	[redacted]																											

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604115A / *TECHNOLOGY MATURATION INITIATIVES*	**Project (Number/Name)** DX1 / *Analysis of Alternatives*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Identify Candidates for AoA funding	1	2013	4	2013
Issue Funding as Determined in the MDD	1	2013	4	2013
Conduct Analyses of Alternatives	1	2013	4	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	9.930	-	9.930	20.191	21.692	33.745	30.300	Continuing	Continuing
ED5: *Assured Positioning, Navigation and Timing (PNT)*	-	-	-	9.930	-	9.930	20.191	21.692	33.745	30.300	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Joint Requirements Oversight Council Memo (JROCM) 049-10, dated April 5th 2010, approved the Positioning, Navigation and Timing Assurance Initial Capabilities Document and designated the Army as the Lead Component for Assured PNT. The Material Development Decision (MDD) was approved on July 30th 2013. Positioning Navigation and Timing (PNT) is a critical enabler of many Army systems. The current capability, Global Positioning System (GPS), is a fixed frequency system which is vulnerable to current and emerging threats and field conditions which means that PNT access and integrity to the Warfighter cannot be guaranteed. This situation degrades mission performance to an unacceptable level. Therefore, current Army systems cannot operate at the required PNT Assurance Levels with GPS alone.

Assured PNT consists of a set of mutually dependent products that provide a cumulative effect to enable the Assured PNT capability. The Assured PNT program focuses on platform distribution of PNT, scalable PNT architectures that pace the threat, and the ability to upgrade to future technologies, including Military Code (M-Code), at a much lower cost than the current architecture of GPS user equipment (UE). M-code was designed to further improve the anti-jamming and secure access of the military GPS signals.

Assured PNT is a family of solutions which includes four subprograms: (1) The Pseudolites subprogram provides PNT Assurance in GPS denied environments by providing terrestrial radio navigation (GPS-like) service in electronically or physically challenged environments using a higher power signal. The Pseudolites subprogram enables continued operations of PNT-enabled systems such as Blue Force Tracker, Communications Networks and Precision Guided Munitions; (2) The Mounted PNT subprogram is the integration of multiple sensors and provides PNT platform distribution. The Mounted PNT subprogram incorporates a System of Systems architecture that acquires, protects and distributes secure PNT on stationary and vehicular platforms. The mounted materiel solution is a modular, scalable form-factor that paces the threats and enables PNT on the Vehicle Integration for Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance/Electronic Warfare (C4ISR/EW) Interoperability also known as VICTORY and Future Airborne Capability Environment (FACE) Architecture; (3) The Dismounted PNT subprogram is the integration of multiple sensors for platform distribution of PNT on the Soldier. The Dismounted PNT subprogram incorporates a System of Systems architecture that acquires, protects and distributes secure PNT wirelessly on the soldier; (4) The Anti-Jam subprogram provides GPS signal protection and PNT Assurance in challenged environments through anti-jam technologies. Anti-jam enables tactical capabilities through assured signal acquisition in challenged environments.

FY 2015 Base funds in the amount of $9.930 million are provided as a new start for the Assured PNT Program to initiate the development of PNT system solutions for combating electronically and physically challenged electromagnetic environments.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	9.930	-	9.930
Total Adjustments	-	-	9.930	-	9.930
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	9.930	-	9.930

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*	Project (Number/Name) ED5 / *Assured Positioning, Navigation and Timing (PNT)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
ED5: *Assured Positioning, Navigation and Timing (PNT)*	-	-	-	9.930	-	9.930	20.191	21.692	33.745	30.300	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Joint Requirements Oversight Council Memo (JROCM) 049-10, dated April 5th 2010, approved the Positioning, Navigation and Timing Assurance Initial Capabilities Document and designated the Army as the Lead Component for Assured PNT. The Material Development Decision (MDD) was approved on July 30th 2013. Positioning Navigation and Timing (PNT) is a critical enabler of many Army systems. The current capability, Global Positioning System (GPS), is a fixed frequency system which is vulnerable to current and emerging threats and field conditions which means that PNT access and integrity to the Warfighter cannot be guaranteed. This situation degrades mission performance to an unacceptable level. Therefore, current Army systems cannot operate at the required PNT Assurance Levels with GPS alone.

Assured PNT consists of a set of mutually dependent products that provide a cumulative effect to enable the Assured PNT capability. The Assured PNT program focuses on platform distribution of PNT, scalable PNT architectures that pace the threat, and the ability to upgrade to future technologies, including Military Code (M-Code), at a much lower cost than the current architecture of GPS user equipment (UE). M-code was designed to further improve the anti-jamming and secure access of the military GPS signals.

