Department of Defense
Fiscal Year (FY) 2023 Budget Estimates

April 2022

Army

Justification Book Volume 3a of 3

Research, Development, Test & Evaluation, Army

RDT&E − Volume III, Budget Activity 6

Volume 3a Table of Contents

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, $13,703,609,000.00 to remain available for obligation until September 30, 2024.

The FY 2023 Overseas Operations accounted for in the base budget are as follows:

Combat or direct combat support expenses that discontinue once combat operations end at major contingency location $12,800,000.

In-theater and in-CONUS expenses that remain after combat operations cease and have been previously funded in OCO $5,875,000.

COST STATEMENT

The following Justification Books were prepared at a cost of $474,495.00: Aircraft (ACFT), Missiles (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 5C, Budget Activity 5D, Budget Activity 6, Budget Activity 7, and Budget Activity 8.

FY 2023 RDT&E, ARMY PROGRAM ELEMENT DESCRIPTIVE SUMMARIES
Introduction and Explanation of Contents

1. General. The purpose of this document is to provide summary information concerning the Research, Development, Test and Evaluation, Army program. The descriptive summaries are comprised of R-2 (Army RDT&E Budget Item Justification – program element level), R-2A (Army RDT&E Budget Item Justification – project level), R-3 (Army RDT&E Cost Analysis), R-4 (Schedule Profile Detail) and R-5 (Termination Liability Funding for MDAPs) Exhibits, which provide narrative information on all RDT&E program elements and projects through FY 2022.

2. Relationship of the FY 2023 Budget Submitted to Congress to the FY 2022 Budget Submitted to Congress. This paragraph provides a list of program elements/projects that are major new starts, restructures, developmental transitions, and terminated programs. Explanations for these changes can be found in the narrative sections of the Program Element R-2A Exhibits.

New Start Programs:

Budget Activity	***OSDPE / Project***	***Project Title***
02	0602002A / DC4	Army Applied Innovation
02	0602002A / DC5	Team Ignite
02	0602141A / CI1	Advanced Armaments Lethality Technology
02	0602141A / CZ9	Foundational Hypersonic Weapons Research
02	0602144A / CV3	Engineer Enablers Maneuver, LOG, & Sustainment Apl
02	0602144A / DA1	SAFR Alternatives for Readiness Applied Research
02	0602145A / CU5	Platform Agnostic Armaments Applied Technology
02	0602146A / CU6	Adaptive Information Mediation and Analytics
02	0602146A / CV4	Pathfinder 3D Applied Technology
02	0602150A / CV7	High Energy Laser Direct Diode Apl Tech
02	0602150A / CV8	Vulnerability Modules for Multi-Domain Operations
02	0602150A / DA9	Radar Survivability through Dis Sensing Tech
02	0602180A / DA5	AI Enabled Talent Management Applied Research
02	0602180A / DA6	AI-Enabled Command and Coordination Apl Research
02	0602183A / CU7	Control & Autonomy for Tactical Superiority Tech
02	0602183A / CU8	Structures Tech for Enduring Efficient Resilience

02	0602183A / CU9	Systems Design Technology
02	0602184A / CV9	Technical-SAVVY Soldier Applied Research
03	0603025A / DA3	Army Advanced Innovation
03	0603040A / CN6	Predictive Maintenance Advanced Technology
03	0603040A / DA7	AI-Enabled Command and Coordination Adv Tech
03	0603041A / DA4	All Domain Convergence Engineering & Architectures
03	0603043A / CV1	Control & Autonomy for Tactical Superiority Adv
03	0603043A / CV2	Structures Platform Int Resilience & Efficiency
03	0603119A / CV5	Engineer Enablers Maneuver, LOG, & Sustainment Adv
03	0603119A / DA2	SAFR Alternatives for Readiness Advanced Tech
03	0603466A / CV6	Optimized High Energy Laser Source Adv Tech
03	0603466A / DB3	Radar Survivability through Dis Sensing Adv Tech
04	0604020A / DC8	Army Experimentation and Prototyping
05	0604641A / CF5	Robotic Combat Vehicle (BA5) NGCV-CFT
05	0604827A / S65	Platoon Power Generator
05	0604854A / 516	Paladin/FAASV
06	0605235A / CQ4	Mid-Range Capability

Program Element/Project Restructures:

Budget Activity	***Old OSDPE / Project: Title***	***New OSDPE / Project***
02	0602143A / BE6: Reactive/Resp Surfaces & Matls-Soldiers & Sys	0602184A / CW9
02	0602146A / AΘ2: Stand-In Advanced RF Effects (STARE)	0602146A / AP5
02	0602146A / AR3: Intelligent Environmental Battlefield Awareness	0602182A / CX3
02	0602146A / AR7: Sensing in Contested Environments Technology	0602182A / CX5
02	0602146A / AR9: Persistent Geophysical Sensing-Infrasound Tech	0602182A / CX4
02	0602146A / AT2: Subterranean Detection and Monitoring Technology	0602182A / CX6
02	0602146A / AV7: Atmospheric Modeling and Meterological Technology	0602182A / CW2
02	0602146A / CK1: Assurred PNT Enabling Technologies	0602182A / CZ6
02	0602148A / AI9: Future UAS Engine Technology	0602183A / CW6

02	0602148A / AJ2: Next Generation Rotorcraft Transmission Technology	0602183A / CW8
02	0602148A / AJ6: Advanced Rotors Technology	0602183A / CW3
02	0602148A / AJ8: Experimental and Computational Aeromechanics Techn	0602183A / CW5
02	0602148A / AL2: High Performance Computing for Rotorcraft App Tech	0602183A / DC2
02	0602148A / AL4: High Speed and Efficient VTOL Vehicle Technology	0602183A / CW7
02	0602148A / AL5: Air Vehicle Structures and Dynamics Technology	0602183A / CW4
02	0602148A / AL8: Holistic Situational Awareness and Dec Making Tech	0602141A / CG4
02	0602150A / AD2: High Energy Laser (HEL) Enabling and Support Techn	0602150A / DC1
02	0602150A / AD3: Maneuver Air Defense Technology	0603466A / AD4
02	0602182A / CM9: Convergent CEMA Deception	0602182A / CZ7
03	0602145A / BJ9: Autonomous Mobility Tech	0603462A / BK1
03	0602146A / AM8: Protected SATCOM Technology	0603463A / AM9
03	0602148A / AK4: Multi-Role Small Guided Missile Technology	0603465A / AK5
03	0603463A / AR4: Intelligent Env Battlefield Awareness Adv Tech	0603042A / CX7
03	0603463A / AS9: Persistent Geophysical Sensing-Infrasound Adv Tech	0603042A / CX8
03	0603463A / AR8: Sensing in Contested Environments Adv Technology	0603042A / CX9
03	0603463A / AT3: Subterranean Detection and Monitoring Adv Technology	0603042A / CZ5
03	0603465A / AJ7: Advanced Rotors Advanced Technology	0603043A / CX1
03	0603043A / AJ3: Next Generation Rotorcraft Transmission Adv Technology	0603043A / CX2
03	0603043A / AL3: HPC for Rotorcraft Applications Adv Tech	0603043A / DC3
03	0603463A / AU2: Optimization of Geospatial Data for Visualization	0603463A / AT8
03	0603463A / AV1: GEOInt/Ops Logistics Integration-Planning Adv Tech	0603463A / AU4
03	0602147A / AF1: Long Range Maneuverable Fires (LRMF) Technology	0603464A / AF2
03	0603464A / AE8: Land-Based Anti-Ship Missile (LBASM) Advanced Tech	0603464A / CZ8
03	0603465A / CH6: Adapt & Resilnt Tach Autnmy Cont&Struct Adv Tech	0603043A / CV1
03	0603465A / CH6: Adapt & Resilnt Tach Autnmy Cont&Struct Adv Tech	0603043A / CV2
03	0603465A / CH8: UAS Survivability Advance Technology	0603465A / AK3
03	0603465A / CH8: UAS Survivability Advance Technology	0603465A / CG1
03	0602148A / BZ7: Future Vertical Lift Medical Technologies	0603465A / CJ5
04	0603466A / AD1: High Energy Laser Tactical Vehicle Demo Adv Tech	0604019A / BU9
04	0305251A / FA8: Cyberspace Operations Forces and Force Support	0305251A / DD3
04	0603801A / B47: Future Vertical Lift	0603801A / CS7
04	0604117A / FI4: Maneuver - Short Range Air Defense (M-SHORAD)	0604117A / CR9
04	0605054A / FI3: Rapid Capability Development and Maturation	0604117A / CR9
04	0604117A / FI4: Maneuver - Short Range Air Defense (M-SHORAD)	0604117A / CS1

04	0604644A / MR1: Mobile Intermediate Range Missile	0604135A / MR2
04	0604644A / MR1: Mobile Intermediate Range Missile	0604135A / MR3
04	0604644A / MR1: Mobile Intermediate Range Missile	0604135A / MR4
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX3
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX4
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX5
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX6
05	0604818A / EJ5: Mounted Computing Environment (MCE)	0604805A / 593
05	0605013A / T05: Army Business System Modernization Initiatives	0605013A / BY3
05	0608041A / CD1: Defensive Cyber - Software Prototype Devel	0605041A / XU3
05	0605042A / FA1: Manpack Radio	0605236A / CQ1
05	0605042A / FA2: Rifleman Radio (RR)	0605236A / CQ1
06	0605602A / 628: Developmental Test Technology & Sustainment	0605602A / FJ3
06	0605602A / 62C: Modeling and Simulation Instrumentation	0605602A / FJ3
07	0303142A / 456: MILSATCOM System Engineering	0303142A / CO7
07	0205778A / EG2: GMLRS Alternative Warheads	0205778A / EG3

Program Terminations (including transfers to Procurement and Sustainment):

Budget Activity	***OSDPE / Project***	***Project Title***
01	0601104A / CI9	University & Industry Rsch Ctrs / Strategic University Basic Research Alliance
02	0602141A / CJ6	Lethality Technology / Advanced Energetics for Missile Technologies
02	0602143A / BB9	Soldier Lethality Technology / Human Performance Tech for Mobility & Lethality
02	0602144A / CG5	Ground Technology / Ground Vehicle Sensor Concepts and Technologies
02	0602146A / AR1	Network C3I Technology / Robust, Resilient and Intelligent C3I Technology
02	0602150A / AD5	Air and Missile Defense Technology / Next Generation Fires Radar Technology
03	0603002A / MN3	Medical Advanced Technology / Immediate Cardiopulmonary Stabilization Adv Tech
03	0603002A / MN4	Medical Advanced Technology / Advanced Life Support Advanced Technology
03	0603002A / MN5	Medical Advanced Technology / Next Generation Blood Products Advanced Technology
03	0603002A / MN9	Medical Advanced Technology / Far Forward Behavioral Health Care Advanced Tech

03	0603463A / AN2	Network C3I Advanced Technology / Narrowband SATCOM Advanced Technology
03	0603466A / AD4	Air and Missile Defense Adv Technology / Maneuver Air Defense Advanced Technology
04	0604785A / DS4	Integrated Base Defense / Integrated Base Defense
05	0604854A / HB6	Artillery Systems EMD / Mobile 155MM Howitzer

3. Classification: This document contains no classified data. Appropriately cleared individuals can obtain further information on Classified/Special Access Programs by contacting the Department of the Army.

Department of the Army
FY 2023 President's Budget
Exhibit R-1 FY 2023 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Apr 2022

Summary Recap of Budget Activities	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request
Basic Research	552,521	606,509	466,823
Applied Research	1,518,220	1,529,888	883,759
Advanced Technology Development	1,948,792	2,190,430	1,392,065
Advanced Component Development & Prototypes	3,589,313	3,818,276	4,098,749
System Development & Demonstration	2,979,946	3,254,230	4,031,334
Management Support	1,832,049	1,553,905	1,554,252
Operational Systems Development	1,719,691	1,466,180	1,188,403
Software and Digital Technology Pilot Programs	56,706	108,841	94,888
Total Research, Development, Test & Evaluation	**14,197,238**	**14,528,259**	**13,710,273**

Summary Recap of FYDP Programs			
General Purpose Forces	589,523	579,473	392,489
Intelligence and Communications	372,869	275,873	210,597
Research and Development	13,099,825	13,566,200	13,009,253
Central Supply and Maintenance	130,785	103,720	91,270
Administration and Associated Activities	253		
Classified Programs	3,983	2,993	6,664
Total Research, Development, Test & Evaluation	**14,197,238**	**14,528,259**	**13,710,273**

Department of the Army
FY 2023 President's Budget
Exhibit R-1 FY 2023 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Apr 2022

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

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
1	0601102A	Defense Research Sciences	01	344,031	368,751	279,328	U
2	0601103A	University Research Initiatives	01	84,697	91,241	70,775	U
3	0601104A	University and Industry Research Centers	01	118,716	126,267	100,909	U
4	0601121A	Cyber Collaborative Research Alliance	01	5,077	5,067	5,355	U
5	0601601A	Artificial Intelligence and Machine Learning Basic Research	01		15,183	10,456	U
	Basic Research			**552,521**	**606,509**	**466,823**	
6	0602002A	Army Agile Innovation and Development-Applied Research	02			9,534	U
7	0602115A	Biomedical Technology	02	11,403	11,925		U
8	0602134A	Counter Improvised-Threat Advanced Studies	02	1,927	1,976	6,192	U
9	0602141A	Lethality Technology	02	117,484	91,626	87,717	U
10	0602142A	Army Applied Research	02	29,257	28,654	27,833	U
11	0602143A	Soldier Lethality Technology	02	201,511	205,058	103,839	U
12	0602144A	Ground Technology	02	159,358	216,550	52,848	U
13	0602145A	Next Generation Combat Vehicle Technology	02	258,341	245,525	174,090	U
14	0602146A	Network C3I Technology	02	202,256	164,804	64,115	U
15	0602147A	Long Range Precision Fires Technology	02	119,007	93,785	43,029	U
16	0602148A	Future Verticle Lift Technology	02	169,536	133,158	69,348	U
17	0602150A	Air and Missile Defense Technology	02	107,584	93,549	27,016	U
18	0602180A	Artificial Intelligence and Machine Learning Technologies	02		15,034	16,454	U
19	0602181A	All Domain Convergence Applied Research	02		25,967	27,399	U
20	0602182A	C3I Applied Research	02		12,406	27,892	U
21	0602183A	Air Platform Applied Research	02		6,597	41,588	U

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Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
22	0602184A	Soldier Applied Research	02		11,064	15,716	U
23	0602213A	C3I Applied Cyber	02	18,816	12,119	13,605	U
24	0602386A	Biotechnology for Materials - Applied Research	02		20,643	21,919	U
25	0602785A	Manpower/Personnel/Training Technology	02	20,399	18,701	19,649	U
26	0602787A	Medical Technology	02	101,341	120,747	33,976	U
	Applied Research			**1,518,220**	**1,529,888**	**883,759**	
27	0603002A	Medical Advanced Technology	03	95,146	137,804	5,207	U
28	0603007A	Manpower, Personnel and Training Advanced Technology	03	11,344	14,273	15,598	U
29	0603025A	Army Agile Innovation and Demonstration	03		22,231	20,900	U
30	0603040A	Artificial Intelligence and Machine Learning Advanced Technologies	03		909	6,395	U
31	0603041A	All Domain Convergence Advanced Technology	03		17,743	45,463	U
32	0603042A	C3I Advanced Technology	03		3,151	12,716	U
33	0603043A	Air Platform Advanced Technology	03		754	17,946	U
34	0603044A	Soldier Advanced Technology	03		890	479	U
35	0603115A	Medical Development	03	26,711	26,508		U
36	0603116A	Lethality Advanced Technology	03		8,066	9,796	U
37	0603117A	Army Advanced Technology Development	03	64,163	76,815	134,874	U
38	0603118A	Soldier Lethality Advanced Technology	03	154,161	152,369	100,935	U
39	0603119A	Ground Advanced Technology	03	196,055	280,490	32,546	U
40	0603134A	Counter Improvised-Threat Simulation	03	24,087	24,747	21,486	U
41	0603386A	Biotechnology for Materials - Advanced Research	03		53,736	56,853	U
42	0603457A	C3I Cyber Advanced Development	03	43,357	61,426	41,354	U

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Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
43	0603461A	High Performance Computing Modernization Program	03	221,161	229,123	251,964	U
44	0603462A	Next Generation Combat Vehicle Advanced Technology	03	309,860	299,712	193,242	U
45	0603463A	Network C3I Advanced Technology	03	215,337	211,068	125,565	U
46	0603464A	Long Range Precision Fires Advanced Technology	03	177,142	141,909	100,830	U
47	0603465A	Future Vertical Lift Advanced Technology	03	220,334	261,880	177,836	U
48	0603466A	Air and Missile Defense Advanced Technology	03	173,244	145,826	11,147	U
49	0603920A	Humanitarian Demining	03	16,690	19,000	8,933	U
		Advanced Technology Development		**1,948,792**	**2,190,430**	**1,392,065**	
50	0603305A	Army Missle Defense Systems Integration	04	139,518	56,702	12,001	U
51	0603308A	Army Space Systems Integration	04	25,584	25,755	17,945	U
52	0603327A	Air and Missile Defense Systems Engineering	04	47,098	15,000		U
53	0603619A	Landmine Warfare and Barrier - Adv Dev	04	56,067	46,637	64,001	U
54	0603639A	Tank and Medium Caliber Ammunition	04	106,881	73,844	64,669	U
55	0603645A	Armored System Modernization - Adv Dev	04	130,485	164,328	49,944	U
56	0603747A	Soldier Support and Survivability	04	5,312	2,897	4,060	U
57	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	182,400	113,365	72,314	U
58	0603774A	Night Vision Systems Advanced Development	04	15,179	62,820	18,048	U
59	0603779A	Environmental Quality Technology - Dem/Val	04	20,906	22,921	31,249	U
60	0603790A	NATO Research and Development	04	4,589	3,777	3,805	U
61	0603801A	Aviation - Adv Dev	04	694,296	1,178,460	1,162,344	U
62	0603804A	Logistics and Engineer Equipment - Adv Dev	04	15,287	11,055	9,638	U
63	0603807A	Medical Systems - Adv Dev	04	36,006	37,053	598	U

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Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
64	0603827A	Soldier Systems - Advanced Development	04	23,905	25,925	25,971	U
65	0604017A	Robotics Development	04	92,401	80,525	26,594	U
66	0604019A	Expanded Mission Area Missile (EMAM)	04		27,872	220,820	U
67	0604020A	Cross Functional Team (CFT) Advanced Development & Prototyping	04			106,000	U
68	0604021A	Electronic Warfare Technology Maturation (MIP)	04	15,034			U
69	0604035A	Low Earth Orbit (LEO) Satellite Capability	04	21,850	19,638	35,509	U
70	0604036A	Multi-Domain Sensing System (MDSS) Adv Dev	04		50,548	49,932	U
71	0604037A	Tactical Intel Targeting Access Node (TITAN) Adv Dev	04		28,347	863	U
72	0604100A	Analysis Of Alternatives	04	9,714	10,091	10,659	U
73	0604101A	Small Unmanned Aerial Vehicle (SUAV) (6.4)	04	1,328	926	1,425	U
74	0604113A	Future Tactical Unmanned Aircraft System (FTUAS)	04	59,183	76,349	95,719	U
75	0604114A	Lower Tier Air Missile Defense (LTAMD) Sensor	04	308,805	297,629	382,147	U
76	0604115A	Technology Maturation Initiatives	04	141,109	132,561	269,756	U
77	0604117A	Maneuver - Short Range Air Defense (M-SHORAD)	04	5,776	39,376	225,147	U
78	0604119A	Army Advanced Component Development & Prototyping	04	167,990	189,483	198,111	U
79	0604120A	Assured Positioning, Navigation and Timing (PNT)	04	115,688	83,952	43,797	U
80	0604121A	Synthetic Training Environment Refinement & Prototyping	04	112,093	206,335	166,452	U
81	0604134A	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	13,326	13,379	15,840	U
82	0604135A	Strategic Mid-Range Fires	04			404,291	U
83	0604182A	Hypersonics	04	841,666	315,131	173,168	U
84	0604403A	Future Interceptor	04		6,895	8,179	U
85	0604531A	Counter - Small Unmanned Aircraft Systems Advanced Development	04		19,148	35,110	U

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Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
86	0604541A	Unified Network Transport	04	39,192	35,172	36,966	U
87	0604644A	Mobile Medium Range Missile	04	88,100	286,445		U
88	0604785A	Integrated Base Defense (Budget Activity 4)	04	2,020	2,040		U
89	0305251A	Cyberspace Operations Forces and Force Support	04	50,525	55,895	55,677	U
		Advanced Component Development & Prototypes		**3,589,313**	**3,818,276**	**4,098,749**	
90	0604201A	Aircraft Avionics	05	7,011	6,654	3,335	U
91	0604270A	Electronic Warfare Development	05	56,624	30,840	4,243	U
92	0604601A	Infantry Support Weapons	05	89,497	79,339	66,529	U
93	0604604A	Medium Tactical Vehicles	05	8,213	9,524	22,163	U
94	0604611A	JAVELIN	05	5,983	7,094	7,870	U
95	0604622A	Family of Heavy Tactical Vehicles	05	22,254	28,445	50,924	U
96	0604633A	Air Traffic Control	05	3,383	4,405	2,623	U
97	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05			115,986	U
98	0604642A	Light Tactical Wheeled Vehicles	05	4,371	2,055		U
99	0604645A	Armored Systems Modernization (ASM) - Eng Dev	05	123,992	122,778	71,287	U
100	0604710A	Night Vision Systems - Eng Dev	05	52,959	43,417	62,679	U
101	0604713A	Combat Feeding, Clothing, and Equipment	05	2,734	1,658	1,566	U
102	0604715A	Non-System Training Devices - Eng Dev	05	27,013	26,514	18,600	U
103	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	62,058	59,518	39,541	U
104	0604742A	Constructive Simulation Systems Development	05	9,779	22,240	29,570	U
105	0604746A	Automatic Test Equipment Development	05	5,375	8,807	5,178	U
106	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	7,605	12,453	8,189	U

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

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
107	0604768A	Brilliant Anti-Armor Submunition (BAT)	05	20,175			U
108	0604780A	Combined Arms Tactical Trainer (CATT) Core	05	3,438			U
109	0604798A	Brigade Analysis, Integration and Evaluation	05	18,737	21,423	21,228	U
110	0604802A	Weapons and Munitions - Eng Dev	05	277,344	297,086	263,778	U
111	0604804A	Logistics and Engineer Equipment - Eng Dev	05	53,676	54,642	41,669	U
112	0604805A	Command, Control, Communications Systems - Eng Dev	05	10,674	20,107	40,038	U
113	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	48,285	44,400	5,513	U
114	0604808A	Landmine Warfare/Barrier - Eng Dev	05	9,239	29,137	12,150	U
115	0604818A	Army Tactical Command & Control Hardware & Software	05	126,676	155,017	111,690	U
116	0604820A	Radar Development	05	105,271	122,607	71,259	U
117	0604822A	General Fund Enterprise Business System (GFEBS)	05	15,428	15,979	10,402	U
118	0604823A	Firefinder	05	18,278			U
119	0604827A	Soldier Systems - Warrior Dem/Val	05	6,546	6,454	11,425	U
120	0604852A	Suite of Survivability Enhancement Systems - EMD	05	62,012	96,132	109,702	U
121	0604854A	Artillery Systems - EMD	05	36,187	25,000	23,106	U
122	0605013A	Information Technology Development	05	123,659	129,380	124,475	U
123	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	111,078	67,701	67,564	U
124	0605028A	Armored Multi-Purpose Vehicle (AMPV)	05	76,140	35,560		U
125	0605030A	Joint Tactical Network Center (JTNC)	05	15,671	16,350	17,950	U
126	0605031A	Joint Tactical Network (JTN)	05	30,540	28,905	30,169	U
127	0605033A	Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)	05	5,758			U
128	0605035A	Common Infrared Countermeasures (CIRCM)	05	29,770	16,630	11,523	U

Department of the Army
FY 2023 President's Budget
Exhibit R-1 FY 2023 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Apr 2022

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

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
129	0605038A	Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) Sensor Suite	05	4,669	7,618		U
130	0605041A	Defensive CYBER Tool Development	05	28,544	18,811	33,029	U
131	0605042A	Tactical Network Radio Systems (Low-Tier)	05	20,511	28,741	4,497	U
132	0605047A	Contract Writing System	05	22,025	20,960	23,487	U
133	0605051A	Aircraft Survivability Development	05	99,403	61,768	19,123	U
134	0605052A	Indirect Fire Protection Capability Inc 2 - Block 1	05	152,399	182,257	131,093	U
135	0605053A	Ground Robotics	05	12,010	16,360	26,809	U
136	0605054A	Emerging Technology Initiatives	05	294,366	226,802	185,311	U
137	0605143A	Biometrics Enabling Capability (BEC)	05		4,326	11,091	U
138	0605144A	Next Generation Load Device - Medium	05		15,397	22,439	U
139	0605145A	Medical Products and Support Systems Development	05	919	962		U
140	0605148A	Tactical Intel Targeting Access Node (TITAN) EMD	05		54,972	58,087	U
141	0605203A	Army System Development & Demonstration	05	177,501	122,175	119,516	U
142	0605205A	Small Unmanned Aerial Vehicle (SUAV) (6.5)	05	5,780	2,275	6,530	U
143	0605224A	Multi-Domain Intelligence	05		9,313	19,911	U
144	0605225A	SIO Capability Development	05		22,713		U
145	0605231A	Precision Strike Missile (PrSM)	05		188,452	259,506	U
146	0605232A	Hypersonics EMD	05		111,473	633,499	U
147	0605233A	Accessions Information Environment (AIE)	05		16,790	13,647	U
148	0605235A	Strategic Mid-Range Capability	05			5,016	U
149	0605236A	Integrated Tactical Communications	05			12,447	U
150	0605450A	Joint Air-to-Ground Missile (JAGM)	05	7,566	2,134	2,366	U

Department of the Army
FY 2023 President's Budget
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Total Obligational Authority
(Dollars in Thousands)

Apr 2022

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

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
151	0605457A	Army Integrated Air and Missile Defense (AIAMD)	05	213,956	159,873	265,288	U
152	0605531A	Counter - Small Unmanned Aircraft Systems Sys Dev & Demonstration	05		33,386	14,892	U
153	0605625A	Manned Ground Vehicle	05	162,390	202,320	589,762	U
154	0605766A	National Capabilities Integration (MIP)	05	7,670	13,454	17,030	U
155	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	05	1,500	2,564	9,376	U
156	0605830A	Aviation Ground Support Equipment	05	1,413	1,201	2,959	U
157	0303032A	TROJAN - RH12	05	3,451	3,362	3,761	U
158	0303667A	Citizen Broadband Radio System	05	900			U
159	0303767A	AMBIT - Pre-Auctioned SRF	05	9,785			U
160	0304270A	Electronic Warfare Development	05	59,755	75,520	56,938	U
		System Development & Demonstration		**2,979,946**	**3,254,230**	**4,031,334**	
161	0604256A	Threat Simulator Development	06	41,487	61,422	18,437	U
162	0604258A	Target Systems Development	06	35,279	42,404	19,132	U
163	0604759A	Major T&E Investment	06	119,231	93,617	107,706	U
164	0605103A	Rand Arroyo Center	06	12,989	32,296	35,542	U
165	0605301A	Army Kwajalein Atoll	06	221,949	240,877	309,005	U
166	0605326A	Concepts Experimentation Program	06	46,847	79,585	87,122	U
167	0605502A	Small Business Innovative Research	06	369,715			U
168	0605601A	Army Test Ranges and Facilities	06	390,366	367,125	401,643	U
169	0605602A	Army Technical Test Instrumentation and Targets	06	81,829	59,253	37,962	U
170	0605604A	Survivability/Lethality Analysis	06	36,001	36,370	36,500	U
171	0605606A	Aircraft Certification	06	2,736	2,489	2,777	U

Department of the Army
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Exhibit R-1 FY 2023 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
172	0605702A	Meteorological Support to RDT&E Activities	06	6,360	6,521	6,958	U
173	0605706A	Materiel Systems Analysis	06	21,830	21,558	22,037	U
174	0605709A	Exploitation of Foreign Items	06	8,936	13,631	6,186	U
175	0605712A	Support of Operational Testing	06	54,116	55,122	70,718	U
176	0605716A	Army Evaluation Center	06	56,827	65,854	67,058	U
177	0605718A	Army Modeling & Sim X-Cmd Collaboration & Integ	06	2,478	2,633	6,097	U
178	0605801A	Programwide Activities	06	89,023	96,558	89,793	U
179	0605803A	Technical Information Activities	06	25,817	31,987	28,752	U
180	0605805A	Munitions Standardization, Effectiveness and Safety	06	50,648	63,042	48,316	U
181	0605857A	Environmental Quality Technology Mgmt Support	06	1,715	1,789	1,912	U
182	0605898A	Army Direct Report Headquarters - R&D - MHA	06	50,859	48,981	53,271	U
183	0606002A	Ronald Reagan Ballistic Missile Defense Test Site	06	74,089	80,921	90,088	U
184	0606003A	CounterIntel and Human Intel Modernization	06	5,200	5,363	1,424	U
185	0606105A	Medical Program-Wide Activities	06	18,973	39,041		U
186	0606942A	Assessments and Evaluations Cyber Vulnerabilities	06	6,496	5,466	5,816	U
187	0909999A	Financing for Cancelled Account Adjustments	06	253			U
		Management Support		**1,832,049**	**1,553,905**	**1,554,252**	
188	0603778A	MLRS Product Improvement Program	07	9,785	12,314	18,463	U
189	0605024A	Anti-Tamper Technology Support	07	8,436	8,868	9,284	U
190	0607131A	Weapons and Munitions Product Improvement Programs	07	24,666	35,828	11,674	U
191	0607134A	Long Range Precision Fires (LRPF)	07	100,146			U
192	0607136A	Blackhawk Product Improvement Program	07	8,300	14,773		U

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FY 2023 President's Budget
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Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
193	0607137A	Chinook Product Improvement Program	07	49,409	67,872	52,513	U
194	0607139A	Improved Turbine Engine Program	07	232,159	260,024	228,036	U
195	0607142A	Aviation Rocket System Product Improvement and Development	07	11,321	12,417	11,312	U
196	0607143A	Unmanned Aircraft System Universal Products	07	19,460	4,594	512	U
197	0607145A	Apache Future Development	07	52,502	10,067	10,074	U
198	0607148A	AN/TPQ-53 Counterfire Target Acquisition Radar System	07		47,752	62,559	U
199	0607150A	Intel Cyber Development	07	14,652	3,611	13,343	U
200	0607312A	Army Operational Systems Development	07	35,851	28,029	26,131	U
201	0607313A	Electronic Warfare Development	07		5,673	6,432	U
202	0607665A	Family of Biometrics	07	1,276	1,144	1,114	U
203	0607865A	Patriot Product Improvement	07	178,984	125,932	152,312	U
204	0203728A	Joint Automated Deep Operation Coordination System (JADOCS)	07	43,060	25,489	19,329	U
205	0203735A	Combat Vehicle Improvement Programs	07	213,726	280,107	192,310	U
206	0203743A	155mm Self-Propelled Howitzer Improvements	07	217,959	175,076	136,680	U
207	0203744A	Aircraft Modifications/Product Improvement Programs	07	11,261	10,000		U
208	0203752A	Aircraft Engine Component Improvement Program	07	80	132	148	U
209	0203758A	Digitization	07	4,351	3,903	2,100	U
210	0203801A	Missile/Air Defense Product Improvement Program	07	1,241	127	3,109	U
211	0203802A	Other Missile Product Improvement Programs	07	15,268	10,265	9,027	U
212	0205412A	Environmental Quality Technology - Operational System Dev	07	250	262	793	U
213	0205778A	Guided Multiple-Launch Rocket System (GMLRS)	07	72,817	60,733	20,180	U
214	0208053A	Joint Tactical Ground System	07	9,510	13,379	8,813	U

Department of the Army
FY 2023 President's Budget
Exhibit R-1 FY 2023 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Apr 2022

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

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	Sec
216	0303028A	Security and Intelligence Activities	07	23,367	24,531		U
217	0303140A	Information Systems Security Program	07	28,270	15,680	17,209	U
218	0303141A	Global Combat Support System	07	70,652	45,297	27,100	U
219	0303142A	SATCOM Ground Environment (SPACE)	07	18,002	15,222	18,321	U
222	0305179A	Integrated Broadcast Service (IBS)	07	382	5,430	9,926	U
223	0305204A	Tactical Unmanned Aerial Vehicles	07	38,151	8,410	4,500	U
224	0305206A	Airborne Reconnaissance Systems	07	28,858	24,460	17,165	U
225	0305208A	Distributed Common Ground/Surface Systems	07	40,771			U
226	0307665A	Biometrics Enabled Intelligence	07		2,066		U
227	0708045A	End Item Industrial Preparedness Activities	07	130,785	103,720	91,270	U
9999	9999999999	Classified Programs		3,983	2,993	6,664	U
		Operational Systems Development		**1,719,691**	**1,466,180**	**1,188,403**	
228	0608041A	Defensive CYBER - Software Prototype Development	08	56,706	108,841	94,888	U
		Software and Digital Technology Pilot Programs		**56,706**	**108,841**	**94,888**	
Total Research, Development, Test & Eval, Army				**14,197,238**	**14,528,259**	**13,710,273**	

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

Appropriation 2040: Research, Development, Test & Evaluation, Army

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 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0604256A *I Threat Simulator Development*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	41.487	61.422	18.437	-	18.437	11.581	15.550	11.533	11.645	0.000	171.655
976: *Army Threat Sim (ATS)*	-	41.487	61.422	18.437	-	18.437	11.581	15.550	11.533	11.645	0.000	171.655

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) supports the design, development, acquisition, integration and fielding of realistic mobile threat simulators and realistic threat simulation products utilized in Army/Department of Defense (DoD) training and developmental and operational tests. This PE originally funded simulators representing Soviet equipment, but scope was expanded to address emerging world threats. Army Threat Simulator and Threat Simulation products are utilized to populate test battlefields for United States (U.S.) Army Test and Evaluation Command (ATEC), to conduct developmental and operational tests, and to support Program Executive Office for Simulation, Training and Instrumentation (PEO STRI) required user testing in System Integration Laboratories (SILs) and hardware/simulation in-the-loop facilities. These battlefield simulators represent adversary systems (e.g. missile systems, command, control and communications systems, electronic warfare systems, etc.) in order to portray a realistic threat environment during testing of U.S. weapon systems.

Army Threat Simulator and Threat Simulation products developed or fielded under this PE support Army-wide, non-system-specific threat product requirements. Each capability is pursued in concert and coordination with existing Army/DoD and Tri-Service capabilities to eliminate duplication of effort. Simulator development is responsive to Office of the Secretary of Defense and Government Accountability Office guidance for the Army to conduct operational testing in a realistic threat environment. Actual threat equipment is acquired when appropriate (in lieu of development) and total package fielding is still required (i.e., instrumentation, operations and maintenance, manuals, new equipment training, etc.). Threat simulator development is accomplished under the auspices of the Project Manager for Cyber Test and Training (PM CT2) and the Director, Operational Test and Evaluation (DOT&E) Threat Simulator Investment Working Group.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	41.486	18.439	0.000	-	0.000
Current President's Budget	41.487	61.422	18.437	-	18.437
Total Adjustments	0.001	42.983	18.437	-	18.437
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	43.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.001	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	18.437	-	18.437

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0604256A / *Threat Simulator Development*	

• FFRDC Transfer	-	-0.017	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)

	FY 2021	FY 2022
Project: 976: *Army Threat Sim (ATS)*		
Congressional Add: *Threat Cyberspace Operations*	3.750	3.000
Congressional Add: *Cyber Security Operations Center*	20.000	40.000
Congressional Add: *Cyber Threat Vulnerabilities & Assessments*	3.750	-
Congressional Add Subtotals for Project: 976	27.500	43.000
Congressional Add Totals for all Projects	27.500	43.000

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604256A / *Threat Simulator Development*	Project (Number/Name) 976 / *Army Threat Sim (ATS)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
976: *Army Threat Sim (ATS)*	-	41.487	61.422	18.437	-	18.437	11.581	15.550	11.533	11.645	0.000	171.655
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the design, development, acquisition, integration, and fielding of realistic mobile threat simulators and realistic threat simulation products utilized in Army/Department of Defense (DoD) training and developmental and operational tests. This Project originally funded simulators representing Soviet equipment, but scope was expanded to address emerging world threats. Army Threat Simulator and Threat Simulation products are utilized to populate test battlefields for the United States (U.S.) Army Test and Evaluation Command (ATEC), to conduct developmental and operational tests, and to support Program Executive Office for Simulation, Training and Instrumentation (PEO STRI) required user testing in System Integration Laboratories (SILs) and hardware/simulation in-the-loop facilities. These battlefield simulators represent adversary systems (e.g. missile systems, command, control and communication systems, electronic warfare systems, etc.) in order to portray a realistic threat environment during testing of U.S. weapon systems.

Army Threat Simulator and Threat Simulation products developed or fielded under this Project support Army-wide, non-system-specific threat product requirements. Each capability is pursued in concert and coordination with existing Army/DoD and Tri-Service capabilities to eliminate duplication of effort. Simulator development is responsive to Office of the Secretary of Defense and Government Accountability Office guidance for the Army to conduct operational testing in a realistic threat environment. Actual threat equipment is acquired when appropriate (in lieu of development) and total package fielding is still required (i.e., instrumentation, operations and maintenance, manuals, new equipment training, etc.) Threat simulator development is accomplished under the auspices of the Project Manager for Cyber Test and Training (PM CT2) and the Director, Operational Test and Evaluation (DOT&E) Threat Simulator Investment Working Group.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Threat Information Warfare	4.805	5.753	5.813
Description: Provides cyber red team personnel and Information Operations (IO) weapons, Command and Control (C2), infrastructure, and research for advanced threat capabilities targeting Army programs, systems, and commands. Provides funds for cyber training and certifications of on-net interactive operators, certified ethical hackers, mission leads, planners and logistics. Access to real-time Internet flow information used for characterization of near-peer threats and the application of this information to Army targets.			
FY 2022 Plans: Continue to identify mission sets with focus on the integration of Red Team operator capabilities into the Threat Environments mission set, i.e. provide not only integration of red assets but also include threat defense, threat blue teams, and general threat-based CND operations. Operationalize NETT infrastructure and capabilities into a distributed cloud-based model such that other DoD Red Teams (joint teams) and Army teams can leverage the capability from geographically separated locations (fully			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604256A / *Threat Simulator Development*	**Project (Number/Name)** 976 / *Army Threat Sim (ATS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
distributed operations). Will develop state and non-state threat targeting packages that are current, accurately profiling attack trends and timelines, intent, levels of sophistication, and threat training. These threat packages represent state and non-state level forces using both active and passive network attack to selectively degrade or disrupt Command, Control, Communications, Computers (C4) Intelligence, Surveillance and Reconnaissance (C4ISR) and Enterprise Business Systems. Development of threat targets and networks as new real-world targets sets and capabilities evolve. ***FY 2023 Plans:*** Continue to identify mission sets with focus on the integration of Red Team operator capabilities into the Threat Environments mission set, i.e. provide not only integration of red assets but also include threat defense, threat blue teams, and general threat based Cyber Network Defense (CND) operations. Expand Network Exploitation Test Tool (NETT) infrastructure and capabilities into a distributed cloud-based model such that other DoD Red Teams (joint teams) and Army teams can leverage the capability from geographically separated locations (fully distributed operations). Will develop state and non-state threat targeting packages that are current, accurately profiling attack trends and timelines, intent, levels of sophistication, and threat training. These threat packages represent state and non-state level forces using both active and passive network attack to selectively degrade or disrupt Command, Control, Communications, Computers (C4) Intelligence, Surveillance and Reconnaissance (C4ISR) and Enterprise Business Systems. Development of threat targets and networks as new real-world targets sets and capabilities evolve. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increase from FY 2022 to FY 2023 for hardware cost increases required for threat capability development. FY 2022 FFRDC reduction of $6K.			
Title: Threat Electronic Warfare	4.178	7.721	8.444
Description: Develops Army threat Electronic Warfare (EW) capabilities that will simulate a realistic anti-access/aerial denial (A2/AD) environment that will portray critical threats to U.S. DoD satellite communication (SATCOM), navigation, and command, control, and communication (C3I) networks. Develops specific EW capabilities to include cyber/EW convergence, tailored jamming in a complex radio frequency (RF) environment, data spoofing, detection of Low Probability Intercept (LPI) waveforms, artificial intelligence (AI), network modeling, passive detection systems, and advanced electronic support systems. The Threat Operations program will fund the operation, maintenance, management, and sustainment capability for Threat systems used to portray a realistic threat environment during Army testing and training within the Army's Threat inventory in order to support multiple Army/Department of Defense (DoD) test events including Joint Warfighting Assessment (JWA) and anticipated excursion test events for numerous SUTs / PORs. ***FY 2022 Plans:*** Continue to develop and integrate electronic support sensors and electronic attack payloads to provide a robust and threat representative capability to support testing of Army systems. Threat Position, Navigation, and Timing (PNT) Jammer will consist			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604256A / *Threat Simulator Development*	**Project (Number/Name)** 976 / *Army Threat Sim (ATS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
of modifications and upgrades to ensure relevance by implementing additional capabilities within the PNT spectrum. Threat Operations will continue to support multiple Army test events including Joint Warfighting Assessment (JWA) and anticipated excursion test events for numerous Systems Under Test/ Programs of Record (SUT / POR) currently identified through FY2022. ***FY 2023 Plans:*** Continue to develop and integrate electronic support sensors and electronic attack payloads to provide a robust and threat representative capability to support testing of Army systems. Threat Position, Navigation, and Timing (PNT) Jammer will consist of modifications and upgrades to ensure relevance by implementing additional capabilities within the PNT spectrum. Threat Systems Management Office will continue to support multiple Army test events including Joint Warfighting Assessment (JWA) and anticipated excursion test events for numerous Systems Under Test/ Programs of Record (SUT / POR) currently identified through FY2023. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 increase will enable the Threat Systems Management Office (TSMO) to continue supporting multiple Army test events including Joint Warfighting Assessment (JWA) and anticipated excursion test events for numerous Systems Under Test/ Programs of Record (SUT / POR) currently identified through FY2023. FY 2022 FFRDC reduction of $6K.			
Title: Threat Network and Mission Command ***Description:*** Develops Army threat Network and Mission Command capabilities to include quantum computing techniques, use of adaptive RF transmissions, self-healing/mesh network, capabilities aimed at masking threat communication systems (Very High Frequency (VHF), Ultra High Frequency (UHF), and High Frequency (HF), satellite and cellular, and next generation tactical radios. ***FY 2022 Plans:*** Continue system integration and improve the network fidelity, as well as develop data fusion and artificial intelligence to provide improved decision aids to the Threat Force Commander. ***FY 2023 Plans:*** Continue system integration and improve the network fidelity, as well as, develop data fusion and artificial intelligence to provide improved decision aids to the Threat Force Commander. Continue to develop and integrate electronic support sensors and electronic attack payloads to provide a robust and threat representative capability to support testing of Army systems. Threat Position, Navigation, and Timing (PNT) Jammer will consist of modifications and upgrades to ensure relevance by implementing additional capabilities within the PNT spectrum. Threat Operations will continue to support multiple Army test events including	5.004	4.275	4.180

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604256A / *Threat Simulator Development*	**Project (Number/Name)** 976 / *Army Threat Sim (ATS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Joint Warfighting Assessment (JWA) and anticipated excursion test events for numerous Systems Under Test/ Programs of Record (SUT / POR) currently identified through FY2023. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Army decreased funding in FY 2023 due to higher Army priorities. FY 2022 FFRDC reduction of $5K.			
Title: SBIR/STTR ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.673	-
Accomplishments/Planned Programs Subtotals	13.987	18.422	18.437

	FY 2021	FY 2022
Congressional Add: Threat Cyberspace Operations ***FY 2021 Accomplishments:*** Support of Cyber Threat and vulnerability assessments through the enhancement of Cyber Threat simulators, including the research and development of cyber security solutions (tools, techniques, tactics & procedures). ***FY 2022 Plans:*** Support to Cyber Threat and vulnerability assessments through the enhancement of Cyber Threat simulators, including the research and development of cyber security solutions (tools, techniques, tactics & procedures). Provides cyber red team Information Operations (IO) weapons, Command and Control (C2) infrastructure, and research for advanced threat capabilities targeting Army programs, systems, and commands. Furthers efforts executed under FY21 185 $3,750K Program Increase ?Threat Simulator Development?	3.750	3.000
Congressional Add: Cyber Security Operations Center ***FY 2021 Accomplishments:*** Continue the Cyber Security Operations Center (CSOC) technical capabilities by engaging a variety of Defense Industrial Base (DIB) participants to conduct multiple prototype demonstrations. Continue gathering data to conduct the feasibility assessment of providing scalable cyber security expertise to the DIB. Develop and demonstrate the ability to provide secure real-time cyber support to a series of cloud enabled customer bases. ***FY 2022 Plans:*** Prototype capability to evaluate the feasibility of providing cyber security services and expertise to the Defense Industrial Base (DIB). Refine techniques for providing on-site and remote DIB assistance with assessment, training, response, and mitigation of cyber vulnerabilities and industrial supply chains. Continue	20.000	40.000

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604256A / *Threat Simulator Development*	**Project (Number/Name)** 976 / *Army Threat Sim (ATS)*

	FY 2021	FY 2022
development and refinement of the ability to provide effective and secure real-time cyber support to a series of cloud-enabled distributed, or deployed government and/or industry customer bases. The FY 2022 Congressional Add funds will significantly increase the scale of support into the next phase of the prototype, which includes a drastically larger magnitude of DIB participants than executed in previous phases.		
Congressional Add: Cyber Threat Vulnerabilities & Assessments ***FY 2021 Accomplishments:*** TSMO is chartered as the threat provider for the Army Acquisition community and provides Red Team capabilities to all branches of the DoD. As such, TSMO has a responsibility to continuously develop new and maintain existing threat capabilities, in the cyber, physical, intelligence, and EW domains. Cyber Vulnerability Assessments (CVA) allow TSMO to develop and test new capabilities in support of the Army Test and Evaluation, Cyber Operations Resiliency Assessment ? Platform (CORA-P), and Persistent Cyber Operation (PCO) missions. CVA will enable TSMO to more closely replicate advanced adversarial capabilities resulting in more threat faithful testing of critical Army weapon and information systems.	3.750	-
Congressional Adds Subtotals	27.500	43.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0604258A / *Target Systems Development*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	35.279	42.404	19.132	-	19.132	11.821	15.668	15.091	15.208	Continuing	Continuing
238: *Aerial Targets*	-	32.271	36.085	12.722	-	12.722	8.383	12.359	11.370	11.451	Continuing	Continuing
459: *Ground Targets*	-	3.008	6.319	6.410	-	6.410	3.438	3.309	3.721	3.757	Continuing	Continuing

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element funds aerial and ground target hardware and software development, maintenance, and upgrades. The overall objective is to ensure validation of weapon system accuracy and reliability by developing aerial and ground targets essential for test and evaluation (T&E). These targets are economical and expendable, remotely controlled or stationary, and often destroyed in use. The Army is the Tri-Service lead under the Secretariat Reliance panel for providing rotary wing, mobile ground, towed, and designated targets for T&E. The Army executes development of some service-peculiar target requirements in support of quality assurance, lot acceptance, and training and continues development of service-peculiar and on-going target materiel upgrades to maintain continuity with current weapons technology and trends in modern and evolving Army weapons.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	35.279	17.404	0.000	-	0.000
Current President's Budget	35.279	42.404	19.132	-	19.132
Total Adjustments	0.000	25.000	19.132	-	19.132
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	25.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	19.132	-	19.132

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: 238: *Aerial Targets*		
Congressional Add: *UAS Swarm Threat and Mitigation*	25.000	25.000
Congressional Add Subtotals for Project: 238	25.000	25.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Congressional Add Totals for all Projects	25.000	25.000

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / *Target Systems Development*	Project (Number/Name) 238 / *Aerial Targets*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
238: *Aerial Targets*	-	32.271	36.085	12.722	-	12.722	8.383	12.359	11.370	11.451	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Aerial Targets Project supports Army readiness and multi-domain operations through development, acquisition, operation and modernization of aerial targets. Multi-spectral Aerial Targets include realistic surrogates, actual high performance threat aircraft, and virtual target computer models. Current and emerging weapons systems require test, evaluation, and training using threat representative aerial targets to assess weapons systems effectiveness in the operational environment. This project encompasses a portfolio of full-scale, miniature, and subscale fixed wing/rotary wing targets, virtual targets, ancillary devices, and associated control systems. For accurate threat portrayal that properly stresses weapons systems during test and evaluation, aerial targets must exhibit the flight characteristics, threat signatures, and other performance factors to represent or emulate relevant and validated threats. This Project funds: the long-range planning necessary to determine future target needs and development of coordinated requirements; the management of target research, development, test and evaluation, production, and modernization; execution of the validation process to ensure that aerial targets accurately represent the threat; as well as storage and repair parts. The Army is the Test Enterprise Reliance lead for Rotary Wing Targets and Towed Target development.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Towed Targets/Ancillary devices.	0.363	0.536	0.492
Description: Engineering & Manufacturing Development (EMD) phase activities for Towed Targets/Ancillary devices.			
FY 2022 Plans: Continues EMD for Towed Targets/Ancillary devices, to include development, enhancement, maintenance, and sustainment for towed targets and ancillary devices as needed. Continued development and testing of Low Cost Towed target systems (Sphere Tow and the Glide Tow Target) emulating current threats at a very low cost to Lower Tier Project Office (LTPO), Indirect Fire Protection Capability (IFPC), Center for Countermeasures/Office of the Secretary of Defense (CCM/OSD), and classified customers. Signature modification and performance enhancement efforts for these targets is ongoing. Investigates and tests other cost-saving towed systems (Glide-Tow, Cruise Missile Tow Target, Towed Spheres, and Tow Test Bed) for Air Defense Weapons System customers.			
FY 2023 Plans: Continue EMD for Towed Targets and Ancillary devices, to include development, enhancement, maintenance, and sustainment for towed targets and ancillary devices as needed. Continue development and testing of Low Cost Towed target systems specifically the Glide Tow and TLX-1 Height Keeping Tow Targets. These targets emulate current threats or provide calibrated radar cross section sources at a very low cost to Lower Tier Project Office (LTPO), Center for Countermeasures/Office of the Secretary of Defense (CCM/OSD), the USAF Three Dimensional Long Range Radar and the Navy Enterprise Air Surveillance			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 238 / *Aerial Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Radar. Signature modification and performance enhancement efforts for these targets is ongoing. Investigate and test other cost-saving towed systems specifically modifications to the Cruise Missile Tow Target for High Energy Laser system tests. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding decreased in FY 2023 for higher Army priorities.			
Title: Aerial Virtual Targets. ***Description:*** EMD phase activities for Aerial Virtual Targets. ***FY 2022 Plans:*** Will continue engineering and manufacturing for Aerial Virtual Targets for evolving Army and DoD simulation standards and evolving implementation techniques; focuses on simulation target models of airplanes, helicopters, missiles, unmanned aerial vehicles, and aerial targets in commonly used formats to support visualization, infrared analysis, and radar analysis simulations; will support verification and validation of models, will provide archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Simulation target models are employed to facilitate simulations for Development Testing (DT) and Operational Testing (OT) planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models will be used by multiple DoD agencies and multiple weapon systems such as, but not limited to Close Combat Weapon Systems, Unmanned Aerial Systems, and Lower Tier Program offices. ***FY 2023 Plans:*** Will continue modeling, simulation, and development of aerial threat targets for use throughout Army and DoD simulation environments for evolving Army and DoD simulation standards and evolving implementation techniques; focuses on simulation target models of airplanes, helicopters, missiles, unmanned aerial vehicles, and aerial targets in commonly used formats to support visualization, infrared analysis, and radar analysis simulations; will support verification and validation of models, will provide archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Life cycle maintenance of threat virtual targets will be addressed for creation, validation, and distribution of simulation target models and physics based software and simulation formats evolve. Aerial Virtual Targets will necessarily address continued adoption, utilization, and proliferation of unmanned aerial vehicles as well as rocket, artillery, and mortar (RAM) threats. Aerial Virtual Target models will continue to incorporate electronic attack (EA) and electronic warfare (EW) components. Simulation target models are employed to facilitate simulations for Development Testing (DT) and Operational Testing (OT) planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models will be used by multiple DoD agencies and multiple weapon systems such as, but not limited to Close Combat Weapon Systems, Unmanned Aerial Systems, and Lower Tier Program offices. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	0.581	0.858	0.738

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 238 / *Aerial Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding decreased in FY 2023 for higher Army priorities.			
Title: Army Ground Aerial Target Control System (AGATCS). ***Description:*** EMD phase activities for the AGATCS in support of a modern current technology target control system for control of subscale and full scale aerial, surface (ground/seaborne), Small Unmanned Aerial System (SUAS) and rotary wing targets. ***FY 2022 Plans:*** AGATCS engineering and manufacturing to provide remote control of aerial (fixed wing, rotary wing, and small unmanned aerial systems (SUAS)), ground (heavy, medium, and light vehicles), and seaborne targets with a single control system in support of live fire testing necessary for lethality evaluation and sensor package testing for evaluation of suitability and effectiveness. Complies with DODI 8510.01 mandate / DOD Risk Management Framework on all target control systems to ensure a secure operating posture. Meets surface target testing requirements to include formation, collision avoidance, and swarming capabilities for U.S. Army test ranges. Provides Test Centers and the T&E community with a versatile seaborne and rotary wing resource for use in conducting tests to include live fire testing, observation, signal repeater and cargo transportation. ***FY 2023 Plans:*** AGATCS engineering and manufacturing to provide remote control of aerial (fixed wing, rotary wing, and simulated unmanned aerial systems (SUAS)), ground (heavy, medium, and light vehicles), and seaborne targets with a single control system in support of live fire testing necessary for lethality evaluation and sensor package testing for evaluation of suitability and effectiveness. Complies with DODI 8510.01 mandate / DOD Risk Management Framework on all target control systems to ensure a secure operating posture. Meets surface target testing requirements to include convoy, formation, collision avoidance, and swarming capabilities for U.S. Army test ranges. Provides Test Centers and the T&E community with a versatile seaborne and rotary wing resource for use in conducting tests to include live fire testing, observation, signal repeater and cargo transportation. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding decreased in FY 2023 for higher Army priorities.	2.691	3.962	3.534
Title: Unmanned Aerial System - Target (UAS-T). ***Description:*** Technical updates and life cycle management activities for the UAS-T to provide Threat representative support for test and experimentation missions. ***FY 2022 Plans:*** Technical and life cycle management for the UAS-T to operate and maintain a generic, tactical class unmanned aircraft system target to support a variety of test requirements by providing a generic threat representative aerial target to support test and experimentation missions. Projects to be supported include the Space and Missile Defense Command and the Joint Integration Air and Missile Defense Organization live fire testing. This activity will continue to require technical support for investigation,	1.018	1.500	3.975

