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**Department of Defense
Fiscal Year (FY) 2024 Budget Estimates**

March 2023



Army

Justification Book Volume 4a of 4

Research, Development, Test & Evaluation, Army

RDT&E – Volume III, Budget Activity 6

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Army • Budget Estimates FY 2024 • RDT&E Program

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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, \$15,772,215,000.00 to remain available for obligation until September 30, 2025.

The FY 2024 Overseas Operations accounted for in the base budget are as follows:

In-theater and in-CONUS expenses that remain after combat operations cease and have been previously funded in Overseas Operations \$3,166,000.00.

COST STATEMENT

The following Justification Books were prepared at a cost of \$365,839.52: 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.

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FY 2024 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 2024.
2. **Relationship of the FY 2024 Budget Submitted to Congress to the FY 2023 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:

<u><i>Budget Activity</i></u>	<u><i>OSDPE / Project</i></u>	<u><i>Project Title</i></u>
02	0602146A / AM6	Modular RF Communications Technology
02	0602148A / CI4	Adaptive Avionics Technologies
02	0602141A / CIC	Fire Control Lethality Technology
02	0602182A / DA8	Quantum PNT & Radio Frequency Sensing
02	0602182A / DB4	Enabling Long Standoff 3D (ELS3D) Tech
02	0602002A / DC6	Sci & Analysis for Autonomous Sys & Counter-Auton
02	0602183A / DE2	Airborne Threat Defeat
02	0602150A / DE3	Adv Beam Control Component Development for C-CM
02	0602182A / DE6	Understanding Environment as a Threat Tech
03	0603044A / CW1	Technical-SAVVY Soldier Advanced Research
03	0603116A / DB2	Future Armaments Scalable Technologies
03	0603042A / DB5	Enabling Long Standoff 3D (ELS3D) Adv Tech
03	0603463A / DB6	Pathfinder 3D Advanced Technology
04	0604103A / DG4	NAVWAR SA
04	0603779A / DH6	Installation Resilience
05	0604802A / DC9	30mm MMPA M-SHORAD INC 3

05	0604818A / DD1	Unified Network Technology Trans & Integ (UNTTI)
05	0605206A / DG3	CI and HUMINT Equipment Program-Army (CIHEP-A)
05	0605013A / DH1	Operational Medicine Information System
05	0605216A / EFA	Joint Target Integrated Cmd & Coordination Suite
05	0605036A / EQ5	Combating Weapons of Mass Destruction (CWMD)
05	0605049A / XT4	Advanced Threat Detection System (ATDS)
06	0605601A / WD1	West Desert Test Center
07	0203735A / DD4	AMPV Improvement Program
07	0607315A / DD5	Army Power Systems Modernization

Program Element/Project Restructures:

<u>Budget Activity</u>	<u>Old OSDPE / Project: Title</u>	<u>New OSDPE / Project</u>
02	0602145A / CU5: Next Generation Combat Vehicle Technolog	0602141A / CIA
02	0602181A / CM7: All Domain Convergence Applied Research	0602141A / CIB
02	0602143A / AZ9: Soldier Lethality Technology	0602143A / BB4
02	0602143A / BBG: Soldier Lethality Technology	0602143A / BC2
02	0602145A / BG8: Next Generation Combat Vehicle Technology	0602144A / DG1
02	0602180A / CL7: Artificial Intelligence and Machine Learning Technologies	0602180A / DE8
03	0603040A / CL6: Artificial Intelligence and Machine Learning Technologies	0603040A / DE9
03	0603463A / AR6: Network C3I Advanced Technology	0603042A / DE7
03	0603041A / CM8: All Domain Convergence Advanced Technology	0603116A / CID
03	0603462A / BH6: Next Generation Combat Vehicle Advanced Technology	0603118A / BD9
03	0603462A / BG9: Next Generation Combat Vehicle Advanced Technology	0603119A / DG2
03	0603464A / CZ8: Long Range Precision Fires Advanced Technology	0603464A / AF2
04	0604036A / BY9: Multi-Domain Sensing System (MDSS) Adv Dev	0604036A / DD6
04	0604036A / BY9: Multi-Domain Sensing System (MDSS) Adv Dev	0604036A / DD6