Assured PNT is a family of solutions which includes four subprograms: (1) The Pseudolites subprogram provides PNT Assurance in GPS denied environments by providing terrestrial radio navigation (GPS-like) service in electronically or physically challenged environments using a higher power signal. The Pseudolites subprogram enables continued operations of PNT-enabled systems such as Blue Force Tracker, Communications Networks and Precision Guided Munitions; (2) The Mounted PNT subprogram is the integration of multiple sensors and provides PNT platform distribution. The Mounted PNT subprogram incorporates a System of Systems architecture that acquires, protects and distributes secure PNT on stationary and vehicular platforms. The mounted materiel solution is a modular, scalable form-factor that paces the threats and enables PNT on the Vehicle Integration for Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance/Electronic Warfare (C4ISR/EW) Interoperability also known as VICTORY and Future Airborne Capability Environment (FACE) Architecture; (3) The Dismounted PNT subprogram is the integration of multiple sensors for platform distribution of PNT on the Soldier. The Dismounted PNT subprogram incorporates a System of Systems architecture that acquires, protects and distributes secure PNT wirelessly on the soldier; (4) The Anti-Jam subprogram provides GPS signal protection and PNT Assurance in challenged environments through anti-jam technologies. Anti-jam enables tactical capabilities through assured signal acquisition in challenged environments.

FY 2015 Base funds in the amount of $9.930 million are provided as a new start for the Assured PNT Program to initiate the development of PNT system solutions for combating electronically and physically challenged electromagnetic environments.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*	**Project (Number/Name)** ED5 / *Assured Positioning, Navigation and Timing (PNT)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Assured PNT ***Description:*** Efforts include initiation of development effort for Pseudolite subprogram, Dismounted sub program Risk reduction efforts, preparation of Milestone documentation for the Assured PNT program, and associated Program Management Office (PMO) and support activities. ***FY 2015 Plans:*** Efforts include initiation of development effort for Pseudolite subprogram, Dismounted sub program Risk reduction efforts, preparation of Milestone documentation for the Assured PNT program, and associated Program Management Office (PMO) and support activities.	-	-	9.930
Accomplishments/Planned Programs Subtotals	-	-	9.930

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Assured Positioning, Navigation and Timing (PNT) Acquisition Strategy is focused on the acquisition of a family of systems required to achieve the Assured PNT capability. The materiel solutions are partitioned into subprograms that are at various stages of technical maturity, and include Pseudolites, Mounted PNT, Dismounted PNT, and Anti-jam. The strategy for the Pseudolite subprogram includes technology development accomplished through two competitive, cost-plus incentive fee (CPIF) contracts; this includes development and testing of critical system technologies including command and control, anti-tamper, and PNT determination technologies following a MS A Decision in FY 2015. The Milestone B decision is planned for FY 2017. The strategy for the Mounted PNT subprogram includes technology development accomplished through two competitive CPIF contracts following a Milestone A decision in FY 2016; this includes open-system architecture development to enable industry to provide PNT solutions that "plug-in" to the Mounted PNT Hub, increasing competition and innovation across the life of the program. The strategy for the Dismounted PNT subprogram includes technology bridging activities to facilitate a small-business innovative research (SBIR) performer to support a Milestone B decision in FY 2017. The strategy for the Antijam subprogram consists of a Milestone B in FY 2016 to initiate Engineering and Manufacturing Development with two contractors, focused on size-weight, power and cost (SWAP-C) optimization of the anti-jam technologies. The above acquisition strategy is pending approval by the Milestone Decision Authority.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*	Project (Number/Name) ED5 / *Assured Positioning, Navigation and Timing (PNT)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Allot	PD PNT Core : Various	0.000	-		-		0.490	Nov 2014	-		0.490	-	0.490	-
		Subtotal	0.000	-		-		0.490		-		0.490	-	0.490	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop Pseudolite Competitive Prototype Contractor 1	C/CPIF	Various : Various	0.000	-		-		3.615	Mar 2015	-		3.615	-	3.615	-
Develop Pseudolite Competitive Prototype Contractor 2	C/CPIF	Various : Various	0.000	-		-		3.615	Mar 2015	-		3.615	-	3.615	-
Dismounted Technical Risk Reduction and Integration	MIPR	Various : Various	0.000	-		-		0.440	Mar 2015	-		0.440	-	0.440	-
		Subtotal	0.000	-		-		7.670		-		7.670	-	7.670	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	Various : Various	0.000	-		-		0.850	Nov 2014	-		0.850	-	0.850	-
SETA Support	C/FFP	Various : Various	0.000	-		-		0.920	Mar 2015	-		0.920	-	0.920	-
		Subtotal	0.000	-		-		1.770		-		1.770	-	1.770	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		9.930		-		9.930	-	9.930	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*	Project (Number/Name) ED5 / *Assured Positioning, Navigation and Timing (PNT)*	

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*	**Project (Number/Name)** ED5 / *Assured Positioning, Navigation and Timing (PNT)*