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 238 / *Aerial Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
demonstration, and integration of a more economical target, to include technical oversight of the targets' acquisition and ground support equipment. ***FY 2023 Plans:*** Technical and life cycle management for the Unmanned Aerial System-Threat (UAS-T) to operate and maintain a generic, tactical class unmanned aircraft system target to support a variety of test requirements by providing a generic threat representative aerial target to support test and experimentation missions. Projects to be supported include the Space and Missile Defense Command and the Joint Integration Air and Missile Defense Organization live fire testing. This activity will continue to require technical support for investigation, demonstration, and integration of a more economical target, to include technical oversight of the targets' acquisition and ground support equipment. Includes replenishment of Group 1 platforms consumed for Counter-Small Unmanned Aerial System (C-sUAS) test and training needs. In addition, provides for 35 Group 2 threat endurance Small Unmanned Aerial Systems (sUAS), 15 Tethered sUAS?s, Manned sUAS Deployment Systems, and GPS jamming payload systems. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increased funding in FY 2023 for the Unmanned Aerial System - Counter.			
Title: High Speed Aerial Target (HSAT). ***Description:*** Funds the EMD phase for the replacement of the aging MQM-107 with the new BQM-167A to provide a realistic aerial target capable of simulating the performance of enemy aircraft; technical and life cycle management activities for equipment, to include engineering change proposals, technology obsolescence, and safety and system data documentation for the HSAT Target. Program requires technical support for investigation, demonstration, and integration of a more economical target. Technical oversight of the replacement targets' acquisition along with Ground Support Equipment (GSE) and other activities related to getting it operational is essential; provides a realistic aerial target capable of simulating the performance of enemy aircraft to aid in the research, development, test, and evaluation of weapons systems and aid in training operational units employing production missile systems. ***FY 2022 Plans:*** The U.S Army Targets Management Office provides Aerial Targets to customers for threat realism required by law in Title 10 U.S.C., Section 2366 (Live Fire Test & Evaluation) for the testing of ACAT I/II major munitions, missile programs, or product improvements of these programs. This line is the technical sustainment of all HSATs. This funding covers the engineering, integration, safety, cyber security, technology obsolescence, safety and system data documentation, Air Worthiness Release development, and flight waivers for the entire enterprise, as well as, non-recurring engineering for software/firmware updates, and minor product upgrades. This includes the MQM-107, MQM-178, BQM-34, and the new BQM-167. These HSATs will continue	2.618	3.824	3.983

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 238 / *Aerial Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
to support T&E programs such as Patriot, Stinger, Integrated Air and Missile Defense, Sentinel Radar, Cruise Missile Defense System, and classified programs for Army and Tri-Service customers. ***FY 2023 Plans:*** The U.S Army Threat Systems Management Office provides Aerial Targets to customers for threat realism required by law in Title 10 U.S.C., Section 2366 (Live Fire Test & Evaluation) for the testing of ACAT I/II major munitions, missile programs, or product improvements of these programs. This line is the technical sustainment of all HSATs. This funding covers the engineering, integration, safety, cyber security, technology obsolescence, safety and system data documentation, Air Worthiness Release development, and flight waivers for the entire enterprise, as well as, non-recurring engineering for software/firmware updates, and minor product upgrades. This includes the MQM-107, MQM-178, BQM-34, BQM-167, and MQM-185. These HSATs will continue to support T&E programs such as Patriot, Integrated Air and Missile Defense, Sentinel Radar, Cruise Missile Defense System, and classified programs for Army and Tri-Service customers. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2022 to FY 2023 funding increase for technical sustainment.			
Title: SBIR/STTR ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.405	-
Accomplishments/Planned Programs Subtotals	7.271	11.085	12.722

	FY 2021	FY 2022
Congressional Add: UAS Swarm Threat and Mitigation	25.000	25.000
FY 2021 Accomplishments: Funds development of US produced UAS platforms, ground control system, mission planner/simulation, payloads, and system mobility for Army DT & OT weapons testing in support of Army readiness and modernization. Funds development of 5G NSA cellular network simulator, field deployable 5G network system, and 5G NSA/SA CORE network capable of interoperability with foreign and future domestic architectures. This capability is key to TSMO?s ability to replicate realistic UAS swarms and testing of other related networks.		
FY 2022 Plans: Advancement of current U.S. produced Threat Unmanned Aerial System (UAS) platforms, ground control system, mission planner/simulation, payloads, and system mobility for Army Combat Training		

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 238 / *Aerial Targets*

	FY 2021	FY 2022
Centers (CTCs) and DT & OT weapons testing in line with advancement of Threat capabilities to include but not limited to GPS denied navigation, advanced day/night cameras, unattended launch/recovery/charging, and artificial intelligence. Continued development and deployment of 5G Non-Stand Alone (NSA) cellular network simulator, field deployable 5G network system, and 5G NSA/Stand Alone (SA) CORE network capable of interoperability with foreign and future domestic architectures. This capability is key to Threat System Management Office's ability to replicate realistic UAS swarms will be added as a command-and-control solution for Threat UAS.		
Congressional Adds Subtotals	25.000	25.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / *Target Systems Development*	Project (Number/Name) 459 / *Ground Targets*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
459: *Ground Targets*	-	3.008	6.319	6.410	-	6.410	3.438	3.309	3.721	3.757	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds Army efforts to support test and evaluation (T&E) of advanced weapon systems and supports Army Modernization, Multi-Domain Operations, and Tri-Service readiness by developing ground target surrogates, acquiring foreign equipment, and developing virtual target computer models of ground vehicle targets. These products are required to adequately stress weapon systems undergoing (T&E). The United States Army is the Tri-Service lead for providing mobile ground targets for (T&E). This tasking includes long-range planning to determine future target needs and development of coordinated requirement documents; the centralized management of the ground target research, development, test and evaluation processes; execution of the validation process; acquisition of foreign equipment; and continuing maintenance, storage, and development/enhancement/update via engineering services of developed and acquired targets to ensure availability for (T&E) customers. This Project also manages use of current assets and operates a centralized spare parts program.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Mobile Ground Target Operations (MGTO)	1.503	3.482	2.093
Description: MGTO provides oversight of five Primary Operating Centers to include operation, storage, maintenance, repair, safety and configuration management. The objective of the MGTO effort is to support the testing community as fully, efficiently and effectively as possible. The MGTO centrally manages a fleet of foreign threat ground vehicles while maintaining the foreign integrity of the assets.			
FY 2022 Plans: Will maintain a fleet of reusable ground targets emulating relevant, current, and emerging threats which provides cost effective solutions for T&E. The MGTO will centrally manage a fleet of foreign threat ground vehicles while maintaining the foreign integrity of the assets. The MGTO will provide support and oversight for actual threat foreign ground vehicles and mobile ground target surrogate vehicles for use as threat targets by the T&E community for destructive and non-destructive scenarios. Efforts will support users such as, but not limited to Army Futures Command Cross Functional Teams (CFTs) Apache 64E, Joint Air to Ground Missile, Javelin, Extended Range Guided Multiple Launch Rocket System, Army Tactical Missile System, Cruise Missile Defense System, Precision Fires, Counter Rocket Artillery and Missile, Close Combat Weapon System, and other research, prototyping, and operational users.			
FY 2023 Plans: Will maintain a fleet of reusable ground targets emulating relevant, current, and emerging threats which provides cost effective solutions for T&E. The MGTO will centrally manage a fleet of foreign threat ground vehicles while maintaining the foreign integrity of the assets. The MGTO will provide support and oversight for actual threat foreign ground vehicles and mobile ground target			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 459 / *Ground Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
surrogate vehicles for use as threat targets by the T&E community for destructive and non-destructive scenarios. Efforts will support users such as, but not limited to Army Futures Command Cross Functional Teams (CFTs) Apache 64E, Joint Air to Ground Missile, Javelin, Extended Range Guided Multiple Launch Rocket System, Army Tactical Missile System, Cruise Missile Defense System, Precision Fires, Counter Rocket Artillery and Missile, Close Combat Weapon System, and other research, prototyping, and operational users. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding decreased in FY 2023 for higher Army priorities.			
Title: Mobile Ground Targets Hardware (MGTH) ***Description:*** MGTH provides a mix of actual threat assets and surrogate targets to support Army T&E events. ***FY 2022 Plans:*** Will provide cost effective and highly threat representative surface targets (consisting of actual foreign equipment as well as surrogates) for Test and Evaluation of multiple Weapon System developers. Will continue to provide surface targets to meet the functionality and signature fidelity requirements of the objective force. Will acquire actual foreign equipment, to include insurgent vehicles, to meet known weapon system target shortfalls. Will continue to initiate analysis and design efforts to address specific capability shortfalls and the ability to develop threat representative surrogates. ***FY 2023 Plans:*** Will provide cost effective and highly threat representative surface targets (consisting of actual foreign equipment as well as surrogates) for Test and Evaluation of multiple Weapon System developers. Will continue to provide surface targets to meet the functionality and signature fidelity requirements of the objective force. Will acquire actual foreign equipment, to include insurgent vehicles, to meet known weapon system target shortfalls. Will continue to initiate analysis and design efforts to address specific capability shortfalls and the ability to develop threat representative surrogates. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding decreased in FY 2023 for higher Army priorities.	0.710	1.345	0.535
Title: Ground Virtual Targets ***Description:*** Government System (T&E) to support the research and development of Ground Virtual Targets. Virtual Targets are employed by multiple Department of Defense agencies and weapon systems to facilitate simulations for Developmental and Operational Test planning, rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. ***FY 2022 Plans:***	0.795	1.262	0.735

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 459 / *Ground Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Will continue engineering and manufacturing for Ground Virtual Targets for evolving Army and DoD simulation standards and evolving implementation techniques. Will focus on simulation target models of armored assets, air defense systems, small unmanned aerial systems vehicles, maritime systems and other surface targets in commonly used formats to support visualization, infrared analysis, and radar analysis simulations. Will support verification and validation of models and provide archiving and distribution of simulation target models to simulation developers throughout the Army and DoD Test and Evaluation communities. ***FY 2023 Plans:*** Will continue engineering and manufacturing for Ground Virtual Targets for evolving Army and DoD simulation standards and evolving implementation techniques. Will focus on simulation target models of armored assets, air defense systems, small unmanned aerial systems vehicles, maritime systems and other surface targets in commonly used formats to support visualization, infrared analysis, and radar analysis simulations; will support verification and validation of models, will provide archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Life cycle maintenance of threat virtual targets will be addressed for creation, validation, and distribution of simulation target models and physics based software as simulation formats evolve. Ground Virtual Targets will necessarily address continued application of cross domain, air defense, and denied access threats. Ground Virtual Target models will continue to incorporate electronic attack (EA) and electronic warfare (EW) components for air defense systems and simulations. Simulation target models are employed to facilitate simulations for developmental test (DT) and operational test (OT) planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models will be used by multiple DoD agencies and multiple weapon systems such as, but not limited to Close Combat Weapon Systems, Strategic and Operational Rockets and Missiles, and Tactical Aviation and Ground Munition offices. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding decreased in FY 2023 for higher Army priorities.			
Title: Low Cost Ground Targets	-	-	3.047
Description: This proof-of-concept utilizes lower-cost Software Defined Radio (SDR) technology to demonstrate the feasibility of replicating a scalable, diverse, high-density Radio Frequency (RF) environment capable of supporting MDO, Test and Training within cost constraints. This proposed solution develops low-cost/low-risk solutions to emulate adversary high-dense RF environments using components developed for SDRs, coupled with available antennas and Commercial-Off-the-Shelf (COTS) devices and products to demonstrate operations. SDR radar systems have been employed mainly in military operations, like target detection, target recognition, surveillance, and other specific applications, such as meteorology and air-traffic control. However, in recent years, large-scale commercial applications are driving standard radar system operations at significant cost reductions with increased adaptability. According			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 459 / *Ground Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
to this new operating context, Software Defined Radar (SDRadar) represents new challenges in radar technology given the possibility of performing basic operations (i.e. mixing, filtering, modulation, and demodulation) by simply employing software modules in order to eliminate much of the radar specific processing hardware. The main goal of a software defined approach is related not only to a clear cost reduction, but also to a significant increase of the versatility of the system, since signal generation and signal processing parameters may be easily adapted to the task under consideration. Integration into test and training range and Home Station networks, such as the Threat Battle Command Force (TBCF), provides significant Integrated Air Defense Systems (IADS) capability utilizing multiple units. This program supports US Army acquisition ability to adequately stress weapon systems undergoing both Developmental and Operational Tests, as well as Live, Virtual, and Constructive (LVC) training. The low-cost systems emulate known threat radars across multiple radar bands and to develop as many emitters as possible to create a dense, RF environment. ***FY 2023 Plans:*** Provides threat emitters in sufficient quantities to support Developmental and Operational Tests across multiple Army Test and Training programs, as well as the Cross Functional Teams. In addition, units will be deployed at Combined Training Centers (CTC) as well as to various Army installations in support of Home Station Training in a Live, Virtual and Constructive (LVC) environment. Develop interfaces required to integrate units into the Threat Battle Command Force operational system. Develop Time Space Position Information (TSPI) interface required for test and training exercises. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increased in FY 2023 to support the required quantities for the Low Cost Ground Targets to support Army developmental and operational testing for home station training at Army installations.			
Title: SBIR/STTR ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.230	-
Accomplishments/Planned Programs Subtotals	3.008	6.319	6.410

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604258A / *Target Systems Development*	**Project (Number/Name)** 459 / *Ground Targets*

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0604759A / *Major T&E Investment*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	119.231	93.617	107.706	-	107.706	69.131	74.814	91.919	95.157	Continuing	Continuing
983: *Reagan Test Site (RTS) T&E Investments*	-	6.051	6.378	6.844	-	6.844	8.364	4.199	8.359	8.440	Continuing	Continuing
984: *Major Developmental Testing Instrumentation*	-	47.985	38.027	43.861	-	43.861	33.384	26.653	30.434	33.116	Continuing	Continuing
986: *Major Operational Test Instrumentation*	-	11.840	29.441	4.623	-	4.623	-	4.636	4.251	4.250	Continuing	Continuing
EY9: *Range Radar Replacement Program (RRRP)*	-	52.340	18.687	50.065	-	50.065	26.239	38.183	47.731	48.196	Continuing	Continuing
FF1: *Cyber Blue Team*	-	1.015	1.084	2.313	-	2.313	1.144	1.143	1.144	1.155	0.000	8.998

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) funds the development and acquisition of major developmental test instrumentation for the United States (U.S.) Army Test and Evaluation Command's (ATEC) test activities: White Sands Test Center (WSTC), New Mexico; Yuma Test Center (YTC), Arizona; Aberdeen Test Center (ATC), Maryland; Electronic Proving Ground (EPG), Arizona; Redstone Test Center (RTC), Alabama; and for the Reagan Test Site (RTS) at the United States Army Kwajalein Atoll (USAKA), which is managed by the Space and Missile Defense Command. This PE also funds development and acquisition of Operational Test Command's (OTC) major field instrumentation and beginning in Fiscal Year 2020, management of the Cyber Acquisition Blue Teams (CABT) certification standards. Requirements for instrumentation and cyber certifications are identified through a long range survey of project managers, Research Development and Engineering Centers (RDECs), and Battle Laboratories developing future weapon systems and the test programs that support these systems. Army testing facilities are also surveyed to determine major testing capability shortfalls.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	119.231	68.139	0.000	-	0.000
Current President's Budget	119.231	93.617	107.706	-	107.706
Total Adjustments	0.000	25.478	107.706	-	107.706
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	25.600			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	107.706	-	107.706
• FFRDC Transfer	-	-0.122	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: 984: *Major Developmental Testing Instrumentation*		
Congressional Add: *Radio frequency threat systems emulator for rotary wing aircraft*	5.000	-
Congressional Add Subtotals for Project: 984	5.000	-
Project: 986: *Major Operational Test Instrumentation*		
Congressional Add: *Major operational test instrumentation*	11.840	25.600
Congressional Add Subtotals for Project: 986	11.840	25.600
Congressional Add Totals for all Projects	16.840	25.600

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604759A / *Major T&E Investment*	Project (Number/Name) 983 / *Reagan Test Site (RTS) T&E Investments*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
983: *Reagan Test Site (RTS) T&E Investments*	-	6.051	6.378	6.844	-	6.844	8.364	4.199	8.359	8.440	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds improvement and modernization (I&M) for the Ronald Reagan Ballistic Missile Defense Test Site (RTS) instrumentation systems. The Reagan Test Site with its remote location and one of kind instrumentation systems provides a strategic test environment that cannot be replicated. In order to continue its critical mission of testing missile systems that are of paramount importance to the defense of the nation, the RTS instrumentation systems must be continuously updated and upgraded to support the emerging technologies being developed by the Department of Defense (DOD) such as hypersonics and other advanced weapons systems. Without modernization, these instrumentation systems face obsolescence or degraded capability and the inability to provide the critical data needed for continued materiel development. Without instrumentation on par with the technologies being utilized in emerging systems, the materiel developer will be unable to complete their test programs or pass programmatic milestones toward deployment. These funds provide modernization of the radar, telemetry, optics, range safety, communications, command/control and other equipment essential to meet test and evaluation requirements of the Services and DoD agencies. The RTS instrumentation is required to support data collection for test & evaluation assessments and operational decisions that have strategic implications for the Army, Navy, Air Force, United States Strategic Command (STRATCOM), Missile Defense Agency (MDA), Defense Advanced Research Projects Agency (DARPA), National Aeronautics and Space Administration (NASA), and other customers. RTS, located in the Republic of the Marshall Islands, is a remote, secure activity of the Major Range and Test Facility Base (MRTFB). Funding will enable RTS to meet customer objectives and sustain the required instrumentation suite.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Radar Reliability Improvement Program (RRI).	0.500	0.500	0.551
Description: The Radar Improvement and Sustainment (RIS) activity is an Improvements and Modernizations (I&M) Umbrella Program to push technology into radar systems. RIS is a group of complimentary I&M Projects that mitigate annual Operations and Maintenance (O&M) risks. Projects initiated address the following needs: Enhancing the Reliability of the Sensor; Technology Refresh; Obsolescence; Commonality of Design across Sensors; Enhanced Monitoring; Fault Detection - Fault Isolation (FD/FI); Enable Remote Operation and Monitoring; and Enhanced Capabilities.			
FY 2022 Plans: RRI Program will continue as an I&M umbrella Program to push technology into the radar systems. RRI projects will address: Enhancing the Reliability of the Sensor; Technology Refresh; Obsolescence; Commonality of Design across Sensors; Enhanced Monitoring FD/FI; Enable Remote Operation and Monitoring; and Enhanced Capabilities.			
FY 2023 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 983 / *Reagan Test Site (RTS) T&E Investments*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
RRI Program will continue as an I&M Umbrella Program to push technology into the radar systems. RRI projects will address: Enhancing the Reliability of the Sensor; Technology Refresh; Obsolescence; Commonality of Design across Sensors; Enhanced Monitoring FD/FI; Enable Remote Operation and Monitoring; and Enhanced Capabilities. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is due to inflation.			
Title: Telemetry (TM) Modernization Study. ***Description:*** This activity will develop the technology required to modernize the telemetry systems using an innovative software defined radio approach designed to vastly improve the ability to adapt to future telemetry changes and requirements quickly with lower cost. In addition, this approach will enable centralized command and control of the telemetry equipment increasing efficiency in mission preparation and execution. The telemetry back-end processing chain is currently comprised of discrete frequency-specific hardware components that are replicated for each telemetry channel required for a test event. This activity will develop a scalable frequency-agnostic, software-based solution that runs on commodity computer servers. More complex missions (e.g., Over-the-air (OTA) operational testing of the Ballistic Missile Defense Systems (BMDS)) will continue to require more telemetry channels, but this activity will avoid much of that future cost. This effort will provide enough hardware to increase capacity of the telemetry system. ***FY 2022 Plans:*** Continuation of V&A testing effort focusing on engineering test for the full-up capability and deployment of the modernized telemetry equipment to the other TM sites within RTS range (Kwaj, Illegini, & Gagan Islands). ***FY 2023 Plans:*** TM Modernization should complete in FY23; the component will utilize the requested funds for wrap up efforts. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation.	2.500	1.221	1.251
Title: Legacy Servo Upgrade Program. ***Description:*** This activity will design, upgrade, and replace the radar and optics servo systems. The custom-hardware based legacy systems will be replaced with commercially supportable commercial off the shelf (COTS) hardware. Where possible, common components will be used across all range sensors to minimize ongoing maintenance costs. ***FY 2022 Plans:***	0.108	0.391	2.201

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 983 / *Reagan Test Site (RTS) T&E Investments*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Assessment of remaining antenna servo systems and determine next highest priority servo replacement need and initiate engineering design activities for the next phase of the program. ***FY 2023 Plans:*** Continue assessment of antenna servo systems and continue engineering design activities for the next phase of the program. Prototyping and testing of new servo methodologies will be implemented as well. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase from FY22 to FY23 is due to ramping up the program to ensure future radar operability by replacing antiquated servos. Includes the removal of FFRDC in the amount of $109K.			
Title: RTS Range Enhancements for Hypersonic Vehicle Testing ***Description:*** The Range Enhancements for Hypersonic Vehicle Testing program will develop and deploy advanced technologies and a number of infrastructure upgrades specific to hypersonic vehicle testing. These technologies and infrastructure improvements include advanced non-ballistic tracking enhancements, improved data collection, additional waveform support, sensor surrogate capabilities and integration of adjunct sensors to support situational awareness and future tracking enhancements. ***FY 2022 Plans:*** Continue maturing and deploying enhanced tracking algorithms to the RTS sensor suite ***FY 2023 Plans:*** Continue maturing and deploying enhanced tracking algorithms to the RTS sensor suite and planning & support for experimentation & testing in space. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease from FY22 to FY23 is due to balancing of range resourcing needs.	0.100	0.432	0.401
Title: Digital Focal Plane Array (DFPA) Technology Insertion ***Description:*** DFPA Technology Insertion program designs, builds, and integrates DFPA-based camera systems and other leading-edge imaging technologies into existing Super Recording Automatic Digital Optical Tracker (RADOT) mounts at RTS. The cameras and telescopes will provide coverage in multiple imaging bands including Middle Wave Infra-Red (MWIR) and Long Wave Infra-Red (LWIR). ***FY 2022 Plans:***	0.040	0.441	0.581

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 983 / *Reagan Test Site (RTS) T&E Investments*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Procure and deploy additional DFPA based cameras at SR Optics site ***FY 2023 Plans:*** Installation and test of IR cameras; work RMF accreditation package for cyber security; IV&V; test system. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase from FY22 to FY23 is due to installation, checkout, documentation, and testing of system.			
Title: Radar Open System Architecture (ROSA) Refresh ***Description:*** ROSA initial concept and implementation subdivided each of the RTS radars into logical and separable functional building blocks. Up to nine common subsystems including receivers, transmitters and antenna controls were designed using Commercial Off the Shelf (COTS) equipment to provide a unified framework, largely eliminating the very unique and custom hardware and software at each of the RTS radars. Over a decade of technology advancement and further maturity of industry standards have outdated the current ROSA implementation, posing a sustainability problem. This program will identify key subsystem technologies and architectures to stabilize future procurement, maintenance and operational capability across all RTS radars. ***FY 2022 Plans:*** Continue to maintain and increase the operability of RTS capabilities across all KREMS radars. ***FY 2023 Plans:*** Continue to maintain and increase the operability of RTS capabilities across all KREMS radars. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decreased due to funds reallocated to higher priorities.	2.000	2.000	0.251
Title: TRADEX L-Band High Voltage Power Supply Upgrade ***Description:*** TRADEX L-Band High Voltage Power Supply Upgrade will improve resilience of L-band by providing a backup power supply and a test stand where tubes can be tested without impacting the operational system. ***FY 2022 Plans:*** Continue to upgrade the unregulated supply components that are obsolete and a single point of failure for the TRADEX radar with a modern solid state power supply technology which would replace the legacy power supply, modulator, crowbar and capacitor bank. ***FY 2023 Plans:***	0.803	0.200	0.552

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 983 / *Reagan Test Site (RTS) T&E Investments*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Wrap up documentation, installation, and test of new L-band High Voltage power supply for the TRADEX radar. Project completion has been delayed due to COVID-19 and supplier production issues. System should be fully operational and RMF compliant in FY23. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation and receiving additional funds to support this requirement.			
Title: MPS-36 Infrastructure Refresh ***Description:*** MPS-36 radars are quite old and decaying due to corrosion because of proximity to Pacific Ocean as well as normal wear and tear. This project is to replace outdoor infrastructure related to the MPS-36 radars: dish, pedestal, wiring, connectors, LNA, and other components as required. Upgrade to newer materials and technologies to improve performance and longevity. ***FY 2022 Plans:*** Begin multi-year infrastructure repair & refresh with inspections & study of existing issues, and begin to replace most critical items. ***FY 2023 Plans:*** Replace corroded and decayed components to restore functionality and maintainability. Begin work to upgrade/replace RF components and computer hardware that controls the RF sub-systems. Multi-year infrastructure repair & refresh with inspections & study of existing issues, and begin to replace most critical items. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation and receiving additional funds to support this requirement.	-	0.956	1.056
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** SBIR/STTR Transfer ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.237	-
Accomplishments/Planned Programs Subtotals	6.051	6.378	6.844

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 983 / *Reagan Test Site (RTS) T&E Investments*

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604759A / *Major T&E Investment*	Project (Number/Name) 984 / *Major Developmental Testing Instrumentation*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
984: *Major Developmental Testing Instrumentation*	-	47.985	38.027	43.861	-	43.861	33.384	26.653	30.434	33.116	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project develops and acquires major test instrumentation to perform developmental testing of weapon systems at United States Army Test and Evaluation Command's (ATEC) activities which include: Yuma Test Center (YTC), AZ; Aberdeen Test Center (ATC), MD; Electronic Proving Ground (EPG), AZ; White Sands Test Center (WSTC), NM; Redstone Test Center (RTC), AL; Cold Regions Test Center (CRTC), AK.

Projects are designated as a major test program based on their visibility, assessed relative technical risk (medium high), schedule risk, cost (greater than $1.500 Million per year or $7.500 Million for the total Project) and applicability to other mission areas or services. These Projects are technically demanding, state of the art, unique instrumentation assets or suites to meet the technology shortfalls, and generally result from development programs managed by a professional project management team.

Test Network Modernization (TNM) will upgrade existing test data networks to ensure infrastructures are capable of providing reliable and secure transport of data and communications for ATEC test activities. Applied Environments Modernization (AEM) program will upgrade antiquated Environmental labs for climatic and dynamic testing with new cascade refrigeration units, climatic chambers, vibration test systems, x-ray cameras, a real-time radiography system and full spectrum solar lights. Robotics/Unmanned Aerial Systems (R/UAS) Instrumentation Suite will develop and procure instrumentation for testing controlled and autonomous ground and aerial robotic systems. System of Systems Cooperative Engagement Test Infrastructure (SCETI) will provide for the development of systems to conduct systems-level Manned-Unmanned Teaming (MUM-T) testing for both aircraft and ground systems in a distributed environment. ATEC Fiber Modernization will provide all ATEC Test Centers with a revitalized fiber network to complement the TNM program. Due to limited commercial infrastructure, the cold regions provide a difficult climate for network connectivity. Therefore, both TNM and AFM's ability in resourcing an edge capability along with providing a permanent fiber backbone on Army test ranges is critical to ensuring advanced weapon systems operate flawlessly in extreme cold environments. Telemetry Systems Modernization (TSM) will modernize outdated telemetry systems with new equipment designed to enhance the technical and spectral capabilities currently available. This new telemetry equipment will also provide for a remote controlled operational environment. In support of the National Defense Strategy, each of these programs supports the following Army Cross Functional Teams: Long Range Precision Fires, Next Generation Combat Vehicle and Future Vertical Lift.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: EMD phase contract activity of the Test Network Modernization.	12.545	12.725	16.631
Description: Engineering, Manufacturing, and Development (EMD) phase contract activity for the Test Network Modernization. This effort will provide a modern test infrastructure capable of reliable, secure transport of test data and test communications for Aberdeen Test Center (ATC), Electronic Proving Ground (EPG), Redstone Test Center (RTC), White Sands Test Center (WSTC),			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 984 / *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Yuma Proving Ground (YPG), and Cold Regions Test Center (CRTC). This effort applies an enterprise solution to replace end-of-life equipment with the purpose of improving and providing the capability to support future network/data throughput demands consistent with operations and cybersecurity requirements. This effort supports Long Range Precision Fires, Next Generation Combat Vehicle and Future Vertical Lift Cross-Functional Teams. ***FY 2022 Plans:*** The Test Network Modernization effort will continue in the engineering and manufacturing phase. FY 2022 funds in the amount of $12.725 Million will continue the standardization of the network that allows modern monitoring, tracking, and troubleshooting of network issues and failure points. ***FY 2023 Plans:*** The Test Network Modernization effort will continue in the engineering and manufacturing phase. FY 2023 funds in the amount of $16.631 Million will continue the standardization of the network that allows modern monitoring, tracking, and troubleshooting of network issues and failure points. Test Centers with high customer demands, such as White Sands Test Center and Yuma Test Center will also be receiving fiber optic network Dense Wavelength Division Multiplexing (DWDM) upgrades to address end of life equipment issues. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY2023 increase in funding is required to obtain the network equipment identified during market research for all ATEC test centers.			
Title: EMD for the Applied Environments Modernization.	10.267	5.698	7.755
Description: EMD phase contract activity for the Applied Environments Modernization program. This effort supports Long Range Precision Fires, Next Generation Combat Vehicle, Future Vertical Lift, Air and Missile Defense Cross-Functional Teams. ***FY 2022 Plans:*** Will continue EMD phase for Applied Environments Modernization program. In FY 2022 funds in the amount of $5.698 Million will be used to continue with the procurement of a Rain and Wind Facility, Temperature, Altitude, Humidity, and Decompression Chamber, Portable Field Refrigeration unit, and Multi-Use Conditioning Chambers at Yuma Test Center (YTC) and a Replacement Temperature Humidity Chamber at Redstone Test Center (RTC). ***FY 2023 Plans:*** Will continue EMD phase for Applied Environments Modernization program. In FY 2023 funds in the amount of $7.755 Million will be used to continue with the purchase of equipment utilized for testing environmental effects at Yuma Test Center (YTC) and Redstone Test Center (RTC). Specific equipment to be upgraded in FY2023 includes: Temperature & Altitude Conditioning			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 984 / *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Chamber, Large Temperature Conditioning Shroud, High Energy X-Ray Tube System and Large Portable Temperature Conditioning System. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY2023 increase in funds due to more refined estimates.			
Title: EMD phase contract activity for Robotics/UAS Instrumentation Suite ***Description:*** EMD phase of Robotics/Unmanned Autonomous System (UAS) Instrumentation Suite for testing controlled and autonomous ground and aerial robotic systems. This effort supports Next Generation Combat Vehicle and Future Vertical Lift Cross-Functional Teams. ***FY 2022 Plans:*** Funds in the amount of $6.569 Million will continue with the acquisition of instrumentation hardware and sensor suite equipment needed for testing controlled and autonomous ground and aerial robotic systems at Aberdeen Test Center. ***FY 2023 Plans:*** Funds in the amount of $7.163 Million will continue with the acquisition of instrumentation hardware and sensor suite equipment needed for testing controlled and autonomous ground and aerial robotic systems at Aberdeen Test Center. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY2023 increase in funds is required for additional equipment identified during acquisition refinement.	6.263	6.569	7.163
Title: EMD phase contract activity for ATEC Fiber Modernization ***Description:*** ATEC Fiber Modernization will provide all ATEC Test Centers with a revitalized fiber network to complement the Test Network Modernization (TNM) program. This effort provides test centers with an improved fiber infrastructure to support greater data payloads and increased network reliability. This enterprise effort will replace fiber optic cable at the test centers to extend the lifecycle of the test networks. This effort supports Long Range Precision Fires, Next Generation Combat Vehicle, Network, Air and Missile Defense and Future Vertical Lift Cross-Functional Teams. ***FY 2022 Plans:*** Funds in the amount of $5.225 Million will continue the market research for revitalization of the network and further refine the acquisition strategy for replacement of fiber network at all ATEC test centers. ***FY 2023 Plans:***	0.963	5.225	5.585

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 984 / *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funds in the amount of $5.585 Million will used to continue the acquisition of hardware needed to revitalize and replace the fiber network at all ATEC test centers. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY2023 increase in funds is due to refinement of necessary equipment identified during acquisition strategy refinement.			
Title: EMD phase contract activity for Telemetry Systems Modernization ***Description:*** Telemetry Systems Modernization will modernize current outdated telemetry systems located at: White Sands Test Center (WSTC), Yuma Test Center (YTC) , Aberdeen Test Center (ATC) and Redstone Test Center (RTC). Telemetry systems are a core capability for supporting testing under ATEC for airborne and both manned & unmanned ground vehicles. The modernization of these systems will provide enhanced technical and spectral capability while also providing for a remote controlled operational environment. This effort supports Long Range Precision Fires, Next Generation Combat Vehicle, Air and Missile Defense, and Future Vertical Lift Cross-Functional Teams. ***FY 2022 Plans:*** Funds in the amount of 6.422 Million will continue with replacement of obsolete Telemetry system components at Redstone Test Center, Yuma Test Center and White Sands Test Center. This replacement will include Commercial Off The Shelf (COTS) fixed site and mobile telemetry equipment. ***FY 2023 Plans:*** Funds in the amount of $6.727 Million will continue with replacement of obsolete Telemetry system components at Redstone Test Center, Yuma Test Center and White Sands Test Center. This replacement will include Commercial Off The Shelf (COTS) fixed site and mobile telemetry equipment. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY2023 increase in funds is due to refinement of necessary equipment identified during acquisition strategy refinement.	7.859	6.422	6.727
Title: EMD phase contract activity for System of Systems Controlled Environment Test Infrastructure (SCETI) ***Description:*** EMD phase for System of Systems Cooperative Engagement Test Infrastructure (SCETI). This effort supported the Future Vertical Lift Cross-Functional Team.	5.088	-	-
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	-	1.388	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 984 / *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	42.985	38.027	43.861

	FY 2021	FY 2022
Congressional Add: Radio frequency threat systems emulator for rotary wing aircraft	5.000	-
FY 2021 Accomplishments: Congressional Add funding in the amount of $5 million dollars for the Major Operational Test Instrumentation of the radio frequency threat system emulator for rotary wing aircraft.		
Congressional Adds Subtotals	5.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604759A / *Major T&E Investment*	Project (Number/Name) 986 / *Major Operational Test Instrumentation*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
986: *Major Operational Test Instrumentation*	-	11.840	29.441	4.623	-	4.623	-	4.636	4.251	4.250	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds the development, acquisition, and integration of major operational test instrumentation for the U.S. Army Test and Evaluation Command's Operational Test Command and supporting test activities at test and training ranges. Requirements for instrumentation are identified through a long range survey of project managers, Research Development and Engineering Centers (RDECs), and Battle Laboratories developing future weapon systems and the test programs that support these systems. Project focus is to address Director Operational Test and Evaluation (DOT&E)-identified Army test realism shortfalls.

Projects are designated as a major test program based on their visibility, assessed relative technical risk (medium-high), schedule risk, cost (greater than $1.500 million per year or $7.500 million for the total project) and applicability to other mission areas or services. These projects are technically demanding, state-of-the-art, unique instrumentation assets or suites to meet technology shortfalls, and generally result from development programs managed by a professional project management team.

The DOT&E annual report to Congress identified shortfalls in the Army's abilities to create realistic operational environments. The Exportable Live Virtual Constructive Command Center (XLCC)(formerly called the Integrated Live-Virtual-Constructive (LVC) Test Environment (ILTE)) project will address multiple shortfalls identified by DOT&E. XLCC is a portfolio of related development efforts that will deliver a system of systems to provide a Real-Time Casualty Assessment (RTCA) and instrumentation suite that delivers a high fidelity, realistic, real-time capability to measure hardware and personnel performance in modern combat environments. XLCC will enable testing under tactical conditions for small and large-scale operations while integrating network operations and effects in support of the Army Equipment Modernization Plan. XLCC also allows the U.S. Army to test all Current-to-Future weapon systems in a realistic operational environment. XLCC will transition Research, Development, Test and Evaluation (RDTE) developed performance enhancements and technology upgrades to the operational test command, control, and communications, communications network, weapons system interfaces, vehicle and dismounted-troop kits and peripherals, Global Positioning System (GPS), encryption components, and integrate operational realistic digital battlefield data collection and analysis tools. These tools will collect, store and analyze data from the digital battlefield. Improvements will enable the XLCC system of systems to measure and record accrued damage, levels of exposure, effects of countermeasures, evasive action, and instrument threat vehicles. This capability is required by the operational test community to integrate digital battlefield data collection and analysis tools to support Project Convergence, Army Modernization priorities and other operational tests.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Exportable Live Virtual Constructive Command Center (XLCC)	-	3.701	4.623
Description: Funds the development, acquisition, and integration of major operational test instrumentation for the U.S. Army Test and Evaluation Command's Operational Test Command and supporting test activities at test and training ranges.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 986 / *Major Operational Test Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: Develop and integrate the Exportable Live Virtual Constructive Command Center (XLCC) System of Systems with capability to perform real-time casualty assessment (RCTA), create operational realistic test environments, collect test data, command and control the test environment, and integrate with other systems and tools. ***FY 2023 Plans:*** Funds in the amount of $4.623 Million will create operational realistic test environment and integrate with other systems and tools; update Real Time Casualty Assessment and fair-fight methodologies and provide data analytics to the test community; integrate and provide initial interoperability with current and future Multi-Domain Operations (MDO) range threats (e.g. Threat Battle Command Force and Intelligence Electronic Warfare Tactical Proficiency Trainer) through development of Test and Evaluation Network Architecture (TENA) Gateways; provide continuous SW/HW updates to allow flexibility and modularity in system capabilities in order to deploy XLCC to a multitude of ranges and test sites. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2022 to FY 2023 funding increase supports the integration of existing Army drone capabilities and modification of Exportable Live Virtual Constructive Command Center (XLCC) software needed for Operational Test Command (OTC) to support near term test of Counter small Unmanned Aerial System (C-sUAS). Program name change in FY 2022 from ILTE to XLCC.			
Title: SBIR/STTR ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.140	-
Accomplishments/Planned Programs Subtotals	-	3.841	4.623

	FY 2021	FY 2022
Congressional Add: Major operational test instrumentation	11.840	25.600
FY 2021 Accomplishments: T&E Investment to advance hardware and software to properly conduct operational testing on 31 Army modernization efforts in development by Army Futures Command. Adds near-peer threat live, virtual, and constructive components (ideally reconfigurable/programmable threat simulators and simulations) that will operate within the Integrated Live-Virtual-Constructive Test Environment (ILTE) real-time simulation, test control, and data architectures for network communications and processing. Will enhance Real Time Casualty Assistance (RTCA) simulation that includes kinetic weapons as well as directed		

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** 986 / *Major Operational Test Instrumentation*

	FY 2021	FY 2022
energy weapons, electronic warfare, cyber operations, and a converged EW/Cyber capability. Will integrate constructive simulation to augment single, one-on-one RTCA effects calculation as well as replicating supporting systems-of-systems via high-fidelity modeling. ***FY 2022 Plans:*** T&E Investment to advance hardware and software to properly conduct operational testing on 31 Army modernization efforts in development by Army Futures Command. Adds near-peer threat live, virtual, and constructive components (ideally reconfigurable/programmable threat simulators and simulations) that will operate within the Exportable Live Virtual Constructive Command Center (XLCC) (formerly Integrated Live-Virtual-Constructive Test Environment (ILTE)) real-time simulation, test control, and data architectures for network communications and processing. Will enhance Real Time Casualty Assistance (RTCA) simulation that includes kinetic weapons as well as directed energy weapons, electronic warfare, cyber operations, and a converged Electronic Warfare/Cyber capability. Will integrate constructive simulation to augment single, one-on-one RTCA effects calculation as well as replicating supporting systems-of-systems via high-fidelity modeling. Upgrade electronic range infrastructure for simulation, data exchange and instrumentation required. Prototype threat assets capable of emulating synchronized joint effects Integrate high fidelity simulations; and kinetic and non-kinetic RTCA effects. Support test events for: Artificial Intelligence (AI), Ground Combat, Future Vertical Lift (FVL), Command and Control (C2) and Integrated Cyber, Electronic Warfare and Kinetic Operations.		
Congressional Adds Subtotals	11.840	25.600

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604759A / *Major T&E Investment*	Project (Number/Name) EY9 / *Range Radar Replacement Program (RRRP)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
EY9: *Range Radar Replacement Program (RRRP)*	-	52.340	18.687	50.065	-	50.065	26.239	38.183	47.731	48.196	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In order to effect strategic overmatch on current and future battlefields, it is essential that the United States (U.S.) Army provide advanced radar system instrumentation for developmental testing. Since existing range radar instrumentation is aged beyond useful life and cannot adequately support emerging test requirements, the Range Radar Replacement Program (RRRP) recapitalizes and develops modern instrumentation radars to replace obsolete tracking and surveillance radars at U.S. Army Test and Evaluation Command's (ATEC) activities, which include: Aberdeen Test Center (ATC), MD; White Sands Test Center (WSTC), NM; and Yuma Test Center (YTC), AZ. The project will deliver capability in two block increments: Block I will recapitalize or replace existing radar systems, and Block II will develop a Long Range Radar which is compliant with ATEC's Test Capability Requirements Document (TCRD). The acquisition of modern instrumentation radar systems will provide the Army with critical testing data essential for the development of next generation technology and advanced system capabilities. The RRRP provides the test centers with improved radar resolution, sensitivity, accuracy, clutter suppression, and reliability. The planned solution to meet program requirements consists of four primary items: Long Range Single Object Tracking Radars (SOTR), Long Range Multiple Object Tracking Radars (MOTR), Medium Range Radars (MRR), and Short Range Radars (SRR). The resulting systems will not only reduce operation and sustainment costs for the ranges, but will improve data collection, thus enhancing development of Army systems being tested at these ranges. The current fleet of instrumentation radars located at ATC, WSTC, and YTC has become antiquated to the extent that they are not able to support the test needs of the test centers.

This Project will procure Modified Commercial Off-the-Shelf (MCOTS) radars for both the MRR and SRR solutions, and a combination of recapitalization and MCOTS replacement for the Long Range SOTRs. Also, the project will conduct Engineering and Manufacturing Development (EMD) for upgrading three Long Range MOTRs.

FY23 in the amount of $50.065M provides funding for final two Block I LRR contract, continued testing and acceptance costs of remaining Block I radars to include Medium, Long Range and MPS-39 MOTR instrumentation radars, and funds the Block II ECP with continued development of Block II radars.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: EMD Phase	52.340	18.005	50.065
Description: The Fiscal Year (FY) 2023 request of $50.065 million continues delivery and acceptance testing of Medium, Long Range, and MPS-39 MOTR instrumentation radars and continues development of the first Block II Long Range radar prototype.			
FY 2022 Plans: Continue development of the first Block II Long Range radar prototype, and continue acceptance testing of Medium Range, Short Range and MPS-39 MOTR instrumentation radars.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** EY9 / *Range Radar Replacement Program (RRRP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
SBIR/STTR $682K. ***FY 2023 Plans:*** Continue development of the first Block II Long Range radar prototype, and acceptance testing of Medium, Long Range, and MPS-39 MOTR instrumentation radars. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 increase is consistent with the strategic plan to align RRRP with developmental testing requirements emerging from Army modernization efforts; this also will support the Range Radar Replacement Program's (RRRP) Block II LRR development and schedule. .			
Title: FY22 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** FY22 $682K transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.682	-
Accomplishments/Planned Programs Subtotals	52.340	18.687	50.065

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604759A / *Major T&E Investment*	Project (Number/Name) FF1 / *Cyber Blue Team*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
FF1: *Cyber Blue Team*	-	1.015	1.084	2.313	-	2.313	1.144	1.143	1.144	1.155	0.000	8.998
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In 2016 the Army Acquisition Executive (AAE) designated the Program Manager for Cyber, and Training (PM CT2) (formerly PM ITTS) as the Office of Primary Responsibility for Cyber Acquisition Blue Teams (CABT) certifications and standards program. This Project executes the establishment and management of certification standards for CABT and coordination of requirements on behalf of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA (ALT)).

PM CT2 will establish certification standards, certify Blue Teams and maintain a vulnerabilities/lessons learned repository. PM CT2 will work with Blue and Red Teams to establish processes which facilitate open network tests under the red team authority, coordinate with Program Managers on CABT efforts on behalf of ASA (ALT) and report to ASA (ALT) on new cyber vulnerabilities. Blue teams will work cooperatively with acquisition programs to make sure all security measures are taken throughout the program's lifecycle, ensuring cyber resiliency. Blue teams are essential to help military operators assess, protect and defeat the presence of cyber security threats across Army Acquisition Programs.

Will focus on the continuation of certifying candidate teams. The goal is to certify enough teams to allow acquisition programs the flexibility to find a certified Blue Team that meet their program's schedule and cost and can be incorporated early on in the program. CABT vulnerability assessments will provide data analytics to report trends and lessons learned. A web portal will serve as a one stop shop for both candidate and certified Blue teams to obtain and maintain their certification.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Cyber Blue Teams	1.015	1.044	2.313
Description: Management and oversight of Cyber Blue Team vulnerability assessments.			
FY 2022 Plans: Will continue to support the maintenance and operation of a central repository to include trend analysis and lessons learned from vulnerability assessments. The CABT program will also develop and maintain an additional web portal to support and manage both the candidate and the certified teams.			
FY 2023 Plans: The funding provides the ability to continue certification of Army Acquisition and Modernization Cyber Assessment Teams (AAMCATs) as well as support the operation and maintenance of an AAMCAT web portal and central repository to include trend analysis and lessons learned from engineering risk reduction assessments.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0604759A / *Major T&E Investment*	**Project (Number/Name)** FF1 / *Cyber Blue Team*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY2022 to FY2023 increase is for the ability to certify additional AAMCATs within the FY as well as support and oversee the increasing volume of AAMCATs.			
Title: SBIR/STTR ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.040	-
Accomplishments/Planned Programs Subtotals	1.015	1.084	2.313

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605103A / *Rand Arroyo Center*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	12.989	32.296	35.542	-	35.542	36.915	37.832	38.643	39.019	Continuing	Continuing
732: *Arroyo Center Spt*	-	12.989	32.296	35.542	-	35.542	36.915	37.832	38.643	39.019	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element funds the RAND-Arroyo Center, the Department of the Army's Federally Funded Research and Development Center, for strategic studies and analysis. The Army's management of RAND-Arroyo's activities are governed by AR 5-21. RAND-Arroyo Center provides strategic analytical research across a broad spectrum of issues grouped in three major research areas: Personnel, Training, and Health; Forces and Logistics; and Strategy, Doctrine and Resources. The RAND-Arroyo Center research agenda is primarily focused on mid/long-term strategic concerns. Current priorities include: implementation of the National Defense Strategy; total force readiness; Army modernization; operations and dynamic force employment; reform of business processes; multi-domain operations; soldier-centric investments; and soldier and family resilience. Results and analytical findings directly affect senior leadership deliberations on major issues. RAND-Arroyo research is sponsored by Army Senior Leaders and Army Major Commands. The Arroyo Center Policy Committee (ACPC), co-chaired by the Under Secretary of the Army and Vice Chief of Staff of the Army, provides guidance, sets the annual research plan, and monitors execution. In FY21 the ACPC directed a change in the execution of the RAND-Arroyo program which resulted in a change to business practices. The ACPC also directed a consolidation of existing resources for the RAND-Arroyo program.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	12.989	33.126	0.000	-	0.000
Current President's Budget	12.989	32.296	35.542	-	35.542
Total Adjustments	0.000	-0.830	35.542	-	35.542
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	35.542	-	35.542
• FFRDC Transfer	-	-0.830	-	-	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605301A *I Army Kwajalein Atoll*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	221.949	240.877	309.005	-	309.005	267.085	270.507	273.805	276.770	0.000	1,859.998
DW7: *Army Kwajalein Atoll Facilities Sustainment*	-	35.457	47.799	68.683	-	68.683	77.138	78.534	80.132	81.701	0.000	469.444
DW8: *Army Kwajalein Atoll Installation Services*	-	129.480	135.120	179.306	-	179.306	128.078	130.035	131.095	131.867	0.000	964.981
DW9: *Army Kwajalein Atoll Restoration And Modernization*	-	47.512	46.420	49.037	-	49.037	49.718	49.673	50.186	50.675	0.000	343.221
DX2: *Army Kwajalein Test Ranges and Mission Support*	-	9.500	11.538	11.979	-	11.979	12.151	12.265	12.392	12.527	0.000	82.352

A. Mission Description and Budget Item Justification

This Program Element (PE) is unique in the Research, Development, Test & Evaluation (RDTE) portfolio due to the comprehensive scope of RDTE funding at United States (U.S.) Army Garrison Kwajalein Atoll, directly supporting eleven leased islands with radars, telemetry, and optics in support of continuous New Foreign Launch surveillance, space surveillance, space object identification, offensive and defensive strategic ballistic and interceptor missile testing. In addition, responsibilities include provision of the totality of the logistics and municipal services required to maintain a strategically vital mission support infrastructure in a remote Pacific island chain 2,300 miles southwest of Hawaii. Kwajalein's flexible electromagnetic frequency spectrum, equatorial locale, deep water, and unmatched instrumentation make the nation's space and missile operations possible. In addition, the Ronald Reagan Ballistic Missile Defense Test Site (RTS) on Kwajalein is the Department of Defense's (DoD) only land-impact missile testing site, providing an increasingly vital Test & Evaluation (T&E) capability.

The U.S. Army Kwajalein Atoll / Ronald Reagan Ballistic Missile Defense Test Site (USAKA/RTS), located in the Republic of the Marshall Islands, is a remote, secure activity of the Major Range and Test Facility Base (MRTFB). USAKA/RTS supports test and evaluation of major Army and DoD missile and space acquisition programs and provides New Foreign Launch surveillance and space operations (surveillance and object identification) in support of U.S. Strategic Command (USSTRATCOM), the U.S. Air Force, and National Aeronautics and Space Administration (NASA) scientific and space programs. USAG-KA provides Base Operations (BOS), Infrastructure and Services (Projects DW7, DW8, and DW9) support to the USAKA/RTS mission and other resident Programs (i.e. Army missile defense, Air Force & Navy Intercontinental Ballistic Missile (ICBM) developmental and operational tests; Army, Air Force, Navy and Defense Advanced Research Projects Agency (DARPA) hypersonic developmental tests; Air Force Space Fence, Missile Defense Agency (MDA) operational /demonstration/ validation tests; USSTRATCOM space situational awareness requirements (including contributions to the U.S. Space Surveillance Network); and space experiments). Base Operations Services at Kwajalein Atoll are conducted predominantly through a contracted workforce with governmental oversight. These PE-funded contracts provide: installation/base operations and maintenance for all facilities, logistics, and security; power generation fuel supporting the installation and radars; transportation; and mission essential bandwidth via a fiber optic cable system.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605301A *I Army Kwajalein Atoll*

The Network Enterprise Technology Command (NETCOM) utilizes Project DX2 to provide civilian pay, manpower service contracts, supporting Information Technology (IT), equipment, and associated costs specifically identified and measurable to plan, manage, coordinate, and execute Information Technology Services Management at Army Kwajalein Test Ranges. This Project provides C4IM services in accordance with the Department of Army Pamphlet (DA PAM) PAM 25-1-1 and the Army C4IM Services List.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	221.965	240.877	0.000	-	0.000
Current President's Budget	221.949	240.877	309.005	-	309.005
Total Adjustments	-0.016	0.000	309.005	-	309.005
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.016	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	309.005	-	309.005

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605301A / *Army Kwajalein Atoll*	Project (Number/Name) DW7 / *Army Kwajalein Atoll Facilities Sustainment*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
DW7: *Army Kwajalein Atoll Facilities Sustainment*	-	35.457	47.799	68.683	-	68.683	77.138	78.534	80.132	81.701	0.000	469.444
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides resources for preventive maintenance and repair necessary to sustain 1,477 facilities on Kwajalein, Roi-Namur, and nine other leased islands, totaling 2.6 million square feet. Funds are focused toward keeping facilities in good working order in accordance with industry standards. This includes emergency response and service calls, minor repair and major repair or replacement resulting from Kwajalein's particularly harsh climate, including strong winds, saltwater corrosion, and sustained torrential rainfall. Funds also provide manpower necessary to achieve, evaluate, and sustain compliance with appropriate Federal, State, and local environmental laws, Executive Orders, Department of Defense (DoD) Directives, regulations, and overseas country-specific Final Governing Standards.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Real Property Maintenance	35.336	45.931	68.549

Description: This effort provides the preventive maintenance and repair necessary to sustain Kwajalein facilities and utilities in order to prevent further deterioration. Funds facilities and utilities at minimum acceptable levels to mitigate risk of catastrophic failures. Includes regularly scheduled adjustments and inspections, preventive maintenance tasks, and emergency response and service calls for minor repairs. Also includes costs of major repairs or replacement of facility components that are expected to occur periodically throughout the expected service life. This work includes: regular roof replacement; refinishing wall surfaces; repairing and replacing electrical, plumbing, and cooling systems; replacing tile and carpeting; and similar types of work. Sustainment, however, is not intended to keep facilities adequately functioning beyond their expected service lives.