05	0604818A / EJ5: Family of Heavy Vehicles	0604622A / DG7
05	0605224A / CK4: Long-Range Hypersonic Weapon	0604182A / HX2
05	0605224A / CK4: All Up Round and Canister (AUR+C)	0604182A / HX2
05	0605457A / S40: Common Hypersonic Glide Body (CHGB)	0604182A / HX2
05	0605601A / F30: Ground Support Equipment (GSE)	0604182A / HX2
05	0203744A / EB6: HX6: Test and Evaluation	0604182A / HX2
05	0605224A / CK4: Multi-Domain Intelligence	0604805A / 593
05	0605224A / CK4: Multi-Domain Intelligence	0605224A / DD8
05	0605457A / S40: Multi-Domain Intelligence	0605224A / DD9
05	0605601A / F30: Army Integrated Air and Missile Defense (AIAMD)	0605457A / SS1
06	0605601A / F30: Army Integrated Air and Missile Defense (AIAMD)	0605702A / 128
07	0203744A / EB6: Army Test Ranges and Facilities	0305219A / MQ2

Program Terminations (including transfers to Procurement and Sustainment):

<u>Budget Activity</u>	<u>OSDPE / Project</u>	<u>Project Title</u>
03	0603465A / AI8	Future Vertical Lift Advanced Technology / Alternative Concept Engine Advanced Technology
03	0603463A / AV4	Network C3I Advanced Technology / Foundational S&T for Network C3I Advanced Tech
04	0305251A / DD3	Cyberspace Operations Forces and Force Support / Joint Cyber Warfighting Architecture Cyber Train
04	0604115A / AX8	Technology Maturation Initiatives / Adv Leth and Accuracy Sys for Med Calber (ALAS-MC)
04	0604115A / AX9	Technology Maturation Initiatives / Adv Mobility Experimental Prototype Adv Tech
05	0604802A / CE3	Weapons and Munitions - Eng Dev / Precision Munition (Sniper)
05	0604802A / EU4	Weapons and Munitions - Eng Dev / 40mm HV Improved High Explosive Dual Purpose
05	0604804A / FG4	Logistics and Engineer Equipment - Eng Dev / Ultra-Lightweight Camouflage Net System (ULCANS)
05	0604822A / DV6	General Fund Enterprise Business System (GFEBS) / General Fund Enterprise Business System
05	0604854A / HB6	Artillery Systems - EMD / Mobile 155MM Howitzer
05	0605013A / 184	Information Technology Development / Installation Support Modules
07	0305204A / 11A	Tactical Unmanned Aerial Vehicles / Advanced Payload Develop & Spt

07	0305206A / EH2	Airborne Reconnaissance Systems / EMARSS ADV DEV
07	0305206A / EH3	Airborne Reconnaissance Systems / EMARSS Payloads ADV DEV
08	0608041A / DD2	Defensive CYBER - Software Prototype Development / Joint Cyber Warfighting Architecture Software

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.

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Department of Defense
FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2023

<u>Appropriation</u>	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment	FY 2024 Request
Research, Development, Test and Evaluation, Army	14,660,654	17,142,121	9,100	17,151,221	15,775,381
Total Research, Development, Test, & Evaluation	14,660,654	17,142,121	9,100	17,151,221	15,775,381

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Department of Defense
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Total Obligational Authority
(Dollars in Thousands)