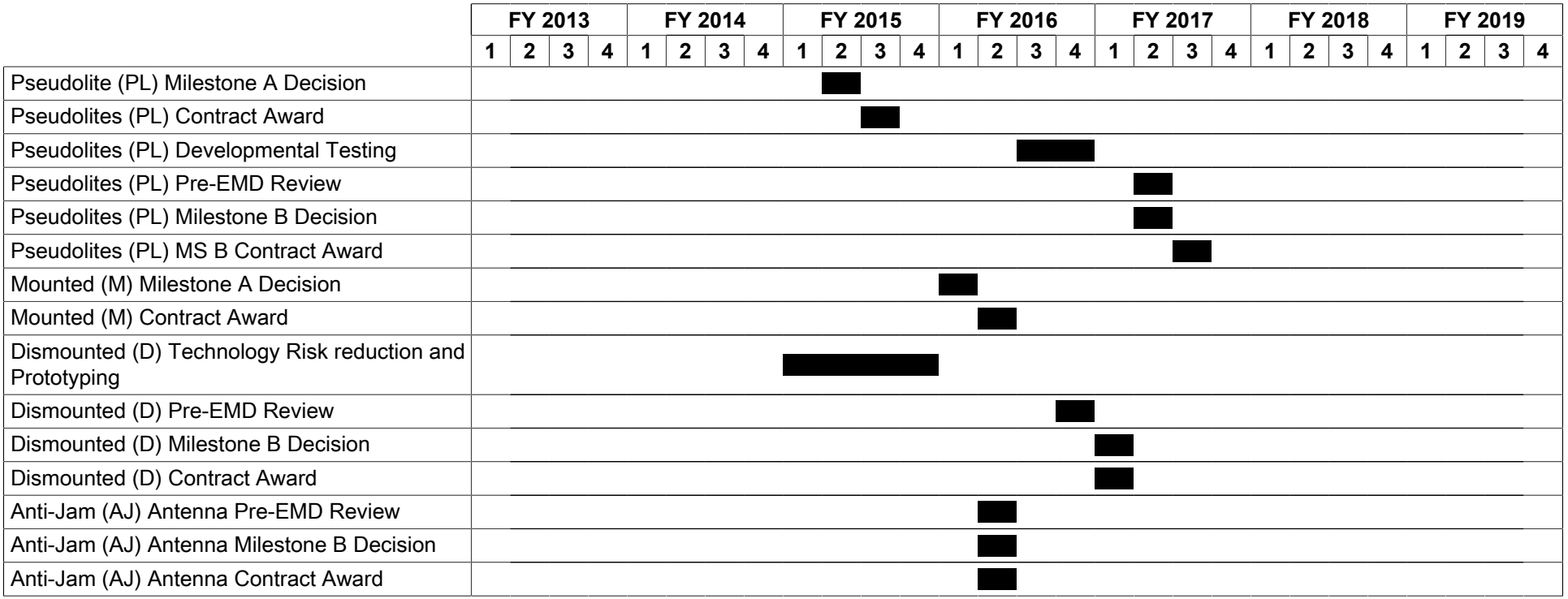

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604120A / *Assured Positioning, Navigation and Timing (PNT)*	**Project (Number/Name)** ED5 / *Assured Positioning, Navigation and Timing (PNT)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Pseudolite (PL) Milestone A Decision	2	2015	2	2015
Pseudolites (PL) Contract Award	3	2015	3	2015
Pseudolites (PL) Developmental Testing	3	2016	4	2016
Pseudolites (PL) Pre-EMD Review	2	2017	2	2017
Pseudolites (PL) Milestone B Decision	2	2017	2	2017
Pseudolites (PL) MS B Contract Award	3	2017	3	2017
Mounted (M) Milestone A Decision	1	2016	1	2016
Mounted (M) Contract Award	2	2016	2	2016
Dismounted (D) Technology Risk reduction and Prototyping	1	2015	4	2015
Dismounted (D) Pre-EMD Review	4	2016	4	2016
Dismounted (D) Milestone B Decision	1	2017	1	2017
Dismounted (D) Contract Award	1	2017	1	2017
Anti-Jam (AJ) Antenna Pre-EMD Review	2	2016	2	2016
Anti-Jam (AJ) Antenna Milestone B Decision	2	2016	2	2016
Anti-Jam (AJ) Antenna Contract Award	2	2016	2	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604131A / *TRACTOR JUTE*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.054	-	-	-	-	-	-	-	-	-	0.054
DT1: *TRACTOR JUTE*	-	0.054	-	-	-	-	-	-	-	-	-	0.054

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The details of this program are being reported in accorance with Title 10, United States Code, Section 119(a)(1).

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	0.059	-	-	-	-
Current President's Budget	0.054	-	-	-	-
Total Adjustments	-0.005	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-0.005	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	-	534.457
DU3: *IFPC2*	-	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	-	534.457

The FY 2015 OCO Request will be submitted at a later date.

Note

Adjustments to Budget Years: Change due to overall decrease in TOA.