FY 2022 Plans:

Will continue to service 1,477 facilities on Kwajalein, Roi-Namur, and the nine other leased islands, totaling 2.6 Million square feet. Will continue an aggressive maintenance plan based on the significant corrosive environment; prepare maintenance plans and schedules for recurring or preventive maintenance; perform periodic pre-maintenance inspections; perform preventive and corrective maintenance; report the need for major repair, replacement, or rehabilitation; prepare records of maintenance actions performed and deficiencies discovered; and perform post-maintenance inspections.

FY 2023 Plans:

Will continue to service 1,477 facilities on Kwajalein, Roi-Namur, and the nine other leased islands, totaling 2.6 Million square feet. Will continue an aggressive maintenance plan based on the significant corrosive environment; prepare maintenance plans and schedules for recurring or preventive maintenance; perform periodic pre-maintenance inspections; perform preventive and corrective maintenance; report the need for major repair, replacement, or rehabilitation; prepare records of maintenance actions

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605301A / *Army Kwajalein Atoll*	**Project (Number/Name)** DW7 / *Army Kwajalein Atoll Facilities Sustainment*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
performed and deficiencies discovered; and perform post-maintenance inspections. Increased funding for FY23 will accelerate efforts to arrest facility degradation in a harsh maritime environment and reduce the facilities maintenance backlog. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding buybacks sustainment and reduces the facilities maintenance backlog.			
Title: Environmental Quality ***Description:*** This effort provides manpower necessary to achieve, evaluate, and sustain compliance with appropriate Federal, State, and local environmental laws, Executive Orders, DoD Directives, regulations, and overseas country-specific Final Governing Standards, in order to protect human health and safety and reduce total cost to the Army through environmental compliance, conservation, and pollution prevention. Enables installations to comply with legal environmental mandates and critical stewardship responsibilities that impact management and modernization of installations, while sustaining natural and cultural resources in a manner that provides continued access and long-term use of training lands to support the Army's installation missions.. ***FY 2022 Plans:*** Will continue oversight and management of environmental workload ***FY 2023 Plans:*** Will continue oversight and management of environmental workload ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustments.	0.121	0.128	0.134
Title: SBIR/STTR ***Description:*** FUNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 USC 638. ***FY 2022 Plans:*** FUNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 USC 638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FUNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 USC 638	-	1.740	-
Accomplishments/Planned Programs Subtotals	35.457	47.799	68.683

C. Other Program Funding Summary ($ in Millions)

N/A

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C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

N/A

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COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
DW8: *Army Kwajalein Atoll Installation Services*	-	129.480	135.120	179.306	-	179.306	128.078	130.035	131.095	131.867	0.000	964.981
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project resources Base Operations / Installation Services Support for United States (U.S.) Army Kwajalein (USAKA) Garrison located in the Republic of the Marshall Islands, a remote, secure activity designated as a Major Range and Test Facility Base (MRTFB). Base Operations / Installation Services Support resourcing is a critical enabler to ensure continuity of operations supporting Test and Evaluation and Space Operations of the Ronald Reagan Ballistic Missile Test Site in its role as an MRTFB Activity. Kwajalein is a government-managed / contractor-operated (GOCO) site and is primarily dependent upon its associated support contracts for the daily operations and maintenance of Base Operations / Installation Services Support. Installation Services Support consists of: Utility Services; logistical (fuel/transportation) operations support requirements; Medical/Dental Services; Education (K-12) Services; Food/Grocery Services; Contracted Security Guards; and Aviation/Marine support.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army Airfields (AAF) and Heliports (AHP)	11.923	7.775	8.212
Description: Provides Resources Operations and Maintenance for Army Airfield and Aviation Fleet. Provides manpower, equipment acquisition, sustainment and maintenance in support of airfield operations, airfield management, aircraft services, air traffic services (ATS), air transport, airspace management and control, and air traffic control equipment maintenance. Includes airfield specific equipment, safety requirements, Hazardous Materials (HAZMAT) support, and airfield obstruction surveys. AAF/ AHP functions support Department of Defense (DoD) priorities for Army and joint force capabilities and inter-agency, intra-agency and multinational operations to meet current and future full spectrum requirements. Funds AAF/AHP functions at the necessary state of readiness to support missions across eleven islands (two fixed wing/six rotator wing) in addition to international aircraft traffic and reduces risk of major accidents/incidents.			
FY 2022 Plans: Provide services for all mission essential DoD, commercial, and transient aircraft. Operate two Airfields and eight outer islands helipads. Operate and maintain one Air Traffic Control (ATC) tower with class D airspace, two separate airfield operations and integrated STARS radar for aircraft separation and de-confliction. Support all intra-atoll cargo and personnel movements with two fixed wing and four rotary wing aircraft. Support transient international flights.			
FY 2023 Plans: Will provide services for all mission essential DoD, commercial, and transient aircraft. Operate two Airfields and eight outer islands helipads. Operate and maintain one Air Traffic Control (ATC) tower with class D airspace, two separate airfield operations and			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
integrated STARS radar for aircraft separation and de-confliction. Support all intra-atoll cargo and personnel movements with two fixed wing and four rotary wing aircraft. Support transient international flights. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Army Community Services (ACS) ***Description:*** Provides programs that prevent family violence/fatalities through family advocacy programs and counseling; provide specialized assistance to provide prevention, education and family sustainment for military and civilian personnel and their families; and also provide critical financial, employment and relocation education and training to Soldiers, civilians, and their Families. ***FY 2022 Plans:*** Continue to provide necessary/routine Army Community Services to the Installation. ***FY 2023 Plans:*** Will continue to provide necessary/routine Army Community Services to the Installation. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.	-	0.281	0.298
Title: Child and Youth Services (CYS) ***Description:*** Provides child care, youth, and school services (CYSS) programs for children and youth. Provides child and youth spaces required to meet Army's child care and youth participation demand goals. Resources the following programs: 1) Child Development Centers; 2) Family Child Care; 3) School Age Care; 4) Youth Programs; 5) Youth Sports & Fitness; 6) School Support Services. Resources staffing levels necessary to minimize risk of child abuse, and the oversight to achieve and maintain DoD Certification (State licensing equivalent) and National Accreditation per statutory requirement and DoD policy. ***FY 2022 Plans:*** Continue to provide resources to operate CYS programs on Kwajalein to include a Child Development Center, School Age Services programs, Supplemental Programs and Services, and Youth programs and services. Establish and maintain developmentally and age-appropriate staff-child/youth interactions, activities, activity schedules and plans, supplies and equipment, furnishings, and environment (both indoors and outdoors) that lead to the social, physical, cognitive, and emotional growth of children up to 18 years. Ensure that youth programs include, at a minimum, seasonal sports programs, 4-H Club	1.104	0.427	0.449

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
programs, Boys and Girls Club of America programs, instructional programs, recreational programs, programs that promote leadership and citizenship, intervention services, and teen programs. ***FY 2023 Plans:*** Will continue to provide resources to operate CYS programs on Kwajalein to include a Child Development Center, School Age Services programs, Supplemental Programs and Services, and Youth programs and services. Establish and maintain developmentally and age-appropriate staff-child/youth interactions, activities, activity schedules and plans, supplies and equipment, furnishings, and environment (both indoors and outdoors) that lead to the social, physical, cognitive, and emotional growth of children up to 18 years. Ensure that youth programs include, at a minimum, seasonal sports programs, 4-H Club programs, Boys and Girls Club of America programs, instructional programs, recreational programs, programs that promote leadership and citizenship, intervention services, and teen programs. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Engineering Services ***Description:*** Provides (1) Facility Management and Administration and (2) Installation Engineering Services. Facility Management includes public works management costs, contract management, material procurement, facility data management; to include, Geographic Information System (GIS) and Sustainment Management Systems (SMS) suite implementation/inspections, furnishings management costs, and real property and real estate management. Installation Engineering Services includes facility engineer service contracts, annual inspection of facilities, master planning, overhead of planning and design, and overhead of construction management and non-Sustainment and Restoration Modernization (SRM) service calls. Excludes: vehicle maintenance, in-house shop and contracted personnel who routinely perform facility sustainment activities; and design engineers or project managers or construction inspectors who manage and oversee facility sustainment and construction projects. ***FY 2022 Plans:*** Continue to provide necessary/routine engineering services to the Installation. ***FY 2023 Plans:*** Will continue to provide necessary/routine engineering services to the Installation. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.	2.526	4.411	4.683
Title: Soldier Recreation and Community Support ***Description:*** Provides the development and delivery of Soldier Programs, Community Recreation, and Direct Common Family and Morale, Welfare and Recreation (FMWR) Support Services that sustain the Total Army, in accordance with (IAW) the Army	1.397	0.251	0.268

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Campaign Plan and the Chief of Staff of the Army (CSA)'s Strategic Priorities. Programs funded include sports, fitness and aquatics, recreation centers, libraries, outdoor recreation, skill development, bowling (16 lanes or less); Direct Common FMWR Support Services (essential command and control and risk management programs for property, funds and personnel); and as designated by Congress, Category C FMWR activities at remote and isolated sites. These programs resource readiness and resiliency and build upon physical, emotional, social and psychological coping skills; funds opportunities for Soldiers, civilians and Families to foster self-reliance, morale and a sense of belonging by offering positive discretionary time choices, mitigating aberrant behaviors through individual skill development and team participation. ***FY 2022 Plans:*** Continue to provided resources necessary to sustain Soldier Recreation and Community Support for a community population of 1400 and meet the needs of USAKA/RTS residents, tenants, satellite activities, range users, and other authorized organizations/ personnel on Kwajalein Island, Roi-Namur Island, Meck Island, and on other USAKA/RTS outer islands. ***FY 2023 Plans:*** Will continue to provided resources necessary to sustain Soldier Recreation and Community Support for a community population of 1400 and meet the needs of USAKA/RTS residents, tenants, satellite activities, range users, and other authorized organizations/personnel on Kwajalein Island, Roi-Namur Island, Meck Island, and on other USAKA/RTS outer islands. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Fire and Emergency Services (FES) ***Description:*** Provides for fire and emergency services for the installation, including preparation for and response and mitigation of aircraft and structural firefighting and rescue, technical rescue, Hazardous Materials and Weapons of mass destruction/Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) responses, and out of control wildfire mitigation in an all-hazard response environment. ***FY 2022 Plans:*** Continue to provide fire and Emergency Services which are performed in association with the Base Support/Logistics contractor. Provide fire protection services for all USAG-KA and RTS assets, to include facilities, structural, aircraft, shipboard and small watercraft, and wild land fires. Services provide protection for the fire hazards associated with operations and community at USAG-KA and RTS. Provide Fire Protection on Kwajalein and Roi-Namur 24 hours Provided Fire Protection and Emergency Services on Meck during duty hours, mission periods, and hazardous operations. Provide ambulance service on Kwajalein, Meck, and Roi-Namur Islands. Provide fire safety education and activities for the schools and child development center and for adult residents of USAG-KA. Train personnel normally assigned to work on the remote islands of Illeginni, Ennylabegan, Gagan, and	2.594	4.968	5.303

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Legan in first aid, Cardiopulmonary Resuscitation (CPR), and operation of fire extinguishers and fire alarm and suppression equipment peculiar to the island. Provide rescue and emergency medical personnel available for immediate dispatch to aircraft or vessel crash site, entry into the ocean or lagoon, and be provisioned for immediate rescue and emergency medical assistance. ***FY 2023 Plans:*** Will continue to provide fire and Emergency Services which are performed in association with the Base Support/Logistics contractor. Provide fire protection services for all USAG-KA and RTS assets, to include facilities, structural, aircraft, shipboard and small watercraft, and wild land fires. Services provide protection for the fire hazards associated with operations and community at USAG-KA and RTS. Provide Fire Protection on Kwajalein and Roi-Namur 24 hours Provided Fire Protection and Emergency Services on Meck during duty hours, mission periods, and hazardous operations. Provide ambulance service on Kwajalein, Meck, and Roi-Namur Islands. Provide fire safety education and activities for the schools and child development center and for adult residents of USAG-KA. Train personnel normally assigned to work on the remote islands of Illeginni, Ennylabegan, Gagan, and Legan in first aid, Cardiopulmonary Resuscitation (CPR), and operation of fire extinguishers and fire alarm and suppression equipment peculiar to the island. Provide rescue and emergency medical personnel available for immediate dispatch to aircraft or vessel crash site, entry into the ocean or lagoon, and be provisioned for immediate rescue and emergency medical assistance. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Financial Management (FM) Activities ***Description:*** Provides Directorate of Resource Management (DRM) and DRM base support for Army tenants resident on or receiving support from the Army installation. Functions of the DRM include program, budget, manpower, documentation, Memorandum of Understanding (MOU)/Memorandum of Agreement (MOA)/Support Agreement management, finance and accounting. ***FY 2022 Plans:*** Continue to provide program/budget support and budget execution, financial advisory service and accounting liaison services. Support Audit Readiness through Statement of Budgetary Resource samples. Continue to establish Inter-service Support Agreements (ISSA). Provide management analysis on manpower requirements and organizational structure analysis. Provide Contracting Officer Representative oversight for the Program Management functions for the base-support contract. ***FY 2023 Plans:*** Will Continue to provide program/budget support and budget execution, financial advisory service and accounting liaison services. Support Audit Readiness through Statement of Budgetary Resource samples. Continue to establish Inter-service Support	0.954	0.629	0.671

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Agreements (ISSA). Provide management analysis on manpower requirements and organizational structure analysis. Provide Contracting Officer Representative oversight for the Program Management functions for the base-support contract. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Food Services ***Description:*** Provides for the operation of dining facilities including contract employees, food service supplies, and equipment life-cycle replacement. ***FY 2022 Plans:*** Continue to provide services for DoD, contractor, host nation, interagency and intra-agency organizations with multiple facilities on three different islands to include 3 cafeterias, bakery, grocery store, dry/cold warehousing, AAFES retail stores, AAFES food court, and catering services and private organizations. Monitor and approve food purchases and preparation. Conduct food service inspections. ***FY 2023 Plans:*** Will continue to provide services for DoD, contractor, host nation, interagency and intra-agency organizations with multiple facilities on three different islands to include 3 cafeterias, bakery, grocery store, dry/cold warehousing, AAFES retail stores, AAFES food court, and catering services and private organizations. Monitor and approve food purchases and preparation. Conduct food service inspections. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.	16.703	9.114	8.746
Title: Unaccompanied Housing ***Description:*** Provides for Government-owned Unaccompanied Housing including appropriated funded Army lodging, lifecycle replacement furnishings, and other associated costs. Includes Manpower purchase, control, moving, management and handling of lifecycle replacement and repair for all unaccompanied housing furnishings. Includes all costs of authorized replacement furnishings in existing inventory. ***FY 2022 Plans:*** Continue to provide contractor management, oversight, M&R, and control of all USAG-KA Housing/ Billeting Facilities Utilize best commercial residential business practices to ensure basic quality of life standards are achieved and are in compliance with life and safety standards. Provide Master Key control services. Provide and implement a sound furnishings and appliances program that addresses acquisition, replacement, M&R, and refurbishing. Provide Hospitality Kits consisting of the minimum essential items	0.115	1.607	1.683

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
to operate a household until permanent party personnel's HHG arrive and from HHG shipment until departure. Provide COOM on all facilities prior to reassignment to in-coming resident. ***FY 2023 Plans:*** Will continue to provide contractor management, oversight, M&R, and control of all USAG-KA Housing/ Billeting Facilities Utilize best commercial residential business practices to ensure basic quality of life standards are achieved and are in compliance with life and safety standards. Provide Master Key control services. Provide and implement a sound furnishings and appliances program that addresses acquisition, replacement, M&R, and refurbishing. Provide Hospitality Kits consisting of the minimum essential items to operate a household until permanent party personnel's HHG arrive and from HHG shipment until departure. Provide COOM on all facilities prior to reassignment to in-coming resident. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Law Enforcement ***Description:*** Provides Law Enforcement (LE) activities/services for the protection of people and property, enforcement of laws, and maintenance of order. This effort covers, but is not limited to: all personnel and operating costs associated with LE operations, salaries, overtime, benefits, material and supplies, equipment, vehicles, training and management for LE response forces (Department of the Army Civilian Police (DACP) and military police (MP)). Funds the conduct of motor vehicle traffic supervision, and liaison with civilian LE agencies. Funds LE work load derived from historical responses to calls for service (i.e. Crimes against Persons, Drug Crimes, Traffic Crimes, Absent Without Leave (AWOL), Sex Crimes, and Crimes against Property, Environmental Violations, Fraud Crimes, Alarm Response and Public Service Calls), investigation of non-felony level offenses, preparation and distribution of MP reports and related documents, and collection and analyses of crime statistics. ***FY 2022 Plans:*** Continue to provide Law Enforcement activities/services for the protection of people and property, enforcement of laws, and maintenance of order. Will cover, but not limited to, all personnel and operating costs associated with LE operations, salaries, overtime, benefits, material and supplies, equipment, vehicles, training and management for LE response forces. ***FY 2023 Plans:*** Will continue to provide Law Enforcement activities/services for the protection of people and property, enforcement of laws, and maintenance of order. Will cover, but not limited to, all personnel and operating costs associated with LE operations, salaries, overtime, benefits, material and supplies, equipment, vehicles, training and management for LE response forces. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	1.210	1.697	1.810

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Minor economic adjustment.			
Title: Materiel Maintenance	3.944	2.903	3.099
Description: Provide for automotive, Marine vessel, Construction, General Equipment, and Armament Maintenance. Also provides Field and Sustainment level maintenance services to Army activities in accordance with AR 750-1; provides maintenance technical assistance to supported units and activities, and provides material maintenance on base operations support equipment. ***FY 2022 Plans:*** Continue to provide resources for the maintenance of assigned aircraft, marine vessels, heavy equipment, non-tactical and tactical equipment, construction equipment; base operations equipment and marine navigational aides. Provide government estimates for repair/ replacement of damaged, lost or lifecycle replacement equipment. Provide resources for On-Condition Cyclic Maintenance (OCCM) for marine vessels. ***FY 2023 Plans:*** Will continue to provide resources for the maintenance of assigned aircraft, marine vessels, heavy equipment, non-tactical and tactical equipment, construction equipment; base operations equipment and marine navigational aides. Provide government estimates for repair/ replacement of damaged, lost or lifecycle replacement equipment. Provide resources for On-Condition Cyclic Maintenance (OCCM) for marine vessels. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Municipal Services	5.122	1.918	45.826
Description: Provides for municipal services including grounds maintenance, custodial, pest management, solid waste or refuse handling operations, pavement clearance. ***FY 2022 Plans:*** Will provide necessary/routine municipal services to the Installation. ***FY 2023 Plans:*** Will provide necessary/routine municipal services to the Installation. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase funds Kwajalein Landfill Removal Project in FY23.			
Title: Installation Command and Management	36.688	33.008	34.877

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: Provides for a K-12 school system, medical/dental services, and Base Support Contract overhead fees. Additionally, supports offices of the Commander, Staff Judge Advocate (SJA), Chaplain, Public Affairs (PA), and Safety Office. Supports civilian pay and benefits, training, duty travel, Permanent Change of Station (PCS) costs, equipment, and contractual services for installation command and management activities. Kwajalein Medical/Dental services provide family practice and emergency services at Kwajalein (2-5 days for MEDEVAC support to Honolulu), a secondary clinic on Roi-Namur, and a dental clinic. Support includes but is not limited to medical lab and imaging services, pharmacy services, basic dental services, and all medical functions including inspections of medical facilities. ***FY 2022 Plans:*** Provide Installation Command and Management across 11 islands/defense sites to a population of over 100 Active Duty Military and Department of the Army civilians & 1100 contractors and their family members. Plan, organize, staff, direct, and control all aspects of installation and command management. ***FY 2023 Plans:*** Will provide Installation Command and Management across 11 islands/defense sites to a population of over 100 Active Duty Military and Department of the Army civilians & 1100 contractors and their family members. Plan, organize, staff, direct, and control all aspects of installation and command management. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Personnel Services Delivery ***Description:*** Provides a human resource specialist responsible for providing all aspects of human resource management, administrative, and counsel to the Garrison Staff. ***FY 2022 Plans:*** Continue to provide human resource support to the Garrison Staff. ***FY 2023 Plans:*** Will continue to provide human resource support to the Garrison Staff. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.	0.106	0.126	0.134
Title: Physical Security Matters	7.516	5.604	5.982

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: Provides resources for physical security programs and equipment to support Army installations and facilities requirements. Procures, installs, maintains and/or leases physical security equipment to include, but not limited to barriers; blast mitigation devices; communication systems; explosive detection devices; intrusion detection systems and devices; sensors; site improvements; management/planning; and security forces and technicians. Funds contract security guards including military working dog management and equipping the installation with explosive and drug detection dog capabilities. ***FY 2022 Plans:*** Continue to provide the necessary physical security procedures and materials to ensure USAG-KA maintains all proper security measures. ***FY 2023 Plans:*** Will continue to provide the necessary physical security procedures and materials to ensure USAG-KA maintains all proper security measures. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: Army Security Programs ***Description:*** Funds Army Command security activities supporting: Information Security, Personnel Security, Industrial Security, Communications Security (COMSEC) Policy, Security Education, Training and Awareness (SETA), Special Access Program (SAP) Security, Sensitive Compartmented Information (SCI) Security, Foreign Disclosure, and Technology Protection. ***FY 2022 Plans:*** Continue to provide the necessary security procedures and materials to ensure USAGKA maintains all proper security measures to ensure successful missions continue on USAGKA. ***FY 2023 Plans:*** Will continue to provide the necessary security procedures and materials to ensure USAGKA maintains all proper security measures to ensure successful missions continue on USAGKA. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.	0.112	0.126	0.134
Title: Supply Logistics ***Description:*** Provides supply operations which support: ammunition supply point services, bulk petroleum operations, marine and aviation assets, Army tenants, operation of a central receiving point and/or Installation Supply Support Activity (SSA) for goods	10.482	32.119	41.055

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
delivered to the installation, management of non-deployable installation property, and receipt, storage, issue, reutilization and tracking of hazardous materials. ***FY 2022 Plans:*** Continue to provided resources for property accountability of all GFE/CAP, reutilization items, Military Standard Requisitioning and Use Procedures ordering and delivery to multiple outer islands. Dispose of obsolete items in accordance with Army equipment disposition procedures. ***FY 2023 Plans:*** Will continue to provided resources for property accountability of all GFE/CAP, reutilization items, Military Standard Requisitioning and Use Procedures ordering and delivery to multiple outer islands. Dispose of obsolete items in accordance with Army equipment disposition procedures. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation/economic assumptions			
Title: Transportation Services ***Description:*** Provides the operation of installation transportation offices, transportation motor pools, and cost of rolling stock; also includes movement of privately-owned household goods of military personnel (and civilian personnel in overseas areas) in connection with assignment, reassignment, or termination of government-furnished family housing. ***FY 2022 Plans:*** Continue to provide resources for the operation of all transportation services to include 6 aircraft, 17 marine vessels, and over 200 pieces of rolling stock. Operate a centralized motor pool. Fund operations for movement of all international and intra atoll air and surface cargo to include mission critical equipment and supplies, household goods, HAZMAT, United States Postal Service (USPS) mail, medical, and food items. Safely ferry over 48,000 mission critical employees per month within the atoll on various USAGKA marine assets. ***FY 2023 Plans:*** Will continue to provide resources for the operation of all transportation services to include 6 aircraft, 17 marine vessels, and over 200 pieces of rolling stock. Operate a centralized motor pool. Fund operations for movement of all international and intra atoll air and surface cargo to include mission critical equipment and supplies, household goods, HAZMAT, United States Postal Service (USPS) mail, medical, and food items. Safely ferry over 48,000 mission critical employees per month within the atoll on various USAGKA marine assets. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	16.544	2.960	3.558

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Minor economic adjustment.			
Title: Utilities	9.075	18.109	10.015
Description: Provides utility services - production and distribution of utilities including expenses for electricity, steam, hot water, fuels and other utilities, and operation of electrical, air conditioning, refrigeration, water distribution, and wastewater collection and treatment plants and systems. ***FY 2022 Plans:*** Continue to provide resources including fuel to operate and maintain seven Power generation and distribution systems on Kwajalein; nine on Roi, five on Meck, and eleven total on the outer islands of Carlos, Gagan, Illeginni, and Legan, distributing over 7.5 Million kilowatt hours / month. Operate, maintain, and repair all prime power plants, distribution systems, and ancillary equipment and related systems, including fixed and portable auxiliary generators. Provide reliable power during mission windows. Develop and implement a maintenance plan which includes operator maintenance, predictive maintenance, Program Management (PM), cyclical, and recurring maintenance, as well as periodic equipment and systems overhauls for all power production systems. Provide appropriate staff to operate power plants 24 hours a day. Operate and maintain potable and non-potable water production & distribution systems. Operate and maintain wastewater treatment plant water systems and storage including equipment. Distribute water to a population of approximately 1400 people consuming over 5.3 million gallons of water per month. Operate all wastewater treatment plants and equipment, collection and distribution systems, and all ancillary equipment and other related systems, including septic tanks. Develop, implement, and manage a waste management program including collection, incineration, landfill, compost, and recycling facilities. Provide preventative, cyclical and recurring, and unscheduled maintenance and repair of the Incinerator and all ancillary equipment and systems. ***FY 2023 Plans:*** Will continue to provide resources including fuel to operate and maintain seven Power generation and distribution systems on Kwajalein; nine on Roi, five on Meck, and eleven total on the outer islands of Carlos, Gagan, Illeginni, and Legan, distributing over 7.5 Million kilowatt hours / month. Operate, maintain, and repair all prime power plants, distribution systems, and ancillary equipment and related systems, including fixed and portable auxiliary generators. Provide reliable power during mission windows. Develop and implement a maintenance plan which includes operator maintenance, predictive maintenance, Program Management (PM), cyclical, and recurring maintenance, as well as periodic equipment and systems overhauls for all power production systems. Provide appropriate staff to operate power plants 24 hours a day. Operate and maintain potable and non-potable water production & distribution systems. Operate and maintain wastewater treatment plant water systems and storage including equipment. Distribute water to a population of approximately 1400 people consuming over 5.3 million gallons of water per month. Operate all wastewater treatment plants and equipment, collection and distribution systems, and all ancillary equipment and other related systems, including septic tanks. Develop, implement, and manage a waste management program			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605301A / *Army Kwajalein Atoll*	**Project (Number/Name)** DW8 / *Army Kwajalein Atoll Installation Services*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
including collection, incineration, landfill, compost, and recycling facilities. Provide preventative, cyclical and recurring, and unscheduled maintenance and repair of the Incinerator and all ancillary equipment and systems. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Reduction reinvested within program to higher priorities as well as continued rebalancing to better align with execution.			
Title: Environmental Quality ***Description:*** Provides manpower and funding necessary to achieve, evaluate, and sustain compliance with appropriate Compact of Free Association, national, and USAKA Environmental Standards, Executive Orders, DoD Directives, regulations, and overseas country-specific. Final Governing Standards, in order to protect human health and safety and reduce total cost to the Army through environmental compliance, conservation, and pollution prevention. Enables installations to comply with legal environmental mandates and critical stewardship responsibilities that impact management and modernization of installations, while sustaining natural and cultural resources in a manner that provides continued access and long-term use of training lands to support the Army's installation missions. Also includes costs associated with Range Military Construction (MILCON) to address one-time mitigation actions. ***FY 2022 Plans:*** Will provide necessary/routine environmental quality services to the Installation. ***FY 2023 Plans:*** Will provide necessary/routine environmental quality services to the Installation. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.	1.245	2.129	2.274
Title: Anti-Terrorism (AT) ***Description:*** Funds the Army Antiterrorism program, a defensive program to protect against Terrorism. Supports the following: Antiterrorism installation and mission requirements: Combatant Commands (COCOM) Antiterrorism requirements (Army as Executive Agent (EA)), Antiterrorism Program Management, Antiterrorism Training and Awareness efforts (Area of Responsibility (AOR) specific, Level I Antiterrorism Awareness Training, Level II Antiterrorism Officers Training, Level III Pre-command training, and Level IV Antiterrorism Executive Seminar), protection of High Risk Personnel (HRP) to include support requirements (equipment), execution of Antiterrorism Assessments (Terrorism Vulnerability Assessments, Special Event Assessments, Pre-deployment Vulnerability Assessments, and Comprehensive Antiterrorism Reviews) designed to identify and fix protection vulnerabilities that will protect personnel and facilities from terrorist acts, intelligence support to Army Antiterrorism, conduct annual Antiterrorism Exercises designed to execute Antiterrorism plans, and the implementation of the Random Antiterrorism Measures Program (RAMP) and the Force Protection Condition (FPCON) system.	0.120	0.215	0.229

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605301A / *Army Kwajalein Atoll*	**Project (Number/Name)** DW8 / *Army Kwajalein Atoll Installation Services*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: Will provide antiterrorism programs. Will provide personnel with the necessary training and identify high risk individuals when appropriate. Will continue to identify and update vulnerabilities to our facilities and put protective measures in place to reduce risks to mission. ***FY 2023 Plans:*** Will provide antiterrorism programs. Will provide personnel with the necessary training and identify high risk individuals when appropriate. Will continue to identify and update vulnerabilities to our facilities and put protective measures in place to reduce risks to mission. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: SBIR/STTR TRANSFER ***Description:*** SBIR/STTR ***FY 2022 Plans:*** FUNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 USC 638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 USC 638	-	4.743	-
Accomplishments/Planned Programs Subtotals	129.480	135.120	179.306

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605301A / *Army Kwajalein Atoll*	Project (Number/Name) DW9 / *Army Kwajalein Atoll Restoration And Modernization*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
DW9: *Army Kwajalein Atoll Restoration And Modernization*	-	47.512	46.420	49.037	-	49.037	49.718	49.673	50.186	50.675	0.000	343.221
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds the restoration and modernization of United States (U.S.) Army Kwajalein Atoll (USAKA) degraded infrastructure (Real Property/facilities) to working condition and upgrades facilities to meet current standards. Restoration consists of repair and replacement work to fix facilities degraded due to the effects of aging and previously deferred sustainment. Modernization supports upgrade of facilities to meet current codes, accommodate new functions, and/or replace building components that exceed the overall service life of the facilities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Recapitalization Deficit R&M	47.512	44.726	49.037
Description: Provides facility restoration for facilities not specifically aligned to specified Facility Investment Strategy focus areas. Funds facilities quality improvement required to achieve elimination of Q4/Q3 Installation Status Report (ISR) rated facilities. In addition to major renovation costs, facility costs include project tails in accordance with AR 420-1 for: National Environmental Policy Act (NEPA) compliance. ***FY 2022 Plans:*** Will continue to provide resources against the HQDA-approved 15-year investment plan, focusing on completion of Phase II of the Bucholz Army Airfield runway, including repair of 1000 feet on both ends of the runway down to subgrade, resurfacing center section of runway, and repairing aged and deteriorating airfield pavements to include airfield lighting and back up generator. ***FY 2023 Plans:*** Will continue to provide resources against the HQDA-approved 15-year investment plan, focusing on completion of the Bucholz Army Airfield runway, including repair of 1000 feet on both ends of the runway down to subgrade, resurfacing center section of runway, and repairing aged and deteriorating airfield pavements to include airfield lighting and back up generator. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Minor economic adjustment.			
Title: SBIT/STTR TRANSFER	-	1.694	-
Description: SBIR/STTR ***FY 2022 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605301A / *Army Kwajalein Atoll*	**Project (Number/Name)** DW9 / *Army Kwajalein Atoll Restoration And Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FUNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FUNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 638			
Accomplishments/Planned Programs Subtotals	47.512	46.420	49.037

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605301A / *Army Kwajalein Atoll*	Project (Number/Name) DX2 / *Army Kwajalein Test Ranges and Mission Support*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
DX2: *Army Kwajalein Test Ranges and Mission Support*	-	9.500	11.538	11.979	-	11.979	12.151	12.265	12.392	12.527	0.000	82.352
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds Network Enterprise Technology Command (NETCOM) installation management-related Command, Control, Communications, Computers, and Information Management (C4IM) services at Army Kwajalein Test Ranges. NETCOM utilizes this Project to provide civilian pay, manpower service contracts, supporting Information technology (IT) equipment, and associated costs specifically identified and measurable to plan, manage, coordinate, and execute Information Technology Services Management at Army Kwajalein Test Ranges. Project provides C4IM services in accordance with the Department of Army Pamphlet (DA PAM) PAM 25-1-1 and the Army C4IM Services List. Provides Base Communications Support (Service 701), Visual Information (Service 702), Information Assurance (Service 703), and Automation (Service 700). Includes the delivery of services consisting of secure and non-secure fixed voice communications, wireless voice, data and video connectivity services, and studio video conferencing services. Provides infrastructure support, including the design, installation, and maintenance of special circuits/systems in support of life safety/security systems and monitoring/control systems. Provides Collaboration and Messaging Services including services and tools for workforce to communicate and share information. Provides Application and Web-hosting including operation and management services required to support web and application hosting. Provides Desktop Management Support including management and support for end-user hardware and software services and tools. Includes Service Desk Support, Continuity of Operations, and Disaster Recovery support.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Contractor Support (C4IM Services)	7.773	9.396	10.235
Description: The Contractor shall provide non-personnel IT support to the 30th Signal Battalion NEC on Kwajalein Atoll. The NEC?s IT environment includes any hardware, software, application, tool, system, or network used by the Government, whether developed, leased, or commercially purchased. Although this is a level of effort service contract, there are currently 74 contractors supporting this capability at Kwajalein. The contract covers supply and small equipment replacement that are needed to perform C4IM services.			
FY 2022 Plans: Work shall include current and new systems at various lifecycle stages, and any future applications and systems not currently identified in this PWS. The 30th Signal Battalion NEC requires support for unclassified and classified networked systems located throughout Kwajalein Atoll, including the islands of Kwajalein, Roi-Namur, Gagan, Omleck, Meck, Carlos, Legan, and Illeginni. Currently, the 30th Signal Battalion NEC supports approximately 2,000 users, computers, and notebooks with about 20 servers, both physical and virtual.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605301A / *Army Kwajalein Atoll*	**Project (Number/Name)** DX2 / *Army Kwajalein Test Ranges and Mission Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Provide Command, C4IM services in accordance with the DA PAM 25-1-1 and the Army C4IM Services List. Provide Base Communications Support (Service 701), Visual Information (Service 702), Information Assurance (Service 703), and Automation (Service 700). Delivery services consisting of secure and non-secure fixed voice communications, wireless voice, data and video connectivity services, and studio video conferencing services. Provide infrastructure support, including the design, installation, and maintenance of special circuits/systems in support of life safety/security systems and monitoring/control systems. Provide Collaboration and Messaging Services including services and tools for workforce to communicate and share information. Provide Application and Web-hosting including operation and management services required to support web and application hosting. Provide Desktop Management Support including management and support for end-user hardware and software services and tools, to include Service Desk Support, Continuity of Operations, and Disaster Recovery support. ***FY 2023 Plans:*** Work shall include current and new systems at various lifecycle stages, and any future applications and systems not currently identified in this PWS. The 30th Signal Battalion NEC requires support for unclassified and classified networked systems located throughout Kwajalein Atoll, including the islands of Kwajalein, Roi-Namur, Gagan, Omleck, Meck, Carlos, Legan, and Illeginni. Currently, the 30th Signal Battalion NEC supports approximately 2,000 users, computers, and notebooks with about 20 servers, both physical and virtual. Provide Command, C4IM services in accordance with the DA PAM 25-1-1 and the Army C4IM Services List. Provide Base Communications Support (Service 701), Visual Information (Service 702), Information Assurance (Service 703), and Automation (Service 700). Delivery services consisting of secure and non-secure fixed voice communications, wireless voice, data and video connectivity services, and studio video conferencing services. Provide infrastructure support, including the design, installation, and maintenance of special circuits/systems in support of life safety/security systems and monitoring/control systems. Provide Collaboration and Messaging Services including services and tools for workforce to communicate and share information. Provide Application and Web-hosting including operation and management services required to support web and application hosting. Provide Desktop Management Support including management and support for end-user hardware and software services and tools, to include Service Desk Support, Continuity of Operations, and Disaster Recovery support. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Cost increase commensurate with inflation.			
Title: Civilian Pay ***Description:*** Civilian Pay ***FY 2022 Plans:***	0.287	0.291	0.304

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605301A / *Army Kwajalein Atoll*	**Project (Number/Name)** DX2 / *Army Kwajalein Test Ranges and Mission Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Cost Increase based on new CEAC rates. ***FY 2023 Plans:*** Cost increase based on new CEAC rates. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Cost increase commensurate with inflation.			
Title: ISSA (Installation Service Support Agreement) ***Description:*** ISSA with Garrison to provide all services that would normally be provided by the home station and other services specific to Kwajalein. ***FY 2022 Plans:*** Pay Garrison to provide housing, food support, etc. ***FY 2023 Plans:*** Pay Garrison to provide housing, food support, etc.	1.440	1.440	1.440
Title: SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.411	-
Accomplishments/Planned Programs Subtotals	9.500	11.538	11.979

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605326A / *Concepts Experimentation Program*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	46.847	79.585	87.122	-	87.122	87.326	86.091	86.598	87.659	0.000	561.228
312: *Army/Joint Experimentation*	-	10.021	42.985	34.980	-	34.980	35.818	36.319	36.785	37.363	0.000	234.271
317: *Current Force Capability Gaps*	-	36.826	36.600	52.121	-	52.121	51.494	49.772	49.813	50.296	0.000	326.922
33B: *Soldier-Centered Analyses For Future Force*	-	-	-	0.021	-	0.021	0.014	-	-	-	0.000	0.035

A. Mission Description and Budget Item Justification

The Army Concepts Experimentation Program supports current and future concepts and capabilities involving Soldiers and Leaders within live, virtual, and constructive environments by exploring concepts, capability requirements and solutions across Doctrine, Organization, Training, Materiel, Leadership and Education, personnel, and Facilities (DOTMLPF) domains. The purpose of Concepts Experimentation is to clarify and mitigate risk for current and future forces. Experiments and projects inform Army futures concepts and assess high-risk conceptual assumptions in order to focus required capabilities and represent user requirements in the future Army to produce an MDO ready force by 2035. Army experiments use the combined resources of Army Battle Laboratories, operational units, research labs, materiel developers, industry and academia to collaborate in the development, refinement, and assessment of future force concepts. Simulated Experiments (SIMEX) will integrate and assess Army Concepts and Force Design phases with Army-level issues across the breadth of a campaign that highlights validation and integration of MDO capabilities.

This Program Element (PE) enhances Joint Capabilities Integration and Development System (JCIDS) development in support of Program Executive Offices (PEOs) and Program Managers (PMs) for acquisition milestone decisions. Funding ensures AFC/FCC serves as the voice of the warfighter and compliments the materiel developer in providing total capability management ensuring the integration of DOTMLPF solutions. This PE provides funding for Joint Warfighter Assessments (JWA) that physically integrate, assess and evaluate networked capability sets and other adaptive capabilities to accelerate the systems acquisition process of providing DOTMLPF recommendations to the Army. JWA is an integrated part of a series of linked experiments (Defender, Forager, MDO Live, and Project Convergence) that help the Army evaluate emerging concepts, integrate new technologies, and promote interoperability between the Army, other services and multinational partners. This PE also provides funding for Project Convergence which is the Army's new campaign of learning, designed to aggressively advance and integrate our Army's contributions to Joint Force overmatch. It ensures the Army, as part of the Joint fight, can rapidly and continuously integrate or "converge" effects across all domains to overmatch our adversaries in competition and conflict.

The Soldier-Centered Analysis For Future Force Project (33B) will provide early application of human performance and human figure modeling tools in the development of Soldier-focused requirements to shape technology for Future Force development. These efforts include design analyses, constructive simulations, and Soldier-in-the loop assessments to ensure that manpower requirements and workload and skill demands are considered, avoiding information and physical task overloads and taking optimum advantage of aptitudes, individual and collective training, and numbers of Soldiers for an affordable Future Force.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army					Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*		R-1 Program Element (Number/Name) PE 0605326A / *Concepts Experimentation Program*			
B. Program Change Summary ($ in Millions)	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**
Previous President's Budget	50.394	79.710	0.000	-	0.000
Current President's Budget	46.847	79.585	87.122	-	87.122
Total Adjustments	-3.547	-0.125	87.122	-	87.122
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.547	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	87.122	-	87.122
• FFRDC Transfer	-	-0.125	-	-	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / *Concepts Experimentation Program*	Project (Number/Name) 312 / *Army/Joint Experimentation*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
312: *Army/Joint Experimentation*	-	10.021	42.985	34.980	-	34.980	35.818	36.319	36.785	37.363	0.000	234.271
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The United States Army Joint Modernization Command (USAJMC) is the Army and Army Futures Command lead for live field experimentation. Army and Joint Experimentation supports current and future concepts and capabilities involving Soldiers and Leaders within live, virtual, and constructive environments by exploring concepts, capability, and formation requirements, and solutions across Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) domains. The purpose of these efforts is to learn and mitigate risk for current and future forces. Experiments and multi-scale assessments inform Army future concepts and assess high-risk conceptual assumptions in order to focus required capabilities, formations and represent user requirements in the future Army. Army experiments use the combined resources of Army Battle Laboratories, operating force units, research laboratories, materiel developers, industry, and academia to collaborate in the development, refinement, and assessment of future force concepts, capabilities and formations at echelon. These experiments are typical in the Joint Warfighting Assessment (JWA), Army Live Prototype Assessments (ALPA), and in Army's new campaign of learning based on a continuous, structured series of demonstrations and experiments called "Project Convergence" (PC) series of events. This project also supports the Army's Simulation-Based Experiments (SIMEX) to integrate and assess near, mid, and far-term future force concepts, force designs, and capabilities. In support of the Army Vision and Army Modernization Strategy, experimentation focuses on the latest Multi-Domain Operations (MDO) Concept, operational and organizational concepts for the Army to produce an MDO ready force by 2035. To refine the Multi-Domain Operations Concept, Army experimentation expands linkages to joint and multi-national experiments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Experimentation - High-Fidelity Live-Virtual-Constructive Experiments	10.021	41.411	34.980
Description: Experiments address concept and capability developments including integration of capabilities for all Brigade Combat Team (BCT) types; development of future DOTMLPF requirements and solutions; and acceleration and integration of capabilities for current force BCTs and above brigade. Prototyping events are coordinated with CFTs and other Industry and Academic partners and utilizes live, force on force prototype-based experiments to assess the operational relevance of developing technologies, refine initial Operational and Organizational concepts, and conduct early prototyping to retain current advantages over adversaries, accelerate investments on contested future capabilities, and mitigate risk to the force.			
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605326A / *Concepts Experimentation Program*	**Project (Number/Name)** 312 / *Army/Joint Experimentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Experiments will address concept and capability developments including integration of capabilities for all BCT types; development of future DOTMLPF requirements and solutions; and acceleration and integration of capabilities for current force BCT's and above brigade. The Joint Warfighting Assessment (JWA) is a capstone event, providing a venue for the Army to demonstrate and assess concepts and capabilities required for a more lethal, expeditionary and agile force. JWA is the only venue to experiment with the Multi-Domain Operations (MDO) concept and a multi-echelon, Joint and Multinational level exercise in the live, virtual, and constructive replicated operational environment with contested domains. Project Convergence ensures the Joint and Multinational force can rapidly and continuously integrate or ?converge? effects across all domains through intelligence gathering, data sharing, interoperable systems to decide and act more rapidly against adversaries in competition and conflict. ***FY 2023 Plans:*** FY23 experiments will address concept and capability developments including integration of capabilities for all BCT types; development of future DOTMLPF requirements and solutions; and acceleration and integration of capabilities for current force BCT's and above brigade. Project Convergence (PC) is the Army's campaign of learning, designed to aggressively advance solutions in the areas of people, weapons systems, command and control, information, and terrain: and integrate the Army's contribution to Joint All Domain Operations. CSA and SECARMY recently signed a PC Narrative in which they stated ?Through experimentation and learning, Project Convergence helps ensure that the Army has the right people, with the right systems, appropriately enabled, in the right places, to support the Joint fight?. PC is a Secretary of the Army priority for Live Prototyping Experimentation in support of Aimpoint Force, through experimentation and learning, PC helps ensure that the Army has the right people, with the right systems, appropriately enabled, in the right places, to support the Joint fight. The Joint Warfighting Assessment (JWA) is the annual capstone force modernization exercise for the U.S. Army. JWA is designed to achieve an enduring three-fold purpose: (1) accelerate force modernization by integrating and assessing Multi Domain Operations (MDO) concepts, capabilities, and formations at echelon (BCT to Theater Army/CJTF); (2) train a Joint, Interagency, and Multinational (JIM) force in a challenging and realistic operational environment of 2028; and (3) develop future strategic readiness and interoperability in the JIM warfighting team.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605326A / *Concepts Experimentation Program*	**Project (Number/Name)** 312 / *Army/Joint Experimentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funds include the transfer of 2 FTEs for the Joint Test Element (JTE) to JMC from ATEC. JTE generates operational solutions to urgent, specific Joint Warfighter problems through a short-term rigorous test program process. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY23 decrease pertains to a change in Project Convergence (PC) execution of funding for PC21 events preparations executed in FY22 thus including both PC21 & PC22 costs. Additionally, FY23 does not include MDO live and PNTAX event costs. PC is a continuous, structured series of demonstrations and experiments that informs not only how the Army applies technology and develops capabilities, but also how it designs and postures the force, and how it plans to fight that force. The scope and size of PC is evolving to support modernization objectives, as well as integrating with Multi-domain operational exercises and enabling events. PC 23 will continue to evolve from PC 22 which was the initial year of the expanded troop list. PC 23 will continue to examine and assess not only the technological impacts of future technologies, but also the ability to leverage those technologies against an adversary (OPFOR) in line with the conceptual underpinnings of the Army?s Operating Concept (Multi-Domain Operations). PC 23 will assess the ?ways? and the ?means? to achieve multi-domain advantages.			
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	1.574	-
Accomplishments/Planned Programs Subtotals	10.021	42.985	34.980

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / *Concepts Experimentation Program*	Project (Number/Name) 317 / *Current Force Capability Gaps*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
317: *Current Force Capability Gaps*	-	36.826	36.600	52.121	-	52.121	51.494	49.772	49.813	50.296	0.000	326.922
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project enables Army Futures Command (AFC) Futures and Concepts Center (FCC) to develop, integrate and help synchronize capability requirements and solutions into the operational force to meet the Army's goal of an MDO ready force by 2035. Funding ensures that the FCC acts independently and serves as the voice of the Warfighter, complementing the materiel developer in providing total capability management that integrates all doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) considerations. This project also provides AFC and FCC resources to execute Capability Development and Integration Directorate (CDID) Battle Lab experimentation, assessments and analysis addressing the Army's biggest modernization challenges. FCC plans and conducts experiments to gain insight and recommendations in the development of integrated concepts and requirements to inform Army Senior Leader modernization decisions through the results of rigorous deliberate learning. Funding in this project also enables FCC to maintain the Army Capability-based Architecture Development and Integration Environment (ArCADIE) providing storage, accessibility, production, and certification of authoritative architecture data and supporting systems. ArCADIE enables FCC to develop, verify and validate operational architecture for eight major BCT formations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: CDID/TCM JCIDS Requirements Documentation	21.176	22.254	-
Description: The AFC/FCC team facilitates requirements determination in coordination with the Joint Requirements Oversight Council (JROC) and in coordination with the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA(ALT) which directs and ensures Milestone acquisition decisions are formally staffed and fully integrated across the Future Force Modernization Enterprise. Funding ensures AFC/FCC serves as the voice of the warfighter and compliments the materiel developer in providing total capability management ensuring the integration of all DOTMLPF solutions. ***FY 2022 Plans:*** Funding ensures requirement determination and integration in Cyber areas including Cyberspace, Networks and Services, Electromagnetic Spectrum Operations and Tactical Radios to support Army's Cyber priorities and CFT efforts. Funding also provides Sustainment CDID the ability to conduct requirements determination for watercraft and maneuver support vessels. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decreases to 0 due to this accomplishment being updated and input as new accomplishment reflecting updated Army organizations and terminology.			
Title: Requirements Determination	-	-	23.423

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605326A / *Concepts Experimentation Program*	**Project (Number/Name)** 317 / *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: This accomplishment is a renaming of previous CDID/TCM JCIDS Requirements Documentation accomplishment to update organizational names and terminology. The AFC/FCC team facilitates requirements determination in coordination with the Joint Requirements Oversight Council (JROC) and in coordination with the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA(ALT)) which directs and ensures Milestone acquisition decisions are formally staffed and fully integrated across the Future Force Modernization Enterprise. Funding ensures AFC/FCC serves as the voice of the warfighter and compliments the materiel developer in providing total capability management ensuring the integration of all DOTMLPF solutions. ***FY 2023 Plans:*** Funding ensures requirement determination, documentation and integration in support of all FCC CDIDs. Includes areas of Aviation platforms and enablers, Soldier and Robotic requirement development, Sustainment watercraft and maneuver support vehicles, and Cyber ACM areas of Cyberspace, Networks and Services, Electromagnetic Spectrum Operations and Tactical Radios. Cyber ACMs provide support to the Army's Cyber priorities and CFT efforts. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding due to moving requirements from Task: CDID/TCM JCIDS Requirements Documentation and increased economic impacts.			
Title: Accelerated Capabilites Develpment ***Description:*** Prototyping events are coordinated with CFTs and other Industry and Academic partners and utilizes live, force on force prototype-based experiments to assess the operational relevance of developing technologies, refine initial Operational and Organizational concepts, and conduct early prototyping to retain current advantages over adversaries, accelerate investments on contested future capabilities, and mitigate risk to the force. ***FY 2022 Plans:*** FCC conducts ALPA experiments to continue identification and assessment of Multi Domain Operations solutions and to refine operational and organizational concepts. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease due to ALPA transition to JMC as the program manager under Project 312.	1.309	3.782	-
Title: Army Focused Warfighting Experiments (AFWE) ***Description:*** This accomplishment is a renaming of the above Accelerated Capabilities Development accomplishment to update mission and terminology.	-	-	7.225

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605326A / *Concepts Experimentation Program*	**Project (Number/Name)** 317 / *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
AFWE evolved from formerly known Army Live Prototyping Assessments. AFWE is full spectrum experimentation that examines new and innovative concepts and capabilities to support the Army?s Force Design efforts to achieve the Army 2040 as well as Combined Arms Center's Force Development equities to achieve the Army 2030. AFWE focuses beyond just materiel solutions by also looking at new organization designs, and how to fight tactics, techniques, and procedures to better inform development of the Army 2040. AFWE planning and event proposals are aligned to and incorporated into Project Convergence use case planning. ***FY 2023 Plans:*** FCC conducts AFWE experiments to continue identification and assessment of Multi Domain Operations solutions and to refine operational and organizational concepts. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to re-purposed AFWE series of events that explore new innovations which inform capabilities development activities, rapid acquisition, and feeds follow on experimentation (Project Convergence, other AFWE events, MDO-Live, etc.)			
Title: Battle Lab Experimentation and Support ***Description:*** Funding allows CDID Battle Lab to execute experiments in support of Army modernization efforts. Experimentation informs concepts, requirements, material solutions, and DOTMLPF changes for critical capability gaps and informs Army Senior Leader modernization decisions through the results of rigorous deliberate learning. Experimentation enables the Army to achieve an MDO ready force by 2035 and identifies opportunities to transform how the Army might fight beyond 2035. ***FY 2022 Plans:*** Cyber Quest will be conducted via Cyber CDID Battle Lab to experiment with and evaluate potential Cyber, Signal, Intelligence and EW material and DOTMLPF-P solutions. Funding provides staff, 45 military experimental forces, equipment and testing material costs, and travel costs. ***FY 2023 Plans:*** Funds provide CDID Battle Lab capacity in order for FCC to plan and execute experiments in order to refine and underpin concepts and requirements with analysis. Funds provide contracted functional SMEs, facilitation analysts, software and travel costs. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in FY23 due to FCC battle lab capacity contracts transitioning to RDTE.	13.240	1.419	17.050
Title: Army Capability-based Architecture Development and Integration Environment (ArCADIE)	0.500	6.027	0.408

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605326A / *Concepts Experimentation Program*	**Project (Number/Name)** 317 / *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: ArCADIE is the Army's authoritative source for architecture data and supports the community of practice requirement. ArCADIE provides a robust collaborative and common enterprise environment for architecture-related efforts in support of critical institutional processes throughout the TRADOC Centers of Excellence, AFC CDIDs and Army/Joint/Department of Defense (DOD) partners. Offers a single, federated web-based environment for the development and discovery of integrated architectures across warfighting functions, and organizations throughout the Army Enterprise. ***FY 2022 Plans:*** Enable FCC to maintain ArCADIE and develop, verify, and validate operational architecture for eight major BCT formations. Provide storage, accessibility, production, and certification of authoritative architecture data and supporting systems in accordance with DoD and DA information Assurance and management standards. ***FY 2023 Plans:*** Enable FCC to maintain ArCADIE and develop, verify, and validate operational architecture for eight major BCT formations. Provide storage, accessibility, production, and certification of authoritative architecture data and supporting systems in accordance with DoD and DA information Assurance and management standards. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease due to realignment of priorities and funds applied to battle lab contracts and the support of SESU initiatives until SESU becomes a Program of Record beginning in FY25.			
Title: System of Systems Enhanced Small Unit (SESU) Focused Assessments ***Description:*** In support of HQDA EXORD 304-17 the SESU initiative will attempt to solve the following problem: how can the Army and DARPA create a SESU unit capable of defeating a heavy division by leveraging current and future capabilities while operating and synchronizing the efforts of DARPA and the Army? The scope of SESU is to create a concept for enhancing a small unit with capabilities to over match a heavy enemy division. ***FY 2022 Plans:*** Funding supports Focused Assessments, Models and Simulations, and Capstone Demonstration. ***FY 2023 Plans:*** Funding supports Focused Assessments, Models and Simulations, and Capstone Demonstration. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** In crease in funding due to the addition of the System of Systems Enhanced Small Unit (SESU) focused assessments in direct support of HQDA EXORD 304-17.	0.601	1.782	4.015
Title: SBIR/STTR Transfer	-	1.336	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605326A / *Concepts Experimentation Program*	**Project (Number/Name)** 317 / *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	36.826	36.600	52.121

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

test

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / *Concepts Experimentation Program*	Project (Number/Name) 33B / *Soldier-Centered Analyses For Future Force*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
33B: *Soldier-Centered Analyses For Future Force*	-	-	-	0.021	-	0.021	0.014	-	-	-	0.000	0.035
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project will provide early application of human performance and human figure modeling tools in the development of Soldier-focused requirements to shape technology for Future Force development. Efforts include design analyses, constructive simulations, and Soldier-in-the-loop assessments to ensure that manpower requirements and workload and skill demands are considered, avoiding information and physical task overloads and taking optimum advantage of aptitudes, individual and collective training, and numbers of Soldiers for an affordable Future Force.