Mar 2023

	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment	FY 2024 Request
<u>Summary Recap of Budget Activities</u>					
Basic Research	590,078	635,395		635,395	497,455
Applied Research	1,521,472	1,823,330		1,823,330	948,358
Advanced Technology Development	2,145,309	2,532,690		2,532,690	1,455,986
Advanced Component Development & Prototypes	3,799,417	4,631,111	6,000	4,637,111	4,420,315
System Development & Demonstration	3,178,005	4,317,752	600	4,318,352	5,639,364
Management Support	1,901,655	1,820,502		1,820,502	1,624,585
Operational Systems Development	1,416,677	1,286,510	2,500	1,289,010	1,105,748
Software And Digital Technology Pilot Programs	108,041	94,831		94,831	83,570
Total Research, Development, Test, & Evaluation	14,660,654	17,142,121	9,100	17,151,221	15,775,381
<u>Summary Recap of FYDP Programs</u>					
General Purpose Forces	559,789	372,120		372,120	404,375
Intelligence and Communications	262,480	248,995		248,995	212,694
Research and Development	13,733,825	16,382,072	9,100	16,391,172	15,055,009
Central Supply and Maintenance	101,466	132,270		132,270	75,317
Administration and Associated Activities	101				
Classified Programs	2,993	6,664		6,664	27,986
Total Research, Development, Test, & Evaluation	14,660,654	17,142,121	9,100	17,151,221	15,775,381

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Department of the Army
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(Dollars in Thousands)

Mar 2023

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Applied Research	1,521,472	1,823,330		1,823,330	948,358
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Advanced Component Development & Prototypes	3,799,417	4,631,111	6,000	4,637,111	4,420,315
System Development & Demonstration	3,178,005	4,317,752	600	4,318,352	5,639,364
Management Support	1,901,655	1,820,502		1,820,502	1,624,585
Operational Systems Development	1,416,677	1,286,510	2,500	1,289,010	1,105,748
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Department of the Army
FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2023

Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment
1	0601102A	Defense Research Sciences	01	U	358,521	391,642		391,642
2	0601103A	University Research Initiatives	01	U	88,797	107,160		107,160
3	0601104A	University and Industry Research Centers	01	U	122,521	121,160		121,160
4	0601121A	Cyber Collaborative Research Alliance	01	U	5,067	5,355		5,355
5	0601601A	Artificial Intelligence and Machine Learning Basic Research	01	U	15,172	10,078		10,078
	Basic Research				590,078	635,395		635,395
6	0602002A	Army Agile Innovation and Development-Applied Research	02	U		1,000		1,000
7	0602115A	Biomedical Technology	02	U	11,489			
8	0602134A	Counter Improvised-Threat Advanced Studies	02	U	1,904	6,192		6,192
9	0602141A	Lethality Technology	02	U	89,285	194,717		194,717
10	0602142A	Army Applied Research	02	U	28,654	27,833		27,833
11	0602143A	Soldier Lethality Technology	02	U	201,221	253,539		253,539
12	0602144A	Ground Technology	02	U	214,489	264,523		264,523
13	0602145A	Next Generation Combat Vehicle Technology	02	U	239,284	277,445		277,445
14	0602146A	Network C3I Technology	02	U	161,759	212,115		212,115
15	0602147A	Long Range Precision Fires Technology	02	U	107,454	128,529		128,529
16	0602148A	Future Verticle Lift Technology	02	U	130,108	104,348		104,348
17	0602150A	Air and Missile Defense Technology	02	U	92,926	88,768		88,768
18	0602180A	Artificial Intelligence and Machine Learning Technologies	02	U	14,486	16,068		16,068