A. Mission Description and Budget Item Justification

This program supports the overall Air and Missile Defense (AMD) architecture and provides a robust intercept capability against Cruise Missiles (CM), Unmanned Aircraft System (UAS) and Rocket, Artillery, and Mortar (RAM) threats for deployed forces. The Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) is a ground-based weapon system that will be designed to acquire, track, engage, and defeat UAS, CM, and RAM. The System will provide 360-degree protection and will simultaneously engage threats arriving from different azimuths. A block acquisition approach will be used to provide this capability. The Block 1 system will consist of an existing interceptor and sensor and development of technical fire control and a Multi-Mission Launcher (MML) to support the UAS and CM mission. The IFPC Inc 2-I System will be compatible with the Army Integrated Air and Missile Defense (IAMD) Command and Control (C2) architecture. The IFPC Inc 2-I System will be transportable by Army common mobile platforms.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	76.039	79.232	107.587	-	107.587
Current President's Budget	25.710	79.190	96.177	-	96.177
Total Adjustments	-50.329	-0.042	-11.410	-	-11.410
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-47.210	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.809	-			
• Adjustments to Budget Years	-0.038	-0.042	-11.410	-	-11.410
• Other Adjustments 1	-2.272	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	Project (Number/Name) DU3 / *IFPC2*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DU3: *IFPC2*	-	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	-	534.457
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Previous PE/Project/Title: 0603305A/TR7 Army Missile Defense Systems Integration/TR7 Indirect Fire Protection Capability II-Intercept
Current PE/Project/Title: 0604319A/DU3 Indirect Fire Protection Capability Increment 2/ DU3 IFPC2
(Funds realigned to current PE in FY13.)

A. Mission Description and Budget Item Justification

This program supports the overall Air and Missile Defense (AMD) architecture and provides a robust intercept capability against Cruise Missiles (CM), Unmanned Aircraft System (UAS) and Rocket, Artillery, and Mortar (RAM) threats for deployed forces. The Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) is a ground-based weapon system that will be designed to acquire, track, engage, and defeat UAS, CM, and RAM. The System will provide 360-degree protection and will simultaneously engage threats arriving from different azimuths. A block acquisition approach will be used to provide this capability. The Block 1 system will consist of an existing interceptor and sensor and development of technical fire control and a Multi-Mission Launcher (MML) to support the UAS and CM mission. The IFPC Inc 2-I System will be compatible with the Army Integrated Air and Missile Defense (IAMD) Command and Control (C2) architecture. The IFPC Inc 2-I System will be transportable by Army common mobile platforms.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) System Engineering & Program Management	6.572	23.820	28.052
Articles:	-	-	-
Description: Funding is provided for the following efforts:			
FY 2013 Accomplishments: - Performed system engineering, logistics studies, analysis and design and business management activities - Conducted program reviews - Prepared milestone documentation - Conducted milestone review - Continued to provide technical support for Analysis of Alternatives (AOA) excursion - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation			
FY 2014 Plans: - Continue Research, Development, Test, & Evaluation (RDT&E) efforts associated with the Engineering Demonstration			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	**Project (Number/Name)** DU3 / *IFPC2*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Perform system engineering, logistics engineering, system test and evaluation, technical control, and business management activities - Conduct system and program reviews - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation ***FY 2015 Plans:*** - Continue RDT&E efforts associated with the Engineering Demonstration - Perform system engineering, logistics engineering, system test and evaluation management, technical control, and business management activities - Conduct system and program reviews - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation			
Title: IFPC Inc 2-I Engineering and Technical Support	13.338	31.370	52.573
Articles:	-	-	-
Description: Funding is provided for the following efforts: ***FY 2013 Accomplishments:*** - Provided engineering and technical support for development of system hardware, software, and integration requirements and definition - Integrated design refinements from Science and Technology effort into system baseline design - Participated in program reviews - Provided technical support for milestone documentation and decision review - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation ***FY 2014 Plans:*** - Continue engineering and technical support for development of system hardware, software, and integration requirements and definition - Continued integration of design refinements from Science and Technology effort into system baseline design - Participate in system and program reviews - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation ***FY 2015 Plans:*** - Continue engineering and technical support for design of system hardware, software, and integration requirements and definition - Participate in system and program reviews			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	**Project (Number/Name)** DU3 / *IFPC2*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation			
Title: IFPC Inc 2-I System/Subsystem Development, Integration, and Testing	5.800	24.000	15.552
Articles:	-	-	-
Description: Funding is provided for the following efforts:			
FY 2013 Accomplishments: - Supported completion of system/subsystem requirements definition - Initiated system/subsystem hardware, software, and integration design and development activities - Initiated development of Multi-Mission Launcher Technical Data Package - Participated in system and program reviews - Supported milestone documentation and decision review - Procured hardware long lead material and items - Initiated fabrication and integration development of hardware components including: - Rail/Tube Design - Missile Interface Control Design - Launcher Control Design - Elevation and Azimuth Drive Design - Prime Power and Electronic Design - Vehicle Design Modifications - Network Interface Design - Gear Bearing - Cradle Pre-Milestone A - Continued with Research, Development, Test, & Evaluation (RDT&E) efforts to support the Engineering Demonstration - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation			
FY 2014 Plans: - Continue system component hardware, software, and integration design and development activities - Participate in system and program reviews - Fabricate, integrate system/subsystem hardware - Continue development of technical data package - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	**Project (Number/Name)** DU3 / *IFPC2*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Continue system component hardware, software, and integration development activities - Participate in system and program reviews - Continue development of technical data package - Perform technical assessments, concept studies, cost reduction, required documentation, and integration, component, and system level risk reduction - Continue system/subsystem hardware, software, and integration test activities - Perform missile assessment to inform selection of optimum missile to counter Unmanned Aerial Systems (UAS), Cruise Missiles (CM), and Rocket, Artillery, and Mortar (RAM) threats			
Accomplishments/Planned Programs Subtotals	25.710	79.190	96.177