The cited work is consistent with the Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP).

Work in this Project is performed by the United States (U.S.) Army Combat Capabilities Development Command (CCDC) Data and Analysis Center (DAC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Manpower and Personnel Integration (MANPRINT)	-	-	0.021
Description: Provide dedicated modeling and analysis cell for early and accurate MANPRINT estimates to the U.S. Army Futures Command (AFC), DEVCOM and its Centers, The Research and Analysis Center, Schools and Centers of Excellence (CoEs), Army Test and Evaluation Command (ATEC) and other service laboratories. ***FY 2023 Plans:*** Will expand the digital library by developing 3D models of Soldier clothing and equipment items to perform early human figure modeling assessments of planned and/or prototypes of Army modernization platform designs and enhancements. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increased requirement to support Army modernization priorities with manpower and personnel modeling			
Accomplishments/Planned Programs Subtotals	-	-	0.021

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605326A / *Concepts Experimentation Program*	**Project (Number/Name)** 33B / *Soldier-Centered Analyses For Future Force*

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605502A / *Small Business Innovative Research*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	369.715	-	-	-	-	0.000	0.000	0.000	0.000	0.000	369.715
861: *SMALL BUS TECH - AMC*	-	45.581	-	-	-	-	-	-	-	-	0.000	45.581
M40: *SMALL BUSINESS-AMC*	-	324.134	-	-	-	-	-	-	-	-	0.000	324.134

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (SBIR) program is a United States Government program, coordinated by the Small Business Administration, in which 3.2% of the total extramural research budgets of all federal agencies with extramural research budgets in excess of $100 million are reserved for contracts or grants to small businesses. A similar program, the Small Business Technology Transfer Program (STTR), uses a similar approach to the SBIR program to expand public/private sector partnerships between small businesses and nonprofit U.S. research institutions, and is currently funded at .45% of the relevant agencies' extramural research budgets.

There is no Fiscal Year (FY) 2022 or FY 2023 budget programming for Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR). Funds for SBIR / STTR are redistributed in the year of execution from across the Army Research, Development, Test & Evaluation portfolio.

This Program Element is used exclusively to account for SBIR / STTR program funding in the year of execution.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	369.715	0.000	0.000	-	0.000
Current President's Budget	369.715	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605502A / *Small Business Innovative Research*	Project (Number/Name) 861 / *SMALL BUS TECH - AMC*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
861: *SMALL BUS TECH - AMC*	-	45.581	-	-	-	-	-	-	-	-	0.000	45.581
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (SBIR) program is a United States Government program, coordinated by the Small Business Administration, in which 3.2% of the total extramural research budgets of all federal agencies with extramural research budgets in excess of $100 million are reserved for contracts or grants to small businesses. A similar program, the Small Business Technology Transfer Program (STTR), uses a similar approach to the SBIR program to expand public/private sector partnerships between small businesses and nonprofit U.S. research institutions, and is funded at present at .45% of the relevant agencies' extramural research budgets.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605502A / *Small Business Innovative Research*	Project (Number/Name) M40 / *SMALL BUSINESS-AMC*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M40: *SMALL BUSINESS-AMC*	-	324.134	-	-	-	-	-	-	-	-	0.000	324.134
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (or SBIR) program is a United States Government program, coordinated by the Small Business Administration, in which 3.2% of the total extramural research budgets of all federal agencies with extramural research budgets in excess of $100 million are reserved for contracts or grants to small businesses. A similar program, the Small Business Technology Transfer Program (STTR), uses a similar approach to the SBIR program to expand public/private sector partnerships between small businesses and nonprofit U.S. research institutions, and is funded at present at .45% of the relevant agencies' extramural research budgets.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605601A *I Army Test Ranges and Facilities*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	390.366	367.125	401.643	-	401.643	370.357	377.441	381.623	384.654	0.000	2,673.209
F30: *Army Test Ranges & Facilities*	-	390.366	367.125	401.643	-	401.643	370.357	377.441	381.623	384.654	0.000	2,673.209

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) provides the institutional funding required to operate test activities in accordance with Public Law 107-314 (National Defense Authorization Act for Fiscal Year 2003) Section 232 ("Objective for institutional funding of test and evaluation facilities") in support of Department of Defense (DoD) Program Executive Officers, Program and Product Managers, Research, Development, and Engineering Centers and to the Army Futures Command (AFC). Resources provided by this PE operate six elements of the DoD Major Range and Test Facility Base (MRTFB): White Sands Test Center (WSTC) - White Sands Missile Range (WSMR), New Mexico; Aberdeen Test Center (ATC) - Aberdeen Proving Ground (APG), Maryland; Electronic Proving Ground (EPG) - Fort Huachuca, Arizona; Yuma Test Center (YTC) - Yuma Proving Ground (YPG), Arizona; Cold Regions Test Center (CRTC) - Fort Greely, Alaska; and Tropic Regions Test Centers (TRTC) at various locations. This PE also funds the Army's test capability at Redstone Test Center (RTC) - Redstone Arsenal, Alabama.

This PE finances the overhead (institutional) test operating costs not billable to DoD test customers per DoD Instruction (DoDI) 3200.18 and DoD Financial Management Regulation (DoDFMR) 7000.14-R, which include: recurring test infrastructure/capability sustainment requirements; replacement of test equipment; test operating procedures; and test revitalization/upgrade projects to maintain $8.7 billion of testing capabilities; and improvements to the safety, environmental protection, and efficiency of test operations. The test capabilities at these ranges have been uniquely established, and are designated as national assets needed to support test and evaluation (T&E) requirements of funded acquisition programs, and are required to assure technical performance, adherence to safety requirements, reliability, logistics supportability, Title 10 Live Fire Test and Evaluation, transportability, environmental effects, cyber, electromagnetic effects, and quality of materiel in development and in production.

This PE sustains the T&E capability required to support Army Modernization as well as other Army, Joint, or Other Service systems, materiel, and technologies. Types of systems scheduled for testing include, but are not limited to: Aircraft, Air Delivery, Unmanned Aerial Systems, Counter Unmanned Aerial Systems, Air and Missile Defense Systems, Engineering Equipment, Direct fire, Indirect fire, Ammunition, Automotive Systems both manned and unmanned, Intelligence Surveillance and Reconnaissance, Ground Soldier Systems, Missiles, Rockets, Mission Command Network, Tactical Command, Control, and Communications, Robotics/Unmanned Autonomous Systems, Soldier Lethality, Assured Position, Navigation and Timing, Title 10 Live-Fire Survivability, Nuclear survivability, directed energy, and extreme natural environments. These T&E capabilities enable Army Futures Command modernization efforts and readiness.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605601A / *Army Test Ranges and Facilities*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	390.351	354.227	0.000	-	0.000
Current President's Budget	390.366	367.125	401.643	-	401.643
Total Adjustments	0.015	12.898	401.643	-	401.643
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	13.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.015	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	401.643	-	401.643
• FFRDC Transfer	-	-0.102	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: F30: *Army Test Ranges & Facilities*		
Congressional Add: *Integrated Directed Energy Testing*	15.000	-
Congressional Add: *Distributed Environment for System-of-System Cybersecurity Testing*	25.000	-
Congressional Add: *Program Increase: Counter-Unmanned Aerial System High Energy Laser Platform Integration*	-	10.000
Congressional Add: *Environmental Characterization for Test Operations*	-	3.000
Congressional Add Subtotals for Project: F30	40.000	13.000
Congressional Add Totals for all Projects	40.000	13.000

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605601A / *Army Test Ranges and Facilities*	Project (Number/Name) F30 / *Army Test Ranges & Facilities*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
F30: *Army Test Ranges & Facilities*	-	390.366	367.125	401.643	-	401.643	370.357	377.441	381.623	384.654	0.000	2,673.209
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides the institutional funding required to operate test activities IAW Public Law 107-314 (National Defense Authorization Act for Fiscal Year 2003) Section 232 ("Objective for institutional funding of test and evaluation facilities") in support of DoD Program Executive Officers, Program and Product Managers, Research, Development, and Engineering Centers and to the AFC. Resources provided by this Project operate six elements of the DoD MRTFB: WSTC - WSMR, New Mexico; ATC - APG, Maryland; EPG - Fort Huachuca, Arizona; YTC - YPG, Arizona; CRTC - Fort Greely, Alaska; and TRTC at various locations. This Project also funds the Army's test capability at RTC - Redstone Arsenal, Alabama.

This Project finances the overhead (institutional) test operating costs not billable to DoD test customers per DoDI 3200.18 and DoDFMR 7000.14-R, which include: recurring test infrastructure/capability sustainment requirements; replacement of test equipment; test operating procedures; test revitalization/upgrade projects to maintain $8.7 billion of testing capabilities; and improvements to the safety, environmental protection, and efficiency of test operations. The test capabilities at these ranges have been uniquely established, are considered national assets, and are in place to support T&E requirements of funded acquisition programs, and are required to assure technical performance, adherence to safety requirements, reliability, logistics supportability, Title 10 Live Fire Test and Evaluation, transportability, environmental effects, cyber, electromagnetic effects, and quality of materiel in development and in production.

This Project sustains the T&E capability required to support Army Modernization as well as other Army, Joint, or Other Service systems, materiel, and technologies. Types of systems scheduled for testing include, but are not limited to: Aircraft, Air Delivery, Unmanned Aerial Systems, Counter Unmanned Aerial Systems, Air and Missile Defense Systems, Engineering Equipment, Direct fire, Indirect fire, Ammunition, Automotive Systems both manned and unmanned, Intelligence Surveillance and Reconnaissance, Ground Soldier Systems, Missiles, Rockets, Mission Command Network, Tactical Command, Control, and Communications, Robotics/Unmanned Autonomous Systems, Soldier Lethality, Assured Position, Navigation and Timing, Title 10 Live-Fire Survivability, Nuclear survivability, directed energy, and extreme natural environments. These T&E capabilities enable Army Futures Command modernization efforts and readiness.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Mission Support	80.987	80.097	94.048
Description: Funds support: test capability sustainment and maintenance of equipment, test facility maintenance, calibration requirements, handling and disposal of hazardous materials, transportation, postage, administrative supplies, tools, software, spare parts, test support vehicle maintenance, mission unique installation costs, temporary duty/training of civilian and contractor personnel, certifications, printing and reproduction, communications, land leases, and range road maintenance. Funding supports			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605601A / *Army Test Ranges and Facilities*	**Project (Number/Name)** F30 / *Army Test Ranges & Facilities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) IAW DoDI 3200.18 and DoDFMR 7000.14-R. ***FY 2022 Plans:*** Funds will continue to support test capability sustainment and maintenance of equipment, test facility maintenance, calibration requirements, handling and disposal of hazardous materials, transportation, postage, administrative supplies, tools, software, spare parts, test support vehicle maintenance, mission unique installation costs, temporary duty/training of civilian and contractor personnel, certifications, printing and reproduction, communications, land leases, and range road maintenance. Funding supports indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) IAW DODI 3200.18 and DODFMR 7000.14-R. ***FY 2023 Plans:*** Funds will modernize test capability technology, sustainment and maintenance of equipment, test facility maintenance, calibration requirements, handling and disposal of hazardous materials, transportation, postage, administrative supplies, tools, software, spare parts, test support vehicle maintenance, mission unique installation costs, temporary duty/training of civilian and contractor personnel, certifications, printing and reproduction, communications, land leases, and range road maintenance. Funding supports indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) IAW DODI 3200.18 and DODFMR 7000.14-R. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase funds will modernize warfighting test capability technology to support future testing in support of Army modernization and to address a portion of the backlog of sustainment and maintenance of test capabilities.			
Title: T&E Civilian Pay ***Description:*** This funding supports the overhead costs of the civilian labor for Program Budget Guidance (PBG) authorizations. The balance is customer funded. The test customer pays all direct costs that are directly attributable to the use of a test facility or resource for testing of a particular program. Funding is essential to maintain core T&E skills as part of the Government civilian workforce used in support of Army modernization. ***FY 2022 Plans:*** Funds will continue to support the overhead costs of the civilian labor for PBG authorizations. The balance will be customer funded. The test customer will pay all direct costs directly attributable to the use of a test facility or resource for testing of a particular program. Funding will be essential to maintain core T&E skills as part of the Government civilian workforce. ***FY 2023 Plans:***	154.931	163.947	169.029

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605601A / *Army Test Ranges and Facilities*	**Project (Number/Name)** F30 / *Army Test Ranges & Facilities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funds will continue to support the overhead costs of the civilian labor for PBG authorizations. The balance will be customer funded. The test customer will pay all direct costs directly attributable to the use of a test facility or resource for testing of a particular program. Funding will be essential to maintain core T&E skills as part of the Government civilian workforce. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation for civilian pay; the majority of the workforce is in the Acquisition Demonstration Program.			
Title: Contractor Support ***Description:*** This funding supports contractor labor costs not billable to customers. Contract labor is essential to augment core civilian T&E personnel with additional capabilities and/or capacity. Functions performed include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support. ***FY 2022 Plans:*** Funds will continue to support contractor labor costs not billable to the customer. Contract labor will be essential to augment core civilian T&E personnel. Functions performed will include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support. ***FY 2023 Plans:*** Funds will continue to support contractor labor costs not billable to the customer. Contract labor will be essential to augment core civilian T&E personnel. Functions performed will include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation.	58.689	60.535	62.412
Title: Revitalization/Upgrade ***Description:*** Funds support the revitalization/upgrade of critical test infrastructure and capabilities. MRTFB elements are required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding will be focused on improving T&E capabilities for Army Modernization Programs and other high priority acquisition systems. ***FY 2023 Plans:*** Funds will continue to support the revitalization/upgrade of critical test infrastructure and capabilities. MRTFB elements will be required to use institutional funding to sustain or upgrade capabilities that support multiple customers. Funding will be focused on	18.740	-	21.022

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
improving T&E capabilities for the highest priority Army modernization efforts such as Air and Missile Defense (AMD), Long Range Precision Fires (LRPF), Assured Position, Navigation, and Timing (APNT), Future Vertical Lift (FVL), and Unified Network. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY22 decrease of $5M is the result of FY22 SBIR/STTR funding transferred in accordance with Title 15 USC ?638 ($4.898M) and FFRDC reductions ($.102M). FY23 increase funds 13 revitalization/upgrade projects of critical test infrastructure and capabilities supporting Army modernization across five MRTFB elements. Examples include Non-Conductive Covered Electromagnetic (EM) Test Pads at RTC supporting Future Vertical Lift (FVL), Global Positioning System (GPS) Dynamic Array Test Facility at EPG supporting Assured Position, Navigation, and Timing (APNT), and Fort Wingate Launch and Test Site Revitalization at WSTC supporting Long Range Precision Fires (LRPF).			
Title: Physical Security Guards and Equipment ***Description:*** Funding supports security guard forces mandated by regulations and annual vulnerability assessments for ATEC's surety-related test sites which are positioned on isolated and remote locations. Funding supports required training and exercises, to include annual vulnerability assessments and guard force support to Nuclear Accident or Incident Response and Assistance (NAIRA) and Chemical Accident or Incident Response and Assistance (CARIA). These guards secure and protect ATEC's Fast Burst Nuclear Reactor (FBR) at White Sands Test Center (WSTC) located at White Sands Missile Range (WSMR) IAW Army Regulation (AR) 190-54 (Security of Nuclear Reactors and Special Nuclear Materials). The guards also secure and protect the Chemical and Biological (Chem/Bio) facilities at West Desert Test Center (WDTC) located at Dugway Proving Ground (DPG) IAW AR 190-59 (Chemical Agent Security Program) and AR 190-17 (Biological Agents and Toxins Security Program). These surety facilities maintain chemical, biological, radiological, nuclear, and explosive (CBRNE) materials and agents in order to test the effects and effectiveness of defensive or protective equipment and measures. Physical security equipment consists of electronic security systems (ESS) composed of access/egress control systems, various camera systems, sensors and detection arrays, and Intrusion Detection Systems (IDS). Costs include sustainment of maintenance contracts for equipment not included in the Army inventory. This equipment is necessary to secure arms rooms, ammunition, explosives (AA&E) storage facilities at the FBR, and Chem/Bio surety sites. Physical security equipment is critical to maintain current security requirements as directed in: AR 190-54, AR 190-56, AR 190-59, AR 190-17, AR 190-11, AR 190-13, and AR 190-51. Funding enables ATEC to sustain support to Army Modernization and its expanded requirements to include large increases in volume of test planning and test. Additionally, funding addresses increases in physical security and guard force requirements in support of ATEC's assignment of direct support mission to Army Futures Command (AFC) and associated requirements to include support to major exercises including Project Convergence and EDGE. Funding provides training and certification of guards to operate and maintain ESS equipment and qualification of all weapon systems and surety-related personal protective equipment (PPE) requisite to their surety security missions. ***FY 2022 Plans:***	11.492	11.836	12.203

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605601A / *Army Test Ranges and Facilities*	**Project (Number/Name)** F30 / *Army Test Ranges & Facilities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funds will support physical security guard operations, mandatory training and qualifications and for maintenance and sustainment of equipment at the FBR at WSTC located at WSMR and Chem/Bio facilities at WDTC located at DPG. ***FY 2023 Plans:*** Funds will support physical security guard operations, mandatory training and qualifications and for maintenance and sustainment of equipment at the FBR at WSTC located at WSMR and Chem/Bio facilities at WDTC located at DPG. Funding supports Army priorities shift to modernization and associated expansion of test mission and support to AFC-led RDT&E major events (Project Convergence and Edge). ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation for civilian pay and routine program adjustments.			
Title: UH-60 Aircraft ***Description:*** This funding supports the Aviation Restructure Initiative endorsed by the SECDEF. Funding supports aircraft maintenance, aircrew labor, mandatory training, and aircraft flying hours. IAW DoDI 3200.18 and DoDFMR 7000.14-R, these costs are not billable to the test customers. UH-60 helicopters are used to provide essential logistical, sensor platform and aerial photo/video documentation support for developmental testing. ***FY 2022 Plans:*** Funds will support UH-60 helicopter maintenance, aircrew labor, mandatory training and aircraft flying hours. ***FY 2023 Plans:*** Funds will support UH-60 helicopter maintenance, aircrew labor, mandatory training and aircraft flying hours. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation and program requirements.	5.246	5.325	5.645
Title: Network Enterprise Center (NEC) ***Description:*** This funding supports the NEC operations for WSMR and YPG. Funding supports manpower and contracts, support equipment and associated costs specifically identified and measurable to plan, manage, coordinate, and execute Communication, Network, and Information Technology Services Management. ***FY 2022 Plans:*** Funds will continue to support all labor, support equipment, and training required for the NEC operations at WSMR and YPG. ***FY 2023 Plans:***	13.786	14.002	14.422

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funds will continue to support all labor, support equipment, and training required for the NEC operations at WSMR and YPG. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation and program requirements.			
Title: Cybersecurity Service Provider (CSSP) ***Description:*** This requirement supports compliance with DoD Directive (DoDD) 8530.1 and DoDI, which directed that all component information systems and computer networks be assigned to a certified CSSP and that all information systems and computer networks must enter into a service agreement with a CSSP. United States (U.S.) Army Cyber Command (ARCYBER) Operations Order (OPORD) 2014-224 directed all Commands/Direct Reporting Units (DRU) to take immediate measures to ensure Army assets connected to Defense Research and Engineering Network (DREN) and Secure Defense Research and Engineering Network (SDREN) enclaves are aligned with the U.S. Army Research Laboratory as their CSSP to ensure cyber defense oversight and information security continuous monitoring going forward. ***FY 2022 Plans:*** Funds will continue to support cyber defense oversight and continuous monitoring of information security. ***FY 2023 Plans:*** Funds will continue to support cyber defense oversight and continuous monitoring of information security. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increase due to inflation and program requirements.	1.679	1.704	2.020
Title: Military Construction Mission Unique Equipment (MUE) ***Description:*** ATEC was programmed one MILCON project a year from FY18 through FY20. MUE includes items that are movable and not affixed as an integral part of the MILCON facility, but are required to perform the mission of the facility and are required to be provided by the mission activity. In 2019, ATEC's FY18 and FY19 MILCON projects were deferred due to the National Emergency at the Southern Border, but were subsequently restored by the SECDEF; one each in FY20 and FY21. ***FY 2022 Plans:*** Funds will provide for the EPG Ground Transport Equipment Building (GTEB), the WSTC Information Systems Facility long lead items, and the RTC Aircraft Test Instrumentation and Integration Facility (ATIIF) programmed MILCON projects in FY22. The ATIIF will play a vital role in RTC's ability to support three high priority programs - all related to Future Vertical Lift (FVL). The programs are the Future Attack Reconnaissance Aircraft (FARA), Future Long-Range Assault Aircraft (FLRAA), and Improved	0.064	6.950	14.623

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Turbine Engine (ITE) equipment. The GTEB will support the testing, evaluation, instrumentation, and integration of all ground support equipment with electronic warfare and intelligence, surveillance and reconnaissance systems. ***FY 2023 Plans:*** Funds will provide the bulk of the MUE ($14.623) for the WSTC Information Systems Facility (ISF) funded MILCON project. The MUE must be procured starting in FY23 in order to be on hand to transfer data lines to new systems after physical construction is completed. Delay in USG receipt/provision of MUE puts the ISF ability to be fully mission capable at risk, while existing legacy systems and facility will need to maintain full functionality at increased costs. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increase due to project specific needs. The FY23 request is for the majority of the MUE for the WSTC ISF MILCON project.			
Title: MRTFB Organizational Logistics Activities	4.369	4.459	5.593
Description: In FY20, Army policy changed requiring organizational logistics functions be funded by organizational units and not LRCs. This funding supports those organizational logistics activities previously provided by LRCs to WSTC located at WSMR, YTC located at YPG and WDTC located at DPG. These activities provide a wide range of logistics support services including but not limited to asset management/property book support; equipment maintenance/ repair of ATEC owned maintenance significant items; small arms gaging and repair, dispatch of Army Owned/General Services Administration (GSA) vehicles and equipment; retail fuel support for vehicles and ground power generation equipment; driver's licensing; and transportation support for inbound and outbound equipment, freight and cargo. ***FY 2022 Plans:*** Funds will support organizational logistics requirements for WSTC located at WSMR, YTC located at YPG and WDTC located at DPG that were previously funded by LRCs. These organizational logistics requirements include but are not limited to asset management/ property book support; equipment maintenance/repair of ATEC owned maintenance significant items; small arms gaging and repair, dispatch of Army Owned/GSA vehicles and equipment; forward fuel support for vehicles and ground power generation equipment; driver's licensing; and transportation support for inbound and outbound equipment, freight and cargo. ***FY 2023 Plans:*** This funding supports MRTFB organizational logistics activities providing support to WSTC located at WSMR, YTC located at YPG and WDTC located at DPG. These activities provide a wide range of organizational logistics support services including but not limited to asset management/property book support; equipment maintenance/repair of ATEC owned maintenance significant items; small arms gaging and repair, dispatch of Army Owned/General Services Administration (GSA) vehicles and equipment;			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
retail fuel support for vehicles and ground power generation equipment; driver's licensing; and transportation support for inbound and outbound equipment, freight and cargo. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funds are allocated based on program requirements. Increase in funding in support of Quality Assurance Specialist Ammunition Surveillance (QASAS) required at test ranges and actual cost of the level of effort.			
Title: ARCYBER- C4IM Services Support to WSMR ***Description:*** 3 CMEs- Provide contract support (C4IM services) at WSMR to non-Defense Research and Engineering Network (DREN) customers IAW MOA with ATEC. Supports IMCS contract for touch labor. ***FY 2022 Plans:*** The Fort Bliss Network Enterprise Center (NEC) shall continue to migrate users and services from the White Sands network to the Fort Bliss Network. Fort Bliss does not have enough storage and computing capacity to migrate all the Servers and User Data to Fort Bliss. The NEC requires additional storage and computing capacity to support these requirements. The system must integrate into the existing VMware platform, IFN architecture, and GFN architecture. ***FY 2023 Plans:*** The Fort Bliss Network Enterprise Center (NEC) shall continue to migrate users and services from the White Sands network to the Fort Bliss Network. Fort Bliss does not have enough storage and computing capacity to migrate all the Servers and User Data to Fort Bliss. The NEC requires additional storage and computing capacity to support these requirements. The system must integrate into the existing VMware platform, IFN architecture, and GFN architecture. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Change is due to program requirement adjustments.	0.220	0.202	0.224
Title: AMC / AFC Physical Security Officer Civ Pay ***Description:*** AMC / AFC Physical Security Officer Civ Pay ***FY 2022 Plans:*** AMC / AFC Physical Security Officer Civ Pay ***FY 2023 Plans:*** AMC / AFC Physical Security Officer Civ Pay ***FY 2022 to FY 2023 Increase/Decrease Statement:***	0.163	0.156	0.173

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding change reflects planned lifecycle of this effort.			
Title: Army Enterprise Business Systems (EBS) Consolidation ? SOMARDS Financial Management Information System (SOFIMS) ***Description:*** The Army consolidated Enterprise Business Systems (EBS) under the Acquisition Domain. The consolidation resulted in the transfer of funding $229K to support the SOMARDS Financial Management Information System (SOFIMS). SOFIMS is the system utilized by ATEC to manager contractor time in tracking completion of test and evaluation projects. It serves as a data entry portal for contractor and time and costs in the Army?s General Fund Enterprise Business System (GFEBS). ***FY 2023 Plans:*** SOFIMS is due to sunset at the end of FY23 and be subsumed into a new business system, the ATEC Integrated Mission Management System (AIMMS). ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase of funding provides SOFIMS contractor support to allow continued data collection.	-	-	0.229
Title: SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	4.912	-
Accomplishments/Planned Programs Subtotals	350.366	354.125	401.643

	FY 2021	FY 2022
Congressional Add: Integrated Directed Energy Testing	15.000	-
FY 2021 Accomplishments: Program increase supported management support for test, and evaluation efforts and funds to sustain and/or modernize test ranges by creating a center for high energy laser testing at White Sands Missile Range. Immediate upgrades were required to meet increased demand to enable T&E and experimentation of advanced directed energy weapon systems. Funding provided new equipment and infrastructure needed to meet imminent		

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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	FY 2021	FY 2022
time frames to address three of the six Army modernization priorities, while delivering a foundation for more comprehensive long term solutions to meet future requirements. Work executed under the direction of the Rapid Capabilities and Critical Technologies Office.		
Congressional Add: Distributed Environment for System-of-System Cybersecurity Testing ***FY 2021 Accomplishments:*** Congressional Add supported Cybersecurity Vulnerability and Assessment Test Environment (CVATE) at Redstone Test Center.	25.000	-
Congressional Add: Program Increase: Counter-Unmanned Aerial System High Energy Laser Platform Integration ***FY 2022 Plans:*** Program increase for management support for test and evaluation efforts in support of Counter-Unmanned Aerial System High Energy Laser Platform Integration. This project provides an integrated government-owned Counter-small Unmanned Aerial System (C-sUAS) capability for combat system experimentation and analysis to inform Tactics, Techniques, and Procedures for testing, training, and operational employment of high energy lasers for negating Unmanned Aerial System (UAS) threat systems. This project develops two assets, provides a training and test architecture and environment for soldier centered training and experimentation in an operational environment. Work performed by the Rapid Capabilities and Critical Technologies Office (RCCTO), in Huntsville, Alabama.	-	10.000
Congressional Add: Environmental Characterization for Test Operations ***FY 2022 Plans:*** Congressional Add for Environmental Characterization for Test Operations.	-	3.000
Congressional Adds Subtotals	40.000	13.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605602A *I Army Technical Test Instrumentation and Targets*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	81.829	59.253	37.962	-	37.962	38.176	38.146	38.141	38.513	0.000	332.020
628: *Developmental Test Technology & Sustainment*	-	38.124	44.739	-	-	-	-	-	-	-	0.000	82.863
62C: *Modeling and Simulation Instrumentation*	-	43.705	14.514	-	-	-	-	-	-	-	0.000	58.219
FJ3: *Technical Test Instrumentation & Targets*	-	-	-	37.962	-	37.962	38.176	38.146	38.141	38.513	0.000	190.938

A. Mission Description and Budget Item Justification

This funding line supports test and evaluation of Army Modernization Priority Programs.

This Program Element (PE) provides critical front-end investments for development of: new test methodologies and standards; advanced test technology concepts; future test capabilities; advanced modeling, simulation and instrumentation prototypes; and full scale development of test and evaluation capabilities for the United States (U.S) Army Test and Evaluation Command (ATEC), which includes the Operational Test Command (OTC) at Ft Hood, Texas; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; White Sands Test Center (WSTC) at White Sands Missile Range (WSMR), New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; Yuma Test Center (YTC) at Yuma Proving Grounds (YPG), Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, Alaska and the Tropics Regions Test Center (TRTC), at various locations); and Redstone Test Center (RTC), Redstone Arsenal, Alabama. OTC consists of four forward Test Directorates (Airborne and Special Operations Test Directorate, Fort Bragg, North Carolina; Air and Missile Defense Test Directorate, Fort Bliss, Texas; Fires Test Directorate, Fort Sill, Oklahoma; and the Intelligence Electronic Warfare Test Directorate, Fort Huachuca, Arizona) together with four other Test Directorates (Aviation; Maneuver; Mission Command; Maneuver Support and Sustainment) at Ft Hood, Texas. These capabilities are required to support test and evaluation requirements of high priority Army modernization systems to support development of Multi-Domain Operations (MDO)-capable Forces. These activities enable Army Futures Command (AFC) modernization efforts and readiness and support the development and fielding cycle of all Army acquisition programs including rapid fielding initiatives and programs of record. Sustainment funding maintains existing testing capabilities at all locations by replacing unreliable, uneconomical, and irreparable instrumentation, as well as incremental upgrades of hardware and software for modeling, simulation, and instrumentation systems to assure adequate test data collection capabilities. This data supports acquisition milestone decisions for all test mission areas throughout the Army including programs such as the 105-mm Mobile Howitzer, 30mm/40mm ammunition, Active Protection System (APS), AH-64 Block III, APR-39C(V)1 Radar, Armored Multi-Purpose Vehicle (AMPV), Army Integrated Air-Missile Defense (AIAMD), Army Tactical Missile System (ATACMS), CH-47F Chinook, Command Post Computing Environment (CPCE), Common Infrared Counter Measures (CIRCM), Counter Unmanned Aircraft System (c-UAS), Counter Rocket Artillery Mortar (C-RAM), Dismounted Assured PNT System (DAPS), Distributed Common Ground System - Army (DCGS-A), Enhanced Night Vision Goggle- Binocular (ENVG-B), Expedient Leader Follower, Extended Range Cannon Artillery (ERCA), Family of Medium Tactical Vehicles (FMTV), Guided Multiple Launch Rocket System (GMLRS), Integrated Tactical Network (ITN), Javelin, Joint Air-to- Ground Missile (JAGM) for US Navy, Joint Assault Bridge (JAB), Joint Light Tactical Vehicle (JLTV), Leader Radio, M109A7 Paladin/M992A3, M1A2 Abrams, M-2/3 Bradley Expedited Active Protection System (ExAPS), M-2/3 Bradley Fist, M776 Chrome Tube, M777 Long Range Cannon, Maneuver Short Range Air Defense (M-SHORAD), ManPack (MP),

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605602A *I Army Technical Test Instrumentation and Targets*

Mounted Assured PNT System (MAPS), Mobile Protected Firepower (MPF), Optionally Manned Fighting Vehicle, Patriot 3 (PAC-3), Precision Guidance Kit (PGK), Precision Strike Missile (PrSM), Robotic Combat Vehicle (RCV), Shadow Tactical Unmanned Aircraft System (TUAS), Stinger Shelf life Extension Program (SLEP), Stryker, Systems for Assured Position, Navigation and Timing (PNT), Terminal High-Altitude Area Defense (THAAD), UH-60M Black Hawk, and XM113. Also supports AFC and Army Modernization events to include Project Convergence and PNT Assessment Exercise (PNTAX).

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	81.829	49.253	0.000	-	0.000
Current President's Budget	81.829	59.253	37.962	-	37.962
Total Adjustments	0.000	10.000	37.962	-	37.962
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	37.962	-	37.962

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: 628: *Developmental Test Technology & Sustainment*		
Congressional Add: *Cyber Space Threats*	5.000	-
Congressional Add: *Rapid Assurance Modernization Program ? Test (RAMP-T)*	-	10.000
Congressional Add Subtotals for Project: 628	5.000	10.000
Project: 62C: *Modeling and Simulation Instrumentation*		
Congressional Add: *Space and Missile Cyber Security*	30.000	-
Congressional Add Subtotals for Project: 62C	30.000	-
Congressional Add Totals for all Projects	35.000	10.000

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605602A / *Army Technical Test Instrumentation and Targets*	Project (Number/Name) 628 / *Developmental Test Technology & Sustainment*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
628: *Developmental Test Technology & Sustainment*	-	38.124	44.739	-	-	-	-	-	-	-	0.000	82.863
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY23 two projects that funds ATEC's test and evaluation capability investment requirements were consolidated to a single account: (1) 665602628 / Project 628, Developmental Test Technology and Sustainment and (2) 66560262C / Project 62C, Modeling and Simulation Instrumentation to PE 665602FJ3 / Project FJ3, Technical Test Instrumentation and Targets.

A. Mission Description and Budget Item Justification

This Project provides critical front-end investments for development of new test methodologies and standards, advanced test technology concepts, future test capabilities, and advanced instrumentation prototypes for subordinate commands of the Army Test and Evaluation Command (ATEC). These capabilities are required to support developmental testing requirements of high priority Army systems supporting Army modernization efforts. Where practical, efficiencies will be gained through the common use of developmental instrumentation in operational testing. A key element is sustaining aging instrumentation which maintains existing capabilities at test facilities by replacing unreliable, uneconomical and irreparable instrumentation, as well as lifecycle replacement and incremental upgrades of instrumentation and software, reducing their average age to assure adequate testing capabilities. This Project develops and maintains developmental test instrumentation and capabilities that provide the data necessary to support acquisition milestone decisions for all test mission areas throughout the Army. Significant examples include new instrumentation for the testing of Command, Control, Communication and Computer (C4) systems, upgrades to existing radars to extend their economic life, common data collection and analysis tools, non-intrusive instrumentation to test Unmanned Ground Vehicles and sensors, high speed - high definition digital imaging systems to capture missile flight events, and automation software to improve data collection of reliability, availability, and maintainability (RAM) testing.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Developmental Test Technology Investment	33.124	33.599	-
Description: Develops, acquires, and maintains critical test technology and instrumentation. Provides the necessary test instrumentation, computer and communications systems, data collection, analysis and reporting equipment, and other special test capabilities to successfully develop and test Army weapons and equipment. Provides the necessary live, virtual and constructive environment, hardware-in-the-loop capabilities, and modeling and simulation (M&S) needed for testing Army materiel solutions. Acquires instrumentation to measure performance of Command, Control, Communication and Computer (C4) systems; reliability, availability, and maintainability (RAM) data collection on tracked and wheeled vehicles; ballistic transducers for measuring chamber pressures during ammunition and barrel tests; supports development of common data collection instrumentation and data management systems used in testing across all test commodity areas and lifecycles; continues replacement and upgrade of range control instrumentation, radar, optics and telemetry used in missile testing; acquires data recorders, signal conditioning			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605602A / *Army Technical Test Instrumentation and Targets*	**Project (Number/Name)** 628 / *Developmental Test Technology & Sustainment*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
equipment, data processing equipment and other instrumentation for various aircraft tests; upgrades natural environments test instrumentation used for testing weapon systems, vehicles, munitions and support equipment in extreme hot desert environments as well as extreme cold conditions; continues upgrade of survivability/vulnerability test capabilities in support of live fire testing; upgrades and replaces mobile range communications equipment and digital end devices; and improves test efficiency through the use of smart devices as data collectors. ***FY 2022 Plans:*** Test centers will continue to provide, acquire, and upgrade instrumentation for C4ISR, RAM, automotive, ballistics, missile, aviation and environmental testing across all test commodity areas and enhance/expand the use of common data collectors, smart devices, and enterprise data management tools. Examples include Aberdeen Test Center (ATC) Crew Survivability Instrumentation during Live Fire Test and Evaluation (LFT&E) to support NGCV; Electronic Proving Ground (EPG) Phoenix Architecture project for support to C4 network systems; Yuma Proving Ground (YPG) Long Range Precision Fires (LRPF) test support equipment; White Sands Missile Range (WSMR) Directed Energy Laser test modernization, and Redstone Test Center's (RTC) Modular Open System Architecture (MOSA) for supporting Future Vertical Lift (FVL) testing. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** In FY23 two projects that funds ATEC's test and evaluation capability investment requirements were consolidated to a single account: (1) 665602628 / Project 628, Developmental Test Technology and Sustainment and (2) 66560262C / Project 62C, Modeling and Simulation Instrumentation to PE 665602FJ3 / Project FJ3, Technical Test Instrumentation and Targets.			
Title: FY2022 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	1.140	-
Accomplishments/Planned Programs Subtotals	33.124	34.739	-

	FY 2021	FY 2022
Congressional Add: Cyber Space Threats ***FY 2021 Accomplishments:*** Congressional Add for Cyber Space Threats.	5.000	-
Congressional Add: Rapid Assurance Modernization Program ? Test (RAMP-T)	-	10.000

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605602A / *Army Technical Test Instrumentation and Targets*	**Project (Number/Name)** 628 / *Developmental Test Technology & Sustainment*

	FY 2021	FY 2022
FY 2022 Plans: Congressional Add for RAMP-T.		
Congressional Adds Subtotals	5.000	10.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605602A / *Army Technical Test Instrumentation and Targets*	Project (Number/Name) 62C / *Modeling and Simulation Instrumentation*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
62C: *Modeling and Simulation Instrumentation*	-	43.705	14.514	-	-	-	-	-	-	-	0.000	58.219
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY23 two projects that funds ATEC's test and evaluation capability investment requirements were consolidated to a single account: (1) 665602628 / Project 628, Developmental Test Technology and Sustainment and (2) 66560262C / Project 62C, Modeling and Simulation Instrumentation to PE 665602FJ3 / Project FJ3, Technical Test Instrumentation and Targets.

A. Mission Description and Budget Item Justification

The United States Army Test and Evaluation Command (U.S. ATEC) plans, executes, and reports on operational tests, assessments and experiments in order to provide essential information for the acquisition and fielding of Army systems. A subordinate unit of ATEC, the Operational Test Command (OTC) provides support to Army Future Command (AFC), Cross Functional Teams (CFT), and Programs of Record. OTC employs Modeling, Simulation, and Instrumentation (MS&I) to provide a realistic multi-domain operational (MDO) test environment with modern threat effects, conduct test monitoring and control, and perform data analysis. OTC performs Risk Management Framework (RMF) functions on all technology tools across OTC and develops and adapts Army training simulations (such as Multiple Integrated Laser Engagement System (MILES) Real Time Casualty Assessment (RTCA), One Semi-Automated Forces (OneSAF) Live-Virtual-Constructive (LVC), Extensible Command, Control, Communications, and Computers Intelligence (C4I) Instrumentation Suite (ExCIS), and others for use in Operational Tests (OTs). By using MS&I tools, OTC reduces test cost and the demand for Army test units by simulating tactical engagements, adjacent and higher headquarters units, mission command message traffic, and battlefield kinetic and non-kinetic effects. OTC provides test monitoring and control through video monitoring, Global Positioning System (GPS)-enabled networks, and integration with Army mission command systems to collect real-time position location and status tracking to ensure test safety and provide status of data collection devices. OTC uses video equipment, appended data collection devices, and embedded software to collect and analyze system performance during test. MS&I funding is used to adapt/integrate current Army training simulation capabilities to function with new Army systems, purchase commercial off-the-shelf systems, and develop and sustain OT-unique simulation and instrumentation systems. The MS&I program also funds the technical expertise and hardware to sustain cyber security of OTC's technology capabilities, and provides for minor data collection device development and sustainment to support systems undergoing OT.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: MS&I	13.705	13.985	-
Description: Develops and enhances ATEC's simulation/stimulation of Mission Command; Fire Support; Air Defense; Command, Control, Communications, and Computers Intelligence, Surveillance and Reconnaissance (C4ISR); and Network systems. Improves and sustains Real-Time Casualty Assessment (RTCA) capabilities. Develops, enhances, and sustains Performance Instrumentation Systems, Time Space Positioning Information (TSPI), Telemetry Systems, and Imaging Systems together with their associated data management enabling capabilities.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605602A / *Army Technical Test Instrumentation and Targets*	**Project (Number/Name)** 62C / *Modeling and Simulation Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: Plan is to sustain and invest in ATEC's test capabilities to provide operationally realistic multi-domain operations with modern kinetic and non-kinetic threat effects during test events for the following Army modernization efforts: Extended Range Cannon Artillery, Armored Multi-Purpose Vehicle, Patriot, Lower Tier Air Missile Defense Sensor/Radar Set, Assured Position Navigation and Timing, Guided Multiple Launch Rocket System - Extended Range (GMLRS-ER), Next Generation Squad Weapons, Synthetic Training Environment, Command Post Integrated Infrastructure, Blackhawk (UH-60V), Global Combat Support System, Distributed Common Ground System - Army (DCGS-A), Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade Chemical Surface Detector, and Cross-Functional Team Soldier-Centered Design events. Program will align requirements with Army modernization priorities in support of the National Defense Strategy. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** In FY23 two projects that funds ATEC's test and evaluation capability investment requirements were consolidated to a single account: (1) 665602628 / Project 628, Developmental Test Technology and Sustainment and (2) 66560262C / Project 62C, Modeling and Simulation Instrumentation to PE 665602FJ3 / Project FJ3, Technical Test Instrumentation and Targets.			
Title: FY2022 SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.529	-
Accomplishments/Planned Programs Subtotals	13.705	14.514	-

	FY 2021	FY 2022
Congressional Add: Space and Missile Cyber Security ***FY 2021 Accomplishments:*** Congressional Add for Space and Missile Cyber Security.	30.000	-
Congressional Adds Subtotals	30.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605602A / *Army Technical Test Instrumentation and Targets*	**Project (Number/Name)** 62C / *Modeling and Simulation Instrumentation*

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605602A / *Army Technical Test Instrumentation and Targets*	Project (Number/Name) FJ3 / *Technical Test Instrumentation & Targets*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
FJ3: *Technical Test Instrumentation & Targets*	-	-	-	37.962	-	37.962	38.176	38.146	38.141	38.513	0.000	190.938
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY23 two projects that funds ATEC's test and evaluation capability investment requirements were consolidated to a single account: (1) 665602628 / Project 628, Developmental Test Technology and Sustainment and (2) 66560262C / Project 62C, Modeling and Simulation Instrumentation to PE 665602FJ3 / Project FJ3, Technical Test Instrumentation and Targets.

A. Mission Description and Budget Item Justification

This Project provides critical front-end investments for development of: new test methodologies and standards; advanced test technology concepts; future test capabilities; advanced development of modeling, simulation, and instrumentation prototypes; advanced instrumentation prototypes; and the full scale development of test and evaluation capabilities for the United States (U.S) Army Test and Evaluation Command (ATEC). ATEC employs modeling, simulation, and instrumentation to provide a realistic multi-domain operational (MDO) test environment with modern threat effects, conduct test monitoring and control, and perform data analysis to enable essential transformation and support the Joint Force through development of MDO-capable forces. ATEC investments include organically developed capabilities as well as adaptation of capabilities developed by others (e.g., government, academia) or commercial-off-the-shelf products. These capabilities are located at, and managed by, ATEC T&E activities (excluding West Desert Test Center) and employed at ATEC ranges and other designated test locations across the country. Maintaining and modernizing ATEC T&E capabilities is critical to enable Army Futures Command (AFC) modernization efforts and readiness and support the development and fielding cycle of all Army acquisition programs including rapid fielding initiatives and programs of record.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Technical Test Instrumentation & Targets	-	-	37.825
Description: Develops, acquires, and sustains critical test technology and instrumentation to successfully develop, test, and evaluate Army weapons and equipment. Provides hardware/software and communication to create realistic relevant test environments, real-time range operations for monitoring participants, and data support systems for full integration. Provides the necessary live, virtual and constructive environment, hardware-in-the-loop capabilities, and modeling and simulation needed for testing Army materiel solutions. Acquires instrumentation to measure performance of Command, Control, Communication and Computer (C4) systems; reliability, availability, and maintainability (RAM) data collection on tracked and wheeled vehicles; ballistic transducers for measuring chamber pressures during ammunition and barrel tests; supports development of common data collection instrumentation and data management systems used in testing across all test commodity areas and lifecycles; continues replacement and upgrade of range control instrumentation, radar, optics and telemetry used in missile testing; acquires data recorders, signal conditioning equipment, data processing equipment and other instrumentation for various aircraft tests;			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605602A / *Army Technical Test Instrumentation and Targets*	**Project (Number/Name)** FJ3 / *Technical Test Instrumentation & Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
upgrades natural environments test instrumentation used for testing weapon systems, vehicles, munitions and support equipment in extreme hot desert environments as well as extreme cold conditions; continues upgrade of survivability/vulnerability test capabilities in support of live fire testing; upgrades and replaces mobile range communications equipment and digital end devices; and improves test efficiency through the use of smart devices as data collectors. ***FY 2023 Plans:*** ATEC OTC will maintain and invest in test and evaluation capabilities to provide a realistic multi-domain operational environment with modern kinetic and non-kinetic threat effects for the following Army modernization efforts: Rapid Rigging and De-Rigging Air Delivery System (RRDAS), RRDAS Maintenance Evaluation/Technical Manual (ME/TM), Multipurpose Equipment Transport System, Patriot, Cargo Helicopter CH-47F Block II, Guided Multiple Launch Rocket System - Extended Range, Terminal High Altitude Area Defense (THAAD), THAAD Flight Test, SPIKE-NLOS (non-line-of-sight), Attack Helicopter AH-64V6.X Flight Test, Multi- functional Information System, Family of Medium Tactical Vehicles, Future Vertical Lift CFT, Extended Range Cannon Artillery Increment 1C, Future Weapon Sight-Crew Served, Armored Multi-Purpose Vehicle, Abrams M1A2 System Enhancement Program (SEP), Assured Position Navigation and Timing, Robotic Combat Vehicles, Next Generation Squad Weapons, Command Post Computing Environment, Accessions Information Environment, Army Training Information System, Improved Forward Looking Infrared, Lower Tier Air and Missile Defense Sensor-Radar Set, Enhanced Electronic Automatic Activation Device, Mounted Computing Environment, Global Combat Support System, Mobile Airfield Damage Repair Kit, Modernized Radar Warning Receiver, Distributed Common Ground System - Army, Stryker 30mm Engineering Change Proposal, Mobile Protective Firepower, Precision Strike Missile, Project Convergence, the Synthetic Training Environment-CFT, and Cross-Functional Team Soldier-centered design events. Programs will align requirements with Army modernization priorities in support of the National Defense Strategy. ATEC test centers will continue to provide, acquire, and upgrade instrumentation for C4ISR, RAM, automotive, ballistics, missile, aviation and environmental testing across all test commodity areas and enhance/expand the use of common data collectors, smart devices, and enterprise data management tools. Examples include Aberdeen Test Center (ATC) Crew Survivability Instrumentation during Live Fire Test and Evaluation (LFT&E) to support NGCV; Electronic Proving Ground (EPG) Phoenix Architecture project for support to C4 network systems; Yuma Proving Ground (YPG) Long Range Precision Fires (LRPF) test support equipment; White Sands Missile Range (WSMR) Directed Energy Laser test modernization, and Redstone Test Center's (RTC) Modular Open System Architecture (MOSA) for supporting Future Vertical Lift (FVL) testing. ***FY 2022 to FY 2023 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605602A / *Army Technical Test Instrumentation and Targets*	**Project (Number/Name)** FJ3 / *Technical Test Instrumentation & Targets*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
In FY23 two projects that funds ATEC's test and evaluation capability investment requirements were consolidated to a single account: (1) 665602628 / Project 628, Developmental Test Technology and Sustainment and (2) 66560262C / Project 62C, Modeling and Simulation Instrumentation to PE 665602FJ3 / Project FJ3, Technical Test Instrumentation and Targets.			
Title: Army Enterprise Business Systems (EBS) Consolidation ? Test Data Management System (TDMS) ***Description:*** The Army consolidated Enterprise Business Systems (EBS) under the Acquisition Domain. The consolidation resulted in the transfer of funding $137K in support of the Test Data Management System (TDMS). TDMS is the system by the White Sands Missile Range to manage test data and perform program management of all missions performed on the range. ***FY 2023 Plans:*** WSMR is performing an analysis to determine the efficacy of the continuance of the use of TDMS. The funding for TDMS will transfer back to EE PEG in POM24-28 to allow for synergy of execution utilizing our existing funding sources. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding provides TDMS contractor support to maintain the systems to allow for data collection.	-	-	0.137
Accomplishments/Planned Programs Subtotals	-	-	37.962

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605604A / *Survivability/Lethality Analysis*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	36.001	36.370	36.500	-	36.500	37.353	37.319	37.332	37.695	0.000	258.570
675: *Army Survivability Analysis & Evaluation Supp*	-	36.001	36.370	36.500	-	36.500	37.353	37.319	37.332	37.695	0.000	258.570

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) funds objective vulnerability assessment products necessary for the inherently-governmental Army Test & Evaluation Command/Army Evaluation Center (ATEC/ AEC) mission and for the Research and Development and analysis communities. Products result from investigating, analyzing, assessing, experimenting and reporting on the survivability of Soldiers, and on the survivability, lethality and vulnerability (SLV) of the highest-priority Army and threat systems. Products are leveraged within the Army Futures Command (AFC), the Cross Functional Teams (CFTs) and Program Managers / Program Executive Offices (PM/PEO) to exercise constructive design influence over materiel development and to provide credible engineering-level underpinning and input to the Army Analytical Community.

This PE provides quantitative analyses and data for fielded and developmental systems as the Army pursues its modernization priorities and ensures readiness through the fielding of lethal and survivable systems for multi-domain operations. This PE funds engineering level analysis and experimentation supporting all CFTs including Long Range Precision Fires systems, Next Generation Combat Vehicles, Future Vertical Lift, Network / Command, Control, Communications (C3I), Air & Missile Defense, Soldier Lethality, and other high Army priority efforts. Principal data and analysis domains are integrated materiel performance, cyber resilience, human engineering and performance, Electronic Warfare threat defense, and mission threat analysis.

Assessments funded by this PE are conducted across the spectrum of multi-domain battlefield threats to include: guns, missiles, mines and other methods of inflicting physical damage; jammers, countermeasures, and other electronic warfare techniques; cyber threats from insiders to nation states; and directed energy weapons. Many different kinds of technical capabilities are used to generate these analyses, including specialized equipment, modeling & simulation, and experimental facilities. This PE ensures these capabilities can represent a live, virtual, or constructive hostile environment required for credible assessment, thus enabling evaluators, developers, users, and decision makers to make informed acquisition judgments. This technical data from earliest AFC experimentation to final operational test is retained and serves as AFC's repository of analysis and information for supporting an ever-improving body of evidence to drive Milestone Decisions. This body of evidence enables properly informed decisions concerning acquisition and production; maximizes Army overmatch in systems and tactics; informs investment priorities; and mitigates system weaknesses prior to actual combat.

Technical data and analysis results funded by this PE are efficiently leveraged for many different Army uses, reducing total cost to the Army by eliminating the need for duplicative capabilities funded by individual system developers. Central funding of this mission assures accurate and consistent technical treatment across all formal system Evaluations, and across the Army's analytical community as it conducts analyses of alternatives and other studies. The United States (U.S.) Army Combat Capabilities Development Command (DEVCOM) and ATEC/AEC integrate the results from the work program into Army's formal Evaluation process to ensure ATEC can comply with its legally-mandated responsibility to assess system survivability along with effectiveness and suitability.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605604A / *Survivability/Lethality Analysis*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	36.001	36.389	0.000	-	0.000
Current President's Budget	36.001	36.370	36.500	-	36.500
Total Adjustments	0.000	-0.019	36.500	-	36.500
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	36.500	-	36.500
• FFRDC Transfer	-	-0.019	-	-	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605604A / *Survivability/Lethality Analysis*	Project (Number/Name) 675 / *Army Survivability Analysis & Evaluation Supp*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
675: *Army Survivability Analysis & Evaluation Supp*	-	36.001	36.370	36.500	-	36.500	37.353	37.319	37.332	37.695	0.000	258.570
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds objective vulnerability assessment products necessary for the inherently-governmental Army Test & Evaluation Command/Army Evaluation Center (ATEC/ AEC) mission, and for the Research and Development and analysis communities. Products result from investigating, analyzing, assessing, experimenting and reporting on the survivability of Soldiers, and on the survivability, lethality and vulnerability (SLV) of the highest-priority Army and threat systems. Products are leveraged within the Army Futures Command (AFC), the Cross-Functional Teams (CFTs), and Program Managers / Program Executive Offices (PM/PEO) to exercise constructive design influence over materiel development and to provide credible engineering-level underpinning and input to the Army Analytical Community.

This Project provides quantitative analyses and data for fielded and developmental systems as the Army pursues its modernization priorities and ensures readiness through the fielding of lethal and survivable systems for multi-domain operations. PE funds engineering level analysis and experimentation supporting all CFTs including Long Range Precision Fires systems, Next Generation Combat Vehicles, Future Vertical Lift, Network / Command, Control, Communications (C3I), Air & Missile Defense, Soldier Lethality, and other highest Army priority efforts Principal data and analysis domains are integrated materiel performance, cyber resilience, human engineering and performance, Electronic Warfare threat defense, and mission threat analysis.