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604869A, Proj M06: *Patriot/MEADS Combined Aggregate Program (CAP)*	348.234	-	-	-	-	-	-	-	-	-	348.234
• PE 0605456A, Proj PA3: *PAC-3/MSE MISSILE*	63.123	68.807	35.009	-	35.009	2.271	-	-	-	Continuing	Continuing
• SSN C53101: *MSE Missile*	8.249	690.401	384.605	-	384.605	419.791	422.527	458.724	497.553	Continuing	Continuing
• PE 0205456, Proj EF9: *System Integration and Test*	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	Continuing	Continuing
• SSN C50016: *Lower Tier Air and Missile Defense (AMD)*	-	-	110.300	-	110.300	116.416	131.549	114.678	113.281	Continuing	Continuing
• PE 0102419A, Proj E55: *JLENS*	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	Continuing	Continuing
• PE 0605457A, Proj S40: *Army Integrated Air and Missile Defense (AIAMD)*	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
• SSN BZ5075: *IAMD Battle Command System*	-	-	-	-	-	21.091	206.300	298.990	379.981	Continuing	Continuing
• PE 0604820A, Proj E10: *Sentinel*	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing
• PE 654741A, Proj 126, 146, 149: *Air Defense C2I Eng Dev*	42.876	18.284	15.906	-	15.906	20.248	19.632	19.878	20.165	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	**Project (Number/Name)** DU3 / *IFPC2*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

This program is an integral part of the Army Integrated Air and Missile Defense (IAMD) architecture.

D. Acquisition Strategy

The Materiel Development Decision (MDD) was completed in fourth quarter Fiscal Year (FY) 2011, allowing for the initiation of an Analysis of Alternatives (AoA) to determine materiel solution approach; establishment of requirement baseline; initiation of development of required Milestone documents and execution of the Milestone decision to continue with Research, Development, Test, & Evaluation (RDT&E) efforts associated with conducting an Engineering Demonstration.

The Government will fund the Aviation and Missile Research Development and Engineering Center (AMRDEC) for the development and demonstration of the Multi-Mission Launcher (MML). The Government also plans to fund the Letterkenny Army Depot (LEAD) for the development and testing of the MML. The MML development schedule assumes use of this organic industrial base.

No new contracts are anticipated in support of the development of the Indirect Fire Protection Capability Increment 2-Intercept (IFPC Inc 2-I) Block I effort, unless determined to be necessary. The Cost Benefit Analysis (CBA) will further inform decisions on new contracts. The Government will use existing contracts and work performed by other Government agencies. The IFPC Inc 2-I Product Office will fund AMRDEC and LEAD to perform additional work. The Government will use the following contracts:

- No new contracts are anticipated to develop and integrate the IFPC suite of missiles to the Technical Fire Control (TFC) and IFPC Inc 2-I Block I Interceptor uplink. The existing contract will also be used to procure test missiles to support Pre-Milestone B activities and the Engineering and Manufacturing Development (EMD) phase.

- The government anticipates using the Army's Integrated Air and Missile Defense Battle Command System (IBCS) contract to support development, test, and integration of the IFPC Inc 2-I Block I Interceptor with the IBCS and the MML.

- The government anticipates using the Army's Sentinel contract to incorporate sensor software upgrades to enhance detection of small radar cross section (RCS), slow-moving, and low-flying targets.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	Project (Number/Name) DU3 / *IFPC2*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Admin	MIPR	Cruise Missile Defense Systems Project Office : Huntsville, Alabama	0.000	0.483		10.067		8.778		-		8.778	Continuing	Continuing	Continuing
		Subtotal	0.000	0.483		10.067		8.778		-		8.778	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering & Integration	MIPR	Cruise Missile Defense Systems Project Office : Huntsville, AL	0.000	6.089		13.753		19.274		-		19.274	Continuing	Continuing	Continuing
Engineering and Technical Support	MIPR	Aviation and Missile Research, Development, Engineering Center : Huntsville, AL	0.000	13.338	Apr 2013	31.370		52.573		-		52.573	Continuing	Continuing	Continuing
System/Subsystem Development, Integration, and Test	MIPR	Multiple Activities : Multiple Locations	0.000	5.800		24.000		15.552		-		15.552	Continuing	Continuing	Continuing
		Subtotal	0.000	25.227		69.123		87.399		-		87.399	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	25.710		79.190		96.177		-		96.177	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	**Project (Number/Name)** DU3 / *IFPC2*

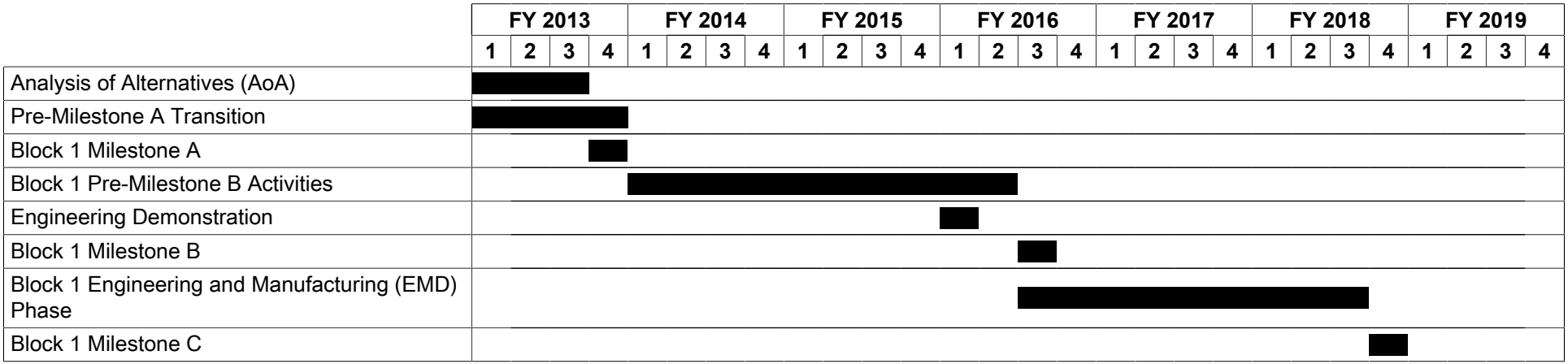

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604319A / *Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)*	**Project (Number/Name)** DU3 / *IFPC2*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Analysis of Alternatives (AoA)	4	2011	3	2013
Pre-Milestone A Transition	2	2011	4	2013
Block 1 Milestone A	4	2013	4	2013
Block 1 Pre-Milestone B Activities	1	2014	2	2016
Engineering Demonstration	1	2016	1	2016
Block 1 Milestone B	3	2016	3	2016
Block 1 Engineering and Manufacturing (EMD) Phase	3	2016	3	2018
Block 1 Milestone C	4	2018	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604785A / *Integrated Base Defense (Budget Activity 4)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.604	4.473	-	-	-	-	-	-	-	-	8.077
DS4: *Integrated Base Defense*	-	3.604	4.473	-	-	-	-	-	-	-	-	8.077

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 2015 Research Development Test and Evaluation funding in the amount of $4.364 million was moved to Program Element 275402.

A. Mission Description and Budget Item Justification

Integrated Base Defense (IBD) provides integration of software and analytical capability to support the integration of systems in the field. IBD employs an enterprise approach to enable Integrated Base Defense capabilities across the operational spectrum by leveraging interoperability efforts in support of the Integrated Unit, Base, and Installation Protection (IUBIP) framework.

FY 2015 Research Development Test and Evaluation funding in the amount of $4.364 million was moved to Program Element 205402A Project EF2.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	4.043	4.476	3.855	-	3.855
Current President's Budget	3.604	4.473	-	-	-
Total Adjustments	-0.439	-0.003	-3.855	-	-3.855
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-0.439	-0.003	-3.855	-	-3.855

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604785A / *Integrated Base Defense (Budget Activity 4)*	Project (Number/Name) DS4 / *Integrated Base Defense*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DS4: *Integrated Base Defense*	-	3.604	4.473	-	-	-	-	-	-	-	-	8.077
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Mission Description:
Integrated Base Defense (IBD) provides integration of software and analytical capability to support the integration of systems in the field. IBD employs an enterprise approach to enable Integrated Base Defense capabilities across the operational spectrum by leveraging interoperability efforts in support of the Integrated Unit, Base, and Installation Protection (IUBIP) framework focused on system engineering and software development.

Justification:
FY 2015 Research Development Test and Evaluation funding in the amount of $4.364 million was moved to Program Element 205402A Project EF2.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Integrated Base Defense Architecture Development	3.604	4.473	-
Articles:	-	-	-

Description: Development of holistic IBD architectures leveraging DoD-approved protocol and processes to support interoperability of fielded and emerging IBD-related systems.