Assessments funded by this PE are conducted across the spectrum of multi-domain battlefield threats to include: guns, missiles, mines and other methods of inflicting physical damage; jammers, countermeasures, and other electronic warfare techniques; cyber threats from insiders to nation states; and directed energy weapons. Many different kinds of technical capabilities are used to generate these analyses, including specialized equipment, modeling & simulation, and experimental facilities. This PE ensures these capabilities can represent a live, virtual, or constructive hostile environment required for credible assessment, thus enabling evaluators, developers, users, and decision makers to make informed Acquisition judgments. This technical data from earliest AFC experimentation to final operational test is retained and serves as AFC's repository of analysis and information for supporting an ever-improving body of evidence to drive Milestone Decisions. This body of evidence enables properly informed decisions concerning acquisition and production; maximizes Army overmatch in systems and tactics; informs investment priorities; and mitigates system weaknesses prior to actual combat.

Technical data and analysis results funded by this PE are efficiently leveraged for many different Army uses, reducing total cost to the Army by eliminating the need for duplicative capabilities funded by individual system developers. Central funding of this mission assures accurate and consistent technical treatment across all formal system Evaluations, and across the Army's analytical community as it conducts analyses of alternatives and other studies. The United States (U.S.) Army Combat Capabilities Development Command (DEVCOM) and ATEC/AEC integrate the results from the work program into Army's formal Evaluation process to ensure ATEC can comply with its legally-mandated responsibility to assess system survivability along with effectiveness and suitability.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605604A / *Survivability/Lethality Analysis*	**Project (Number/Name)** 675 / *Army Survivability Analysis & Evaluation Supp*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Survivability, Lethality, Vulnerability Analyses (SLVA) for Ground, Aviation, Munitions, and Soldier Systems ***Description:*** This activity provides integrated multi-domain SLV for highest priority Ground, Aviation, Munitions, and Soldier Systems. ***FY 2022 Plans:*** Will conduct essential analysis on Long Range Precision Fires, Next Generation Combat Vehicle, Future Vertical Lift, and Soldier lethality systems, and on AFC?s, AEC?s, and CCDC's highest priority platform and weapon systems. For systems supported, working with materiel developers to constructively influence system design and providing relevant data to Army analytical community for supporting Analyses of Alternatives and other Army studies. ***FY 2023 Plans:*** Will conduct essential SVLA on Long Range Precision Fires, Next Generation Combat Vehicle, Future Vertical Lift, and Soldier Lethality systems and technologies, and on AFC's, AEC's, and DEVCOM's highest priority platform and weapon systems. Will provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, will work with materiel developers to constructively influence system design and provide relevant data to Army analytical community for supporting Analyses of Alternatives and other Army studies. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding changes reflects planned lifecycle of this effort.	16.370	16.093	16.567
Title: Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) System Survivability Assessments ***Description:*** This effort produces assessments of the survivability of C4ISR systems in EW and cyber threat environments and conducts Electronic Attack (EA) and cyber analyses that reveal critical vulnerabilities in C4ISR systems. It also defines, demonstrates, and recommends mitigation options to proponents and evaluators of C4ISR. A cyber vulnerability database is maintained for the benefit of the community. ***FY 2022 Plans:*** Will conduct cyber and EW analysis on network components as specified by the Network C3I CFT, AFC, AEC, and on CCDC's highest priority Network/C3 and other systems. For systems supported working with materiel developers to constructively influence system design and providing relevant data to Army analytical community to support Analyses of Alternatives and other Army studies. Cyber support includes resiliency assessments of systems and Soldiers together and verification of fixes to identified vulnerabilities. ***FY 2023 Plans:***	18.075	17.429	17.927

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605604A / *Survivability/Lethality Analysis*	**Project (Number/Name)** 675 / *Army Survivability Analysis & Evaluation Supp*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Will conduct essential cyber and EW analysis on network components and technologies as specified by the Network C3I CFT, AFC, AEC, and on DEVCOM's highest priority Network/C3 and other systems. Will provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, will work with materiel developers to constructively influence system design and provide relevant data to Army analytical community to support Analyses of Alternatives and other Army studies. Cyber support includes resiliency assessments of systems and Soldiers together and verification of fixes to identified vulnerabilities. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding changes reflects planned lifecycle of this effort.			
Title: Survivability, Lethality, Vulnerability (SLV) Analyses for Developmental Air and Missile Defense Systems ***Description:*** Conduct integrated SLV analyses for developmental air and missile defense systems, pre-planned product improvements of current systems, and recently fielded systems. ***FY 2022 Plans:*** Will conduct high-priority measurements and analysis on AMD systems and components as specified by AFC, AEC, and CCDC. For systems supported working with materiel developers to constructively influence system design and providing relevant data to Army analytical community to support Analyses of Alternatives and other Army studies. ***FY 2023 Plans:*** Will conduct high-priority measurements and analysis on AMD systems, technologies and components as specified by AFC, AEC, and DEVCOM. Will provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, will work with materiel developers to constructively influence system design and provide relevant data to Army analytical community to support Analyses of Alternatives and other Army studies. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding changes reflects planned lifecycle of this effort.	1.556	1.520	2.006
Title: SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:***	-	1.328	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605604A / *Survivability/Lethality Analysis*	**Project (Number/Name)** 675 / *Army Survivability Analysis & Evaluation Supp*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	36.001	36.370	36.500

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605606A / *Aircraft Certification*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	2.736	2.489	2.777	-	2.777	2.775	2.297	2.300	2.322	Continuing	Continuing
092: *Aircraft Certification*	-	2.736	2.489	2.777	-	2.777	2.775	2.297	2.300	2.322	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Airworthiness Certification Program Element (PE) assures safe flight operation of Army aircraft and aviation systems by means of technical design approval and qualification of systems to appropriate airworthiness standards. This PE supports independent airworthiness qualification for all assigned developmental and in-production Army aircraft, both manned and unmanned, as required by Army Regulation (AR) 70-62 ("Airworthiness of Aircraft Systems"), and is essential for assuring the safe operation of Army aircraft. This PE performs engineering functions (design, analysis, testing, demonstrations, and system specification compliance) essential for certifying the airworthiness of nearly 20,000 assigned Army aircraft. This PE also supports: management/execution of the Army's Aeronautical Design Standards (ADS) program; management/execution of airworthiness approval for new systems and materiel changes for all assigned Army aircraft systems; airworthiness engineering support for major development/modification and future systems/ subsystems requirements of the Program Executive Officer for Aviation (PEO AVN) and U.S. Army Special Operations Command's Technology Applications Program Office (TAPO); and management of test and evaluation processes in support of the airworthiness qualification process. The Airworthiness Certification PE also performs general research and development in support of aircraft qualification and overarching airworthiness projects that involve multiple aircraft models, and supports the application of other critical aviation subsystems onto Army aircraft.

This PE also supports: airworthiness certification for military-use civil derivative aircraft technical qualification through the Federal Aviation Administration's Military Certification Office; development of airworthiness procedures, specifications, critical standards, and other design and qualification documents; participation in senior leadership mandated airworthiness tri-service activities (e.g., National Airworthiness Council) and international airworthiness related activities mandated by treaty (e.g., Flight Into Non-segregated Airspace (FINAS)); and early airworthiness involvement in Technology Transition projects such as the Future Attack Reconnaissance Aircraft, Future Long Range Assault Aircraft, Advanced Unmanned Aircraft Systems, Modular Open System Architecture, and other Office of the Secretary of Defense (OSD) initiatives.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army					Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*		R-1 Program Element (Number/Name) PE 0605606A *I Aircraft Certification*			
B. Program Change Summary ($ in Millions)	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**
Previous President's Budget	2.736	2.489	0.000	-	0.000
Current President's Budget	2.736	2.489	2.777	-	2.777
Total Adjustments	0.000	0.000	2.777	-	2.777
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	2.777	-	2.777

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605606A / *Aircraft Certification*	Project (Number/Name) 092 / *Aircraft Certification*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
092: *Aircraft Certification*	-	2.736	2.489	2.777	-	2.777	2.775	2.297	2.300	2.322	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Airworthiness Certification Project assures safe flight operation of Army aircraft and aviation systems by means of technical design approval and qualification of systems to appropriate airworthiness standards. This Project supports independent airworthiness qualification for all assigned developmental and in-production Army aircraft, both manned and unmanned, as required by Army Regulation (AR) 70-62 ("Airworthiness of Aircraft Systems"), and is essential for assuring the safe operation of Army aircraft. This Project performs engineering functions (design, analysis, testing, demonstrations, and system specification compliance) essential for certifying the airworthiness of nearly 20,000 assigned Army aircraft. This Project also supports: management/execution of the Army's Aeronautical Design Standards (ADS) program; management/execution of airworthiness approval for new systems and materiel changes for all assigned Army aircraft systems; airworthiness engineering support for major development/modification and future systems/ subsystems requirements of the Program Executive Officer for Aviation (PEO AVN) and U.S. Army Special Operations Command's Technology Applications Program Office (TAPO); and management of test and evaluation processes in support of the airworthiness qualification process. The Airworthiness Certification Project also performs general research and development in support of aircraft qualification and overarching airworthiness projects that involve multiple aircraft models, and supports the application of other critical aviation subsystems onto Army aircraft.

This Project also supports: airworthiness certification for military-use civil derivative aircraft technical qualification through the Federal Aviation Administration's Military Certification Office; development of airworthiness procedures, specifications, critical standards, and other design and qualification documents; participation in senior leadership mandated airworthiness tri-service activities (e.g., National Airworthiness Council) and international airworthiness related activities mandated by treaty (e.g. Flight Into Non-segregated Airspace (FINAS)); and early airworthiness involvement in Technology Transition projects such as the Future Attack Reconnaissance Aircraft, Future Long Range Assault Aircraft, Advanced Unmanned Aircraft Systems, Modular Open System Architecture, and other Office of the Secretary of Defense (OSD) initiatives.

Work in this Project is performed by the United States Army Futures Command (AFC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Certification Requirements and Studies for Force Modernization Aircraft, Future Aircraft, and Advanced Aircraft Technologies	0.815	1.179	1.557
Description: Perform studies to support airworthiness certification requirements for Force Modernization and Future Aircraft Systems.			
FY 2022 Plans: Will refine AMACC document. Will conduct technical and airworthiness qualification assessments, projects, and studies to demonstrate airworthiness and system performance for Army force modernization aircraft systems and multi-system programs			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605606A / *Aircraft Certification*	**Project (Number/Name)** 092 / *Aircraft Certification*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
(e.g. AH-64E, UH-60M, MH-47G, MH-60M, etc). Will conduct studies of Airworthiness Certification requirements for future aircraft systems and other advanced technology transition programs (e.g. Future Attack Reconnaissance Aircraft, Future Long Range Assault Aircraft, Advanced Unmanned Aircraft Systems, Modular Open System Architecture). These efforts will include extensive, multi-faceted interactions and collaborations with government RDTE Centers, academia, US industry, professional aerospace technical societies, and international partners to fully understand advanced aviation technologies and proposed airworthiness certification criteria, standards, and methods of compliance. ***FY 2023 Plans:*** Will refine Army Military Airworthiness Certification Criteria (AMACC) document. Will conduct technical and airworthiness qualification assessments, projects, and studies to demonstrate airworthiness and system performance for Army force modernization aircraft systems and multi-system programs (e.g. AH-64E, UH-60M, MH-47G, MH-60M, etc). Will conduct studies of Airworthiness Certification requirements for future aircraft systems and other advanced technology transition programs (e.g. Future Attack Reconnaissance Aircraft, Future Long Range Assault Aircraft, Advanced Unmanned Aircraft Systems, Modular Open System. These efforts will aid in fully understanding advanced aviation technologies and proposed airworthiness certification criteria, standards, and methods of compliance. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increased to focus on efforts related to modernization and advanced technologies studies.			
Title: Design Standards ***Description:*** Support the development, implementation and maintenance of Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching Airworthiness qualification documentation. ***FY 2022 Plans:*** Will develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation. ***FY 2023 Plans:*** Will develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation.	1.437	0.777	0.777
Title: Commercial Derivative Aircraft ***Description:*** Technical and airworthiness qualification for Commercial Derivative Aircraft. ***FY 2022 Plans:***	0.242	0.221	0.222

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605606A / *Aircraft Certification*	**Project (Number/Name)** 092 / *Aircraft Certification*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Will provide technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration. ***FY 2023 Plans:*** Will continue to provide technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Inflation adjustment			
Title: Aircraft Fleet Airworthiness Certification Advancement and Synchronization ***Description:*** Support efforts to establish and maintain aircraft safety for a fleet of aircraft. ***FY 2022 Plans:*** Will lead and participate in national and international airworthiness certification committees, conferences and working groups responsible for establishing, maintaining, and synchronizing aircraft safety for fleets of aircraft (e.g. National Airworthiness Council, Joint Propulsion Coordinating Committee, NATO Airworthiness working groups, AFIC Airworthiness working groups, and Global Air Traffic Management working groups.) ***FY 2023 Plans:*** Will continue to lead and participate in national and international airworthiness certification committees, conferences and working groups responsible for establishing, maintaining, and synchronizing aircraft safety for fleets of aircraft (e.g. National Airworthiness Council, Joint Propulsion Coordinating Committee, North Atlantic Treaty Organization (NATO) Airworthiness working groups, Air Force Interoperability Council (AFIC) Airworthiness working groups, and Global Air Traffic Management working groups).	0.242	0.221	0.221
Title: FY22 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.091	-
Accomplishments/Planned Programs Subtotals	2.736	2.489	2.777

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605606A / *Aircraft Certification*	**Project (Number/Name)** 092 / *Aircraft Certification*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605702A / *Meteorological Support to RDT&E Activities*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	6.360	6.521	6.958	-	6.958	7.463	7.605	7.608	7.682	0.000	50.197
128: *Meteorological Support To RDT&E Activities*	-	6.360	6.521	6.958	-	6.958	7.463	7.605	7.608	7.682	0.000	50.197

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) provides meteorological support to research, development, test, and evaluation (RDTE) activities and provides standard and specialized weather forecasts and data to satisfy Army/Department of Defense (DoD) RDTE test requirements for modern weaponry. Types of support include: (1) unique atmospheric analysis and sampling to include atmospheric transmittance, extinction, optical scintillation, infrared temperature, aerosol/smoke cloud dispersion characteristics, and ballistic meteorological measurements; (2) test event forecasting to include prediction of sound propagation for ballistic firing tests, specialized prediction of light levels and target-to-background measurements, and predictions for electro-optical testing and ballistic artillery/mortar firing; and (3) advisory and warning products such as go/no-go test recommendations for ballistic and atmospheric probe missiles, smoke/obscurant tests, hazard predictions for chemical agent munitions disposal, monitoring dispersion of simulant clouds for chemical/biological detector tests, simulated nuclear blasts, and weather warnings for test range safety. This PE provides technical weather support to Army and Joint Program Executive Officers (PEOs), Project Managers (PMs), and the Army test ranges and sites at: White Sands Test Center (WSTC), White Sands Missile Range, New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; West Desert Test Center (WDTC), Dugway Proving Ground, Utah; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Redstone Test Center (RTC), Redstone Arsenal, Alabama; Yuma Test Center (YTC), Yuma Proving Ground, Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, Alaska); Operational Test Command (OTC), Fort Hood, Texas and Fort Bragg, North Carolina. This PE develops methodologies and acquires instrumentation and systems that allow meteorological teams to support current and future Army/DoD RDTE requirements. It finances indirect meteorological support operating costs not billable to customers along with replacement/ upgrade of meteorological instrumentation and support systems. Direct costs for meteorological support services are not funded by this PE, but are borne by the customer (i.e., materiel/weapons developers and project/product managers) in accordance with DoD Directive 7000.14R (Department of Defense Financial Management Regulations). This PE enables more effective test scheduling and execution, and is essential to the accomplishment of the Army's developmental and operational test mission in that precise weather modeling and measurements directly influence test item performance and quantify test item weather dependencies and vulnerabilities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605702A / *Meteorological Support to RDT&E Activities*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	6.360	6.689	0.000	-	0.000
Current President's Budget	6.360	6.521	6.958	-	6.958
Total Adjustments	0.000	-0.168	6.958	-	6.958
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	6.958	-	6.958
• FFRDC Transfer	-	-0.168	-	-	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605702A / *Meteorological Support to RDT&E Activities*	Project (Number/Name) 128 / *Meteorological Support To RDT&E Activities*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
128: *Meteorological Support To RDT&E Activities*	-	6.360	6.521	6.958	-	6.958	7.463	7.605	7.608	7.682	0.000	50.197
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides meteorological support to research, development, test, and evaluation (RDTE) activities and provides standard and specialized weather forecasts and data to satisfy Army/Department of Defense (DoD) RDTE test requirements for modern weaponry. Types of support include: (1) unique atmospheric analysis and sampling to include atmospheric transmittance, extinction, optical scintillation, infrared temperature, aerosol/smoke cloud dispersion characteristics, and ballistic meteorological measurements; (2) test event forecasting to include prediction of sound propagation for ballistic firing tests, specialized prediction of light levels and target-to-background measurements, and predictions for electro-optical testing and ballistic artillery/mortar firing; and (3) advisory and warning products such as go/ no-go test recommendations for ballistic and atmospheric probe missiles, smoke/obscurant tests, hazard predictions for chemical agent munitions disposal, monitoring dispersion of simulant clouds for chemical/biological detector tests, simulated nuclear blasts, and weather warnings for test range safety. This Project provides technical weather support to Army and Joint Program Executive Officers (PEOs), Project Managers (PMs), and the Army test ranges and sites at: White Sands Test Center (WSTC), White Sands Missile Range, New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; West Desert Test Center (WDTC), Dugway Proving Ground, Utah; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Redstone Test Center (RTC), Redstone Arsenal, Alabama; Yuma Test Center (YTC), Yuma Proving Ground, Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, Alaska); Operational Test Command (OTC), Fort Hood, Texas and Fort Bragg, North Carolina. This PE develops methodologies and acquires instrumentation and systems that allow meteorological teams to support current and future Army/DoD RDTE requirements. It finances indirect meteorological support operating costs not billable to customers along with replacement/ upgrade of meteorological instrumentation and support systems. Direct costs for meteorological support services are not funded by this PE, but are borne by the customer (i.e., materiel/weapons developers and project/product managers) in accordance with DoD Directive 7000.14R (Department of Defense Financial Management Regulations). This PE enables more effective test scheduling and execution, and is essential to the accomplishment of the Army's developmental and operational test mission in that precise weather modeling and measurements directly influence test item performance and quantify test item weather dependencies and vulnerabilities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Civilian Pay and Support Costs	2.175	2.280	2.398
Description: Funding related to Civilian Pay and associated indirect costs for meteorological support. ***FY 2022 Plans:*** Will provide indirect costs (personnel salaries) for generating weather forecasts, severe weather warnings and advisories; staff meteorological services; and atmospheric measurements in support of Army/DoD tests and projects at eight Army test sites and alternate test sites as required. Will provide program management for meteorological support to the Army RDTE community and technical review/assistance to ranges and meteorological support teams. Will provide technical meteorological support to the			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605702A / *Meteorological Support to RDT&E Activities*	**Project (Number/Name)** 128 / *Meteorological Support To RDT&E Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Army RDTE community including collaboration between Army meteorologists and NCAR toward improvements to the 4DWX System and associated system administration. ***FY 2023 Plans:*** Will continue to provide indirect costs (personnel salaries) for generating weather forecasts, severe weather warnings and advisories; staff meteorological services; and atmospheric measurements in support of Army/DoD tests and projects at eight Army test sites and alternate test sites as required. Will provide program management for meteorological support to the Army RDTE community and technical review/assistance to ranges and meteorological support teams. Will provide technical meteorological support to the Army RDTE community including collaboration between Army meteorologists and NCAR toward improvements to the 4DWX System and associated system administration. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation for civilian pay and routine program adjustments.			
Title: Four Dimensional Weather System and Instrumentation ***Description:*** Provides funding for meteorological instrumentation and technology to support RDTE activities at Army test sites. Includes funding for sustainment and enhancement of the 4DWX system, an advanced meteorological support system that provides high-resolution weather forecasts and analyzes. The 4DWX analyzes and forecasts the 3-dimensional structure of the atmosphere over time (4th dimension) and is used in test planning, conduct, and forensic analyses. ***FY 2022 Plans:*** Will continue 4DWX system sustainment and modernization to improve forecast accuracy in support of Army RDTE mission requirements, including development of a full-grid climatography using 4DWX final-analysis data, and further development of probabilistic modeling; improved data assimilation procedures, and configuration of 4DWX to optimize test range-specific accuracy. Instrumentation funding will be used to continue a multi-year effort to replace/upgrade obsolete instrumentation, including upper-air sounding systems, surface atmospheric meteorological system, and radar wind profilers at several test centers. ***FY 2023 Plans:*** Will continue 4DWX system sustainment and modernization to improve forecast accuracy in support of Army RDTE mission requirements, including development of a full-grid climatography using 4DWX final-analysis data, and further development of probabilistic modeling; improved data assimilation procedures, and configuration of 4DWX to optimize test range-specific accuracy. Instrumentation funding will be used to continue a multi-year effort to replace/upgrade obsolete instrumentation,	4.185	4.109	4.560

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605702A / *Meteorological Support to RDT&E Activities*	**Project (Number/Name)** 128 / *Meteorological Support To RDT&E Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
including upper-air sounding systems, surface atmospheric meteorological system, and radar wind profilers at several test centers. Also, life cycle replacement of 4DWX hardware servers and software. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation; program funding aligns 4DWX and Instrumentation requirements with Army modernization priorities in support of the National Defense Strategy.			
Title: FY2022 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.132	-
Accomplishments/Planned Programs Subtotals	6.360	6.521	6.958

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605706A *I Materiel Systems Analysis*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	21.830	21.558	22.037	-	22.037	23.278	23.704	23.705	23.933	0.000	160.045
541: *Materiel Sys Analysis*	-	21.830	21.558	22.037	-	22.037	23.278	23.704	23.705	23.933	0.000	160.045

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) resources the Combat Capabilities Development Command (DEVCOM) Data and Analysis Center (DAC) to conduct integrated material performance analyses to support Army decisions in technology, materiel acquisition, and the design, development, fielding and sustainment of Army materiel systems. The analysis products funded by this PE are leveraged to support Materiel Acquisition decisions and influence the design, development, and sustainment of Army weapon/materiel systems in support of the current and future force in the areas of Long Range Precision Fires, Next Generation Combat Vehicles, Future Vehicle Lift, Network/Command, Control, Communications and Intelligence, Air and Missile Defense, Soldier Lethality and other Army Priority efforts.

As the Army's center for integrated materiel performance analysis, the DEVCOM DAC supports Army and Department of Defense (DoD) decision makers throughout the entire acquisition process in responding to analytical requirements across the full spectrum of materiel. The DAC's unique in-house, consistent, integrated analytical capability provides the Army Futures Command (AFC) and Army leadership with timely, independent, unbiased, reliable, and high quality analysis to support complex decisions required for Current Operations and the development of the Future Force. The DAC's integrated set of skills, tools, and data repository are focused on the highest Army Priorities with a core mission to build the body of evidence and deliver objective analysis and experimentation across the entire life cycle to ensure Readiness today and a more lethal Future Force tomorrow.

This PE develops and certifies system level, and systems-of-systems level, performance and effectiveness data across a broad range of capabilities such as target acquisition, probability of inflicting catastrophic damage, personnel and vehicle survivability, mobility, network, system reliability, and several additional capability areas used in Army studies. The PE funds the development of item-level performance methodology, and Models and Simulations (M&S) for the current and future operational environments and emerging threats. The M&S capabilities support the development, linkage and accreditation of live, virtual, and constructive simulations, and provide unique tools that support systems analysis of individual systems and the combined arms environment. This M&S infrastructure provides a hierarchical modeling framework that is unique to the DAC and allows for a comprehensive performance and effectiveness analysis and prediction capability that can be utilized to support trade-off and investment decisions prior to extensive and expensive hardware testing of proposed systems/technologies.

This PE funds the Center for Reliability Growth (CRG), to develop critical tools, methodologies, policies, guidance and educational materials required to help acquisition programs achieve required reliability during the acquisition process. The CRG develops and applies engineering approaches to assess the reliability of Army materiel and provides recommendations on ways to improve reliability, thereby, reducing logistics footprints and life cycle costs, and extending failure-free periods for materiel. The CRG has developed an integrated set of skills and tools focused on its core competencies to be responsive in delivering objective data and analysis across the entire life cycle to ensure Readiness today and a more lethal future force tomorrow.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army					Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*			R-1 Program Element (Number/Name) PE 0605706A / *Materiel Systems Analysis*		
B. Program Change Summary ($ in Millions)	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**
Previous President's Budget	21.830	21.558	0.000	-	0.000
Current President's Budget	21.830	21.558	22.037	-	22.037
Total Adjustments	0.000	0.000	22.037	-	22.037
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	22.037	-	22.037

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605706A / *Materiel Systems Analysis*	Project (Number/Name) 541 / *Materiel Sys Analysis*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
541: *Materiel Sys Analysis*	-	21.830	21.558	22.037	-	22.037	23.278	23.704	23.705	23.933	0.000	160.045
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Program Element (PE) resources the Combat Capabilities Development Command (DEVCOM) Data and Analysis Center (DAC) to conduct integrated material performance analyses to support Army decisions in technology, materiel acquisition, and the design, development, fielding and sustainment of Army materiel systems. The analysis products funded by this PE are leveraged to support Materiel Acquisition decisions and influence the design, development, and sustainment of Army weapon/materiel systems in support of the current and future force in the areas of Long Range Precision Fires, Next Generation Combat Vehicles, Future Vehicle Lift, Network/Command, Control, Communications and Intelligence, Air and Missile Defense, Soldier Lethality and other Army Priority efforts.

As the Army's center for integrated materiel performance analysis, the DEVCOM DAC supports Army and Department of Defense (DoD) decision makers throughout the entire acquisition process in responding to analytical requirements across the full spectrum of materiel. The DAC's unique in-house, consistent, integrated analytical capability provides Army Futures Command (AFC) and Army leadership with timely, independent, unbiased, reliable, and high quality analysis to support complex decisions required for Current Operations and the development of the Future Force. The DAC's integrated set of skills, tools and data repository are focused on the highest Army Priorities with a core mission to build the body of evidence and deliver objective analysis and experimentation across the entire life cycle to ensure Readiness today and a more lethal Future Force tomorrow.

This PE develops and certifies system level, and systems-of-systems level, performance and effectiveness data across a broad range of capabilities such as target acquisition, probability of inflicting catastrophic damage, personnel and vehicle survivability, mobility, network, system reliability, and several additional capability areas used in Army studies. The PE funds the development of item-level performance methodology, and Models and Simulations (M&S) for the current and future operational environments and emerging threats. The M&S capabilities support the development, linkage and accreditation of live, virtual, and constructive simulations, and provide unique tools that support systems analysis of individual systems and the combined arms environment. This M&S infrastructure provides a hierarchical modeling framework that is unique to the DAC and allows for a comprehensive performance and effectiveness analysis and prediction capability that can be utilized to support trade-off and investment decisions prior to extensive and expensive hardware testing of proposed systems/technologies.

This PE funds the Center for Reliability Growth (CRG), to develop critical tools, methodologies, policies, guidance and educational materials required to help acquisition programs achieve required reliability during the acquisition process. The CRG develops and applies engineering approaches to assess the reliability of Army materiel and provides recommendations on ways to improve reliability, thereby, reducing logistics footprints and life cycle costs, and extending failure-free periods for materiel. The CRG has developed an integrated set of skills and tools focused on its core competencies to be responsive in delivering objective data and analysis across the entire life cycle to ensure Readiness today and a more lethal future force tomorrow.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Materiel Systems Analysis	21.830	20.771	22.037

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605706A / *Materiel Systems Analysis*	**Project (Number/Name)** 541 / *Materiel Sys Analysis*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: This activity provides for systems and engineering analyses to support the entire Future Force Modernization Enterprise decisions in technology, materiel acquisition, and the design, development, fielding and sustainment of Army materiel systems; the development of system level performance and effectiveness data and item-level performance methodology, and models and simulations; and the development of critical tools, methodologies, policies and guidance as the Center for Reliability Growth to improve reliability, extend failure-free periods, and reduce support costs. ***FY 2022 Plans:*** Will conduct integrated material performance analysis by developing, collecting, and retaining technology and system performance data as AFC?s repository for the body of evidence concerning Army technologies and systems. Will develop and maintains essential verified and validated item/system level methodologies, tools, and models and simulations. Will provide extensive analytical support to the CFTs to include AoA's, system cost/ performance tradeoffs, early technology trade-offs, weapons/systems mix analyses, system Technical and Schedule risk assessments, business case analyses, cost benefit analyses, requirements analyses, technology insertion studies, reliability growth studies, and PoF analyses. Will provide analytical support to the planning and conduct of T&E). Will perform follow-on studies for major Army programs undergoing engineering change proposals and provide essential certified weapons system performance data for all major Army studies. Will provide critical tools, policies and educational materials as the Army's Center for Reliability Growth to improve system reliability throughout the acquisition process. Will conduct systems analysis and assessments in support of multiple high-priority programs including Long Range Precision Fires systems, Next Generation Combat Vehicles, Future Vertical Lift, Network / Command, Control, Communications and intelligence (C3I), Air & Missile Defense, Soldier Lethality, and other highest Army priority efforts. For systems and technologies analyzed will provide relevant data and results to materiel developers, evaluators, senior decision makers, and downstream force-on-force modelers to support acquisition decisions. ***FY 2023 Plans:*** Will continue to conduct integrated materiel performance and engineering analyses as AFC's repository for the body of evidence concerning Army technologies and systems. Will continue to develop and maintain essential verified and validated item/system level methodologies, tools, and models and simulations. Will provide analytical support to the CFTs to include AoA's, system cost/ performance tradeoffs, early technology trade-offs, weapons/systems mix analyses, system Technical and Schedule risk assessments, business case analyses, cost benefit analyses, requirements analyses, technology insertion studies, reliability growth studies, and Physics of Failure analyses. Will conduct systems analysis and assessments in support of multiple high-priority programs including Long Range Precision Fires systems, Next Generation Combat Vehicles, Future Vertical Lift, Network / Command, Control, Communications and Intelligence (C3I), Air & Missile Defense, Soldier Lethality, and other highest Army priority efforts. Will provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. Will continue to provide analytical support to the planning and conduct of T&E. Will perform follow-on studies for major Army programs undergoing engineering change proposals and provide essential certified weapons system performance data for all major Army studies. Will continue to provide critical tools, policies and educational materials			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605706A / *Materiel Systems Analysis*	**Project (Number/Name)** 541 / *Materiel Sys Analysis*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
as the Army's Center for Reliability Growth to improve system reliability throughout the acquisition process. For systems and technologies analyzed will provide relevant data and results to materiel developers, evaluators, senior decision makers, and downstream force-on-force modelers to support technology development and acquisition decisions. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding changes reflects planned lifecycle of this effort			
Title: SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.787	-
Accomplishments/Planned Programs Subtotals	21.830	21.558	22.037

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605709A / *Exploitation of Foreign Items*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	8.936	13.631	6.186	-	6.186	6.539	6.519	6.565	6.653	Continuing	Continuing
C28: *Acq/Exploit Threat Items*	-	8.936	13.631	6.186	-	6.186	6.539	6.519	6.565	6.653	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element will continue to support the acquisition, exploitation, and inventory of foreign ground materiel with potential advanced technology threats to United States (U.S.) systems, as well as emerging and destructive threats such as cyber vulnerabilities, biometric systems, and evolving improvised explosive devices. The primary aim of the PE is to maximize the efficiency of research and development for force and materiel development by reducing the uncertainties associated with these threats. The PE also answers scientific and technical intelligence requirements, provides materiel for realistic testing and training, and aids in the development of countermeasures to threat systems, materiel, and technologies. Operations have increased the amount of captured threat materiel that require immediate exploitation to develop countermeasures and force protection measures for U.S. forces. Acquisition and exploitation are executed according to Army Foreign Materiel Program (FMP) Plan prioritization and with the approval of the Army Deputy Chief of Staff for Intelligence (G2).

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	8.936	13.631	0.000	-	0.000
Current President's Budget	8.936	13.631	6.186	-	6.186
Total Adjustments	0.000	0.000	6.186	-	6.186
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	6.186	-	6.186

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605709A / *Exploitation of Foreign Items*	Project (Number/Name) C28 / *Acq/Exploit Threat Items*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
C28: *Acq/Exploit Threat Items*	-	8.936	13.631	6.186	-	6.186	6.539	6.519	6.565	6.653	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides for the acquisition, exploitation, and inventory of foreign ground materiel with potential advanced technology threats to United States (U.S.) systems, as well as emerging and destructive threats. The primary aim of the Project is to maximize the efficiency of research and development for force and materiel development by reducing the uncertainties associated with these threats. The Project also answers scientific and technical intelligence requirements, provides materiel for realistic testing and training, and aids in the development of countermeasures to threat systems, materiel, and technologies. Operations have increased the amount of captured threat materiel that require immediate exploitation to develop countermeasures and force protection measures for U.S. forces. Acquisition and exploitation are executed according to Army Foreign Materiel Program (FMP) Plan prioritization and with the approval of the G2.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army Foreign Materiel Program (FMP) Acquisition	2.628	4.498	2.206
Description: This effort provides for the acquisition of foreign ground materiel with potential advanced technology threats to U.S. systems, as well as emerging and destructive threats. The primary aim of the effort is to maximize the efficiency of research and development for force and materiel development by reducing the uncertainties associated with these threats. The effort also answers scientific and technical intelligence requirements, provides materiel for realistic testing and training, and aids in the development of countermeasures to threat systems, materiel, and technologies. Operations have increased the amount of captured threat materiel that require immediate exploitation to develop countermeasures and force protection measures for US forces. Acquisition and exploitation are executed according to Army FMP Plan prioritization and with the approval of the G2. ***FY 2022 Plans:*** Will conduct Foreign Materiel Acquisition of threat related foreign ground materiel systems and state of the art technologies of military significance. ***FY 2023 Plans:*** Will conduct Foreign Materiel Acquisition of threat related foreign ground materiel systems and state of the art technologies of military significance. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease in funding to fund higher priorities within Army.			
Title: Army Foreign Materiel Program (FMP) Exploitation	6.308	9.133	3.980
Description: This effort provides for the exploitation and inventory of foreign ground materiel with potential advanced technology threats to U.S. systems, as well as emerging and destructive threats such as cyber vulnerabilities, biometric systems, and			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605709A / *Exploitation of Foreign Items*	**Project (Number/Name)** C28 / *Acq/Exploit Threat Items*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
evolving improvised explosive devices. The primary aim of the effort is to maximize the efficiency of research and development for force and materiel development by reducing the uncertainties associated with these threats. The effort also answers scientific and technical intelligence requirements, provides materiel for realistic testing and training, and aids in the development of countermeasures to threat systems, materiel, and technologies. Operations have increased the amount of captured threat materiel that require immediate exploitation to develop countermeasures and force protection measures for US forces. Acquisition and exploitation are executed according to Army FMP Plan prioritization and with the approval of the G2. ***FY 2022 Plans:*** Will conduct Foreign Materiel Acquisition of threat related foreign ground materiel systems and state of the art technologies of military significance. ***FY 2023 Plans:*** Will conduct Foreign Materiel Acquisition of threat related foreign ground materiel systems and state of the art technologies of military significance. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease in funding to fund higher priorities within Army.			
Accomplishments/Planned Programs Subtotals	8.936	13.631	6.186

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605712A / *Support of Operational Testing*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	54.116	55.122	70.718	-	70.718	72.760	73.891	73.940	74.661	0.000	475.208
001: *ATEC Joint Tests And Follow-On Test & Eval*	-	0.303	0.355	-	-	-	-	-	-	-	0.000	0.658
V02: *ATEC Activities*	-	53.813	54.767	70.718	-	70.718	72.760	73.891	73.940	74.661	0.000	474.550

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) provides resources to the United States (U.S.) Army Test and Evaluation Command (ATEC) to operate the Army's Operational Test Command (OTC). OTC conducts independent operational tests that provide significant data to Army decision-makers on key Army systems and concepts. This PE finances recurring costs for OTC that are essential for conducting realistic and continuous testing in the critical areas of equipment, doctrine, force design and training. These recurring costs include civilian pay, requirements for test support contracts, temporary duty, training, supplies and equipment. It also provides funding to the U.S. Army Futures Command to operate the Army Joint Test Element (JTE). JTE examines Joint Service, Combatant Command (COCOM) and Department of Defense (DoD) agencies' mission gaps, tactics and doctrine, resulting in the development of Tactics, Techniques and Procedures (TTP), Concept of Operations (CONOPS) and assessment documents. Products are developed through operational non-materiel solutions to urgent, specific, Joint Warfighter problems.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	54.116	55.122	0.000	-	0.000
Current President's Budget	54.116	55.122	70.718	-	70.718
Total Adjustments	0.000	0.000	70.718	-	70.718
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	70.718	-	70.718

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605712A / *Support of Operational Testing*	Project (Number/Name) 001 / *ATEC Joint Tests And Follow-On Test & Eval*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
001: *ATEC Joint Tests And Follow-On Test & Eval*	-	0.303	0.355	-	-	-	-	-	-	-	0.000	0.658
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Modernization Command (JMC) plans and executes worldwide multi-echelon, joint and multi-national field experiments in support of the Army's modernization strategy enabling a multi-domain operations Aimpoint Force. This Project provides funding for the Joint Modernization Command - Aberdeen Proving Grounds (JMC-APG) which supports assessments of operational solutions to urgent, specific, Joint Warfighter problems through a short-term, rigorous experiment process. This support is principally through the AFC Experiment program. The office further manages Army resources in support of joint assessments. The objective of JMC-APG is to develop, in operational environments, methods for Warfighters to accomplish their missions more effectively with today's equipment, organizations, and doctrine. JMC-APG achieves this by evaluating new concepts for tactics, techniques, and procedures, and addressing Combatant Commanders' needs and issues in the joint military environments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army Joint Test Element (JTE) Management Support	0.303	0.355	-
Description: Funds the civilian salaries and related non-labor requirements that support the JMC-APG. ***FY 2022 Plans:*** Will continue to fund civilian labor and non-labor requirements such as supplies and travel in support of JMC-APG initiatives, program support from remote joint test stations, and COCOM engagements. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding has decreased because Army Joint Test Element (JTE) Management Support will be transferred to the EE PEG under the VAWE Joint Experimentation Management Decision Package (MDEP) which falls under the Army Futures Command.			
Accomplishments/Planned Programs Subtotals	0.303	0.355	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605712A / *Support of Operational Testing*	Project (Number/Name) V02 / *ATEC Activities*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
V02: *ATEC Activities*	-	53.813	54.767	70.718	-	70.718	72.760	73.891	73.940	74.661	0.000	474.550
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY23 there is a realignment of Test Technology Sustainment funding from APE 66560262C, Modeling and Simulation Instrumentation to APE 665712V02, Support of Operational Testing-ATEC Activities.

A. Mission Description and Budget Item Justification

This Project provides funding to the Army Test and Evaluation Command (ATEC) to operate the Operational Test Command (OTC) which conducts independent operational tests that provide significant data to Army decision makers on key systems in support of the Army's modernization priorities. These operational tests are required by public law (Title 10 USC 2399). This Project finances recurring costs for OTC that are essential to conduct realistic and continuous testing in the critical areas of equipment, doctrine, force design and training. These recurring costs include civilian pay, requirements for test support contracts, temporary duty, training, supplies and equipment.

OTC consists of four forward Test Directorates (Airborne and Special Operations Test Directorate, Fort Bragg, North Carolina; Air and Missile Defense Test Directorate, Fort Bliss, Texas; Fires Support Test Directorate, Fort Sill, Oklahoma; and the Intelligence Electronic Warfare Test Directorate, Fort Huachuca, Arizona) together with four additional Test Directorates (Aviation; Maneuver; Mission Command; Maneuver Support and Sustainment) and OTC Headquarters at Fort Hood, Texas. These activities support the development and fielding cycle of all Army acquisition programs including rapid fielding initiatives in support of the Army's modernization priorities. The primary mission of these test directorates is to perform detailed planning, execution, and reporting of Customer Tests, Early User Tests, Limited User Tests (LUT), Initial Operational Test and Evaluation (IOTE), and Follow-On Operational Tests (FOT) in support of Army Modernization. OTC also supports Army Futures Command's Soldier Touch Points and other early assessments of potential new systems the Army seeks to acquire in support of Army Modernization. Funding provides essential sustainment of models, simulations, and instrumentation for operational testing of airborne/aviation systems, mission command systems, fires systems, intelligence systems, real-time casualty assessment (RTCA), and common live-virtual-constructive (LVC) tools.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Operational Test Command Civilian Pay	42.001	43.420	45.036
Description: This funding supports the cost of civilian labor for OTC Program Budget Guidance (PBG) authorizations.			
FY 2022 Plans: Will continue to support the costs of civilian labor for OTC PBG authorizations.			
FY 2023 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605712A / *Support of Operational Testing*	**Project (Number/Name)** V02 / *ATEC Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Will continue to support the costs of civilian labor for OTC PBG authorizations. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding is due to civilian pay raise assumptions.			
Title: Operational Test Command Operations Support ***Description:*** OTC operational costs including: support contracts, temporary duty, training, supplies and equipment. ***FY 2022 Plans:*** Continue to support operational costs including support contracts, temporary duty, training, supplies and equipment. ***FY 2023 Plans:*** Continue to support operational costs including temporary duty, training, supplies, equipment, and support contracts that are required to conduct the operational test mission. Contractual support includes: test support requirements; information technology (IT) and network support and licensing; facilities maintenance and utilities; and technology modernization updates. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding is due to inflation and projected increases in cost for non-pay and non-fuel purchases.	11.812	11.022	12.271
Title: Test Technology Sustainment ***Description:*** This project sustains the capabilities to create a realistic multi-domain operational (MDO) test environment with modern threat effects, provide test monitoring and control, and data analysis. This project sustains the expertise to employ modeling and simulation tools and the expertise to adapt/integrate current Army training simulation capabilities and other tools to function with new Army systems and sustains OT-unique simulation and instrumentation systems. By sustaining the models and simulation tools and expertise, this project reduces test costs and the demand for Army test units by simulating tactical engagements, adjacent and higher headquarters units, mission command message traffic, and battlefield kinetic and non-kinetic effects. This project sustains video equipment, appended data collection devices, and embedded software used to collect and analyze system performance during test. The project also funds the technical expertise and hardware to sustain cyber security of OTC's technology capabilities; technology tools across OTC require Risk Management Framework (RMF) accreditation. ***FY 2023 Plans:*** OTC will sustain test capabilities to provide a realistic multi-domain operational environment with modern kinetic and non-kinetic threat effects for the following Army modernization efforts: Rapid Rigging and De-Rigging Air Delivery System (RRDAS), RRDAS Maintenance Evaluation/Technical Manual (ME/TM), Multipurpose Equipment Transport System, Patriot, Cargo Helicopter CH-47F Block II, Guided Multiple Launch Rocket System - Extended Range, Terminal High Altitude Area Defense (THAAD), THAAD Flight Test, SPIKE-NLOS (non-line-of-sight), Attack Helicopter AH-64V6.X Flight Test, Multi- functional Information	-	-	13.411

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605712A / *Support of Operational Testing*	**Project (Number/Name)** V02 / *ATEC Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
System, Family of Medium Tactical Vehicles, Future Vertical Lift CFT, Extended Range Cannon Artillery Increment 1C, Future Weapon Sight-Crew Served, Armored Multi-Purpose Vehicle, Abrams M1A2 System Enhancement Program (SEP), Assured Position Navigation and Timing, Robotic Combat Vehicles, Next Generation Squad Weapons, Command Post Computing Environment, Accessions Information Environment, Army Training Information System, Improved Forward Looking Infrared, Lower Tier Air and Missile Defense Sensor-Radar Set, Enhanced Electronic Automatic Activation Device, Mounted Computing Environment, Global Combat Support System, Mobile Airfield Damage Repair Kit, Modernized Radar Warning Receiver, Distributed Common Ground System - Army, Stryker 30mm Engineering Change Proposal, Mobile Protective Firepower, Precision Strike Missile, Project Convergence, the Synthetic Training Environment-CFT, and Cross-Functional Team Soldier-centered design events. Programs will align requirements with Army modernization priorities in support of the National Defense Strategy. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding is due to realignment of Test Technology Sustainment funding from APE 66560262C, Modeling and Simulation Instrumentation.			
Title: SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.325	-
Accomplishments/Planned Programs Subtotals	53.813	54.767	70.718

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605716A *I Army Evaluation Center*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	56.827	65.854	67.058	-	67.058	67.182	68.477	68.482	69.729	0.000	463.609
302: *Army Evaluation Center*	-	56.827	65.854	67.058	-	67.058	67.182	68.477	68.482	69.729	0.000	463.609

A. Mission Description and Budget Item Justification

This funding line supports test and evaluation (T&E) of Army Modernization Priority Programs.

This Program Element (PE) provides the resources to operate the Army Evaluation Center (AEC), the Army's independent evaluator for Army Futures Command (AFC) Cross Functional Team (CFT) efforts and all other Army and Joint Service programs (currently over 700 programs in total). AEC is the lead agent to plan, direct, and evaluate all required program testing and is the unbiased, independent authority for reporting on system progress. AEC is the focal point in test strategy development, system safety verification, and data analyses from early developmental consumer tests through operational tests. AEC develops Critical Operational Issues and Criteria (COIC) in conjunction with AFC to narrow the focus of testing to what is essential. AEC reviews and shapes system requirements to ensure they do not drive unnecessary testing. AEC provides critical independent assessments on system effectiveness, suitability, survivability, and safety to include cybersecurity and electronic warfare (EW); artificial intelligence (AI); safety of materiel solutions; and viability of emerging technologies and engineering change proposals in order to support major acquisition/fielding decisions including but not limited to acquisition milestones, materiel changes, and materiel releases.

AEC is responsible for all assigned developmental and independent operational evaluations of Army materiel, information, and acquisition systems, an inherently governmental mission. AEC must remain independent from the development community. AEC assists the Chief of Staff of the Army decision making process by supporting Army Capabilities Integration Development System (A-CIDS) processes as well as supporting the AFC through the CFT concept. AEC evaluates operational effectiveness by determining if the system provides intended benefits to the Force. AEC assesses, confirms, and releases system safety for use by Soldiers upon fielding and during government sponsored experiments and demonstrations. AEC determines impacts to readiness through Human Systems Integration (HSI), Unit Systems Integration (USI), and Army Systems Integration (ASI), as well as doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy (DOTMLPF-P) impacts. AEC evaluates ballistics survivability and lethality missions, adversarial assessments/ threat computer network operations (TCNO), cooperative vulnerability and penetration assessments (CVPA), and EW (attack, support) countermeasures in support of the National Defense Authorization Act (NDAA) 2016 Section 1647, establishment of Cybersecurity and Electromagnetic Affects (CEMA). AEC manages, plans, and executes Information Assurance (IA) operational assessments during annual Combatant Command and Army Service exercises in support of the congressionally mandated Office of the Secretary of Defense (OSD) Director, Operational Test and Evaluation (DOT&E) assessment, and performs operational test agency (OTA) duties for the Ballistic Missile Defense System (BMDS).

This PE funds direct civilian labor and minimum non-labor requirements to include: Temporary Duty (TDY) travel, personnel training, career development, supplies and equipment, hardware, software, and other external Other Government Agency (OGA) support as well as methodology development required to evaluate emerging technologies and instrumentation requirements.

AEC consists of seven directorates - Analytics, Artificial Intelligence, and Digital Engineering Evaluation Directorate (AAIDED); Aviation-Fires Evaluation Directorate; Ballistic Missile Defense Evaluation Directorate (primarily funded by the Missile Defense Agency (MDA); Command, Control, Communications, Computers, Intelligence,

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605716A / *Army Evaluation Center*

Surveillance and Reconnaissance (C4ISR) Evaluation Directorate; Mounted Systems Evaluation Directorate; Soldier Evaluation Directorate; and Survivability Evaluation Directorate - and a lean headquarters element as AEC receives staff services from the Army Test and Evaluation Command (ATEC) Headquarters (HQ). AEC provides direct support to AFC with personnel geographically co-located with eight CFTs - Long Range Precision Fires; Next Generation Combat Vehicle; Future Vertical Lift; Network; Assured Positioning, Navigation, and Timing; Air and Missile Defense; Soldier Lethality; and Synthetic Training Environment - and the Rapid Capabilities-Critical Technology Office and the Artificial Intelligence Task Force.

The AEC primary competencies are: identify what decision makers need to know; plan and direct T&E strategies; evaluate operational effectiveness, suitability, survivability, and safety; and provide senior leadership unbiased advice on Army and Joint Service programs.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	56.827	65.854	0.000	-	0.000
Current President's Budget	56.827	65.854	67.058	-	67.058
Total Adjustments	0.000	0.000	67.058	-	67.058
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	67.058	-	67.058

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605716A / *Army Evaluation Center*				Project (Number/Name) 302 / *Army Evaluation Center*			
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
302: *Army Evaluation Center*	-	56.827	65.854	67.058	-	67.058	67.182	68.477	68.482	69.729	0.000	463.609
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides the resources to operate the Army Evaluation Center (AEC), the Army's independent evaluator for Army Futures Command (AFC) Cross Functional Team (CFT) efforts and all other Army and Joint Service programs (currently over 700 programs in total). AEC is the lead agent to plan, direct, and evaluate all required program testing and is the unbiased, independent authority for reporting on system progress. AEC is the focal point in test strategy development, system safety verification, and data analyses from early developmental consumer tests through operational tests. AEC develops Critical Operational Issues and Criteria (COIC) in conjunction with AFC to narrow the focus of testing to what is essential. AEC reviews and shapes system requirements to ensure they do not drive unnecessary testing. AEC provides critical independent assessments on system effectiveness, suitability, survivability, and safety to include cybersecurity and electronic warfare (EW); artificial intelligence (AI); safety of materiel solutions; and viability of emerging technologies and engineering change proposals in order to support major acquisition/fielding decisions including but not limited to acquisition milestones, materiel changes, and materiel releases.

AEC is responsible for all assigned developmental and independent operational evaluations of Army materiel, information, and acquisition systems, an inherently governmental mission. AEC must remain independent from the development community. AEC assists the Chief of Staff of the Army decision making process by supporting Army Capabilities Integration Development System (A-CIDS) processes as well as supporting the AFC through the CFT concept. AEC evaluates operational effectiveness by determining if the system provides intended benefits to the Force. AEC assesses, confirms, and releases system safety for use by Soldiers upon fielding and during government sponsored experiments and demonstrations. AEC determines impacts to readiness through Human Systems Integration (HSI), Unit Systems Integration (USI), and Army Systems Integration (ASI), as well as doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy (DOTMLPF-P) impacts. AEC evaluates ballistics survivability and lethality missions, adversarial assessments/ threat computer network operations (TCNO), cooperative vulnerability and penetration assessments (CVPA), and EW (attack, support) countermeasures in support of the National Defense Authorization Act (NDAA) 2016 Section 1647, establishment of Cybersecurity and Electromagnetic Affects (CEMA). AEC manages, plans, and executes Information Assurance (IA) operational assessments during annual Combatant Command and Army Service exercises in support of the congressionally mandated Office of the Secretary of Defense (OSD) Director, Operational Test and Evaluation (DOT&E) assessment, and performs operational test agency (OTA) duties for the Ballistic Missile Defense System (BMDS).

This Project funds direct civilian labor and minimum non-labor requirements to include: Temporary Duty (TDY) travel, personnel training, career development, supplies and equipment, hardware, software, and other external Other Government Agency (OGA) support as well as methodology development required to evaluate emerging technologies and instrumentation requirements.

AEC consists of seven directorates - Analytics, Artificial Intelligence, and Digital Engineering Evaluation Directorate (AAIDED); Aviation-Fires Evaluation Directorate; Ballistic Missile Defense Evaluation Directorate (primarily funded by the Missile Defense Agency (MDA); Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Evaluation Directorate; Mounted Systems Evaluation Directorate; Soldier Evaluation Directorate; and Survivability Evaluation Directorate - and a lean headquarters element as AEC receives staff services from the Army Test and Evaluation Command (ATEC) Headquarters (HQ). AEC provides direct support to AFC with personnel geographically co-located with eight CFTs - Long Range Precision Fires; Next Generation Combat Vehicle; Future Vertical Lift;

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605716A / *Army Evaluation Center*	**Project (Number/Name)** 302 / *Army Evaluation Center*

Network; Assured Positioning, Navigation, and Timing; Air and Missile Defense; Soldier Lethality; and Synthetic Training Environment - and the Rapid Capabilities-Critical Technology Office and the Artificial Intelligence Task Force.

The AEC primary competencies are: Identify what decision makers need to know; plan and direct test and evaluation (T&E) strategies; evaluate operational effectiveness, suitability, survivability, and safety; and provide senior leadership unbiased advice on Army and Joint Service programs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army Evaluation Center Civilian Pay	56.702	60.530	61.620

Description: AEC provides integrated technical and operational evaluations and continuous evaluation of assigned weapon systems and major automated information systems for major milestone decisions, materiel changes, and materiel releases in support of the Army Acquisition Executive and force development. AEC develops the evaluation strategy, designs technical and operational tests, and evaluates the test results to address the combat effectiveness, suitability, survivability, and safety factors pertinent to the decision process for more than 700 systems/programs across the Army, other Services, and Agencies. AEC prepares integrated System Evaluation Plans and conducts integrated technical and operational evaluations for all assigned systems. In support of Overseas Contingency Operations (OCO) and other real-world events, AEC provides Capability & Limitation Reports and safety verification documents. AEC assists the Chief of Staff of the Army decision making process by supporting the Army Capabilities Integration Development System (A-CIDS) processes.

AEC exercises enterprise authority to prioritize, synchronize, and resource evaluations and assessments in support of Army Modernization and in accordance with AFC priorities. As a principle member of the ATEC Board of Directors (BOD), AEC partners with other ATEC organizations to provide enterprise oversight and decision making and coordinate enterprise initiatives to accelerate and reduce the cost of evaluations and assessments. AEC supports the A-CIDS process by reviewing and shaping COIC that are operationally relevant, total system focused, and that can be evaluated while driving essential T&E. AEC provides direct support to AFC by resourcing coordinators geographically co-located with eight CFTs, the Rapid Capabilities Critical Technology Office (RCCTO), and the AI Task Force. AEC resources eight integrators dedicated to each CFT to lead synchronization efforts across the T&E enterprise. AEC enables rapid capability development by partnering with and dedicating coordination efforts with RCCTO. AEC employs innovative and adaptive T&E processes through applying flexibility given limited resources and shifting priorities while leveraging all credible data sources. AEC develops and deploys enhanced T&E capabilities focusing on modernizing T&E capabilities while refining the investment process. AEC partners with analytic and strategic partner organizations to share resources, gain evaluation and assessment efficiencies, and increase capacity to support AFC. AEC applies new and innovative techniques in data mining, data visualization, and presentation of large data sets; and develops methodologies for the evaluation of artificial intelligence and hypersonic weapons.