FY 2013 Accomplishments:
Oversee execution of Interim-Integrated Base Defense Increments 1 and 2. Support the ASA(ALT) Architecture & Analysis Team for Force Basing (AATFB) IBD Product Development Team with both Semi-fixed/Expeditionary and Fixed Site Portfolio Development. Continue coordination with the Command Post (CP) and Sensor Computing Environment to ensure alignment with Common Operating Environment (COE) and Computing Environment (CE) framework. Continue development of an IBD operations functionality that leverages current IBD-related efforts that allows the Warfighter to execute the IBD mission more effectively and efficiently. Continue developmentof an IBD operations functionality that leverages current IBD-related efforts, allowing the Warfighter to execute the IBD mission more effectively and efficiently.

FY 2014 Plans:
Continue development of the IBD operations functionality and architecture to ensure that data fusion of IBD Non-standard Equipment and force protection equipment is combined on a single Graphical User Interface (GUI) resulting in the reduction of the number of operators required and reduced footprint, hardware, and associated maintenance/logistics costs. Completion of Technical Data Packages (TDP), software modifications, and physical architecture Ensure promulgation of an IBD construct and

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604785A / *Integrated Base Defense (Budget Activity 4)*	**Project (Number/Name)** DS4 / *Integrated Base Defense*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
the operation of a comprehensive software capability that supports the holistic Life Cycle Support of the IBD Software Architecture and enabling technologies. Package validation, developmental testing and formal operational assessment of the IBD kitting construct.			
Accomplishments/Planned Programs Subtotals	3.604	4.473	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Integrated Base Defense (IBD) acquisition strategy is to leverage existing IBD-related government organizations and to competitively award multiple contracts in support of IBD objectives for the development of holistic IBD architectures and products to support interoperability of fielded and emerging IBD-related systems.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604785A / *Integrated Base Defense (Budget Activity 4)*	Project (Number/Name) DS4 / *Integrated Base Defense*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering and Software Development	MIPR	AMRDEC : Huntsville, AL	0.000	3.604	Dec 2012	3.246		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	3.604		3.246		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	ATEC : Aberdeen Proving Ground, MD	0.000	-		1.227		-		-		-	-	1.227	-
		Subtotal	0.000	-		1.227		-		-		-	-	1.227	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	3.604		4.473		-		-		-	-	-	-

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0305205A / *Endurance UAVs*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	21.957	-	-	-	-	-	-	-	0.100	Continuing	Continuing
LE4: *Long Endurance Multi-Intelligence Vehicle*	-	21.957	-	-	-	-	-	-	-	0.100	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

The Army stated, due to technical and performance challenges, and the limitations imposed by constrained resources, the Army has determined to discontinue the LEMV development effort. Awaiting final invoices and will close contract once these are received.

A. Mission Description and Budget Item Justification

This program element (PE) evaluates unmanned aerial vehicle (UAV) prototype systems that provide increased flight and/or mission duration for Intelligence, Surveillance, and Reconnaissance (ISR) and communications capabilities. These systems include the aerial platform integrated with existing and/or developmental payloads. Project LE4 is developing the Long Endurance Multi-intelligence Vehicle (LEMV), which is a hybrid airship prototype integrated with existing and developmental ISR and communications payloads to improve persistent surveillance and assured communications capabilities. Hybrid airship platform endurance is dependent on weather conditions and payload weight, but the LEMV prototype system is expected to increase endurance to 21 days on average assuming 20 knot winds.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	26.196	28.991	27.759	-	27.759
Current President's Budget	21.957	-	-	-	-
Total Adjustments	-4.239	-28.991	-27.759	-	-27.759
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-27.759	-	-27.759
• Other Adjustments 1	-4.239	-28.991	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0305205A / *Endurance UAVs*	Project (Number/Name) LE4 / *Long Endurance Multi-Intelligence Vehicle*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
LE4: *Long Endurance Multi-Intelligence Vehicle*	-	21.957	-	-	-	-	-	-	-	0.100	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

The Army stated, due to technical and performance challenges, and the limitations imposed by constrained resources, the Army has determined to discontinue the LEMV development effort. Awaiting final invoices and will close contract once these are received.