FY 2022 Plans:
Will continue to support the costs of civilian labor for AEC PBG authorizations. AEC will continue to lead planning and execution of Project Convergence 2022 (PC22) in the evaluation of system of systems as well as individual system evaluations. AEC will

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605716A / *Army Evaluation Center*	**Project (Number/Name)** 302 / *Army Evaluation Center*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
continue to develop and execute advancement of AI and machine learning (ML) in support of evaluations. AEC will continue to leverage AFC's Top-Down Futures Development Process (TDFDP) to shape requirements continuously. AEC will continue to develop processes and procedures to execute T&E for Army programs leveraging agile development processes for software-centric programs. AEC will continue to develop partnerships with Federally Funded Research and Development Center to jointly advance an Instrumentation Sampling Methodology that provides defendable procedures to minimize test resources and ensure suitable data is available. AEC will continue to develop evaluation metrics in support of Army Modernization priorities for new and emerging technologies such as AI, ML, signature management, hypersonics, directed energy, and human cognition. AEC will continue to provide dedicated integration and on-site coordination support for RCCTO and all eight AFC CFTs. AEC will continue to partner with analytic and strategic organizations through participation in the AI Task Force to develop and define strategies and methodologies for T&E of integrated AI system competencies and capabilities. AEC will continue to develop personnel competencies in cloud computing and data management and will continue to identify opportunities for and invest in efforts to develop cloud computing and data sharing/storage infrastructure. AEC will continue to resource dedicated integration and coordination for Project Convergence and Army Modernization through the Sensor to Shooter Cell. AEC will continue to provide evaluation and assessment of system safety in support for government sponsored experiments and demonstrations to test and evaluate system integration events. AEC will continue to develop talent and culture changes that support organic Army T&E expertise in the modernized environment. Leverage advanced analytics/data mining for knowledge management and transfer. Continue to support a leadership-driven decision making process through resourcing high priority efforts, identifying T&E efficiencies, and identifying and allocating T&E resources required for modernization. Continue to leverage strategic partnerships. Establish processes to ensure enduring change, develop and maintain policy and tools, and provide governance and oversight. ***FY 2023 Plans:*** Will continue to fund operational costs for AEC including civilian pay and non-labor costs (approximately 94% of AEC's total budget is civilian labor). Develop and apply new techniques in cloud computing, data mining, data visualization, and presentation of large data sets in support of Army Data Transformation initiatives. Continue to research and develop evaluation metrics for new and emerging technologies in AI/ML, Data Management and Analysis, Virtual/Augmented Reality, Cybersecurity, and aerospace operations. Develop future leaders and invest in improved evaluation tools and capabilities in emerging technologies. Support Army Modernization priorities by providing dedicated support to CFTs, RCCTO, and AI Task Force. Lead Project Convergence 2023 planning and execution activities through its Sensor to Shooter cell. Invest in new modernization efforts to support increasing demands for classified information processing in direct support of Army modernization priorities. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to civilian pay raise assumptions. The FY23 funding will continue to support the additional authorizations and tasks as directed by the Acquisition Reform EXORD.			
Title: Army Evaluation Center Operations Support	0.125	5.163	5.438

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605716A / *Army Evaluation Center*	**Project (Number/Name)** 302 / *Army Evaluation Center*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: AEC operational support costs. Contract services include facilities maintenance and repair and custodial support to ensure safety, health and hygiene of the AEC workforce; sustainment services such as grass cutting, snow removal, and security for AEC facilities; software licenses required for scientific and statistical methods in developing rigorous, defensible test plans and evaluating the results; training for the highly technical civilian and military workforce (450 total number); life cycle replacement of IT equipment, printers, VTC equipment, wireless communications; contract support services for IT helpdesk, network, cybersecurity, etc.; and annual consumable supplies. ***FY 2022 Plans:*** Funding will continue to support AEC operational support costs including contract support, software licenses, training, life cycle replacement of equipment. ***FY 2023 Plans:*** Funding will continue to support AEC operational support costs including contract support, software licenses, training, life cycle replacement of equipment. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation rates for non-pay and non-fuel purchases.			
Title: FY2022 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.161	-
Accomplishments/Planned Programs Subtotals	56.827	65.854	67.058

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605718A *I Army Modeling & Sim X-Cmd Collaboration & Integ*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	2.478	2.633	6.097	-	6.097	6.177	6.199	6.200	6.228	0.000	36.012
S03: *Analysis M&S Tools and Services*	-	2.478	2.633	6.097	-	6.097	6.177	6.199	6.200	6.228	0.000	36.012

A. Mission Description and Budget Item Justification

This Program Element (PE) promotes the Army's Modeling and Simulation (M&S) strategy, defined by five guiding priorities: (1) formulate Army M&S policies; (2) develop and employ management processes for models, simulations and data; (3) develop M&S standards, architectures, networks and environments; (4) develop/ employ new M&S tools and simulation technology; (5) develop an M&S workforce. Specifically, this PE focuses on priorities 3 and 4 to include the modernization of the Center for Army Analysis (CAA) models, simulations, and analytic capabilities.

M&S Standards, Architectures, Networks and Environments: The consistent use of standards, architectures, networks and environments advances the goal of interoperability. The Army coordinates with Joint, Interagency, Intergovernmental, and Multinational (JIIM) partners along with industry and academia to develop/employ standards that promote collaboration and facilitate the sharing of tools, data and information. The Army oversees procedures and processes for the appropriate use of standards to foster common formats and increase M&S and data reuse. The Army ensures these standards, architectures, networks and environments are readily accessible and can be reliably applied by users.

M&S Tools and Simulation Technology: The Army must have credible M&S tools and data to support the full range of Army organizational missions and functional responsibilities. M&S results that are timely and credible enhance decision making. The Army must develop and accredit reliable M&S tools so that decision makers and senior leaders benefit from the results and thus support the continued development, integration and use of such tools. To ensure credibility and reliability of results, M&S managers, developers and users must make the capabilities, constraints, limitations and assumptions of their M&S tools readily accessible. PE 0605718A provides for the development and employment of tools in the form of models, simulations and data that support the full range of Army interests and deliver timely information to enhance effective decision making. Moreover, these tools can be documented, verified, validated and accredited for their intended purpose in order to provide timely, credible results. CAA conducts analysis of senior-level decisions for current and future national security issues. The suite of models, simulations, and analytic tools must remain relevant, current, and responsive to the ever-changing Operational Environment in order effectively to support the Army's analytic requirements.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605718A *I Army Modeling & Sim X-Cmd Collaboration & Integ*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	2.478	2.633	0.000	-	0.000
Current President's Budget	2.478	2.633	6.097	-	6.097
Total Adjustments	0.000	0.000	6.097	-	6.097
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	6.097	-	6.097

Change Summary Explanation

FY 2023 funding increase represents TOA added from undesignated Army funds to for the CAA model modernization effort.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605718A / *Army Modeling & Sim X-Cmd Collaboration & Integ*	Project (Number/Name) S03 / *Analysis M&S Tools and Services*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
S03: *Analysis M&S Tools and Services*	-	2.478	2.633	6.097	-	6.097	6.177	6.199	6.200	6.228	0.000	36.012
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project has two functions:

Function 1 (Priority 3 of the "Army Modeling and Simulation (M&S) Strategy") -- Develop M&S standards, architectures, networks and environments that promote sharing, interoperability, access, and reliable application of tools, formats, data and information among/for users.

Function 2 (priority 4 of the "Army M&S Strategy") -- Develop and improve tools and technology in the form of models, simulations and data that support the full range of Army interests and deliver timely information to enhance effective decision making. These tools can be documented, verified, validated and accredited for their intended purpose.

Resources under Project S03 support the M&S communities (Acquisition, Analysis, Experimentation, Test & Evaluation, Training, Intelligence) at the enterprise level through enabling efforts. These efforts include the following: (a) design models, simulations, data and tools that are resident within one organization but reusable and trusted by M&S users and specialists across the Army M&S enterprise; (b) leverage industry and academia; (c) promote interoperability within M&S and between M&S and operational capabilities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Develop M&S standards, architectures, networks and environments	0.826	0.869	2.012
Description: Develop M&S standards, architectures, networks and environments that promote sharing, interoperability, access, and reliable application of tools, formats, data and information among/for users. ***FY 2022 Plans:*** FY22 funds will be distributed among activities that promote the third priority of the Army M&S Strategy: develop M&S standards, architectures, networks and environments. Specific FY22 plans include: a.) development and access to cyber/electronic warfare simulated environments, b.) development of an enhanced fires training and testing environment, c.) development of an OE signal architecture, d.) enhancement and access to a network modeling architecture that bridges multiple modeling and simulation environments. FY22 M&S standards, architectures, networks and environment plans will be developed to maximize reuse across the Army M&S-enabled communities. ***FY 2023 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605718A / *Army Modeling & Sim X-Cmd Collaboration & Integ*	**Project (Number/Name)** S03 / *Analysis M&S Tools and Services*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY23 funds will be distributed among activities that promote the third priority of the Army M&S Strategy: develop M&S standards, architectures, networks and environments. Specific FY23 plans include: a.) development and access to cyber/electronic warfare simulated environments, b.) development of an enhanced fires training and testing environment, c.) development of an OE signal architecture, d.) enhancement and access to a network modeling architecture that bridges multiple modeling and simulation environments. FY22 M&S standards, architectures, networks and environment plans will be developed to maximize reuse across the Army M&S-enabled communities. Includes modernization and life cycle management of CAA's suite of models, simulations, data management, and analytic tools. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding for CAA model modernization effort.			
Title: Develop M&S tools and technology ***Description:*** Develop and improve tools and technology in the form of models, simulations and data that support the full range of Army interests and deliver timely information to enhance effective decision making. These tools can be documented, verified and validated for their intended purpose. ***FY 2022 Plans:*** FY22 funds will be distributed among activities that promote the fourth priority of the Army M&S Strategy: develop M&S tools and technology. Specific FY22 plans include: a.) development of an Army Fires Community AEM; b.) development of network modeling scenarios and models for the test/evaluation and analysis network communities; c.) update and enhance intelligence models for existing simulations and Mission Command Information Systems (MCISs). ***FY 2023 Plans:*** FY23 funds will be distributed among activities that promote the fourth priority of the Army M&S Strategy: develop M&S tools and technology. Specific FY23 plans include: a.) development of an Army Fires Community AEM; b.) development of network modeling scenarios and models for the test/evaluation and analysis network communities; c.) update and enhance intelligence models for existing simulations and Mission Command Information Systems (MCISs). Includes modernization and life cycle management of CAA's suite of models, simulations, data management, and analytic tools. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding for CAA model modernization effort.	1.652	1.668	4.085
Title: FY22 SBIR/STTR Adjustments ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:***	-	0.096	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605718A / *Army Modeling & Sim X-Cmd Collaboration & Integ*	**Project (Number/Name)** S03 / *Analysis M&S Tools and Services*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	2.478	2.633	6.097

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605801A *I Programwide Activities*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	89.023	96.558	89.793	-	89.793	93.413	93.504	94.338	95.493	0.000	652.122
EU9: *Army Science Board*	-	2.166	2.189	2.300	-	2.300	2.309	2.330	2.331	2.353	0.000	15.978
M02: *Med Cmd Spt (Non-AMHA)*	-	21.450	23.406	11.729	-	11.729	12.047	12.304	12.565	12.698	0.000	106.199
M15: *ARI Mgmt/ADM Act*	-	5.289	5.769	5.960	-	5.960	6.057	6.059	6.102	6.162	0.000	41.398
M16: *Standardization Groups*	-	4.264	4.219	4.381	-	4.381	4.462	4.507	4.560	4.602	0.000	30.995
M23: *US Army Corps of Engineers Base Operations*	-	31.525	35.308	36.151	-	36.151	37.581	37.270	37.713	38.306	0.000	253.854
M42: *ARDEC Cmd/Ctr Support*	-	7.270	7.379	7.632	-	7.632	8.069	8.061	8.064	8.142	0.000	54.617
M44: *CECOM Cmd/Ctr Spt*	-	3.902	3.933	4.912	-	4.912	5.147	5.141	5.143	5.193	0.000	33.371
M46: *AMCOM Cmd/Ctr Spt*	-	3.432	3.490	4.007	-	4.007	4.204	4.200	4.201	4.242	0.000	27.776
M47: *TACOM Cmd/Ctr Spt*	-	2.954	3.759	3.942	-	3.942	4.195	4.190	4.192	4.232	0.000	27.464
M55: *Edgewood Chemical Biological Center*	-	2.611	2.664	4.126	-	4.126	4.580	4.666	4.673	4.722	0.000	28.042
M58: *SECOM CMD/CTR Spt*	-	2.232	2.250	2.370	-	2.370	2.429	2.427	2.428	2.451	0.000	16.587
M76: *Armament Group Support*	-	1.928	2.192	2.283	-	2.283	2.333	2.349	2.366	2.390	0.000	15.841

A. Mission Description and Budget Item Justification

This Program Element (PE) supports the non-Army Management Headquarters Activity (non-AMHA) Research, Development, Test, and Evaluation (RDTE) functions incident to the local operation and management of United States (U.S.) Army Combat Capabilities Development Command (DEVCOM) Centers, not identifiable with specific research and development projects. This PE also supports the management and operation of multiple, globally-located DEVCOM International Technology Centers (ITCs). The ITCs play an integral role in the U.S. Army efforts for international cooperative research, development and interoperability, and fulfill international memoranda of understanding requirements.

Programwide activities also include: Army Science Board studies; non-AMHA Medical Command support at the U.S. Army Medical Research and Development Command (USAMRDC); non-AMHA management and administrative functions at the U.S. Army Research Institute (ARI); and travel and administrative support to the North Atlantic Treaty Organization (NATO) Army Armaments Group (NAAG).

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army					Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*		R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*			
B. Program Change Summary ($ in Millions)	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**
Previous President's Budget	84.510	96.589	0.000	-	0.000
Current President's Budget	89.023	96.558	89.793	-	89.793
Total Adjustments	4.513	-0.031	89.793	-	89.793
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	4.513	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	89.793	-	89.793
• FFRDC Transfer	-	-0.031	-	-	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) EU9 / *Army Science Board*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
EU9: *Army Science Board*	-	2.166	2.189	2.300	-	2.300	2.309	2.330	2.331	2.353	0.000	15.978
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Army Science Board (ASB) is a federal advisory committee, organized under the Federal Advisory Committee Act (FACA) and the Government in the Sunshine Act, which provides the Secretary of the Army and Secretary of Defense with independent and transparent advice and recommendations on matters relating to scientific, technical, manufacturing, acquisition, logistics, and business management functions. The ASB dates to November 1951 when the Secretary of the Army, Honorable Frank Pace Jr., appointed twelve outstanding scientists and industrialists to a scientific advisory panel to assist him and the Army's leadership in creating an effective, economical, and progressive fighting force using existing technology and industrial resources. Three years later, this panel was expanded and officially designated the Army Scientific Advisory Panel (ASAP), with its first formal meeting held on November 16, 1954. In 1977, with the passage of FACA, the ASB was created to replace the ASAP.

The ASB provides the Army with a resource of world-class scientists, engineers, technologists and operational experts as well as business, policy and managerial specialists from the private sector, academia, non-Department of Defense (DoD) government agencies and former senior military officers. Its members volunteer their expertise and time to address those critical national security challenges for which the Army's leadership seeks independent and unbiased technical advice. The ASB focuses on issues of importance to large segments of the Army, and its products are delivered in a candid and timely manner.

The Board is composed of 20 voting and 20 non-voting members, each serving three-year terms, and consultants who serve one-year terms. Membership is carefully monitored to ensure that diverse disciplines and points of view are represented. The Secretary of the Army appoints the Chair and Vice Chair from the ASB membership. The ASB Chair also serves as a non-voting observer to the Defense Science Board. ASB membership is augmented by consultants who are appointed to provide specialized expertise for ASB studies.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army Science Board	2.166	2.108	2.300
Description: The ASB Charter sets the estimated number of Board meetings at four per year. Board members serve without compensation, with the exception of reimbursement for official Board-related travel and per diem. Funds are therefore required to facilitate Board activities and related subcommittee activities. The ASB Charter states that annual requirements will typically entail a personnel cost of seven Full-Time Equivalents. Currently, the Secretary of the Army has approved four permanent subcommittees to the Board: 1) The Army Science Board Basic Science and Disruptive Technologies Subcommittee is composed of not more than 15 members and addresses issues relating to the Army's basic research and disruptive technologies, including Soldier performance			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** EU9 / *Army Science Board*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
enhancement, cognition improvement, and training; autonomous systems and human-machine teaming; Chemical, Biological, Radiological, Nuclear and high-yield Explosives (CBRNE); and counter Weapons of Mass Destruction. 2) The Army Science Board Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Subcommittee is composed of not more than 15 members and addresses issues relating to the Army's C41SR core competency, including the tactical edge Command, Control, and Communications (C3), situational awareness overmatch, and electronic warfare. 3) The Army Science Board Systems Engineering, Integration, and Sustainment Subcommittee is composed of not more than 15 members and addresses relating to the Army's core competency in systems engineering and integration; advanced prototyping and experimentation in operational environments; and sustainment, including engineered resilient systems, agile logistics and health management. These competencies are essential to the performance of the entire acquisition community. 4) the Army Science Board Weapon Systems Subcommittee is composed of not more than 15 members and addresses issues relating to the Army's weapon systems core competency in: Rotorcraft Design Synthesis & Performance Assessment (DS&PA) and airworthiness/safety; ground combat vehicle DS&PA, Soldier interaction, and system integration; lethality, including impact physics, energetics, warhead DS&PA, effects modeling and simulation; survivability and protection, including armor and balanced approach for detection/hit/kill avoidance; and air and missile defense DS&PA, precision fires, seekers, and precision guidance. ***FY 2022 Plans:*** Conduct four to six studies on behalf of the Secretary of the Army; likely in areas of Basic Science and Disruptive Technology; Weapons Systems; C4ISR; and Systems Engineering, Integrations, and Sustainment or other concerns related to the future of the force. ***FY 2023 Plans:*** Conduct four to six studies on behalf of the Secretary of the Army; likely in areas of Basic Science and Disruptive Technology; Weapons Systems; C4ISR; and Systems Engineering, Integrations, and Sustainment or other concerns related to the future of the force. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to projected slight increases in studies costs.			
Title: FY22 SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	-	0.081	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** EU9 / *Army Science Board*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	2.166	2.189	2.300

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M02 / *Med Cmd Spt (Non-AMHA)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M02: *Med Cmd Spt (Non-AMHA)*	-	21.450	23.406	11.729	-	11.729	12.047	12.304	12.565	12.698	0.000	106.199
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides funding for authorized civilian workforce performing medical research, development, acquisition management and oversight that support the medical Research, Development, Test, and Evaluation (RDTE) programs at the United States (U.S.) Army Medical Research and Development Command (USAMRDC), Fort Detrick, Maryland to: (1) perform planning, programming, and budgeting; (2) manage resources; and (3) ensure compliance with U.S. Food and Drug Administration (FDA) and other regulatory and safety requirements. It also provides for continued operations of contracting and acquisition management functions performed in support of the USAMRDC Medical RDTE Program.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Civilian Authorized Salaries and other operational requirements	21.450	23.384	11.729
Description: Funding is provided to the USAMRDC for Medical Research Development Acquisition (RDA) Management and Oversight to include the payroll of civilians as well as nominal operating expense. Expertise helps establish and maintain the capabilities that Army medicine needs to sustain life, limb, and eyesight for our warfighters. Civilian labor performs centralized management of Medical RDA (many areas required by law and/or regulation) including animal & human research protections, health and safety compliance, environmental management, and U.S. Food and Drug Administration regulatory compliance, legal support (including intellectual property protection), quality assurance, contracting services, personnel management, and planning, programming, and budgeting, and execution management. Funding also supports the Army's portion of the Special Immunization Program that protects individuals engaged in infectious disease research if exposed to pathogens or toxins.			
FY 2022 Plans: Will fund civilian salaries and associated management and administrative expenses (support contracts, supplies, equipment, travel, etc.) at USAMRDMC. Also, will provide regulatory, clinical monitoring and data support for the SIP as necessary. This program will provide non licensed vaccines under FDA oversight to personnel at risk of exposure to selected infectious diseases.			
FY 2023 Plans: Will fund civilian salaries and associated management and administrative expenses (support contracts, supplies, equipment, travel, etc.) at USAMRDMC. Also, will provide regulatory, clinical monitoring and data support for the SIP as necessary. This program will provide non licensed vaccines under FDA oversight to personnel at risk of exposure to selected infectious diseases.			
FY 2022 to FY 2023 Increase/Decrease Statement: Decrease in funding due to funding and mission realigned as part of US Army Medical Research and Development Command transfer to the Defense Health Agency in order to meet Congressional intent as outlined in NDAA 2019 (Section 711) and NDAA 2020 (Section 737).			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M02 / *Med Cmd Spt (Non-AMHA)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred to Program Element 0606105DHA, Project Code 376B.			
Title: FY22 SBIR/STTR Transfer	-	0.022	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638.			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	21.450	23.406	11.729

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M15 / *ARI Mgmt/ADM Act*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M15: *ARI Mgmt/ADM Act*	-	5.289	5.769	5.960	-	5.960	6.057	6.059	6.102	6.162	0.000	41.398
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The United States (U.S.) Army Research Institute for the Behavioral and Social Sciences (ARI) is the only Science and Technology (S&T) laboratory that conducts research to enhance the Soldier lifecycle (e.g., selection, assignment, training, leader development) and human relations (e.g., culture of dignity, respect, and inclusion). This Project supports the non-Army Management Headquarters Activity (non-AMHA) management and administrative functions to enable ARI to accomplish its research mission and includes activities such as budget execution, procurement oversight, Research, Development, Test, and Evaluation (RDTE) program planning and evaluation, management control, security/safety, logistics, information technology, and personnel/manpower execution and oversight. ARI's behavioral and social science research provides effective non-materiel solutions to help the Army adjust to changes in force size and structure, a variety of mission demands and contexts, challenges in human relations, and budgetary constraints.

The cited work is consistent with the Assistant Secretary of Defense (Research and Engineering) priority focus areas, the Army Vision, the Army's Talent Management Strategy, and the Army Modernization Strategy.

Work is performed by ARI at Fort Belvoir, VA.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: ARI Management/Administrative Actions	5.289	5.722	5.960
Description: Supports the non-AMHA management and administrative functions. This project provides enduring management and support functions for the execution of ARI?s science and technology activities.			
FY 2022 Plans: Will provide operation of management, administrative, personnel, budget, and support functions at a level consistent with Army and mission requirements to meet the needs of ARI as an STRL, to include emphasis on the hardware and software requirement to build and sustain data analytic capabilities throughout the laboratory.			
FY 2023 Plans: Will provide operation of management, administrative, personnel, budget, and support functions at a level consistent with Army and mission requirements to meet the needs of ARI as an STRL, to include emphasis on the hardware and software requirement to build and sustain data analytic capabilities throughout the laboratory.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M15 / *ARI Mgmt/ADM Act*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase due to projected slight increases in cost of operation of management, administrative, personnel, budget, and support functions.			
Title: FY22 SBIR/STTR Transfer	-	0.047	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638.			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	5.289	5.769	5.960

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M16 / *Standardization Groups*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M16: *Standardization Groups*	-	4.264	4.219	4.381	-	4.381	4.462	4.507	4.560	4.602	0.000	30.995
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports nine International Technology Centers (ITCs) (formerly known as Standardization Groups) in North America, South America, Asia, and Europe for personnel, travel and overhead costs, leases on buildings, and mandatory permanent change of station.

The mission of the ITCs is to support the United States (U.S.) Army Rationalization, Standardization and Interoperability (RSI) mission around the globe as specified in Army Regulation (AR) 34-1 "Interoperability" and AR 70-41 "Armaments Cooperation". ITCs promote interoperability and represent the U.S. Army in their geographic areas of responsibility (AOR) with foreign ministries of defense on Armaments Cooperation programs. ITCs also facilitate U.S. Army interaction in their geographic AOR with foreign non-governmental entities, such as foreign private industry and academia.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: International Technology Centers Management	4.264	4.145	4.381
Description: This activity funds the U.S. Army Rationalization, Standardization and Interoperability (RSI) mission conducted by the nine ITCs around the globe. These funds support the infrastructure, personnel and travel requirements to support the mission.			
FY 2022 Plans: Will continue to promote interoperability by representing the U.S. Army's interests in engagements with foreign ministries of defense on ICRDA programs that address, harmonize and advance technology development, and materiel interoperability. Will facilitate U.S. Army interaction with foreign non-government entities, such as foreign private industry and academia. Will continue to supervise the ITCs to promote interoperability by assisting in establishing international agreements that address, harmonize, and advance technology development, materiel interoperability, logistics, concepts, doctrine, organization, and training in multinational operations.			
FY 2023 Plans: Will continue to promote interoperability by representing the U.S. Army's interests in engagements with foreign ministries of defense on research programs that address, harmonize and advance technology development, and materiel interoperability. Will facilitate U.S. Army interaction with foreign non-government entities, such as foreign private industry and academia. Will continue to supervise the ITCs to promote interoperability by assisting in establishing international agreements that address, harmonize, and advance technology development, materiel interoperability, logistics, concepts, doctrine, organization, and training in multinational operations.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M16 / *Standardization Groups*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase supports global U.S. Army Rationalization, Standardization and Interoperability (RSI) mission efforts.			
Title: FY22 SBIR/STTR Transfer	-	0.074	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	4.264	4.219	4.381

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M23 / *US Army Corps of Engineers Base Operations*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M23: *US Army Corps of Engineers Base Operations*	-	31.525	35.308	36.151	-	36.151	37.581	37.270	37.713	38.306	0.000	253.854
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides funding for authorized civilian workforce performing engineer research, development, management and oversight that support the engineer Research, Development, Test, and Evaluation (RDTE) programs at the United States (U.S.) Engineer Research and Development Center (ERDC). This Project supports the non-Army Management Headquarters Activity (non-AMHA) management and administrative functions to enable ERDC to accomplish its research mission and includes activities such as procurement oversight, RDTE programming and budget execution, management control and oversight, security/safety, information management and technology, personnel/manpower execution and oversight, research laboratory/facility management and maintenance, and High Performance Computing Modernization Program (HPCMP) facility operations and management

ERDC research in civil and military engineering, blast and weapons effects, battlespace terrain mapping and characterization, computational prototyping of military platforms, and cold regions science and engineering provides effective non-materiel and materiel solutions to enable the Army to achieve its modernization priorities of Air and Missile Defense, Next Generation Combat Vehicle, Future Vertical Lift, Network, Long Range Precision Fires, and Soldier Lethality.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: ERDC Management and Administrative Actions and Other Operational Requirements	31.525	34.018	36.151
Description: Supports the non-AMHA operation of garrison activities, management and administrative functions as follows in support of the ERDC installations' military research missions.			
FY 2022 Plans: Provide operation of management, administrative, personnel, budget, logistics and support functions at a level consistent with Army and mission requirements to meet the needs of ERDC conducting the Army's engineer R&D program supporting all six of the Army's Modernization Priorities. Transition U.S. Army Corps of Engineers (USACE) Logistics Activity (ULA) mission requirements supporting supply logistics and transportation services from OMA to RDTE.			
FY 2023 Plans: Will provide operation of management, administrative, personnel, budget, logistics and support functions at a level consistent with Army and mission requirements to meet the needs of ERDC conducting the Army's engineer R&D program supporting all six of the Army's Modernization Priorities.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M23 / *US Army Corps of Engineers Base Operations*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase due to projected slight increases in cost of operation of management, administrative, personnel, budget, and support functions.			
Title: FY22 SBIR/STTR Transfer	-	1.290	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	31.525	35.308	36.151

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M42 / *ARDEC Cmd/Ctr Support*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M42: *ARDEC Cmd/Ctr Support*	-	7.270	7.379	7.632	-	7.632	8.069	8.061	8.064	8.142	0.000	54.617
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions incident to the local operation and management of the United States (U.S.) Army Combat Capabilities Development Command (DEVCOM) Armaments Center (AC), Picatinny Arsenal, NJ, not identifiable with specific research and development Projects financed under other Program Elements.

Funds only select, critical, overarching functions that enable the DEVCOM AC to accomplish its research, development and engineering mission, to include DEVCOM AC headquarters staff, safety, physical security, anti-terrorism, operations security (OPSEC), information security and intelligence services.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Management Support	7.270	7.110	7.632
Description: DEVCOM Armaments Center (AC) management / administrative efforts. ***FY 2022 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at CCDC AC. ***FY 2023 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at DEVCOM AC. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Provides increased management and administrative functions in support of DEVCOM AC mission requirements.			
Title: FY22 SBIR/STTR Transfer	-	0.269	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	7.270	7.379	7.632

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M42 / *ARDEC Cmd/Ctr Support*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M44 / *CECOM Cmd/Ctr Spt*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M44: *CECOM Cmd/Ctr Spt*	-	3.902	3.933	4.912	-	4.912	5.147	5.141	5.143	5.193	0.000	33.371
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Supports the non-Army Management Headquarters Activity (non-AMHA) functions incident to the local operation and management of the United States (U.S.) Army Combat Capabilities Development Command (DEVCOM) Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) Center, located at Aberdeen Proving Ground, MD. These efforts are not identifiable with specific research and development projects financed under other program elements.

Funds only select, critical, overarching functions that enable DEVCOM C5ISR Center to accomplish its research, development and engineering mission, to include DEVCOM C5ISR Center headquarters staff, resource management, human resources, safety, security, protocol, public affairs, information management, facility management and audit readiness.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Management Support	3.902	3.789	4.912
Description: DEVCOM Command, Control, Communications, Computers, Cyber Intelligence, Surveillance and Reconnaissance (C5ISR) Center management and administrative efforts. ***FY 2022 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at CCDC C5ISR Center. ***FY 2023 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at DEVCOM C5ISR Center. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increased funding supports management and oversight efforts at DEVCOM C5ISR Center.			
Title: FY22 SBIR/STTR Transfer	-	0.144	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M44 / *CECOM Cmd/Ctr Spt*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	3.902	3.933	4.912

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M46 / *AMCOM Cmd/Ctr Spt*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M46: *AMCOM Cmd/Ctr Spt*	-	3.432	3.490	4.007	-	4.007	4.204	4.200	4.201	4.242	0.000	27.776
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions incident to the local operation and management of the United States (U.S.) Army Combat Capabilities Development Command (DEVCOM) Aviation and Missile Center (AvMC), Redstone Arsenal, AL. These functions are not identifiable with specific research and development projects financed under other Program Elements.

Funds only select, critical, overarching functions in support of DEVCOM AvMC accomplishing its research, development and engineering mission.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Management Support ***Description:*** DEVCOM Aviation and Missile Center (AvMC) management and administrative efforts. ***FY 2022 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at CCDC AvMC. ***FY 2023 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at DEVCOM AvMC. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Supports increased non-AMHA management and administrative efforts.	3.432	3.362	4.007
Title: FY22 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.128	-
Accomplishments/Planned Programs Subtotals	3.432	3.490	4.007

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M46 / *AMCOM Cmd/Ctr Spt*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M47 / *TACOM Cmd/Ctr Spt*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M47: *TACOM Cmd/Ctr Spt*	-	2.954	3.759	3.942	-	3.942	4.195	4.190	4.192	4.232	0.000	27.464
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions incident to the local operation and management of the United States Army Combat Capabilities Development Command (DEVCOM) Ground Vehicle Systems Center (GVSC), Warren, MI, not identifiable with specific research and development Projects financed under other Program Elements.

Funds only select, critical, overarching management functions that enable DEVCOM GVSC to accomplish its research, development and engineering mission.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Management Support ***Description:*** DEVCOM Ground Vehicle Systems Center (GVSC) management and administrative efforts. ***FY 2022 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at CCDC GVSC. ***FY 2023 Plans:*** Will provide management and administrative functions at a level consistent with mission requirements and support needs at DEVCOM GVSC. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Provides increased management and administrative functions to support DEVCOM GVSC mission requirements.	2.954	3.622	3.942
Title: FY22 SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.137	-
Accomplishments/Planned Programs Subtotals	2.954	3.759	3.942

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M47 / *TACOM Cmd/Ctr Spt*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M55 / *Edgewood Chemical Biological Center*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M55: *Edgewood Chemical Biological Center*	-	2.611	2.664	4.126	-	4.126	4.580	4.666	4.673	4.722	0.000	28.042
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions incident to the local operation and management of the United States Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC), Aberdeen Proving Ground, MD, not identifiable with specific research and development Projects financed under other Program Elements.

Funds only select, critical, overarching functions that enable DEVCOM CBC to accomplish its mission to include DEVCOM CBC headquarter staff, resource management, safety, and surety programs. In addition, this program includes the management and oversight of Army chemical surety operations as directed by Department of Defense (DoD) Instruction 5210.65, "Minimum Security Standards for Safeguarding Chemical Agents".

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Management Support	2.611	2.616	4.126
Description: DEVCOM Chemical Biological Center (CBC) management and administrative efforts.			
FY 2022 Plans: Will provide continued management and administrative functions at a level consistent with mission requirements and support needs at CCDC CBC.			
FY 2023 Plans: Will provide continued management and administrative functions at a level consistent with mission requirements and support needs at DEVCOM CBC.			
FY 2022 to FY 2023 Increase/Decrease Statement: Provides increased management/administrative functions to support DEVCOM CBC mission requirements.			
Title: FY22 SBIR/STTR Transfer	-	0.048	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M55 / *Edgewood Chemical Biological Center*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	2.611	2.664	4.126

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M58 / *SECOM CMD/CTR Spt*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M58: *SECOM CMD/CTR Spt*	-	2.232	2.250	2.370	-	2.370	2.429	2.427	2.428	2.451	0.000	16.587
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions incident to the local operation and management of the United States Army Combat Capabilities Development Command (DEVCOM) Soldier Center (SC), Natick, MA, not identifiable with specific research and development Projects financed under other Program Elements.

Funds only select, critical, overarching functions that enable DEVCOM SC to accomplish its research, development and engineering mission, to include: Manpower/ Personnel, Intelligence/Security, Operations, Logistics, Training, Resource Management and Headquarters administrative staff.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Management Support ***Description:*** DEVCOM Soldier Center (SC) management and administrative functions. ***FY 2022 Plans:*** Will provide continued management and administrative functions at a level consistent with mission requirements and support needs at CCDC SC. ***FY 2023 Plans:*** Will provide continued management and administrative functions at a level consistent with mission requirements and support needs at DEVCOM SC. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Provides increased management and administrative functions to support DEVCOM SC mission requirements.	2.232	2.168	2.370
Title: FY22 SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.082	-
Accomplishments/Planned Programs Subtotals	2.232	2.250	2.370

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M58 / *SECOM CMD/CTR Spt*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / *Programwide Activities*	Project (Number/Name) M76 / *Armament Group Support*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M76: *Armament Group Support*	-	1.928	2.192	2.283	-	2.283	2.333	2.349	2.366	2.390	0.000	15.841
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The goal of this Project is to expand worldwide allied standardization and interoperability through cooperative research and development (R&D) and technology sharing per Secretary of Defense guidance and especially in support of the United States (U.S.) Army. This Project partially funds the travel costs and administrative support (studies, analysis, interpretation, equipment, etc.) required to participate in international forums, 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 Project 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). This Project also 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.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army Scientific Support NATO Army Armaments Group	0.178	0.413	0.435
Description: Funds supported Army subject matter experts to attend scientific and technological exchange, meetings, demonstrations, and/or simulations having military application and mutual benefits to the U.S. and its Allies. ***FY 2022 Plans:*** Funds support Army SMEs to attend scientific and technological exchange, meetings demonstrations, and/or simulations having military application and mutual benefits to the United States and its Allies and will fund 8 different working/capability groups that will meet twice a year. ***FY 2023 Plans:*** Funds support Army SMEs to attend scientific and technological exchange, meetings demonstrations, and/or simulations having military application and mutual benefits to the United States and its Allies and will fund 8 different working/capability groups that will meet twice a year. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to projected slight cost increases to support Army subject matter experts to attend scientific and technological exchange, meetings, demonstrations, and/or simulations.			
Title: Executive Agent	1.750	1.698	1.848
Description: Funds the U.S. share of the Mandatory NATO Civil Budget, Chapter IX (Defense Support Programs). U.S. Army is Executive Agent for this Mandatory NATO bill.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605801A / *Programwide Activities*	**Project (Number/Name)** M76 / *Armament Group Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: Funds support the United States share of the NATO Civil Budget, Chapter IX (Defense Support Program). U.S. Army is the Executive Agent for this mandatory NATO Bill. ***FY 2023 Plans:*** Funds support the United States share of the NATO Civil Budget, Chapter IX (Defense Support Program). U.S. Army is the Executive Agent for this mandatory NATO Bill. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to projected slight increases for Executive Agent costs to support the United States share of the NATO Civil Budget, Chapter IX (Defense Support Program).			
Title: FY22 SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	0.081	-
Accomplishments/Planned Programs Subtotals	1.928	2.192	2.283

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605803A *I Technical Information Activities*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	25.817	31.987	28.752	-	28.752	29.427	30.254	30.264	30.559	Continuing	Continuing
727: *Tech Info Activities*	-	10.761	11.582	12.386	-	12.386	12.744	12.865	12.869	12.994	Continuing	Continuing
731: *Army High Performance Computing Centers*	-	2.007	2.075	2.187	-	2.187	2.191	2.211	2.211	2.233	Continuing	Continuing
733: *Acquisition Tech Act*	-	4.624	4.787	5.057	-	5.057	5.146	5.256	5.258	5.309	Continuing	Continuing
CC2: *Expeditionary Technologies*	-	5.147	4.938	5.628	-	5.628	5.650	6.158	6.159	6.219	Continuing	Continuing
DW3: *Army Geospatial Enterprise Implementation*	-	3.278	8.605	3.494	-	3.494	3.696	3.764	3.767	3.804	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) supports upgrading the accuracy, timeliness, availability, and accessibility of scientific, technical, and management information at all levels of the Army Research and Development (R&D) community. Management of this information is critical to achieve the goals established by the Army's Senior Leadership. Use of accurate and timely technical information is essential to successfully meeting the milestones required on the path to the future force, allowing Army Science and Technology (S&T) leadership to refine investment strategy and quickly react to emerging opportunities and issues. This PE includes initiatives to improve information derivation, storage, access, display, validation, transmission, distribution, and interpretation, along with initiatives to develop and enhance a single business model for Army S&T knowledge management information technology and to provide for Independent Review Team analysis of technology maturity as part of the Technology Readiness Assessment. Develops and publishes Army S&T strategy and policies, sets Army S&T priorities, establishes and tracks S&T metrics to determine earned value and return on investment, and performs S&T studies in support of the ASA(ALT) in Project 727. Project 731 provides funding for support for Army high performance computing centers. Project 733 provides funding for improvements to the Army's acquisition process. Project CC2 provides funding for Expeditionary Technologies (X-Tech Search) to evaluate the feasibility and potential application of disruptive technologies to Army capability gaps. Project DW3 supports Army Geospatial Enterprise (AGE) Implementation with systems engineering, architecture, and test and certification of Army Acquisition Systems.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering Science and Technology Modernization Priorities and the Army Modernization Strategy.

Work in this PE is performed by the Army Corps of Engineers' Engineer Research and Development Center (ERDC), Vicksburg, MS; the Army Geospatial Center (AGC) in Alexandria, VA; the Information Management Office, Arlington, VA; the Office of the Assistant Secretary of the Army, Acquisition, Logistics and Technology (ASA(ALT)), The Pentagon, Arlington, VA; Army Futures Command (AFC) Combat Capabilities Development Command (CCDC) Army Research Laboratory (ARL), Aberdeen Proving Ground, MD; and AFC CCDC Ground Vehicle Systems Center, Warren, MI.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	25.487	26.808	0.000	-	0.000
Current President's Budget	25.817	31.987	28.752	-	28.752
Total Adjustments	0.330	5.179	28.752	-	28.752
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	5.200			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.330	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	28.752	-	28.752
• FFRDC Transfer	-	-0.021	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: DW3: *Army Geospatial Enterprise Implementation*		
Congressional Add: *FY22 Congressional Program Increase*	-	5.200
Congressional Add Subtotals for Project: DW3	-	5.200
Congressional Add Totals for all Projects	-	5.200

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 727 / *Tech Info Activities*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
727: *Tech Info Activities*	-	10.761	11.582	12.386	-	12.386	12.744	12.865	12.869	12.994	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds the governance, strategy development and oversight of science, research, and technology investments within the Department of the Army. These efforts include developing strategic direction, policy development, supervision and management of the Army's S&T portfolio including resource allocation. This project includes civilian manpower and contractor support required to implement a set of management decision aids and tools to support technical and budgetary decisions at the Department of the Army (DA). Includes the research and development planning, programming and execution for Army S&T, the Army Applied SBIR program, the Army Manufacturing Technology program, Technology Maturation Initiatives program, Technology Transition policy, and Laboratory Management policy. Covers the development and tracking of S&T metrics across the enterprise and supports development of Army plans, programs and policies for OSD and Congress. Most of the efforts in this project are on-going activities to support Army Research and, Development programs. Effective exploitation of Science and Technology (S&T) information is critical to achieving the goals established by Senior Army Leadership for the future force. Funding in this program supports Independent Review Team analysis of technology maturity as part of the Technology Maturation Initiative and Technology Area Readiness Assessments.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering Science and Technology Modernization Priorities and the Army Modernization Strategy.

Work in this Project is performed by the Office of the Assistant Secretary of the Army, Acquisition, Logistics and Technology (ASA(ALT)), The Pentagon, Washington, DC.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Conduct and support S&T program portfolio assessments and analysis.	4.100	4.385	4.910
Description: Supports identification, development and demonstration of technology options that inform and enable effective and affordable capabilities for the Soldier Providing Soldiers with the technology to win. Supports Aviation, Network/C3I, Ground Maneuver, Soldier, Basic Research and Weapons Portfolio Directors, responding to scientific, technical and programmatic challenges. Supports Independent Review Team analysis of technology maturity as part of Technology Area Readiness Assessments. Serves as Office of the Deputy Assistant Secretary of the Army, Research and Technology (DASA(R&T)) central point of contact for S&T Metrics, Army S&T strategy development, Strategic Portfolio Analysis Review, evaluation of technical risks, earned value assessment, and technical and financial health of S&T projects.			
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 727 / *Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Continue to supervise, manage and provide programmatic support for applied research and advanced technology development efforts across the Army modernization priorities; act as the S&T SMEs to provide Portfolio leads what is forecasted for critical science and technology 'outputs' to align with Programs of Record; will ensure tight alignment and coupling to existing PoRs and will identify where misalignment between Portfolio technology projections/timelines and/or emerging technology options are not yet reflected at the PoR level. Will perform cross portfolio coordination and assessment; and evaluate and assess cost, schedule and technical progress against metrics to determine project health. Will assess progress of S&T projects, support Cross-functional team deep dives, evaluate technical risks and assess earned value for S&T projects. Will identify technology for effective and affordable capabilities in all the S&T portfolios: Basic Research; Medical; Soldier; Command, Control, Communications, Computers and Intelligence (C3I); Air; Fires; and Ground Maneuver. Will conduct studies of emerging topics based on Army S&T strategy and senior leader initiatives through the Board on Army Research and Development (BOARD) and the National Academies. ***FY 2023 Plans:*** Provide oversight and programmatic support for laboratory management, basic research, and applied research and advanced technology development efforts across the Army modernization priorities; act as the S&T Portfolio subject matter experts to identify forecasted critical science and technology 'outputs' to align with Programs of Record (PoR); ensure tight alignment and coupling to existing PoRs and identify where misalignment between Portfolio technology projections/timelines and/or emerging technology options are not yet reflected at the PoR level. Perform cross portfolio coordination and assessment; and evaluate and assess cost, schedule and technical progress against metrics to determine project health. Assess progress of S&T projects, support Cross-functional team deep dives, evaluate technical risks and assess earned value for S&T projects. Identify technology for effective and affordable capabilities in all the S&T portfolios: Basic Research; Medical; Soldier; Network/Command, Control, Communications, Computers and Intelligence (C3I); Aviation; Weapons; and Ground Maneuver. Conduct studies of emerging topics based on Army S&T strategy and senior leader initiatives through the Board on Army Research and Development (BOARD) and the National Academies. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is based on increased requirements and inflation.			
Title: Support Army S&T strategic planning, analysis, and prioritization. ***Description:*** Coordinates efforts with and across the Army S&T portfolios; manage proposal nomination and selection process; track and provide oversight of ongoing efforts; recommend resolutions/prioritization in the event of conflicting requirements and/or resource constraints; support the full spectrum of Planning, Programming and Budget Execution (PPBE) as it relates to the Army S&T Program. Provide senior level technical and analytical support for the Joint Capability Technology Demonstration (JCTD) program and Technology Maturation Initiative (TMI) by assisting with investment analysis, strategies and oversight. Provide financial management recommendations and insights with regards to JCTDs, TMI, Manufacturing Technology (ManTech) and	5.211	5.407	5.932

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 727 / *Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Defense Manufacturing Initiatives. A variety of scientific and technical taxonomies applied at the task level allow responsive reporting on S&T programs to Congressional, OSD and Army leadership. ***FY 2022 Plans:*** Will develop strategic analyses to look across the S&T portfolios and will provide recommendations to the Director of Integration for S&T efficiencies and collaborative opportunities; will ensure that resources align to strategy; will support S&T policy development; will support ODASA(R&T) lead for future force; will coordinate efforts within and across the Army S&T portfolios and engage in tri service leveraging; will support the PDM process, tasks and guidance for Equipping PEG; will develop prioritized decrement lists and recommend alternatives for a balanced portfolio; and will support the plan and execution of the S&T Oversight Committees. Evaluate projects within ManTech to support potential joint Service efforts and activities of Joint Defense ManTech. Support Army Prototyping Board planning and execution, and evaluation and tracking implementation of transition agreement policy. ***FY 2023 Plans:*** Will develop strategic analyses to look across the S&T portfolios and provide recommendations to Army leadership for S&T efficiencies and collaborative opportunities; will ensure that resources align to S&T strategy; will support S&T policy development; will coordinate efforts within and across the Army S&T portfolios and engage in tri service leveraging; will support the Program Decision Memorandum process, tasks and guidance for Equipping PEG; will develop prioritized decrement lists and recommend alternatives for a balanced portfolio; and will support the plan and execution of the S&T Oversight Committees. Evaluate projects within ManTech to support potential joint Service efforts and activities of Joint Defense ManTech. Support Army Technology Maturation planning and execution, and evaluation and implementation of transition agreement policy ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is based on increased requirements and inflation.			
Title: Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions. ***Description:*** Coordination and alignment with Programs of Record. Demonstrate technical feasibility at system and subsystem level. As path for technology spirals to acquisition, ensure a rapid insertion of new technology. ***FY 2022 Plans:*** Continue to support the S&T investment strategy for the entire Army; provide options for the future across to sustain overmatch against adversaries and to create opportunities to meet new challenges and fight in new ways; continue Independent Review Team (IRT) analysis of technology maturity as part of Technology Area Readiness Assessments; provide oversight and	1.250	1.250	1.330

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 727 / *Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
management of the Army's Technology Maturation Initiative; develop and track S&T metrics across the enterprise; will identify S&T transitions in SPAR to identify follow-on funding requirements. ***FY 2023 Plans:*** Support the S&T investment strategy for the entire Army; identify options for future modernization to sustain overmatch against adversaries and to create opportunities to meet new challenges and fight in new ways; continue Independent Review Team (IRT) analysis of technology maturity as part of Technology Area Readiness Assessments; provide oversight and management of the Army's Technology Maturation Initiative; develop and track S&T metrics across the enterprise; identify S&T transitions in the Army SPAR planning forum to identify follow-on funding investments. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is based on increased requirements and inflation.			
Title: Provide Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for Department of Defense (DoD) wide Science and Technology oversight. ***Description:*** Supports Army engagement in DoD/Under Secretary of Defense for Research and Engineering and cross agency Communities of Interest (COI) and committees. ***FY 2022 Plans:*** Participate in ongoing DoD Communities of Interest engagements and awareness of COI Programs with links to Army S&T; support Army S&T Engagements with USDRE Managers and Leadership; and support execution of ongoing programs, events and functional responsibilities, effectively communicating with all Army stakeholders and partners including other services, OSD, industry and academia. ***FY 2023 Plans:*** Participate in ongoing DoD Communities of Interest (COI) engagements and awareness of COI Programs with links to Army S&T; support Army S&T Engagements with USDRE Managers and Leadership; and support execution of ongoing programs, events and functional responsibilities, effectively communicating with all Army stakeholders and partners including other services, OSD, industry and academia. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is based on increased requirements and inflation	0.200	0.200	0.214
Title: SBIR/STTR Transfer ***FY 2022 Plans:***	-	0.340	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** *727 / Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	10.761	11.582	12.386

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 731 / *Army High Performance Computing Centers*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
731: *Army High Performance Computing Centers*	-	2.007	2.075	2.187	-	2.187	2.191	2.211	2.211	2.233	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides funding for high performance computing (HPC) research, as well as education, infrastructure sustainment, and outreach support associated with the Army High Performance Computing Center at the United States (U.S.) Army Combat Capabilities Development Command (DEVCOM), specifically, DEVCOM Army Research Laboratory (ARL). The Army High Performance Computing Center provides high fidelity modeling, simulation, and analysis of materials, systems, and operational constructs while working with researchers across the Army to explore new HPC computing environments, algorithms, and supporting technology necessary to support critical efforts in the areas of computational research..

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work is performed by DEVCOM ARL, Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Sustain the High Performance Computing Environment and Infrastructure in Support of the CCDC Army Research Laboratory (ARL)	2.007	2.000	2.187
Description: The HPC center provides levels of computational capacity to support the development and modernization of tactical capabilities that increase the effectiveness of Army Soldiers around the world. Algorithm design and software engineering approaches are investigated to effectively partition and use binary processing cores to reduce time to solution for Army relevant problems. Factors such as performance, portability, and power will be considered in conjunction with developing new models to quantify computing capabilities in hybrid systems to facilitate algorithm signature mapping to available resources.			
FY 2022 Plans: Will develop and expand computational infrastructure, large scale data storage capabilities, and cloud interoperability to support the emerging missions of computational complex graph analytics, augmented physics based simulations, and formal Development, Security, and Operations (DEVSECOPS) frameworks in support of the Research, Development, Test, and Evaluation (RDT&E) community.			
FY 2023 Plans: Will sustain high performance computing computational infrastructure in support of Army relevant problems in physics based applications; expand methods for large-scale data analytic needs using graphic processing units; integrate cloud technologies			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 731 / *Army High Performance Computing Centers*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
with core user services; develop tools to assist the Research, Development, Test, Evaluation, and Acquisition communities with artificial intelligence (AI) and machine learning (ML) analysis using computing platforms with inference and training nodes. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increase reflects planned lifecycle of this effort.			
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.075	-
Accomplishments/Planned Programs Subtotals	2.007	2.075	2.187

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 733 / *Acquisition Tech Act*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
733: *Acquisition Tech Act*	-	4.624	4.787	5.057	-	5.057	5.146	5.256	5.258	5.309	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds efforts to meet the Defense Acquisition Workforce Improvement Act (DAWIA), as well as Congressional, SECDEF, and SECARMY mandates to provide program management execution tools, systems integration and architectural analysis, information technology infrastructure development, knowledge management, and technical workforce management. Funding also provides the framework for Army business and acquisition transformation for development and enhancement of capabilities to allow data to be readily available, automatically extracted to facilitate DoD-wide analysis and manage business operations, and the establishment of a set of activities that use data analysis, measurement, and evaluation-related methods to improve acquisition program outcomes and inform business re-engineering. These efforts affords stability and improvements to the Army Acquisition programmatic and financial data by integrating major acquisition systems and processes, applying decision support and expert information systems, supporting analysis, ability to measure effectiveness, and evaluation of alternative acquisition strategies in meeting Army modernization strategy requirements. This integrated set of capabilities will provide OSD and Army acquisition leadership insights needed to effectively manage a complex portfolio of acquisition programs through more timely and reliable access to authoritative acquisition data to assist in making acquisition, procurement, and logistics decisions in order to provide quality equipment to the Soldiers.

The cited work is consistent with Section 911-913 of the FY 18 NDAA, the Under Secretary of Defense for Research and Engineering Science and Technology priority focus areas, and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: ACQUISITION TECH ACT	4.624	4.611	5.057
Description: Description: This effort supports the Acquisition Domain effort to reduce IT investments in programmatic and financial management tools through data standardization and governance, integration of existing acquisition business systems, and processes supporting key Acquisition capabilities at the enterprise level with the goal of reducing redundancy, improving systems operations, and improving management of data resulting in dramatically improved transparency, efficiency, and effective management of the Acquisition process. This support entails analysis required to develop, upgrade, enhance, deploy, and architect enterprise tools within an integrated program management environment on multiple (unclassified/classified) hosting platforms to support analysis of acquisition programs fiscal programming and budgeting requirements against enacted appropriations, conduct long range programming, planning and policy analysis, resource allocation analysis, cost tracking, and analysis. This support will upgrade the knowledge management and enterprise tools, including Project Management Resource Tools (PMRT), that assist acquisition community and professionals with day-to-day program management tasks throughout the Acquisition program?s lifecycle. This support also helps implement standards for data management and service-oriented design			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 733 / *Acquisition Tech Act*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
methodology to facilitate efficiency and interoperability as well as providing some business intelligence services. These standards will help inform changes and creation of domain-level requirements, governance processes, and policies. ***FY 2022 Plans:*** Upon decision by Army Senior Leaders within acquisition community, continue a phased implementation of activities associated with integrated program management environment framework through the deployment of Project Management Resource Tools (PMRT) on a SIPR platform to capture programmatic and financial data for acquisition programs of record and investments for military intelligence programs (MIP) and address aggregation classification concerns. Additionally, explore and perform activities relating to migrating the mature dataset of framework to the cloud to meet Army strategic goals. This is the continuation of a deliberate effort to build a larger acquisition domain which will capture and utilize acquisition programs data from concept to divestiture. Continuation of assessing and supporting on-boarding of new capabilities, expansion of integrated IT operational environment to include acquisition program management automation, application and acquisition dashboard data visualizations development, and enhancement of PMRT to allow increased visibility to acquisition programmatic and financial information for all Army Acquisition programs. Continued expansion of critical PMRT interfaces via the Acquisition Data Service Broker (ADSB). Development of additional PMRT acquisition dashboard data visualizations. ***FY 2023 Plans:*** FY2023 efforts expand the capabilities of the current PMRT system by migrating PMRT from a server to a cloud environment. The Army will also continue developing system interfaces with data available through the Acquisition Data Service Broker (ADSB) capability to centralize authoritative Army acquisition data into the PMRT environment to include accounting, contracting, programmatic, and financial data. Additionally, in FY2023, the Army will pursue broader PMRT implementation by incorporating capability to support defense acquisition workforce resources (DAWDA), and multi-service organizations pursuing authoritative acquisition data. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increases from FY22 are based on continuation of activities and deliberate efforts to add new capabilities, expand the acquisition program management automation and to allow increased visibility of all Army acquisition programs for senior leaders.			
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	-	0.176	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 733 / *Acquisition Tech Act*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	4.624	4.787	5.057

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) CC2 / *Expeditionary Technologies*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
CC2: *Expeditionary Technologies*	-	5.147	4.938	5.628	-	5.628	5.650	6.158	6.159	6.219	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project evaluates the feasibility and potential application of disruptive technologies to Army capability gaps. Expeditionary Technology Search (xTechSearch) partners with small, non-traditional companies to apply novel techniques and applications to Army problems through a non-dilutive prize competitions, business accelerators, and outreach activities. These programs will uncover novel dual-use technology solutions that otherwise would not be identified by the Department of Defense.

Work in this Project is performed by both the Assistant Secretary of the Army (Acquisition, Logistics and Technology) and the United States Army Futures Command (AFC).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Expeditionary Technology Search (xTechSearch)	5.147	4.758	5.628
Description: Funds technical scouting and competition in Army-wide disciplines through rigorous technical assessment, Soldier feedback, mentorship sponsoring, and cash prizes. ***FY 2022 Plans:*** Conduct biannual competitions with small, non-traditional companies seeking to apply their product or idea towards a prescribed focus area. ***FY 2023 Plans:*** Will conduct biannual and ad-hoc competitions with small, non-traditional startups and technology firms seeking to apply their product or idea towards a prescribed Army technology focus area. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increase reflects planned lifecycle for this effort, including two additional Army customer-driven competitions, focusing on emerging administration priorities and technology firms from underrepresented/underserved communities.			
Title: SBIR/STTR Transfer	-	0.180	-
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** CC2 / *Expeditionary Technologies*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	5.147	4.938	5.628

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) DW3 / *Army Geospatial Enterprise Implementation*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
DW3: *Army Geospatial Enterprise Implementation*	-	3.278	8.605	3.494	-	3.494	3.696	3.764	3.767	3.804	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

FY22 includes $5.2M Congressional Add - Extending Standard Sharable Geospatial Foundation To Tactical Edge Warriors.

A. Mission Description and Budget Item Justification

This funding line provides support to network, synthetic training environment and soldier lethality cross functional teams (CFT). This effort provides the geospatial systems engineering, architecture, and geospatial interoperability certification required by AR 115-11 to ensure Army Acquisition Systems meet Common Operating Environment (COE) requirements and modernization priorities. This effort provides geospatial domain expertise to Mission Command (MC), Synthetic Training Environment (STE) Cross Functional Team (CFT), network and Soldier Lethality CFT in modernizing soldier situational awareness and enabling use of 2D and 3D information across Army and Defense programs and in a Mission Partner Environment (MPE). Enables data sharing, reduces duplication of effort, and enables a common operating picture across the Common Operating Environment, Army Futures Command modernization priorities, National Agencies and Mission Partners. Enables Army systems to consume geospatial data from National-Geospatial Intelligence Agency (NGA) and National System for Geospatial-Intelligence (NSG) partners as required by Department of Defense Instruction (DoDI) 5000.56. Continues implementation of the Army 3D Geospatial Data Integration Strategy as assigned in HQDA EXORD 154-20. Geospatial is a Mission Command Essential Capability and a critical enabler for the Common Operating Environment (COE), Army modernization, multi-domain operations and the warfighter.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Enterprise Support Branch (formerly Geospatial Acquisition Support Office)	3.278	3.363	3.494
Description: This effort provides the geospatial systems engineering, architecture, and geospatial interoperability certification required by AR 115-11 to ensure Army Acquisition Systems meet Common Operating Environment (COE) requirements and modernization priorities. This effort provides geospatial domain expertise to Mission Command (MC) in implementing the Army Geospatial Enterprise (AGE) enabling a common operating picture across the Common Operating Environment, Army Futures Command modernization priorities, National Agencies and Mission Partners. Enables Army systems to consume geospatial data from National-Geospatial Intelligence Agency (NGA) and National System for Geospatial-Intelligence (NSG) partners as required by Department of Defense Instruction (DoDI) 5000.56. Enables an interoperable geospatial baseline system of systems across Army and Defense programs and in a Mission Partner Environment (MPE). Continues execution and implementation of the Army 3D Geospatial Data Integration Strategy as assigned in HQDA EXORD 154-20. Geospatial is a Mission Command Essential Capability and a critical enabler for the Common Operating Environment (COE), Army modernization and the warfighter.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** DW3 / *Army Geospatial Enterprise Implementation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Key lines of effort include standardizing geospatial data between echelons, ensuring a Standard, Sharable Geospatial Foundation (a Mission Command Essential Capability) across Mission Command, developing new geospatial standards, evaluating emerging geospatial technologies early in their development processes, and certifying systems as AGE compliant. These critical capabilities enable geospatial interoperability across Mission Command, Cross-Functional Team (CFT) initiatives, and with our National and UAP partners ensuring a common operational picture enhancing soldier situational awareness and increasing mission success. ***FY 2022 Plans:*** Will continue to extend AGE within the Command Post Computing Environment, Mounted and Mobile Hand-Held CE's and to enable Army modernization initiatives; develop and promulgate geospatial standards and technology alternatives for providing Standard, Sharable Geospatial Foundation (a Mission Command Essential Capability) to Mission Command Systems in a disconnected, Intermittent or Limited environment; develop and recommend technologies and processes to provide an interoperable 2D and 3D SSGF from National to Tactical; continue to execute roadmap to enable geospatial interoperability between Mission Command systems, the NSG, and in a Mission Partner Environment; and provide geospatial domain expertise for Mission Command, Army modernization and enabling technologies of the Common Operating Environment. Congressional add funds will mature and demonstrate geospatial software on edge computing devices to improve military analyses, visualization, reporting, and decision-making at the tactical edge; and matures/optimize next generation geospatial analytical tools for tactical environments applicable to lower echelon and tactical edge exploitation. Provides improve situational awareness, combat planning, and facilitate more rapid decision-making for military forces at the tactical edge. ***FY 2023 Plans:*** Key lines of effort this year include enabling multi-domain operations and ensuring a Standard, Sharable Geospatial Foundation (a Mission Command Essential Capability) across Army and Defense programs and in a Mission Partner Environment (MPE). Focus is on developing geospatial systems engineering guidance for army systems, creating new geospatial standards and standards implementation guidance for the National System for Geospatial-Intelligence, evaluating emerging geospatial technologies such as 3D, augmented and virtual reality and geospatial artificial intelligence, against current Army systems to determine feasibility and path to implementing them successfully across the Army, enabling interoperability with our Allied partners, evaluating geospatial capabilities during Joint All Domain Command and Control exercises, maintaining a ground-warfighter geospatial data model for storing geospatial data in a standard way that supports analysis and data sharing, and certifying systems as compliant with geospatial standards ensuring lossless data exchanges. These critical capabilities enable geospatial interoperability across Mission Command, Cross-Functional Team (CFT) initiatives, and with our National and UAP partners ensuring a common operational picture enhancing soldier situational awareness and increasing mission success. ***FY 2022 to FY 2023 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** DW3 / *Army Geospatial Enterprise Implementation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase covers anticipated cost of living allowance adjustment for 12 direct funded civilians. FY22 included $5.2M Congressional Program Increase.			
Title: SBIR/STTR Transfer	-	0.042	-
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638.			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC ?638.			
Accomplishments/Planned Programs Subtotals	3.278	3.405	3.494

	FY 2021	FY 2022
Congressional Add: FY22 Congressional Program Increase	-	5.200
FY 2022 Plans: Matures and demonstrates geospatial software on edge computing devices to improve military analyses, visualization, reporting, and decision-making at the tactical edge Matures/optimizes next generation geospatial analytical tools for tactical environments applicable to lower echelon and tactical edge exploitation. Provides improve situational awareness, combat planning, and facilitate more rapid decision-making for military forces at the tactical edge		
Congressional Adds Subtotals	-	5.200

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Project funds are for Civilian Pay only. 100% funds utilized to pay for 12 direct funded Army Civilians to execute this mission. No funding is expended for contracting.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605805A *I Munitions Standardization, Effectiveness and Safety*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	50.648	63.042	48.316	-	48.316	44.660	44.902	44.994	45.216	0.000	341.778
297: *Mun Survivability & Log*	-	14.343	21.842	23.158	-	23.158	18.592	18.630	18.508	18.600	0.000	133.673
858: *Army Explosives Safety Management Program*	-	0.413	1.418	1.509	-	1.509	1.542	1.567	1.596	1.595	0.000	9.640
859: *Life Cycle Pilot Process*	-	22.487	20.501	5.797	-	5.797	5.812	5.828	5.825	5.882	0.000	72.132
F21: *NATO Ammo Evaluation*	-	0.722	0.514	0.766	-	0.766	0.769	0.768	0.768	0.775	0.000	5.082
F24: *Conventional Munitions Demil*	-	12.683	18.767	17.086	-	17.086	17.945	18.109	18.297	18.364	0.000	121.251

A. Mission Description and Budget Item Justification

This Program Element (PE) supports continuing technology investigations by providing a coordinated Tri-Service mechanism for the collection and free exchange of technical data on the performance and effectiveness of all non-nuclear conventional munitions and weapons systems in a realistic operational environment.

Project 297 - Munitions Survivability & Logistics: This Project supports the future force by making Army units more survivable through the investigation, testing and demonstration of munitions logistics system improvements that prevent or minimize catastrophic explosive events and accelerate ammunition resupply. Key thrusts are munitions storage area survivability, Insensitive Munitions (IM) technology integration and compliance, ammunition management and asset visibility, weapon system rearm, munitions configured load enablers and advanced packaging and distribution system enhancements. Within each thrust, a broad array of solutions will be identified, tested, and evaluated against developed system measures of effectiveness. Optimum, cost effective and efficient solutions that enable the rapid projection of lethal and survivable forces will be demonstrated. The early stages of force deployment are especially critical. Theater ammunition storage areas are vulnerable and present the enemy with lucrative targets. These areas and distribution nodes contain the only available munitions stocks in theater. Loss of these munition stocks could cripple the force, jeopardize the mission, and result in high loss of life. This Project mitigates vulnerabilities and ensures a survivable fighting force.

Project 858 - Army Explosives Safety Management Program: This Project establishes, validates or modifies explosives technical safety requirements per Department of Defense Manual 6055.09 and Department of the Army Pamphlet 385-64, Ammunition and Explosives Safety Standards. Project activities promote Research, Development, Test, and Evaluation (RDTE) of new and innovative explosives safety technologies that improve the survivability of Army personnel, facilities, and equipment as well as improve the health, safety and welfare of the general public (with highest priority directed to combat theater of operations).

Project 859 - Life Cycle Pilot Process: This Project supports the implementation of the Single Manager for Conventional Ammunition (SMCA) Industrial Base Strategic Plan through technology investigations, model based process controls, pilot prototyping, and industrial assessments. It will assess life cycle production capabilities required for all ammunition families, address design for manufacturability to facilitate economical production, identify industrial and technology requirements, and address the ability of the production base to rapidly and cost effectively produce quality products. Cost reduction is an important part of the Life Cycle Pilot Process (LCPP). LCPP provides the resources to prototype critical technologies and develop the knowledge base to establish cost effective, environmentally safe and modern

production processes in support of the munitions Industrial Base transformation. In addition, the LCPP program addresses Single Point Failures (SPFs) / No Source of supply within the National Technology Industrial Base (NTIB). LCPP provides support to reduce supply chain risk by investigating, developing and evaluating additional sources of supply for a known SPF.

Project F21: North Atlantic Treaty Organization (NATO) Ammunition Evaluation program funding ensures interchangeability of ammunition and weapons among all the NATO countries with all of the associated logistic, strategic and tactical advantages of the alliance. This Project involves development and testing compliance of NATO standardization agreements (STANAGS) and staffing of the North American Regional Test Center (NARTC). In addition, this Project supports small caliber ammunition, 50mm ammunition, 40mm grenade munitions, medium caliber cannon ammunition, and large caliber ammunition enhancements to lethality, effectiveness, survivability, accuracy, and general product improvements. This Project also supports the standardization and interchangeability of legacy and new production United States (US) weapons and ammunition with Allied Nations to maximize battlefield interchangeability/ compatibility under the auspices of international agreements to include NATO working groups, the Joint Ballistics Memorandum of Understanding (JBMOU), and information/ data exchange agreements. Maximizing standardization, interchangeability, and exportability will also potentially increase Foreign Military Sales (FMS) of US indirect fire weapon and munition products to support United States industrial base production and affordable Department of Defense pricing through increased economies of scale. Fiscal Year 2023 funding will support NATO and JBMOU artillery and small arms ammunition interchangeability group meetings, documentation, and test operations.

Project F24: Conventional Munitions Demilitarization (Demil): The Conventional Munitions Demilitarization technology Project supports the SMCA responsibility per Department of Defense Instruction (DoDI) 5160.68 to plan, program, budget and fund a Joint Service Research and Development (R&D) program that develops capability and capacity as well as technology and facilities to support the SMCA mission to demil and dispose of conventional ammunition stored in the SMCA Resource, Recovery and Disposition Account (B5A). The program goals include SMCA efforts to increase efficiencies and effectiveness to reduce the demil stockpile; reduce processing costs including packaging, handling and crating; and increase capacity through improved demilitarization capabilities and processes. Project F24 includes activities: (1) to establish requirements and develop processes to focus investments, assess capabilities, analyze alternatives, and recommend and implement R&D projects; (2) to improve products and processes that support existing capabilities; (3) to develop or improve demil methods and processes related to advance the primary demilitarization core thrust areas of destruction, disassembly, removal, resource recovery and recycling, and waste stream treatment; (4) to ensure safe and environmentally acceptable demil operations; (5) to transition R&D products to United States Army depots or plants as well as commercial facilities performing demil; and (6) to mitigate risk and close-out project activities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605805A / *Munitions Standardization, Effectiveness and Safety*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	55.648	43.042	0.000	-	0.000
Current President's Budget	50.648	63.042	48.316	-	48.316
Total Adjustments	-5.000	20.000	48.316	-	48.316
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	20.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-5.000	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	48.316	-	48.316

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: 297: *Mun Survivability & Log*		
Congressional Add: *Polymer Case Ammunition*	-	5.000
Congressional Add Subtotals for Project: 297	-	5.000
Project: 859: *Life Cycle Pilot Process*		
Congressional Add: *Program increase - foamable celluloid materials*	5.000	5.000
Congressional Add: *Program increase - neutron radiography technology*	5.000	-
Congressional Add: *Program increase - industrial base resiliency initiative*	8.000	5.000
Congressional Add: *Program increase- Advanced Ammunition Materials & Manufacturing Technologies; AM for High Temperature Alloys*	-	5.000
Congressional Add Subtotals for Project: 859	18.000	15.000
Congressional Add Totals for all Projects	18.000	20.000

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	Project (Number/Name) 297 / *Mun Survivability & Log*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
297: *Mun Survivability & Log*	-	14.343	21.842	23.158	-	23.158	18.592	18.630	18.508	18.600	0.000	133.673
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the future force by making Army units more survivable through the investigation, testing and demonstration of munitions logistics system improvements that prevent or minimize catastrophic explosive events and accelerate ammunition resupply. Key thrusts are munitions storage area survivability, Insensitive Munitions (IM) technology integration and compliance, ammunition management and asset visibility, weapon system rearm, munitions configured load enablers and advanced packaging and distribution system enhancements. Within each thrust, a broad array of solutions will be identified, tested, and evaluated against developed system measures of effectiveness. Optimum, cost effective and efficient solutions that enable the rapid projection of lethal and survivable forces will be demonstrated. The early stages of force deployment are especially critical. Theater ammunition storage areas are vulnerable and present the enemy with lucrative targets. These areas and distribution nodes contain the only available munitions stocks in theater. Loss of these munition stocks could cripple the force, jeopardize the mission, and result in high loss of life. This Project mitigates vulnerabilities and ensures a survivable fighting force while providing leap ahead technology to meet the Multi-Domain Operations and the priorities identified by the Long Range Precision Fires & Solider Lethality Cross Function Teams.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Munitions Predictive Life	1.352	1.977	3.377

Description: This activity will demonstrate technologies and algorithms that can help assess munitions serviceability based upon aggregate environmental exposures, system cycling and munition degradation models. The activity will provide life cycle management tools for risk mitigation strategies, while reducing testing, inspection & surveillance required as well as improving weapon system reliability and warfighter effectiveness. This Project will specifically assess munitions serviceability based upon aggregate environmental exposures, system cycling and munition degradation models during the tactical distribution of munitions after munitions are re-configured to distribution focused multi-DODIC consolidation packs.

FY 2022 Plans:

Develop an active ruggedized temperature/humidity/shock/vibration exposure sensor that integrates with a prototype flatrack based consolidator under development for 155mm ammunition, and will enable monitoring of the operational exposure thresholds during transport to Tactical Resupply point. Develop an active ruggedized environmental exposure sensor for ammunition that integrates with emerging hybrid ammunition packaging containers/consolidators of dismounted infantry items to monitor operational exposure thresholds during transport through last tactical mile. Develop sensor configurations to monitor environmental exposure of emerging LRPF propellant components, fuze types, and projectile configurations. Continue recurring

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
market surveys of emerging passive Radio Frequency Identification technologies and active and passive environmental sensors for legacy munitions, select and evaluate viable candidates. ***FY 2023 Plans:*** Investigate capabilities for monitoring ammunition exposures to temperature/humidity/shock/vibration that will ensure exposure thresholds are not breached and that the ammunition is viable for use, thereby improving operational resiliency. The effort will investigate capabilities that will integrate with developmental tactical 155mm ammunition storage and transportation systems to mitigate the detrimental effects of these exposures to the operational availability of the weapon platform. This capability may be integrated into existing vehicles and conveyances or integrated into emerging systems, and will feed data about existing and future Long Range Precision Fires (LRPF) ammunition components (ammunition, propellant, fuzes, and packaging) into emerging tactical ammunition management systems to ensure only viable ammunition is tasked for use. Conduct studies on the degradation of 155mm propellant due to exposure to regional/seasonal humidity levels (future Extended Range Canon Artillery (ERCA) systems will likely store propellant out-of-container) to provide understanding of the impact of measured exposures. Develop an active ruggedized environmental exposure sensor for ammunition that integrates with emerging hybrid ammunition packaging containers/consolidators of dismounted infantry items to monitor operational exposure thresholds during transport through last tactical mile. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase program amount represents residual change to FY 2022 budget.			
Title: Insensitive Munitions (IM) Integration Program ***Description:*** Demonstrate multiple IM technologies and integrate into end item(s) to improve munitions survivability and warfighter safety. IM Technologies, using State-of-the-Art materials, will be developed in the areas of warhead, propulsion and propellants, explosives, packaging, and barriers. In addition, modeling and simulation will be used to reduce development and testing costs. Efforts will increase the number of IM compliant ammunition items fielded to mitigate munitions reaction to unplanned stimuli such as fire, fragments, enclosed heat build-up (cook-off), bullets, adjacent munitions reaction (sympathetic detonation), and shape charge jet attacks. ***FY 2022 Plans:*** Complete demonstration of medium caliber, foamed celluloid cartridge cases for improved response to shock and thermal threats in support of NGCV, FVL and Soldier Lethality SL modernization priorities. Complete fragment impact and ballistic testing of new igniter formulations to replace Benite in 120mm tank munitions. Initiate final testing of the M433E1 40MM Cartridge to integrate explosive technology along with warhead, packaging venting and impact mitigation technologies. Complete testing of DNP based formulation in 120mm mortar for improved IM and lethality to support SL modernization priority. Complete characterization tests of Titan II samples fabricated using Lab RAM technology to coat nanonitramine formulations and for improved shock sensitivity at	5.720	6.564	6.542

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
reduced cost to support LRPF and AMD priorities. Demonstrate optimized plastic containers for large caliber munitions to mitigate both fast and slow cook-off events. Conduct impact testing of the deflection plate technology for an integrated packaged design. Demonstrate container heat management technology to mitigate cook-off events in mortar systems. ***FY 2023 Plans:*** Demonstrate Slow Cook Off (SCO) mitigation using container heat management technology with live munitions. Demonstrate Sealed Seam packaging venting technology to improve artillery and tank containers? response to thermal events in support of Long Range Precision Fire (LRPF) modernization priority. Continue Insensitive Munition (IM) testing of the M433E1 40MM Cartridge to integrate explosive technology along with warhead, packaging venting and impact mitigation technologies in support of Next Generation Combat Vehicle (NGCV) priorities. Utilize completed characterization testing to down-select DNP formulation for initial engineering IM testing in end item to support Soldier Lethality (SL) modernization priority. Initiate engineering IM and performance tests of Titan II formulation to support Long Range Precision Fires (LRPF) and Air and Missile Defense (AMD) priorities. Continue demonstration of PAX-64 as a replacement for PBXN-12 in mortar IM auxiliary charges for improved Fragment Impact (FI) response. Initiate gun firings of new igniter formulations to replace Benite in 120mm tank munitions. Develop propellant coating technology for improved cook-off and impact threats. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease program amount represents residual change to FY 2022 budget.			
Title: Improved Munitions Packaging ***Description:*** This activity will demonstrate upgrades to existing packaging components and materials to improve legacy ammunition survivability. These upgrades will enhance ammunition survivability and reliability, improve field ammunition operations, and improve packaging. This activity will also demonstrate intermediate packaging concepts and components to improve survivability once removed from bulk packs for finer grain distribution through the BCT. ***FY 2022 Plans:*** Develop packaging configuration/consolidation prototypes and perform engineering testing for the 155mm family of extended range components for the transportation and resupply of extended range cannon artillery. Conduct pallet testing as part of the undervalued hardwood program. Assess viability of packaging concepts for transporting 155mm ammunition items forward of the Ammunition Storage Point to the Tactical Resupply Point to meet emerging Long Range Precision Fire CFT modernization requirements. Investigate ammunition container lids, latches, security seal, tie downs, palletization methods and environmental sealing techniques that provide more efficient automation opportunities for resupply. Develop hybrid light weight small arms packaging concepts to meet Soldier Lethality modernization resupply requirements. Conduct qualification testing on selected ammo packaging concepts that provide desired functional characteristics at acceptable unit cost supporting the JPEO Armaments	2.012	2.600	2.851

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
& Ammunition portfolio of items. Develop packaging configurations to protect against environmental effects on emerging LRPF propellant components, fuze types, and projectile configurations. ***FY 2023 Plans:*** Complete engineering and environmental testing on low cost cylindrical container prototypes that incorporate novel venting technology with application for 120mm tank and 155mm extended range ammunition components. Conduct performance testing of ammunition pallets constructed from undervalued hardwoods. Complete cost benefit analysis and implement via a revision to the pallet specification. Develop functional prototype packaging components and ?automation friendly? technologies (e.g. lids, latches, security seal, tie downs, palletization methods and environmental sealing techniques) to enable ammunition handling forward of the Ammunition Storage Point to compliment emerging Long Range Precision Fire CFT modernization initiatives. Continue to investigate hybrid light weight small arms packaging concepts to meet Soldier Lethality modernization resupply requirements. Conduct comparative testing to evaluate ammo packaging technologies intended to reduce the packaging unit cost in support of the JPEO Armaments & Ammunition portfolio of small caliber items. Support qualification testing on packaging prototypes and configurations designed to protect legacy large caliber propellant, fuze and projectile components against environmental effects and other stimuli, as required to reflect use cases defined by the emerging CONOPS for ERCA. Assess the viability of adding 2-dimensional bar codes to individual PM Cannon Artillery System items and unitized packaging to include projectiles, fuzes, and propellant charges to prepare for future ammunition handling automation. Evaluate redesigned ammunition stowage mechanisms developed for the M992A3 Carrier Ammunition Tracked (CAT) for soldier efficiencies, improved resupply/ rearm processes, and ammunition survivability and readiness. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase program amount represents residual change to FY 2022 budget.			
Title: Ammo Provider ***Description:*** This activity demonstrates technologies that will assure a survivable munitions logistics system by increasing distribution velocity and protecting ammo storage areas. Technology areas to be investigated include ammunition asset visibility, including environmental sensors, marking technologies, and supply chain modeling; ammunition management, including improvements in stockpile surveillance and condition based management; sustainment, including pre-configured loads (soldier to unit size); field ammo reconfiguration capability, robotic handling, and improved load building capability; and force protection, including site planning software and field storage protection. All research and development initiatives will be supporting the Long Range Precision Fires & Solider Lethality Cross Functional Teams (CFTs) and the multi domain operations modernization objectives that consume, store or transport/distribute munitions and munition components in the maneuver formations. ***FY 2022 Plans:***	5.259	5.086	5.388

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Develop a suite of ammunition logistics enablers to meet the Long Range Precision Fire CFT modernization objectives for the Extended Range Cannon Artillery to include 1) Extend the current CADES to optimize configuration, location, information, consumption, and planning/forecasting for all ammo items, 2) Adapting the CLBT to anticipatory planning for allocation of ammunition demand with FSC transportation assets, 3) Enhance the MSS capability to provide explosive safety vehicle separation distances for any military vehicle uploaded with ammo, 4) Develop high fidelity models to fully assess emerging Field Artillery Automated Resupply (FAAR) concepts and the resupply and retrograde benefits that may accrue through deployment. 5) Develop ammo handling enablers to meet LRPF CFT driven requirements for increased ammunition distribution velocity and capabilities to reduce crew burden while increasing upload rates during ammunition resupply operations. Develop scoring metrics to determine operational benefits of variable levels of automation applied to ERCA resupply. Develop ammo handling enablers to meet Soldier Lethality CFT modernization objectives of improved ammunition distribution velocity and a more responsive ammunition supply chain to meet dismounted infantry lethality/mobility requirements. Conduct an extended user evaluation of MSS with the US Marines to validate all operational and interface requirements have been met. Provide and support CADES technology transition to migrate Artificial Intelligence planning tools to integrate within TAMS to enable tactical ammunition mission command. Develop Unmanned Logistics System - Air payload configuration enablers and anticipatory planning functions to reduce cycle time of routine small unit resupply operations.			
FY 2023 Plans: Investigate emerging technologies that may contribute to a suite of ammunition logistics enablers to meet the CFT modernization objectives for Long Range Precision Fires (LRPF) Extended Range Cannon Artillery and Soldier Lethality (SL) Small Unit Resupply priorities. These enablers include objectives to provide for the optimization of requisitions, geo-location of inventory, real-time consumption, and planning/forecasting for all ammo items, adapting multi-class configured loads to available transportation conveyances for anticipatory planning for allocation of ammunition distribution assets. Investigate explosive siting techniques to complete explosive safety separation distances for selected military combat and combat service support vehicles uploaded with a basic load or ammo cargo. Refine existing high fidelity models to reflect LRPF Fire Faster concepts and the resupply and retrograde benefits that may accrue through deployment. Assess new concepts for ammo handling interim/ post depot pack configuration enablers to meet LRPF CFT supply chain through-put requirements to improve ammunition distribution velocity through the Tactical Ammunition Micro-services Management (TAMMS). Revise scoring metrics and validate the operational benefits of the Fire Faster integrated automation through advanced System Engineering techniques. Develop a strategy for a responsive ammunition supply chain concept, integrated through Leaderboard, to meet dismounted infantry requirements as defined by the SL CFT Small Unit Resupply initiative. Conduct an extended user evaluation of the Army Futures Command (AFC) Software Factory first iteration and cloud hosting of Munitions Survivability System with the US Marines to validate all operational and interface requirements have been met.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase program amount represents residual change to FY 2022 budget.			
Title: P2 Supply Chain Assured Munitions ***Description:*** Army added funds to update legacy chemical specifications and expand the Industrial Base Analysis Tool (IBAT) software to illuminate kinetic weapons supply chains involving critical chemicals and raw materials used in missiles and munitions. ***FY 2023 Plans:*** Funds will be used to develop a deeper understanding of the risks to the weapons and munitions supply than is presently afforded by the IBAT. Commercial software application tools will be employed were appropriate to identify and document previously unknown supply chain risks to be mitigated. Funds will also be used to modernize the specifications of designated critical materials in order to expand the potential supplier base by eliminating obsolete test methods and modify requirements that are impediments to a viable domestic supplier base. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to Army adding funds to update legacy chemical specifications and to expand Industrial Base Analysis Tool (IBAT)	-	-	5.000
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** Adjustment for SBIR/STTR transfer ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Adjustment for SBIR/STTR transfer	-	0.615	-
Accomplishments/Planned Programs Subtotals	14.343	16.842	23.158

	FY 2021	FY 2022
Congressional Add: Polymer Case Ammunition ***FY 2022 Plans:*** Develop, evaluate and mature alternative ammunition cartridge case solutions including hybrid-polymer case ammunition technology. Conduct adhesive case study. Conduct demilitization recycling emissions pollution abatement study. Perform reliability test for .50 caliber ammunition. Obtain cold forming equipment in order to make hybrid-polymer case head, as a future cost saving effort. Deliver prototype cartridges in order to study temperature during firing.	-	5.000
Congressional Adds Subtotals	-	5.000

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	Project (Number/Name) 858 / *Army Explosives Safety Management Program*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
858: *Army Explosives Safety Management Program*	-	0.413	1.418	1.509	-	1.509	1.542	1.567	1.596	1.595	0.000	9.640
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project establishes, validates or modifies explosives technical safety requirements per Department of Defense Pamphlet 385-64, Ammunition and Explosives Safety Standards. Project activities promote Research, Development, Test, & Evaluation (RDTE) of new and innovative explosives safety technologies that improve the survivability of Army personnel, facilities, and equipment as well as improve the health, safety and welfare of the general public. FY 2021 funding will support continued testing, validation, and regulatory integration for permanent, temporary and mobile ammunition & explosives (A&E) facilities as well as operations. The Defense Ammunition Center/US Army Technical Center for Explosives Safety (DAC/USATCES) will team with and sponsor agencies (Joint Service, Academia, and Contractor) to improve the effectiveness of identifying, analyzing, and apply risk acceptance to ammunition and explosive environments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Risk based explosives safety criteria ***Description:*** Development of risk based explosives safety criteria that will aid commanders and safety personnel in the transition from regulation to risk management. ***FY 2022 Plans:*** Will continue explosives testing and support of hazard research and exposure consequences ***FY 2023 Plans:*** Efforts continue explosives testing and support of hazard research and exposure consequences in support of research and development efforts on Army installations. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase program amount represents residual change to FY 2022 budget.	0.050	0.268	0.310
Title: Development of enhanced protective structure designs ***Description:*** Develop enhanced protective structure designs that improve the survivability of Army personnel, facilities and equipment. ***FY 2022 Plans:*** Will continue explosives testing and support for improving protective construction designs. ***FY 2023 Plans:***	0.213	0.904	0.977

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	**Project (Number/Name)** 858 / *Army Explosives Safety Management Program*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Efforts continue explosives testing and support for improving protective construction designs in support of research and development efforts on Army installations. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase program amount represents residual change to FY 2022 budget.			
Title: Development of explosive safety tools ***Description:*** Develop explosive safety tools for use by Army personnel. Explosive safety tools allow commanders and safety personnel to make explosive safety decisions using risk management methodologies. ***FY 2022 Plans:*** Will continue development of new methods and tools for risk assessment to improve explosive safety risk management decisions. ***FY 2023 Plans:*** Efforts continue development of new methods and tools for risk assessment to improve explosive safety risk management decisions in support of research and development efforts on Army installations. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase program amount represents residual change to FY 2022 budget.	0.150	0.195	0.222
Title: SBIR/STTR transfer ***FY 2022 Plans:*** Adjustment for SBIR/STTR transfer ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Adjustment for SBIR/STTR transfer	-	0.051	-
Accomplishments/Planned Programs Subtotals	0.413	1.418	1.509

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	Project (Number/Name) 859 / *Life Cycle Pilot Process*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
859: *Life Cycle Pilot Process*	-	22.487	20.501	5.797	-	5.797	5.812	5.828	5.825	5.882	0.000	72.132
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

To execute the Single Manager for Conventional Ammunition (SMCA) Industrial Base Strategic Plan, this project supports: material and manufacturing technology investigations and assessments; pilot prototype processes; technology and process assessment for industrial base safety, security and environmental concerns; mitigation of supply chain risks by assessing alternative processes and materials for Army's legacy products. Projects support overall research, development and modernization efforts towards rapid technological advancements and the changing character of war. Specifically, this project assesses life cycle production capabilities required for all ammunition families; addresses design for manufacturability to facilitate economical production; identification of industrial and technology requirements; addresses production base concerns that may impact availability for cost effective quality products and assessment of security capability gaps to ensure robust manufacturing supply chain processes. In addition, the Life Cycle Pilot Process (LCPP) program addresses Single Point Failures (SPFs) and no source of supply within the National Technology Industrial Base (NTIB). LCPP provides support to reduce supply chain risk by investigating, developing and evaluating additional sources of supply for a known SPF. LCPP provides the resources to prototype critical technologies, improve security processes and requirements; develop a knowledge base to establish cost effective, environmentally safe and modern production processes in support of transforming the Industrial Base.

Funding will support various efforts to reduce manufacturing and production costs; bridge technology transition between research and production; and assess security vulnerabilities within the NTIB. Program will continue to investigate and evaluate manufacturing technology; assess improved security processes; alternative materials and processes to address supply chain risks and resiliency concerns.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Product Cost Thrust Area	0.814	0.989	1.980
Description: This thrust area seeks out new opportunities to reduce overall cost of armaments and ammunition components. Efforts will review and analyze legacy manufacturing processing for opportunities to integrate improved technology that can lead to increased operator safety and materials to lean manufacturing processes to reduce overall unit cost and utilization of greener materials.			
FY 2022 Plans: Continue to evaluate and investigate mature manufacturing process and technologies to improve the efficiencies at the GOCO facilities. Assess alternative materials and alternative production processes to reduce end item and production costs for transition to the Army's Industrial Base. Efforts include but not limited to: automating load, assemble and pack operations for artillery /			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
propulsion charge systems, assess alternative materials for fielded propulsion end items to cost avoid potential shutdowns and failure analyses. ***FY 2023 Plans:*** Continue to evaluate and investigate mature manufacturing process, automation of processes and technologies to improve the efficiencies and reduce cost of operations at the GOCO facilities. Assess alternative materials/components and alternative production processes to reduce end item and production costs for transition to the Army's Industrial Base. Efforts are aligned with the Army's Long Range Precision Fires Cross Functional Team (CFT) include but not limited to: automating load, assemble and pack operations for artillery and propulsion charge systems. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 increase in program priorities due to increase requirements in single point failure and product cost thrust areas.			
Title: Single Point Failures (SPFs) ***Description:*** This thrust area seeks to mitigate single source and no source of supply to armaments and ammunition manufacturing operations. Thrust area tests or evaluates alternative materials and processes to mitigate SPFs. These efforts are part of the overall strategy to reduce the number of SPFs in the NTIB. Additionally, thrust area efforts will address ammunition manufacturing capability shortfalls. This area leverages RDTE accomplishments and product knowledge to satisfy manufacturing requirements. ***FY 2022 Plans:*** Assess technologies and material alternatives to mitigate single source and no source of supply for in production end items and end item components. Investigative findings will follow similar technology transition / transfer paths to the industrial base or product PM. Efforts include but not limited to: investigate alternative base constituents for obscurant end items. ***FY 2023 Plans:*** FY2023 will continue to assess and test the technologies and material alternatives to mitigate single source and no source of supply for in production end items and end item components. Investigative findings will follow similar technology transition / transfer paths to the industrial base or product PM. Efforts are aligned with the Army's Solider Lethality CFT include but not limited to investigating alternative constituents for end items. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Program increase amount represents a residual amount for FY 2023 budget.	1.262	0.315	0.325
Title: Manufacturing Technology for Industrial Base Transformation ***Description:*** This thrust area matures ammunition manufacturing technologies, processes to enhance manufacturing, security capabilities of legacy armaments and ammunition manufacturing operations. This thrust area will integrate the framework	2.411	3.996	3.492

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
for digital engineering concepts to pilot and transition processes to affected industrial base for armaments and ammunition manufacturing operations. ***FY 2022 Plans:*** Continue investigation and pilot mature manufacturing technologies and processes towards transforming the Army's Industrial Base. Assessment of improved energetic manufacturing for back-end propellant operations; modernize explosive load, assemble and pack operations for transition to GOCO facility, investigate manufacturing technologies to reduce energetic waste, provide safer manufacturing operations and improve manufacturing efficiencies. ***FY 2023 Plans:*** Efforts include supporting the Army's vision for transformational change across the ammunition industrial base to ensure modernized manufacturing methodologies, processes and equipment. Efforts are aligned with Long Range Precision Fires and Solider Lethality CFTs through assessment of modernized explosive load, assemble and pack operations for transition to GOCO facility; digital technology integration strategies, investigations of robotic and automated manufacturing technologies to reduce energetic waste, provide safer manufacturing operations and assessment of manufacturing efficiencies by investigating flexible manufacturing lines in support of but not limited to production of munition energetic components ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Program decrease amount represents a residual amount for FY 2023 budget.			
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** Adjustment for SBIR/STTR transfer ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Adjustment for SBIR/STTR transfer	-	0.201	-
Accomplishments/Planned Programs Subtotals	4.487	5.501	5.797

	FY 2021	FY 2022
Congressional Add: Program increase - foamable celluloid materials	5.000	5.000
FY 2021 Accomplishments: Foamable celluloid products provides a lighter weight, robust product at a lower cost than the currently fielded items. This effort continues development of Foamable Celluloid manufacturing		

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
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	FY 2021	FY 2022
technologies and evaluation of munition components made out of foamable celluloid at various funding and maturity levels. ***FY 2022 Plans:*** Foamable celluloid products provides a lighter weight, robust product at a lower cost than the currently fielded items. This effort continues development of Foamable Celluloid manufacturing technologies and evaluation of munition components made out of foamable celluloid at various funding and maturity levels.		
Congressional Add: Program increase - neutron radiography technology ***FY 2021 Accomplishments:*** Effort will improve reliability, dependability and robustness to mature digital imaging technology; and explore delivery and installation of high energy photon technology to the Munitions Industrial Base.	5.000	-
Congressional Add: Program increase - industrial base resiliency initiative ***FY 2021 Accomplishments:*** Effort will develop technology to strengthen energy security and resiliency for the Army?s munition industrial base. ***FY 2022 Plans:*** Effort will develop technology to strengthen energy security and resiliency for the Army's munition industrial base.	8.000	5.000
Congressional Add: Program increase- Advanced Ammunition Materials & Manufacturing Technologies; AM for High Temperature Alloys ***FY 2022 Plans:*** Investigate critical materials and techniques assessing Manufacturing solutions of high temp metal alloys and ceramics to meet Modernization and Readiness Priorities.	-	5.000
Congressional Adds Subtotals	18.000	15.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	Project (Number/Name) F21 / *NATO Ammo Evaluation*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
F21: *NATO Ammo Evaluation*	-	0.722	0.514	0.766	-	0.766	0.769	0.768	0.768	0.775	0.000	5.082
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

North Atlantic Treaty Organization (NATO) Ammunition Evaluation program funding ensures interchangeability of ammunition and weapons among all the NATO countries with all of the associated logistic, strategic and tactical advantages of the alliance. This Project involves development and testing compliance of NATO standardization agreements (STANAGS) and staffing of the North American Regional Test Center (NARTC). In addition, this Project supports small caliber ammunition, 50mm ammunition, 40mm grenade munitions, medium caliber cannon ammunition, and large caliber ammunition enhancements to lethality, effectiveness, survivability, accuracy, and general product improvements. This Project also supports the standardization and interchangeability of legacy and new production United States (US) weapons and ammunition with Allied Nations to maximize battlefield interchangeability/ compatibility under the auspices of international agreements to include NATO working groups, the Joint Ballistics Memorandum of Understanding (JBMOU), and information/ data exchange agreements. Maximizing standardization, interchangeability, and exportability will also potentially increase Foreign Military Sales (FMS) of US indirect fire weapon and munition products to support United States industrial base production and affordable Department of Defense pricing through increased economies of scale. Fiscal Year 2023 funding will support NATO and JBMOU artillery and small arms ammunition interchangeability group meetings, documentation, and test operations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: New Ammo Design Qualification & NATO Mission Support	0.300	0.279	0.324
Description: This activity ensures complete interchangeability of small caliber, automated cannon-caliber, 40mm grenade ammunition, air burst capable 30mm/40mm ammunition, 50mm ammunition, large caliber ammunition and weapons among NATO countries to achieve the associated logistic, strategic and tactical advantages. ***FY 2022 Plans:*** Will continue work to support NATO small arms ammunition, direct fire grenade, and large caliber interchangeability group meetings, documentation and test operations. ***FY 2023 Plans:*** Will continue work to support NATO small arms ammunition, direct fire grenade, and large caliber interchangeability group meetings, documentation and test operations. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increase will resource additional testing activities to ensure interoperability of technologies amongst Allied Nations.			
Title: Joint Ballistics Program Support	0.422	0.217	0.442

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	**Project (Number/Name)** F21 / *NATO Ammo Evaluation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: The activity supports the maturation, validation, and risk reduction of battlefield interchangeability/ compatibility and associated enabling technologies between domestic US and NATO/ Allied Nations indirect fires weapons and munitions. ***FY 2022 Plans:*** FY 2022 funding supports interoperability testing and interchangeability group meetings. ***FY 2023 Plans:*** FY 2023 will continue interoperability testing and interchangeability group meetings. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding increase will resource additional testing activities to ensure interoperability of technologies amongst Allied Nations.			
Title: Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (STTR) ***FY 2022 Plans:*** FY 2022 funding to be assess per SBIR Title 15 USC ?638(f)(1) and STTR Title 15 USC ?638(f)(1)(A). ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Adjustment for SBIR/STTR transfer	-	0.018	-
Accomplishments/Planned Programs Subtotals	0.722	0.514	0.766

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	Project (Number/Name) F24 / *Conventional Munitions Demil*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
F24: *Conventional Munitions Demil*	-	12.683	18.767	17.086	-	17.086	17.945	18.109	18.297	18.364	0.000	121.251
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Conventional Munitions Demilitarization Technology Project supports the Single Manager for Conventional Ammunition (SMCA) responsibility per Department of Defense Instruction (DoDI) 5160.68 to plan, program, budget and fund a Joint Service research and development program that develops capability and capacity as well as technology and facilities to support the SMCA mission to demilitarize and dispose of conventional ammunition stored in the SMCA Resource, Recovery and Disposition Account (B5A). Project goals include SMCA efforts to increase efficiencies and effectiveness to reduce the demil stockpile; reduce processing costs including packaging, handling and crating; and increase capacity through improved demil capabilities and processes. Project F24 includes several activities: (1) to establish requirements and develop processes to focus investments, assess capabilities, analyze alternatives, and recommend and implement RDT&E projects; (2) to improve products and processes that support existing capabilities; (3) to develop or improve demil methods and processes related to advance the primary demilitarization core thrust areas of destruction, disassembly, removal, resource recovery and recycling, and waste stream treatment; (4) to ensure safe and environmentally acceptable demil operations; (5) to transition RDT&E products to United States Army depots or plants as well as commercial facilities performing demil; and (6) to mitigate risk and close-out Project activities.

During Fiscal Year (FY) 2023, the F24 projects will focus efforts on fielding alternative capabilities and developing enhancements to existing open burn and open detonation techniques. This effort will include the evaluation of hazardous air pollutants generated in the demil capability for the 155mm Projectile Family of Scatterable Mines (FASCAM) at McAlester Army Ammunition Plant deactivation furnace.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Advanced Destruction	4.316	4.472	4.282
Description: This effort focuses on developing capabilities and capacities for the destruction of obsolete and or unsafe munitions.			
FY 2022 Plans: Final Design of a reactive armor tile demil oven. Install and test a capability to demil plastic walled shotgun cartridges. Fabricate Hardware to demilitarize Honest John Warheads.			
FY 2023 Plans: Planned initiatives include: conduct of an operational test of the download equipment for the Honest John Warhead. The Honest John Warhead contains M40 and M38 cluster munitions bomblets/grenades, which will be disposed of in a safe manner. Transition is scheduled for FY 2024.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	**Project (Number/Name)** F24 / *Conventional Munitions Demil*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Decrease from FY2022 to FY2023 attributed to MK-246 Shotgun Demil completion in FY2022.			
Title: Resource Recovery and Recycling (R3) ***Description:*** This effort focuses on enhancing existing methods of munitions R3, which will maximize sale of residual materials. Proceeds of R3 sales are reinvested in the Army Demilitarization mission to reduce the B5A stockpile. Proceeds of R3 sales are reinvested in the Army Demilitarization mission to reduce the B5A stockpile. ***FY 2022 Plans:*** Design and Start Fabrication for full sized Automated Scrap Inspection System. Initiate a design for Reuse of Rocket Motor Grains ***FY 2023 Plans:*** Planned initiatives include: systemization of the Automated Scrap Inspection System at Tooele Army Depot (TEAD). The Automated Scrap Inspection (ASI) will implement a automated inspection of thermally treated munitions via back scatter X-ray machine vision, and artificial intelligence to verify that the material is safe to release to the public for resale of residuals. The goal is to enhance both the safety and efficacy of the process. A preliminary design will be completed for the size reduction of rocket motor grains capability. The size reduction of rocket motor grains project will focus on developing an alternative to open burning or static fire of obsolete rocket motors. This initiative will focus on development and implementation of methods for propellant size reduction and reuse of rocket motor casings. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease from FY 2022 to FY 2023 attributed to purchase of Automated Scrap Inspection System equipment in FY 2022. Equipment systemization will occur in FY 2023.	0.810	4.186	4.002
Title: Advanced Removal ***Description:*** This effort focuses on technology to remove propellant and energetics from munitions to allow closed disposal thermal treatment. ***FY 2022 Plans:*** Initiate operational test of Shaped Charge Removal equipment to allow thermal treatment. Conduct operational Test for the capability to demil 155mm Illumination Projectiles. Conduct LRIP of 2.75" Rocket Motor Capability. ***FY 2023 Plans:*** Funding will support transition of the demil capability for the 155mm Illumination Projectiles to an organic facility. The configuration of the D505 has a unique expulsion charge, configuration and additional baseline pinning making direct pushout challenging and a safety concern. Funding will also support a complete transition of a capability to demil 2.75" Rocket Motors. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	0.957	1.738	1.664

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	**Project (Number/Name)** F24 / *Conventional Munitions Demil*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
The decrease from FY2022 to FY 2023 is attributed to the transition of the 2.75' Rocket Motor capability to Crane Army Ammunition Activity (CAAA) in FY 2022.			
Title: Advanced Waste Stream Treatment ***Description:*** This effort focuses on handling waste streams from munitions items to continue environmentally compliant closed disposal treatment. ***FY 2022 Plans:*** Conduct Integration testing of the APE 1236 Feed System Upgrade at TEAD. Initiate design of thermal treatment of pyrotechnic munitions. Initiate design of Thermal Treatment System Hardware changes for Per- and poly-FluoroAlkyl Substances (PFAS). Implement Feed Recipes Efficiency Evaluation (FREE) findings at Depot. ***FY 2023 Plans:*** Planned initiatives include sub-scale testing of munitions containing Per- and poly-Fluoro Akyl Substances (PFAS/PFOS). These substances are emerging contaminants with toxic properties. PFAS polymers are commonly used in plastic bonded explosives (PBX), flares, O-rings, lubricants and other components that need to withstand high heat. This project addresses potential pollutants from emittance during demil operations. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease from FY 2022 to FY 2023 is attributed to postponement of APE 1236 RKI Feed System Upgrade Installation at TEAD. Disassembly of the APE 1236 RKI Feed System will occur in FY 2023 and installation of hardware upgrades will occur in FY 2024.	3.559	1.971	1.886
Title: Advanced Munitions Disassembly ***Description:*** This effort focuses on developing innovative and efficient processes to disassemble munitions. ***FY 2022 Plans:*** Complete Fabrication of Hardware for Flechette capability. Conduct LRIP for delinking and sorting capability for small arms cartridges to be fed into the APE 1236 RKI. Initiate Hardware Design and Fabrication of Smoke Hand Grenade Demil Capability. Complete Final Analysis of CS Riot Water Jet Capability. ***FY 2023 Plans:*** Planned initiatives include: integration of hardware for the Flechette capability; and verification of removal and disposal methods for the Lead Chromate in Flechette cartridges. The goal is to ensure proper removal and disposal of in a compliant manner; and conduct of sub scale testing of CS Riot Water Jet capability with disposal of the chemical agent. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	3.041	5.715	5.252

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605805A / *Munitions Standardization, Effectiveness and Safety*	**Project (Number/Name)** F24 / *Conventional Munitions Demil*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
The decrease from FY 2022 to FY 2023 is attributed to the phasing of CS Riot Water Jet capability systemization and operational testing occurring in FY 2023.			
Title: Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (STTR) ***FY 2022 Plans:*** Adjustment for SBIR/STTR transfer ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Adjustment for SBIR/STTR transfer	-	0.685	-
Accomplishments/Planned Programs Subtotals	12.683	18.767	17.086

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605857A *I Environmental Quality Technology Mgmt Support*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	1.715	1.789	1.912	-	1.912	1.761	1.459	1.473	1.487	0.000	11.596
031: *Environmentally Sustainable Acquisition/Logistics*	-	1.287	1.345	1.421	-	1.421	1.455	1.459	1.473	1.487	0.000	9.927
06I: *Environmental Quality Technology Support*	-	0.428	0.444	0.491	-	0.491	0.306	-	-	-	0.000	1.669

A. Mission Description and Budget Item Justification

This Program Element (PE) funds environmental quality technology related management support functions including support of research, development, test, and evaluation required for technical integration efforts at demonstration/validation test sites, technical information and activities, test facilities and general test instrumentation, and requirement assessments. Funds support the management of technology transfer associated with technology demonstrated and validated as part of Army environmental quality technology related projects. In addition, this PE provides support to the Army weapon system acquisition community to address environmental quality requirements under the Environmentally Sustainable Acquisition/Logistics Program.

The Environmentally Sustainable Acquisition/Logistics Project includes program management for developing acquisition strategies that achieve system key performance parameters and sustain the environment without permanent and unacceptable change to the natural environment or human health from system concept refinement through disposal. The Project involves systematic consideration of environmental impacts, energy use, natural resources, installation impacts, economics and quality of life. It provides support to the system acquisition community (Program and Project Managers) to integrate environmental quality analyses into the system acquisition process. The goal of the effort is to resolve environmental quality issues related to weapon systems that are identified during design, development, testing, operation, or support to reduce Army environmental liabilities and total ownership costs, including efforts to eliminate the use of hazardous and ozone-depleting materials from weapon systems and facilities.