A. Mission Description and Budget Item Justification

The Long Endurance Multi-Intelligence Vehicle (LEMV) is a technology demonstration effort to improve persistent surveillance and assured communications using a platform with significantly improved endurance over existing systems. The LEMV platform is a hybrid airship that achieves vertical lift from helium contained within its hull making it lighter-than-air and from traditional engine propulsion that produces thrust to provide lift. The LEMV prototype requirements are to achieve 21 day endurance in 20 knot continuous winds, carry 2500 pounds of multiple surveillance and communication payloads, operate at a maximum altitude of 20,000 feet Mean Sea Level, and provide 16 kilowatts (kW) of power to the payload. The LEMV system is recoverable and reusable. The LEMV system prototype and associated technologies will be evaluated during a Joint Military Utility Assessment (JMUA) in an operational environment upon completion of developmental testing.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Developmental Testing and Certification	15.957	-	-
Articles:	-	-	-
Description: This effort conducted developmental testing, information assurance accreditation, and airworthiness certifications.			
FY 2013 Accomplishments: Completed developmental testing, to include flight tests and endurance demonstration.			
Title: Joint Military Utility Assessment (JMUA)	5.999	-	-
Articles:	-	-	-
Description: This effort prepared and conducted the JMUA, to include training and transportation to the JMUA location.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0305205A / *Endurance UAVs*	**Project (Number/Name)** LE4 / *Long Endurance Multi-Intelligence Vehicle*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Transported LEMV system to JMUA location; completed training for JMUA personnel; began phased JMUA activities; provided initial JMUA report and recommended Tactics, Techniques, and Procedures.			
Title: Contract Closeout	0.001	-	-
Articles:	-	-	-
Description: This effort performs an orderly disassembly and disposal of the airship and associated items.			
FY 2013 Accomplishments: This effort performs an orderly disassembly and disposal of the airship and associated items.			
Accomplishments/Planned Programs Subtotals	21.957	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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D. Acquisition Strategy

Army received approval to acquire the LEMV under an Other Transaction Authority (OTA). Extensive market research determined that this hybrid airship has never been manufactured as a full-scale functioning system and critical hybrid airship technology at the system and subsystem level is mainly available from non-traditional Department of Defense contractors. An OTA agreement was preferred in order to gain access to critical technology within the Non-Traditional industrial community in this area and to promote competition. The OTA Agreement was competitively awarded using a competitive Request for Proposal process. A Joint Military Utility Assessment (JMUA) was to be conducted in theatre following the system development and transport. A Material Development Decision (MDD) is expected 90-180 days after completion of the JMUA Phase 1 (the first 2 months of the overall JMUA time period).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0305205A / *Endurance UAVs*	Project (Number/Name) LE4 / *Long Endurance Multi-Intelligence Vehicle*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	Various : various	3.971	1.400		-		-		-		-	Continuing	Continuing	-
		Subtotal	3.971	1.400		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Design, development, and sub-system integration	C/CPFF	Various : Various	200.418	-		-		-		-		-	-	200.418	-
Sub-system risk reduction, trade studies & competitive agreement award	C/CPFF	Various : Various	15.000	-		-		-		-		-	-	15.000	-
Developmental/ Operational testing	C/CPFF	Various : Various	30.063	14.557		-		-		-		-	-	44.620	-
Military Utility Assessment	C/CPFF	Various : Various	0.000	6.000		-		-		-		-	-	6.000	-
Contract Closeout	C/CPFF	Various : Various	0.001	-		-		-		-		-	-	0.001	-
		Subtotal	245.482	20.557		-		-		-		-	-	266.039	-

Remarks

Awarded Other Transactional Agreement (OTA) to Northrop Grumman on 14 June 2010. Executed option to build first airship.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government and SETA Support	Various	Various : various	35.790	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	35.790	-		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0305205A / *Endurance UAVs*	Project (Number/Name) LE4 / *Long Endurance Multi-Intelligence Vehicle*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various : Various	1.452	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	1.452	-		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	286.695	21.957		-		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0305205A / *Endurance UAVs*	**Project (Number/Name)** LE4 / *Long Endurance Multi-Intelligence Vehicle*

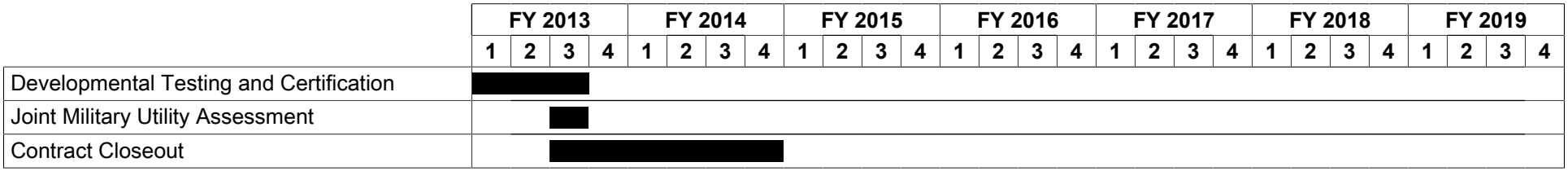

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0305205A / *Endurance UAVs*	**Project (Number/Name)** LE4 / *Long Endurance Multi-Intelligence Vehicle*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Developmental Testing and Certification	3	2012	3	2013
Joint Military Utility Assessment	3	2013	3	2013
Contract Closeout	3	2013	4	2014

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