The Environmental Quality Technology Support Project funds the management support costs to execute the Toxic Metals Reduction, Airborne Lead Reduction, and Low Global Warming Potential environmental quality technology programs, which support Cross Functional Teams and the Army's top modernization priorities by addressing potential obsolescence of legacy materials and current and emerging impacts on human health and the environment.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605857A / *Environmental Quality Technology Mgmt Support*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	1.715	1.789	0.000	-	0.000
Current President's Budget	1.715	1.789	1.912	-	1.912
Total Adjustments	0.000	0.000	1.912	-	1.912
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	1.912	-	1.912

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605857A / *Environmental Quality Technology Mgmt Support*	Project (Number/Name) 031 / *Environmentally Sustainable Acquisition/Logistics*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
031: *Environmentally Sustainable Acquisition/Logistics*	-	1.287	1.345	1.421	-	1.421	1.455	1.459	1.473	1.487	0.000	9.927
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Environmentally Sustainable Acquisition/Logistics (ESAL) Project provides support to the system acquisition community to integrate environmental quality issues and concerns into the life cycle system acquisition process, including human health risks, life safety, material obsolescence due to regulatory pressures, occupational exposures and energy efficiency. This includes helping the acquisition community address high priority issues associated with hexavalent chromium, cadmium and airborne lead. The focus of ESAL is on improving readiness, enabling mission capabilities, improving acquisition processes, reducing supportability burden, and minimizing total ownership cost. The Assistant Secretary of the Army for Installations, Energy and Environment has defined the functions of the ESAL project in coordination with the Army Acquisition Executive and the Assistant Secretary of the Army (Acquisition, Logistics, and Technology). This Project provides direct support to the Army acquisition community to pursue environmental sustainability and comply with legal statutes, policies and regulations during the life cycle of Army materiel. ESAL helps address Army Modernization Priorities, while sustaining readiness and achieving compliance with its weapon systems, industrial base, field and deployed activities directed by international treaties, Federal statutes, Executive Orders, Department of Defense (DoD) and Army policies and regulations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Environmental Quality (EQ) Support (DEVCOM)	0.551	0.578	0.634
Description: Provide EQ Support to Acquisition Programs via Cross Functional Teams (CFTs), Program Executive Offices (PEOs) and Program Managers (PMs). ***FY 2022 Plans:*** Will provide support to CFTs, PEOs and PMs to integrate EQ considerations into systems engineering activities. This will include fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment and revision of contractual and operational requirements for successful technology integration, operation and support. Will analyze impending statutes and regulations impacting production, operation and support of weapon systems. Will assess weapon system readiness impacts (e.g., production levels, training, operational tempo and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. Will provide Army acquisition community representation in select Office of the Secretary of Defense and Department of the Army committees addressing environmental legislation and rulemaking. ***FY 2023 Plans:*** Will provide support to CFTs, PEOs and PMs to integrate EQ considerations into systems engineering activities. This will include fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements,			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605857A / *Environmental Quality Technology Mgmt Support*	**Project (Number/Name)** 031 / *Environmentally Sustainable Acquisition/Logistics*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment and revision of contractual and operational requirements for successful technology integration, operation and support. Will analyze impending statutes and regulations impacting production, operation and support of weapon systems. Will assess weapon system readiness impacts (e.g., production levels, training, operational tempo, and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. Will provide Army acquisition community representation in select Office of the Secretary of Defense and Department of the Army committees addressing environmental legislation and rulemaking. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding changes reflect planned lifecycle of this effort.			
Title: Environmental Quality Technology Management (DEVCOM) ***Description:*** Provide management support for Army EQ technology efforts through the Safer Alternatives for Readiness (SAFR) program. ***FY 2022 Plans:*** Will provide system acquisition support to the Army's SAFR program and coordination of EQ-related system needs for expanded Research, Development, Test and Evaluation efforts in support of Army Modernization Priorities. Will manage and oversee technology integration efforts by Army Life Cycle Management Commands for weapon systems in all stages of design, procurement and operations/support. Will coordinate technology requirements among members of the Army EQ Technology Teams and Cross Functional Teams, will coordinate technology evaluations and operational requirements in support of weapon system platform integration, will manage and oversee test plan development, will oversee testing activities, and will analyze test results to support weapon systems engineering decision making. ***FY 2023 Plans:*** Will provide system acquisition support to the Army's SAFR program and coordination of EQ-related system needs for expanded Research, Development, Test and Evaluation efforts in support of Army Modernization Priorities. Will manage and oversee technology integration efforts by Army Life Cycle Management Commands for weapon systems in all stages of design, procurement and operations/support. Will coordinate technology requirements among members of the Army EQ Technology Teams and Cross Functional Teams, will coordinate technology evaluations and operational requirements in support of weapon system platform integration, will manage and oversee test plan development, will oversee testing activities, and will analyze test results to support weapon systems engineering decision making. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding changes reflect planned lifecycle of this effort.	0.736	0.718	0.787
Title: FY22 SBIR/STTR Transfer	-	0.049	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605857A / *Environmental Quality Technology Mgmt Support*	**Project (Number/Name)** 031 / *Environmentally Sustainable Acquisition/Logistics*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638 ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	1.287	1.345	1.421

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

TBD

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605857A / *Environmental Quality Technology Mgmt Support*	Project (Number/Name) 06I / *Environmental Quality Technology Support*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
06I: *Environmental Quality Technology Support*	-	0.428	0.444	0.491	-	0.491	0.306	-	-	-	0.000	1.669
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides Research, Development, Test, & Evaluation (RDTE) Management Support for the demonstration and validation of innovative environmental quality technologies to modernize materials and processes required for current and future operational sustainment and warfighter training capabilities. The Project supports technologies that increase life safety, reduce Soldier and worker human health risks, enhance readiness, and enable mission capabilities of the current and future force, while simultaneously increasing performance and standardization across the Army. This Project provides for management of RDTE activities conducted under Program Element 0603779A (Environmental Quality Technology Dem/Val) / Project E21 (Environmental Quality Technology Dem/ Val), which supports the Cross Functional Teams and the Army's top modernization priorities by addressing potential obsolescence of legacy materials and current and emerging impacts on human health and the environment. The Project expedites technology transition from the laboratory to operational use by establishing toxicology assessments to support the demonstration of modern materials and processes fulfilling or surpassing the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals, Drawings, and other technical data.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Management of Army Environmental Quality Technology Programs (DEVCOM)	0.428	0.428	0.491
Description: Manage and oversee the demonstration/validation of weapon system pollution prevention technologies through the Safer Alternatives for Readiness (SAFR) program, with a focus on eliminating the high priority issues associated with hexavalent chromium, cadmium and airborne lead through material substitution.			
FY 2022 Plans: Will manage and oversee the demonstration/validation of three SAFR technology efforts that support the Future Vertical Lift, Next Generation Combat Vehicle, Long Range Precision Fire and Soldier Lethality Army modernization priorities: Toxic Metal Reduction in Surface Finishing of Army Weapon Systems; Airborne Lead Reduction from Army Weapon Systems; and Low Global Warming Potential Alternatives to Ozone Depleting Substances.			
FY 2023 Plans: Will manage and oversee the demonstration/validation of three SAFR technology efforts that support the Future Vertical Lift, Next Generation Combat Vehicle, Long Range Precision Fire and Soldier Lethality Army modernization priorities: Toxic Metal Reduction in Surface Finishing of Army Weapon Systems; Airborne Lead Reduction from Army Weapon Systems; and Low Global Warming Potential Alternatives to Ozone Depleting Substances.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605857A / *Environmental Quality Technology Mgmt Support*	**Project (Number/Name)** 06I / *Environmental Quality Technology Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase reflects technology area ramping up to support more demonstration and validation efforts.			
Title: FY22 SBIR/STTR Transfer	-	0.016	-
Description: Funding transferred in accordance with Title 15 USC ?638			
FY 2022 Plans: Funding transferred in accordance with Title 15 USC ?638			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	0.428	0.444	0.491

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605898A *I Army Direct Report Headquarters - R&D - MHA*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	50.859	48.981	53.271	-	53.271	55.674	56.724	56.750	57.295	0.000	379.554
FJ2: *Army SHARP RDTE*	-	1.541	1.529	1.244	-	1.244	1.248	1.247	1.248	1.247	0.000	9.304
M65: *Army Test and Evaluation Command*	-	49.153	47.452	52.027	-	52.027	54.426	55.477	55.502	56.048	0.000	370.085
XW7: *Command HQ - ARI*	-	0.165	-	-	-	-	-	-	-	-	0.000	0.165

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) provides funding for the salaries and related personnel benefits for authorized civilian personnel positions that provide for the management functions and the technical direction of the United States (U.S.) Army Test and Evaluation Command (ATEC) mission located at Aberdeen Proving Ground (APG), Maryland (Project M65 Army Test and Evaluation Command). It also provides funds supporting similar functions at the United States (U.S.) Army Research Institute for the Behavioral and Social Sciences (Project XW7 Command HQ - ARI), and provides funds for Army Headquarters to study and improve the Sexual Harassment / Assault Response and Prevention program (Project FJ2 Army SHARP RDTE).

ATEC plans, conducts and integrates developmental testing, independent operational testing, independent evaluations, and assessments to provide essential information to Soldiers and acquisition decision makers supporting the American Warfighter. Additionally, ATEC provides Direct Support to Army Futures Command (AFC). ATEC provides testing and independent evaluation support to AFC Cross Functional Team (CFT) efforts including risk reduction support to experiments, demonstrations, requirements, research, development, and acquisition. As such, ATEC priorities are aligned to the Army's Modernization priorities.

Project M65 includes staff/management functions to include: human resources, safety, security, environmental, strategic planning, operations, engineering and logistics, resource management, test capabilities management, policy and standardization, public affairs, legal, Inspector General, Equal Opportunity, and information/ technology support for command-wide databases in support of the developmental, evaluation and operational test mission with technical direction to the Army Evaluation Center (AEC), APG, Maryland; to the Operational Test Command (OTC), Fort Hood, Texas which consists of three forward Test Directorates (Airborne and Special Operations Test Directorate, Fort Bragg, North Carolina; Air Defense Artillery Test Directorate, Fort Bliss, Texas; and the Fires Test Directorate, Fort Sill, Oklahoma) together with four other Test Directorates (Aviation; Maneuver; Mission Command; Maneuver Support and Sustainment) at Ft Hood, Texas; and to the seven Major Range and Test Facility Base (MRTFBs) and one non-MRTFB test range: Aberdeen Test Center (ATC) at APG, Maryland; West Desert Test Center (WDTC) at Dugway Proving Ground (DPG), Utah; Electronic Proving Ground (EPG) at Fort Huachuca, Arizona; White Sands Test Center (WSTC) at White Sands Missile Range (WSMR), New Mexico; Yuma Test Center (YTC) at Yuma Proving Ground (YPG), Arizona; Cold Regions Test Center (CRTC) at Fort Greely, Alaska; and Tropic Regions Test Center (TRTC) at various locations, as well as for Redstone Test Center (RTC) at Redstone Arsenal, Alabama. This is the operating budget for ATEC Headquarters, which provides technical direction for the annual execution of approximately 2,300 developmental tests; approximately 52 operational events; and approximately 1100 Evaluation and Safety documents supporting Army Signature Modernization Efforts and other acquisition programs. It also provides funding to address enterprise level operating

requirements that support the entire command and its three missions. ATEC's total authorized workforce amounts to a $1.8 billion program in direct and reimbursable funding.

Project XW7 provides the non-Army Management Headquarters Activity (non-AMHA) management and administrative support that enables the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) to accomplish its research mission and includes personnel/manpower execution and oversight. ARI's behavioral and social science research provides effective non-materiel solutions to help the Army adjust to changes in force size and structure, a variety of mission demands and contexts, challenges in human relations, and budgetary constraints. ARI is the only Science and Technology (S&T) laboratory that conducts research to enhance the Soldier lifecycle (e.g., selection, assignment, training, and leader development).

Project FJ2 provides Army Management Headquarters a critical research capability to improve the Army Sexual Harassment / Assault Response and Prevention (SHARP) program, with a specific focus on prevention.

This PE does not finance test facility operations, test instrumentation, or test equipment.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	54.564	52.108	0.000	-	0.000
Current President's Budget	50.859	48.981	53.271	-	53.271
Total Adjustments	-3.705	-3.127	53.271	-	53.271
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.705	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	53.271	-	53.271
• FFRDC Transfer	-	-0.127	-	-	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605898A / *Army Direct Report Headquarters - R&D - MHA*				Project (Number/Name) FJ2 / *Army SHARP RDTE*			
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
FJ2: *Army SHARP RDTE*	-	1.541	1.529	1.244	-	1.244	1.248	1.247	1.248	1.247	0.000	9.304
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds contracts that cover critical research needs of the Army Sexual Harassment / Assault Response and Prevention (SHARP) Office and the greater Army with a specific focus on prevention. Ongoing efforts to meet the first goal will explore the nature of sexual harassment in the Army, identify the organizational costs related to harassment (e.g., increased turnover, lower job satisfaction, and job performance), and examine the role of sexual harassment as it relates to sexual assault within the continuum of harm. Based on these studies, the performer will recommend effective sexual harassment prevention strategies. Studies will ensure that Army SHARP programs build climates for dignity and respect free of sexual harassment.

To meet the second goal, studies will examine behavioral patterns in offending within military sexual assault cases. For instance, behavioral patterns may reveal the nature of military sexual assault or identify potential vulnerabilities that could lead someone to perpetrate sexual assault. Studies may also be informed by offender patterns observed in research using administrative data sources. Based on this research, the performer will identify ways to reduce risk of sexual offending behavior, recommend ways to improve skills and abilities that will bolster one's ability to engage in healthy relationships, and inform effective sexual assault prevention practices.

To meet the third goal, research will (1) conduct male-specific assessments and (2) conduct other assessments that will assess the efficacy of training/prevention/ outreach efforts related to sexual assault. The research will characterize the behaviors associated with military men's victimization and how they differ from those of service women, men's decision processes to file a formal report of sexual assault, and their experiences with the military sexual assault response systems. In particular, the research will focus on male victimization that occurred during military service rather than childhood sexual assault. Based on this research, the performer will identify ways to improve tailored recommendations for responding to and supporting male victims. This research will improve Department of Defense (DoD) prevention and response for male Service members. To meet the second part of this goal, the research may conduct assessments to evaluate the efficacy of training/prevention/ outreach efforts related to sexual assault. This may involve conducting evaluation research to assess the effectiveness of individual programs or practices. Based on this research, the performer will determine whether these programs are effective and propose ways to improve SHARP efforts. This research will ensure that SHARP programs deliver effective training/ prevention/outreach.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Role Identifications	1.541	1.471	1.244
Description: Funding is required to ensure that Army SHARP is in compliance with multiple Service or DoD requirements. National Defense Authorization Act (NDAA) Requirement S585 (FY 2012) requires the development of Sexual Assault Prevention and Response (SAPR) curriculum for Service members and civilian employees, NDAA Requirement 1725c (FY 2014) requires the identification of qualifications needed for Service and civilian personnel who are assigned to positions that include SAPR functions, NDAA Requirement S1733 requires the review of SAPR training and recommendations for modification based on			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605898A / *Army Direct Report Headquarters - R&D - MHA*	**Project (Number/Name)** FJ2 / *Army SHARP RDTE*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
identified inadequacies, and NDAA Requirement S538 (FY 2016) dictates that the Services develop efforts to improve prevention and response for male victims of sexual assault. Conducting research to meet these requirements is a necessary step in ensuring that training, prevention and outreach activities are having the desired effect and impact on the Total Force. ***FY 2022 Plans:*** SHARP entered into a multi-year research plan that enables SHARP to develop evidence-based interventions for preventing and responding to ?sexual misconduct? in the Army. The knowledge and outcomes from the project will frame the follow-on research requirements to meet the goals and objectives of SHARP for prevention efforts to build climates for dignity and respect free of sexual harassment and assault. ***FY 2023 Plans:*** SHARP continues a multi-year research plan that enables SHARP to develop evidence-based interventions for preventing and responding to ?sexual misconduct? in the Army. The knowledge and outcomes from the project will inform the research requirements to meet the goals and objectives of SHARP in developing prevention strategies, policies, and assessment metrics. SHARP is implementing the People First Task Force requirements, OSD 90-day Independent Review Commission findings, and Senior Leader decisions for SHARP re-design, prevention-focused efforts, and required program assessments for People First Task Force Pilot of Fusion Directorates. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease in funding to fund higher priorities within Army.			
Title: FY2022 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.058	-
Accomplishments/Planned Programs Subtotals	1.541	1.529	1.244

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

MDEP:VSHP does not have any other Army Line Item associated with this project.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605898A / *Army Direct Report Headquarters - R&D - MHA*	**Project (Number/Name)** FJ2 / *Army SHARP RDTE*

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605898A / *Army Direct Report Headquarters - R&D - MHA*	Project (Number/Name) M65 / *Army Test and Evaluation Command*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
M65: *Army Test and Evaluation Command*	-	49.153	47.452	52.027	-	52.027	54.426	55.477	55.502	56.048	0.000	370.085
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides funding for the salaries and related personnel benefits for the authorized civilian personnel positions that provide for the management functions and the technical direction of the United States (U.S.) Army Test and Evaluation Command (ATEC) mission located at Aberdeen Proving Ground (APG), Maryland. ATEC plans, conducts and integrates developmental testing, independent operational testing, independent evaluations, and assessments to provide essential information to Soldiers and acquisition decision makers supporting the American Warfighter. Additionally, ATEC provides Direct Support to the Army Futures Command (AFC). ATEC provides testing and independent evaluation support to AFC Cross Functional Team (CFT) efforts including risk reduction support to experiments, demonstrations, requirements, research, development, and acquisition. As such, ATEC priorities are aligned to the Army's Modernization priorities.

This Project includes staff/management functions to include: human resources, safety, security, environmental, strategic planning, operations, engineering and logistics, resource management, test capabilities management, policy and standardization, public affairs, legal, Inspector General, Equal Opportunity, and information/ technology support for command-wide databases in support of the developmental, evaluation and operational test mission with technical direction to the Army Evaluation Center (AEC), APG, Maryland; to the Operational Test Command (OTC), Fort Hood, Texas which consists of three forward Test Directorates (Airborne and Special Operations Test Directorate, Fort Bragg, North Carolina; Air Defense Artillery Test Directorate, Fort Bliss, Texas; and the Fires Test Directorate, Fort Sill, Oklahoma) together with four other Test Directorates (Aviation; Maneuver; Mission Command; Maneuver Support and Sustainment) at Ft Hood, Texas; and to the seven Major Range and Test Facility Base (MRTFBs) and one non-MRTFB test range: Aberdeen Test Center (ATC) at APG, Maryland; West Desert Test Center (WDTC) at Dugway Proving Ground (DPG), Utah; Electronic Proving Ground (EPG) at Fort Huachuca, Arizona; White Sands Test Center (WSTC) at White Sands Missile Range (WSMR), New Mexico; Yuma Test Center (YTC) at Yuma Proving Ground (YPG), Arizona; Cold Regions Test Center (CRTC) at Fort Greely, Alaska; and Tropic Regions Test Center (TRTC) at various locations, as well as for Redstone Test Center (RTC) at Redstone Arsenal, Alabama. This is the operating budget for ATEC Headquarters, which provides technical direction for the annual execution of approximately 2,300 developmental tests; approximately 52 operational events; and approximately 1100 Evaluation and Safety documents supporting Army Signature Modernization Efforts and other acquisition programs. It also provides funding to address enterprise level operating requirements that support the entire command and its three missions. ATEC's total authorized workforce amounts to a $1.8 billion program in direct and reimbursable funding.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: ATEC	49.153	47.327	50.993
Description: Civilian labor and other support required to manage and administer the Army test and evaluation mission at ATEC. ATEC plans, conducts and integrates developmental testing, independent operational testing, independent evaluations,			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605898A / *Army Direct Report Headquarters - R&D - MHA*	**Project (Number/Name)** M65 / *Army Test and Evaluation Command*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
assessments and experiments to provide essential information to Soldiers and acquisition decision makers supporting the American Warfighter. ***FY 2022 Plans:*** Will continue to fund authorized civilian salaries, associated operating expenses (supplies, equipment, travel, software licensing, etc.) and other support required to manage and administer the Army test and evaluation mission at ATEC. Contractual requirements include: minor maintenance and repair operations that support multiple ATEC facilities, an on-site Information Technology (IT) Help Desk that provides computer hardware and software troubleshooting solutions to the ATEC workforce, sustainment operations for multiple ATEC focused Defense Business Systems (DBS) such as US Army Test and Evaluation Command Decision Support Systems (ADSS) , Video Tele-Conferencing (VTC) hardware procurement and operational maintenance support to ensure that ATEC leadership is able to interface with both Army senior leadership and subordinate commands, property book and divestiture support that maintains accountability of Army equipment. ***FY 2023 Plans:*** Will continue to fund authorized civilian salaries, associated operating expenses (supplies, equipment, travel, software licensing, etc.) and other support required to manage and administer the Army test and evaluation mission at ATEC. Contractual requirements include: minor maintenance and repair operations that support multiple ATEC facilities, an on-site Information Technology (IT) Help Desk that provides computer hardware and software troubleshooting solutions to the ATEC workforce, sustainment operations for multiple ATEC focused Defense Business Systems (DBS) such as US Army Test and Evaluation Command Decision Support Systems (ADSS) , Video Tele-Conferencing (VTC) hardware procurement and operational maintenance support to ensure that ATEC leadership is able to interface with both Army senior leadership and subordinate commands, property book and divestiture support that maintains accountability of Army equipment. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** The FY22 Appropriation Conference reduced this HQ account by $3M which will negatively impact ATEC's ability to fund support costs required to manage and administer the Army test and evaluation mission at ATEC. FY22 FFRDC reduction of $77K.			
Title: Army Enterprise Business Systems (EBS) Consolidation? Command Decision Support Systems ***Description:*** The Army consolidated Enterprise Business Systems (EBS) under the Acquisition Domain managed by the Sustaining (SS PEG). The consolidation resulted in the transfer of funding $1,034K from equipping (EE) PEG to the SS PEG in support of ATEC?s Command Decision Support tools (Army Test and Evaluation Command Decision Support system (ADSS), Technology Development and Acquisition Program (TDAP), Test & Evaluation: US Army Test Facilities Register (TESTFACS), Versatile Information System Integrated Online Nationwide (VISION), and the Versatile Information System Integrated Online Nationwide SIPR (VISION-SIPR).	-	-	1.034

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605898A / *Army Direct Report Headquarters - R&D - MHA*	**Project (Number/Name)** M65 / *Army Test and Evaluation Command*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2023 Plans: These systems (ADSS, TESTFACS, VISION-NIPR, VISION-SIPR) are due to sunset at the end of FY23 and be subsumed into a new business system, the ATEC Integrated Mission Management System (AIMMS). ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding is stable with contractor support to maintain the systems to allow for data collection.			
Title: FY2022 SBIR/STTR Transfer ***Description:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 Plans:*** Funding transferred in accordance with Title 15 USC ?638. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	0.125	-
Accomplishments/Planned Programs Subtotals	49.153	47.452	52.027

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605898A / *Army Direct Report Headquarters - R&D - MHA*	Project (Number/Name) XW7 / *Command HQ - ARI*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
XW7: *Command HQ - ARI*	-	0.165	-	-	-	-	-	-	-	-	0.000	0.165
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The United States (U.S.) Army Research Institute for the Behavioral and Social Sciences (ARI) is the only Science and Technology (S&T) laboratory that conducts research to enhance the Soldier lifecycle (e.g., selection, assignment, training, leader development) and human relations (e.g., culture of dignity, respect, and inclusion). This Project supports the non-Army Management Headquarters Activity (non-AMHA) management and administrative functions to enable ARI to accomplish its research mission and includes activities such as budget execution, procurement oversight, Research, Development, Test, & Evaluation (RDTE) program planning and evaluation, management control, security/safety, logistics, information technology, and personnel/manpower execution and oversight. ARI's behavioral and social science research provides effective non-materiel solutions to help the Army adjust to changes in force size and structure, a variety of mission demands and contexts, challenges in human relations, and budgetary constraints.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Headquarters Support ***Description:*** This project supports Civilian Pay and support ARI headquarters activities.	0.165	-	-
Accomplishments/Planned Programs Subtotals	0.165	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0606002A / *Ronald Reagan Ballistic Missile Defense Test Site*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	74.089	80.921	90.088	-	90.088	90.858	72.709	71.695	72.393	0.000	552.753
XW9: *Reagan Test Site*	-	74.089	80.921	90.088	-	90.088	90.858	72.709	71.695	72.393	0.000	552.753

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

The Ronald Reagan Ballistic Missile Defense Test Site (RTS), with its remote location and one-of-a-kind instrumentation systems, provides a valuable strategic test environment that cannot be replicated. Its function is to: 1) support test and evaluation of major Army and Department of Defense (DOD) acquisition programs of strategic importance to the national defense; and 2) provide space operations and intelligence data (Space Situational Awareness, object tracking & identification) in support of United States Strategic Command (USSTRATCOM), acting as a high value contributing sensor to the United States (U.S.) Space Surveillance Network. Due to its unique geography and instrumentation, RTS is able to provide unmatched data collection capabilities that provide critical test data for programs of national interest to include: Army Missile Defense; Defense Advanced Research Projects Agency hypersonic Boost-Glide developmental tests; Air Force and Navy Intercontinental Ballistic Missile (ICBM) developmental and operational tests; Army, Air Force, Navy, and Missile Defense Agency (MDA) operational, demonstration, and validation tests; National Aeronautics and Space Administration (NASA) scientific and unique space programs; NASA ionospheric studies; space debris tracking; and data collection in support of space experiments.

Funding in this Program Element (PE) covers management and contracting personnel support (salaries and travel) to enable the management of the test and evaluation of major Army and DoD missile systems for the RTS. Funds also provide contracting support for end item procurement, life cycle acquisition planning, and solicitation, negotiation, award, execution and management for weapon systems contracts. This PE provides contractors to accomplish key operations and maintenance functions for RTS instrumentation suites and also provides mission essential bandwidth via a fiber optic cable system. Funds provide the expertise required for operating and maintaining a number of one-of-a-kind radar, optical, telemetry, command/control/communications, safety, and data reduction systems. These systems include: the four unique radars of the Kiernan Reentry Measurement Site; Super Recording Automatic Digital Optical Tracker long range video-metric tracking systems; high density data recorders for high data-rate telemetry collected by ten antennas; an underwater acoustic impact location system; and data analysis/reduction hardware/software and Continental United States (CONUS) based mission control center. The Advanced Research Project Agency Long-Range Tracking and Instrumentation Radar and the Target Resolution Discrimination Experiment radars located at RTS are the only radars in this area of operation that have deep-space tracking capability. The Millimeter Wave Radar is one of the highest resolution imaging radars in the world, providing critical intelligence data. Funding also enables weapon system assessment of operational effectiveness and suitability for the Army, Air Force, Navy and MDA, which all have programs planned that have significant test and data gathering requirements at RTS. This test data cannot be obtained except through the use of technical facilities available on and in the vicinity of RTS. Program supports Army's PATRIOT air defense system; Air Force's Minuteman III ICBM and the Space and Missile Center's associated programs; MDA's Ballistic Missile Defense System, ICBM Targets, and Layered Ballistic Missile Defense operational tests (including: PATRIOT, Terminal High-Altitude Area Defense , and Aegis Weapon System), and NASA's space experiments.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0606002A / *Ronald Reagan Ballistic Missile Defense Test Site*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	68.911	80.952	0.000	-	0.000
Current President's Budget	74.089	80.921	90.088	-	90.088
Total Adjustments	5.178	-0.031	90.088	-	90.088
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	5.178	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	90.088	-	90.088
• FFRDC Transfer	-	-0.031	-	-	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606002A / *Ronald Reagan Ballistic Missile Defense Test Site*	Project (Number/Name) XW9 / *Reagan Test Site*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
XW9: *Reagan Test Site*	-	74.089	80.921	90.088	-	90.088	90.858	72.709	71.695	72.393	0.000	552.753
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds management and contracting personnel support (salaries and travel) to enable the management of the test and evaluation of major Army and DoD missile systems for the RTS. Funds also provide contracting support for end item procurement, life cycle acquisition planning, and solicitation, negotiation, award, execution and management for weapon systems contracts. This PE provides contractors to accomplish key operations and maintenance functions for RTS instrumentation suites and also provides mission essential bandwidth via a fiber optic cable system. Funds provide the expertise required for operating and maintaining a number of one-of-a-kind radar, optical, telemetry, command/control/communications, safety, and data reduction systems. These systems include the four unique radars of the Kiernan Reentry Measurement Site; Super Recording Automatic Digital Optical Tracker long range video-metric tracking systems; high density data recorders for high data-rate telemetry collected by ten antennas; an underwater acoustic impact location system; and data analysis/reduction hardware/software and Continental United States (CONUS) based mission control center. The Advanced Research Project Agency Long-Range Tracking and Instrumentation Radar and the Target Resolution Discrimination Experiment radars located at RTS are the only radars in this area of operation that have deep-space tracking capability. The Millimeter Wave Radar is one of the highest resolution imaging radars in the world, providing critical intelligence data. Funding also enables weapon system assessment of operational effectiveness and suitability for the Army, Air Force, Navy and MDA, which all have programs planned that have significant test and data gathering requirements at RTS. This test data cannot be obtained except through the use of technical facilities available on and in the vicinity of RTS. Program supports Army's PATRIOT air defense system; Air Force's Minuteman III ICBM and the Space and Missile Center's associated programs; MDA's Ballistic Missile Defense System, ICBM Targets, and Layered Ballistic Missile Defense operational tests (including: PATRIOT, Terminal High-Altitude Area Defense, and Aegis Weapon System), and NASA's space experiments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Civilian Pay	6.017	6.270	7.306
Description: This effort covers operations and mission support functions at the RTS and is managed by USASMDC.			
FY 2022 Plans: Will continue to provide government personnel support (salaries) to enable the management of the test and evaluation of major Army and DoD missile systems.			
FY 2023 Plans: Will continue to provide government personnel support (salaries) to enable the management of the test and evaluation of major Army and DoD missile systems.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606002A / *Ronald Reagan Ballistic Missile Defense Test Site*	**Project (Number/Name)** XW9 / *Reagan Test Site*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase due to normal inflation and increase of salaries.			
Title: Temporary Duty (TDY)/Training/Supplies - Military and Civilian ***Description:*** Funding will provide for travel and training for civilians and military to assist in the testing of the Army and DoD Missile system Programs. ***FY 2022 Plans:*** Will continue to provide government personnel support (training and travel) to enable the management of the test and evaluation of major Army and DoD missile systems. ***FY 2023 Plans:*** Will continue to provide government personnel support (training and travel) to enable the management of the test and evaluation of major Army and DoD missile systems. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is due to inflation and increase in travel with Covid restrictions being lessened.	1.052	0.782	1.364
Title: Outside Obligations/Other Government Agencies (OGAs) ***Description:*** Funding provided to other Government Agencies for reimbursable-type work efforts. ***FY 2022 Plans:*** Will continue to provide support to test and evaluation of major Army and DoD missile systems. ***FY 2023 Plans:*** Will continue to provide support to test and evaluation of major Army and DoD missile systems. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase due to inflation.	9.171	2.600	3.202
Title: Fiber Optic Cable (Kwajalein Cable System (KCS))/Inner Ring Submarine ***Description:*** Fiber Optic Cable provides lease cost for Fiber Optic Cable between Kwajalein and Guam. ***FY 2022 Plans:*** Will continue to provide funding for lease of the KCS fiber optic cable between Kwajalein Island and Guam. Will fund annual cable maintenance agreement. ***FY 2023 Plans:*** Will continue to provide funding for lease of the KCS fiber optic cable between Kwajalein Island and Guam. Will fund annual cable	9.102	6.032	6.614

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606002A / *Ronald Reagan Ballistic Missile Defense Test Site*	**Project (Number/Name)** XW9 / *Reagan Test Site*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
maintenance agreement. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is due to inflation.			
Title: RTS Contractor Labor ***Description:*** Provide funding for Prime contractor and other contract support to perform technical Operation and Maintenance support to support test and space missions. ***FY 2022 Plans:*** Will continue to provide technical O&M support (test planning, instrumentation operations and maintenance, systems engineering, flight safety, and launch ordnance) to assure the capability of the Range to support test and space missions. ***FY 2023 Plans:*** Will continue to provide technical O&M support (test planning, instrumentation operations and maintenance, systems engineering, flight safety, and launch ordnance) to assure the capability of the Range to support test and space missions. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is due to additional requirements for Cyber Security and compliance with Risk Management Framework (RMF) and addressing some maintenance backlog items.	34.336	42.977	55.389
Title: Contractor Material ***Description:*** Provide for materials to maintain range capabilities and support test operations. ***FY 2022 Plans:*** Will continue to provide critical non-labor materials to maintain critical range capabilities and prevent obsolescence in support of test operations. ***FY 2023 Plans:*** Will continue to provide critical non-labor materials to maintain critical range capabilities and prevent obsolescence in support of test operations. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease due to no Worthy OCCM cost in FY23.	6.837	13.134	7.204
Title: Federally Funded Research and Development Centers (FFRDC) Contractor Pay ***Description:*** Provide for technical expertise to RTS leadership for the overall performance of Range Operations.	4.056	3.740	4.404

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606002A / *Ronald Reagan Ballistic Missile Defense Test Site*	**Project (Number/Name)** XW9 / *Reagan Test Site*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: Will continue to provide technical advice to RTS leadership in support of Range operations, strategic planning, and technical execution of critical technology. ***FY 2023 Plans:*** Will continue to provide technical advice to RTS leadership in support of Range operations, strategic planning, and technical execution of critical technology. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is due to normal inflation.			
Title: Contractor Meteorological ***Description:*** Provide capability for weather sensing capability which allows for test planning and execution of the program. ***FY 2022 Plans:*** Will continue to provide support for sustained weather sensing capabilities, including weather reporting via radar data. This capability provides critical data to test planning and execution. ***FY 2023 Plans:*** Will continue to provide support for sustained weather sensing capabilities, including weather reporting via radar data. This capability provides critical data to test planning and execution. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is due to normal inflation.	2.299	1.974	2.704
Title: Ground Transportation ***Description:*** Provide transportation of material and passenger between Kwajalein and continental U.S. (CONUS). ***FY 2022 Plans:*** Continuing to provide mission specific material and passenger transportation via air (Air Mobility Command) and sea (Surface Deployment and Distribution Command) between Kwajalein Atoll and CONUS. ***FY 2023 Plans:*** Continuing to provide mission specific material and passenger transportation via air (Air Mobility Command) and sea (Surface Deployment and Distribution Command) between Kwajalein Atoll and CONUS. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	0.651	0.378	0.964

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606002A / *Ronald Reagan Ballistic Missile Defense Test Site*	**Project (Number/Name)** XW9 / *Reagan Test Site*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase is due to normal inflation and the increase in the material and passenger transportation efforts.			
Title: Mission Specific Environmental ***Description:*** Ensures Range Readiness and all regulatory environmental requirements are compliant with range and test requirements. ***FY 2022 Plans:*** Will continue to provide the capability to assess and maintain the Range Readiness and compliance with environmental requirements. ***FY 2023 Plans:*** Will continue to provide the capability to assess and maintain the Range Readiness and compliance with environmental requirements. Begin planning for RTS enhancements to support future DoD test requirements. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is due to normal inflation and testing requirements.	0.568	0.300	0.937
Title: SBIR/STTR Transfer ***FY 2022 Plans:*** SBIR/STTR Transfer funds ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638	-	2.734	-
Accomplishments/Planned Programs Subtotals	74.089	80.921	90.088

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0606003A *I CounterIntel and Human Intel Modernization*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	5.200	5.363	1.424	-	1.424	1.393	1.403	1.415	1.429	Continuing	Continuing
FI9: *Counterl Intel and Human Intel Modernization*	-	5.200	5.363	1.424	-	1.424	1.393	1.403	1.415	1.429	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Counterintelligence (CI) and Human Intelligence (HUMINT) Modernization Program Element (PE) supports ongoing rejuvenation and development of new critical CI and HUMINT systems, applications, tools, equipment, and capabilities necessary to defeat foreign intelligence, international terrorist, and insider threats while enhancing our HUMINT collection capability. The required tools provide Army and DoD leadership, commanders, and warfighters the intelligence necessary for making advantageous operational planning, policies, and timely decisions. Modernization of these systems is a core component of ensuring overmatch on current and future battlefields.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	5.200	5.363	0.000	-	0.000
Current President's Budget	5.200	5.363	1.424	-	1.424
Total Adjustments	0.000	0.000	1.424	-	1.424
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	1.424	-	1.424

Change Summary Explanation

Decrease in requirements in FY23

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606003A / *CounterIntel and Human Intel Modernization*	Project (Number/Name) FI9 / *Counterl Intel and Human Intel Modernization*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
FI9: *Counterl Intel and Human Intel Modernization*	-	5.200	5.363	1.424	-	1.424	1.393	1.403	1.415	1.429	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Counterintelligence (CI) and Human Intelligence (HUMINT) Modernization Project supports ongoing rejuvenation and development of new critical CI and HUMINT systems, applications, tools, equipment, and capabilities necessary to defeat foreign intelligence, international terrorist, and insider threats while enhancing our HUMINT collection capability. The required tools provide Army and Department of Defense (DoD) leadership, commanders, and warfighters the intelligence necessary for making advantageous operational planning, policies, and timely decisions. Modernization of these systems is a core component of ensuring overmatch on current and future battlefields.

CI Support to Force Protection (CIFP) provides for updating the Army's Threat Management Information Sharing System, the Army Counterintelligence Operations Portal (ACOP), and partnering with other Service CI entities on a joint CI analysis system development project. Will support development and testing of software code integrating existing and new algorithms to multiple data source to record, identify, sort, and prioritize behaviors.

Geospatial intelligence (GEOINT) Collection Integration provides rapid integration of emerging GEOINT capabilities and analysis techniques significantly ahead of the traditional integration timelines. The 513th MI BDE has been given access to pre-release algorithms and capabilities, and can begin, test, development, and validation activities years prior to traditional processes. This capability allows GEOINT focused contractor manpower equivalent (CME) support to identify difficult counter-terrorism (CT) issues and deliver appropriate capabilities needed today in every theater. Each MIB-T that provides GEOINT support will leverage the capability, and its applicability is world-wide. The effort funds software and testing to extract, analyze, and validate brand new and emerging classified data sources.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army's Threat Management Informtion Sharing System	3.313	4.467	-
Description: The Counterintelligence (CI) and Human Intelligence (HUMINT) Modernization Project supports ongoing rejuvenation and development of new critical CI and HUMINT systems, applications, tools, equipment, and capabilities necessary to defeat foreign intelligence, international terrorist, and insider threats while enhancing our HUMINT collection capability. The required tools provide Army and Department of Defense I (DoD) leadership, commanders, and warfighters the intelligence necessary for making adventurous operational planning, policies, and timely decisions. Modernization of these systems ia a core component of ensuring overmatch on current and future battlefields.			
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606003A / *CounterIntel and Human Intel Modernization*	**Project (Number/Name)** FI9 / *Counterl Intel and Human Intel Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Will provide for updating of the Army's Threat Management Information Sharing System. Will support development and testing of software code integrating existing and new algorithms to analyze multiple data source to record, identify, sort, and prioritize behaviors indicative of espionage, national security compromises, and other foreign and insider threats. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** No longer a valid requirement.			
Title: C4ISR ***Description:*** The Joint Service Counter C4ISR Initiative conducts technical analysis and research focused on centers of gravity within the C4ISR architecture of adversary weapon systems that enable successful kinetic and non-kinetic engagements. The Army will use the intelligence provided from this effort to inform the development of offensive cyber and advanced electronic warfare capabilities against adversaries.	1.000	-	-
Title: GEOINT ***Description:*** GEOINT Collection Integration provides rapid integration of emerging GEOINT capabilities and analysis techniques significantly ahead of the traditional integration timelines. The 513th Military Intelligence Brigade (MI BDE) has been given access to pre-release algorithms and capabilities, and can begin test, development, and validation activities years prior to traditional processes. This capability allows GEOINT focused CME support to identify difficult CT issues and deliver appropriate capabilities needed today in every theater. Each Military Intelligence Brigade - Theater (MIB-T) that provides GEOINT support will leverage the capability, and its applicability is world-wide. The project funds software and testing to extract, analyze, and validate brand new and emerging classified data sources. ***FY 2022 Plans:*** GEOINT Collection Integration provides rapid integration of emerging GEOINT capabilities and analysis techniques significantly ahead of the traditional integration timelines. the 513th MI BDE has been given access to pre-release algorithms and capabilities, and can begin test, development, and validation activities years prior to traditional processes. This capability allows GEOINT focused CME support to identify difficult CT issues and deliver appropriate capabilities needed today in every theater. Each MIB-T that provides GEOINT support will leverage the capability, and its applicability is world-wide. The project funds software and testing to extract, analyze, and validate brand new and emerging classified data sources. ***FY 2023 Plans:*** GEOINT Collection Integration provides rapid integration of emerging GEOINT capabilities and analysis techniques significantly ahead of the traditional integration timelines. the 513th MI BDE has been given access to pre-release algorithms and capabilities, and can begin test, development, and validation activities years prior to traditional processes. This capability allows GEOINT focused CME support to identify difficult CT issues and deliver appropriate capabilities needed today in every theater. Each MIB-	0.887	0.896	1.424

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606003A / *CounterIntel and Human Intel Modernization*	**Project (Number/Name)** FI9 / *Counterl Intel and Human Intel Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
T that provides GEOINT support will leverage the capability, and its applicability is world-wide. The project funds software and testing to extract, analyze, and validate brand new and emerging classified data sources. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase to GEOINT Collection Integration.			
Accomplishments/Planned Programs Subtotals	5.200	5.363	1.424

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0606105A *I Medical Program-Wide Activities*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	18.973	39.041	-	-	-	0.000	0.000	0.000	0.000	0.000	58.014
CD7: *Medical Program-Wide Activities*	-	18.973	39.041	-	-	-	-	-	-	-	0.000	58.014

A. Mission Description and Budget Item Justification

This Program Element (PE) funds the Continental United States (CONUS) Laboratory Support Clinical Infrastructure and the Outside the Continental United States (OCONUS) Laboratory Infrastructure Support programs. The CONUS and OCONUS laboratory support programs receive funding for research infrastructure management support at select CONUS and OCONUS laboratories and clinical trial sites; work is done in collaboration with Department of Defense Military Treatment Facilities. This program element does not fund research. It funds the infrastructure support staff enabling research scientists to conduct bio-surveillance and early-to-late-stage clinical investigations into biologics, drugs, protectants, device technologies, and knowledge products.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	19.164	39.041	0.000	-	0.000
Current President's Budget	18.973	39.041	0.000	-	0.000
Total Adjustments	-0.191	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.191	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606105A / *Medical Program-Wide Activities*	Project (Number/Name) CD7 / *Medical Program-Wide Activities*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
CD7: *Medical Program-Wide Activities*	-	18.973	39.041	-	-	-	-	-	-	-	0.000	58.014
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Continental United States (CONUS) Laboratory Infrastructure Support funding provides infrastructure and management support for selected laboratories and research sites and enables basic to late stage clinical investigations on medical products as well as collaborative efforts with the Military Health System's (MHS) Military Treatment Facilities (MTFs). MTFs provide access to the patient populations who will benefit the most from the medical products and capabilities being developed. The funds support the retention of technical subject matter expertise, independent of the number of assigned projects. Administration and infrastructure support efforts include resource management, logistics, safety, information technology activities, salaries, utilities, maintenance, transportation, shipping, vehicle maintenance and generator fuel. The infrastructure funds also support Institutional Review Board functions, research technical support, statistical support, grant writing assistance, and other essential functions for maintaining research in MTFs.

The Outside of the Continental United States (OCONUS) Laboratory Infrastructure Support provides management support for research infrastructure at selected overseas laboratories and research sites that conduct bio surveillance and basic to late-stage clinical research and evaluation of investigational products, such as biologics, drugs, protectants, technologies, and knowledge products to treat/prevent infectious diseases for the purpose of protecting the Warfighter; this is accomplished through collaborative efforts with the respective host nation governments. These sites are the US Army Medical Research Directorate-Kenya (USAMRD-K) in Nairobi, Kenya, the US Army Medical Research Directorate-Georgia (USAMRD-G) in Tbilisi, Georgia, and the US Army Medical Directorate-Armed Forces Research Institute of Medical Sciences (USAMD-AFRIMS) in Bangkok, Thailand. USAMRD-G is the newest laboratory, and provides support in the Caucasus region, similar to that provided by the laboratories in Kenya and Thailand to East Africa and Southeast Asia regions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Medical Program-Wide Activities	18.973	37.616	-
Description: CONUS Laboratory Infrastructure Support management for research infrastructure at select laboratories and research sites that conduct basic to late-stage clinical research and evaluation of investigational products, such as biologics, drugs, and devices to treat/prevent poly trauma (multiple traumatic injuries), through collaborative efforts with the MHS MTFs. OCONUS Laboratory Infrastructure Support management for research infrastructure at selected overseas laboratories and research sites is integral to support the predicting, detecting, preventing, and treating infectious disease threats to the US military, as well as support for surveillance, training, research, and response activities for emerging infectious disease threats that could affect Service members in those regions. Supported OCONUS laboratories are the US Army Medical Directorate-Armed Forces			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606105A / *Medical Program-Wide Activities*	**Project (Number/Name)** CD7 / *Medical Program-Wide Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Research Institute of Medical Sciences (AFRIMS) in Bangkok, Thailand; the US Army Research Directorate-Kenya (USAMRD-K) in Nairobi, Kenya, and the US Army Medical Research Directorate-Georgia (USAMRD-G) in Tbilisi, Georgia. ***FY 2022 Plans:*** The CONUS Laboratory Support Clinical Infrastructure project will support efforts for military medical research, as well as sustainment of the administration and infrastructure of CONUS medical research laboratories. These efforts will include support staff engaged in multiple clinical investigations and performing critical roles in research subject engagement, development and review of research protocols, and the creation, analysis, and communication of research data. Efforts with the funding will include: support for clinical investigations, submission for external funding applications, sustainment of a Clinical Investigation Committee to review research protocols and provide research support services, solicitation of collaborative research partnerships with non-federal organizations, utilization of funding opportunities database to assist investigators, and identification of ways to improve submission competitiveness. The OCONUS Laboratory Support Clinical Infrastructure project will support sustainment of the administration and infrastructure support for USAMRD-AFRIMS, USAMRD-AFRICA, and USAMRD-GEORGIA laboratories. These laboratories will provide medical research platforms for surveillance, testing, and evaluation of products to inform the development of interventions for military-relevant endemic diseases. Administration and infrastructure will support efforts include resource management, logistics, safety, regulatory affairs, information technology activities, salaries, utilities, maintenance, security, leasing, transportation, shipping, vehicle maintenance and generator fuel. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding and mission realigned as part of US Army Medical Research and Development Command transfer to the Defense Health Agency in order to meet Congressional intent as outlined in NDAA 2019 (Section 711) and NDAA 2020 (Section 737). Funding transferred to Program Element 0606105DHA, Project Code 376B.			
Title: SBIR/STTR Tax ***FY 2022 Plans:*** SBIR/STTR Tax ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC ?638.	-	1.425	-
Accomplishments/Planned Programs Subtotals	18.973	39.041	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606105A / *Medical Program-Wide Activities*	**Project (Number/Name)** CD7 / *Medical Program-Wide Activities*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0606942A *I Assessments and Evaluations Cyber Vulnerabilities*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	6.496	5.466	5.816	-	5.816	5.998	6.150	6.319	6.381	0.000	42.626
FL2: *Cyber Vulnerabilities Assessments and Evaluations*	-	6.496	5.466	5.816	-	5.816	5.998	6.150	6.319	6.381	0.000	42.626

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

The National Defense Authorization Acts (NDAA), Fiscal Year (FY) 16 Section 1647, and FY 17 Section 1650, directs the office of the Secretary of Defense (OSD) to complete an evaluation of cyberspace vulnerabilities of select Department of Defense (DoD) weapon systems and critical infrastructures. For NDAA 1647, the Army was directed to assess and mitigate twenty-four weapon systems not later than December 31, 2019. For NDAA 1650, the Army was directed to assess and submit a mitigation strategy for twenty-five installations by December 31, 2020. To support this mandate, the two Congressional mandates were merged into two enduring Army programs: the Cyber Operational Resiliency Assessment-Platforms (CORA-P) to replace NDAA 1647, and the Cyber Operational Resiliency Assessment-Installations (CORA-I) to replace NDAA 1650. The aim of CORA-P/I is to reduce the Army's risk to adversarial cyber intrusions or attacks that compromise Army weapon and installation systems. Performance objective is to provide governance oversight of CORA-P/I phased vulnerability assessments to support the Planning, Programming, Budgeting and Execution (PPBE) cycle. These deliverables include identifying the means to mitigate CORA-P/I vulnerabilities.

Efforts in this Program Element will: 1) identify, assess, and develop non-recurring engineering (NRE) to mitigate operational risks from cyber vulnerabilities to critical Army weapon systems in an operational configuration; and 2) assure the confidentiality, availability, and integrity of the information and control systems that underpin Army facilities and critical infrastructure by inventorying and assessing Facility-Related Control Systems (FRCS).

Weapon systems evaluations will assess and provide NRE recommendations to mitigate operational risks emanating from a peer or near-peer adversary profile in accordance with existing test/lab requirements through the acquisition cycle. Where applicable, these evaluations will include tabletop exercises, lab assessments, and exercise/operational assessments of Program Executive Officer Command, Control, Communications-Tactical (PEO C3T) and ground weapon systems. Cyber hardening efforts will be informed by the vulnerability assessments reports (VAR) generated through the assessment and prioritization process. Prioritization will be based on mission criticality, impact to readiness, and threat. When applicable, this PE also provides for Red Team enhancement to support Combatant Command mission-level cyber vulnerability assessments.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0606942A *I Assessments and Evaluations Cyber Vulnerabilities*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	6.496	5.466	0.000	-	0.000
Current President's Budget	6.496	5.466	5.816	-	5.816
Total Adjustments	0.000	0.000	5.816	-	5.816
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	5.816	-	5.816

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: FL2: *Cyber Vulnerabilities Assessments and Evaluations*		
Congressional Add: *Program increase - cyber vulnerability assessment*	2.000	-
Congressional Add Subtotals for Project: FL2	2.000	-
Congressional Add Totals for all Projects	2.000	-

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606942A / *Assessments and Evaluations Cyber Vulnerabilities*	Project (Number/Name) FL2 / *Cyber Vulnerabilities Assessments and Evaluations*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
FL2: *Cyber Vulnerabilities Assessments and Evaluations*	-	6.496	5.466	5.816	-	5.816	5.998	6.150	6.319	6.381	0.000	42.626
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds cyber vulnerabilities evaluations of major weapon systems in alignment with Section 1647 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2016, and of critical infrastructure in alignment with Section 1650 of NDAA FY 2017. Efforts in this Project will: 1) identify, assess, and develop and identify non-recurring engineering (NRE) to mitigate operational risks from cyber vulnerabilities to critical Army weapon systems in an operational configuration; and 2) assure the confidentiality, availability, and integrity of the information and control systems that underpin Army facilities and critical infrastructure by inventorying and assessing Facility-Related Control Systems (FRCS).

Weapon systems evaluations will assess and provide NRE recommendations to mitigate operational risks emanating from a peer or near-peer adversary profile in accordance with existing test/lab requirements through acquisition cycle. Where applicable, these evaluations will include tabletop exercises, lab assessments, and exercise/operational assessments of Program Executive Officer Command, Control, Communications-Tactical (PEO C3T) and ground weapon systems. Cyber hardening efforts will be informed by the vulnerability assessments reports (VAR) generated through the assessment and prioritization process. Prioritization will be based on mission criticality, impact to readiness, and threat. When applicable, this PE also provides for Red Team enhancement to support Combatant Command mission-level cyber vulnerability assessments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Cyberspace Operational Resiliency Assessment ? Platform (CORA-P)	2.248	2.733	5.816
Description: CORA-P is the Army's response to Section 1647 of the 2016 National Defense Authorization Act (NDAA) which directed the Department of the Defense (DoD) to evaluate cyber vulnerabilities of major weapon systems. HQ Department of the Army Cyber Directorate (DAMO-CY) will be the oversight governing body overseeing the assessments and NRE mitigations process to cyber vulnerabilities identified in the VAR.			
FY 2022 Plans: The funding provides DAMO-CY the opportunity to complete evaluation of the 24 critical weapon systems and the 26 critical infrastructures for cyber vulnerabilities, identified by the DoD, in support of NDAAs 1647 and 1650. This includes lab assessments, tabletop exercises, and additional analytical, exercise, and or operational assessments. This funding provides DAMO-CY the ability to develop Red Team capacity to carry out COCOM mission level assessments. Cyber hardening efforts will be informed by			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606942A / *Assessments and Evaluations Cyber Vulnerabilities*	**Project (Number/Name)** FL2 / *Cyber Vulnerabilities Assessments and Evaluations*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
the VAR generated through the assessment and prioritization process. Prioritization will be based on mission criticality, impact to readiness, and threat analysis. ***FY 2023 Plans:*** The funding provides ASA(ALT) the opportunity to complete evaluation of critical Army platforms identified by the Army G 3/5/7 as a follow-on to Section 1647 of the 2016 National Defense Authorization Act (NDAA). This includes system-of-systems assessments, lab assessments, tabletop exercises, and additional analytical, exercise, and or operational assessments. This funding provides ASA(ALT) the ability to develop Red Team capacity to carry out COCOM mission level assessments. Cyber hardening efforts will be informed by the Cyber Vulnerability Assessment Report (CVAR) generated through the assessment and prioritization process. Prioritization will be based on mission criticality, impact to readiness, and threat analysis as determined by the Army G 3/5/7 and Army Cyber Council of Colonels. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY2022 to FY2023 increase is due to the amount of critical Army platforms tested from FY2022 to FY2023.			
Title: Cyberspace Operational Resiliency Assessment ? Installation (CORA-I) ***Description:*** CORA-I is the Army's response to Section 1650 of the 2017 NDAA. Evaluations of cyber vulnerabilities to critical infrastructure will focus on Task Critical Assets, Defense Critical Assets, and on units with high priority Quadrennial Defense Review missions and their supporting infrastructure. When necessary, this PE will provide for the training of teams to conduct cyber vulnerability evaluations on critical infrastructure. Once trained, these teams will conduct cooperative vulnerability and penetration assessments (Blue Teaming), adversarial assessments (Red Teaming), and assist with conducting assessments of cyber dependencies, vulnerabilities and threats in accordance with DoDI 8501.1 "Risk Management Framework." Funding will also provide for Contractor subject matter expertise to conduct Security Control Assessments and Deep Cyber Resiliency Assessments. ***FY 2022 Plans:*** Funding provides for the completion of the select-DoD twenty-five critical infrastructures assessments already in some stage of the evaluation process, identified as part of the Section 1650 directive, executed through on-sight assessments. These assessments result in VAR in support of the Planning, Programming, Budgeting, and Execution (PPBE) cycle. Funding also provides developing and maintaining a Red and Blue teams carry out on-site assessments. Cyber hardening efforts will be informed by the VAR generated through the assessment and prioritization process. Prioritization will be based on mission criticality, impact to readiness, and threat. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	2.248	2.733	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0606942A / *Assessments and Evaluations Cyber Vulnerabilities*	**Project (Number/Name)** FL2 / *Cyber Vulnerabilities Assessments and Evaluations*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 to FY 2023 decrease in funding as CORA-I efforts are complete in FY 2022.			
Accomplishments/Planned Programs Subtotals	4.496	5.466	5.816

	FY 2021	FY 2022
Congressional Add: Program increase - cyber vulnerability assessment	2.000	-
FY 2021 Accomplishments: FY 2021 Congressional Add for Cyber Vulnerability Assessments for Red Teams.		
Congressional Adds Subtotals	2.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army	Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0909999A / *Financing for Cancelled Account Adjustments*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	0.253	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.253
900: *CLOSED ACCT ADJMT-M*	-	0.253	-	-	-	-	-	-	-	-	0.000	0.253

A. Mission Description and Budget Item Justification

Financing for Closed Account Adjustments

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.253	0.000	0.000	-	0.000
Total Adjustments	0.253	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.253	-			
• SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0909999A / *Financing for Cancelled Account Adjustments*	Project (Number/Name) 900 / *CLOSED ACCT ADJMT-M*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
900: *CLOSED ACCT ADJMT-M*	-	0.253	-	-	-	-	-	-	-	-	0.000	0.253
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program accomplishes closed account adjustments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Closed Account Adjustments	0.253	-	-
Description: Closed Account Adjustments			
Accomplishments/Planned Programs Subtotals	0.253	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A