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Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2024 Request
1	0601102A	Defense Research Sciences	01	U	296,670
2	0601103A	University Research Initiatives	01	U	75,672
3	0601104A	University and Industry Research Centers	01	U	108,946
4	0601121A	Cyber Collaborative Research Alliance	01	U	5,459
5	0601601A	Artificial Intelligence and Machine Learning Basic Research	01	U	10,708
	Basic Research				497,455
6	0602002A	Army Agile Innovation and Development-Applied Research	02	U	5,613
7	0602115A	Biomedical Technology	02	U	
8	0602134A	Counter Improvised-Threat Advanced Studies	02	U	6,242
9	0602141A	Lethality Technology	02	U	85,578
10	0602142A	Army Applied Research	02	U	34,572
11	0602143A	Soldier Lethality Technology	02	U	104,470
12	0602144A	Ground Technology	02	U	60,005
13	0602145A	Next Generation Combat Vehicle Technology	02	U	166,500
14	0602146A	Network C3I Technology	02	U	81,618
15	0602147A	Long Range Precision Fires Technology	02	U	34,683
16	0602148A	Future Verticle Lift Technology	02	U	73,844
17	0602150A	Air and Missile Defense Technology	02	U	33,301
18	0602180A	Artificial Intelligence and Machine Learning Technologies	02	U	24,142

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Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment
19	0602181A	All Domain Convergence Applied Research	02	U	25,019	27,360		27,360
20	0602182A	C3I Applied Research	02	U	11,954	27,868		27,868
21	0602183A	Air Platform Applied Research	02	U	6,356	41,588		41,588
22	0602184A	Soldier Applied Research	02	U	10,660	15,716		15,716
23	0602213A	C3I Applied Cyber	02	U	12,119	13,605		13,605
24	0602386A	Biotechnology for Materials - Applied Research	02	U	19,889	21,811		21,811
25	0602785A	Manpower/Personnel/Training Technology	02	U	18,414	19,649		19,649
26	0602787A	Medical Technology	02	U	124,002	80,656		80,656
	Applied Research				1,521,472	1,823,330		1,823,330
27	0603002A	Medical Advanced Technology	03	U	147,287	31,588		31,588
28	0603007A	Manpower, Personnel and Training Advanced Technology	03	U	13,865	15,598		15,598
29	0603025A	Army Agile Innovation and Demonstration	03	U	21,420	20,900		20,900
30	0603040A	Artificial Intelligence and Machine Learning Advanced Technologies	03	U	876	6,395		6,395
31	0603041A	All Domain Convergence Advanced Technology	03	U	20,095	45,377		45,377
32	0603042A	C3I Advanced Technology	03	U	3,036	12,716		12,716
33	0603043A	Air Platform Advanced Technology	03	U	727	17,946		17,946
34	0603044A	Soldier Advanced Technology	03	U	858	479		479
35	0603115A	Medical Development	03	U	25,540			
36	0603116A	Lethality Advanced Technology	03	U	7,772	9,796		9,796
37	0603117A	Army Advanced Technology Development	03	U	76,815	134,874		134,874

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Line No	Program Element Number	Item	Act	Se c	FY 2024 Request
19	0602181A	All Domain Convergence Applied Research	02	U	14,297
20	0602182A	C3I Applied Research	02	U	30,659
21	0602183A	Air Platform Applied Research	02	U	48,163
22	0602184A	Soldier Applied Research	02	U	18,986
23	0602213A	C3I Applied Cyber	02	U	22,714
24	0602386A	Biotechnology for Materials - Applied Research	02	U	16,736
25	0602785A	Manpower/Personnel/Training Technology	02	U	19,969
26	0602787A	Medical Technology	02	U	66,266
	Applied Research				948,358
27	0603002A	Medical Advanced Technology	03	U	4,147
28	0603007A	Manpower, Personnel and Training Advanced Technology	03	U	16,316
29	0603025A	Army Agile Innovation and Demonstration	03	U	23,156
30	0603040A	Artificial Intelligence and Machine Learning Advanced Technologies	03	U	13,187
31	0603041A	All Domain Convergence Advanced Technology	03	U	33,332
32	0603042A	C3I Advanced Technology	03	U	19,225
33	0603043A	Air Platform Advanced Technology	03	U	14,165
34	0603044A	Soldier Advanced Technology	03	U	1,214
35	0603115A	Medical Development	03	U	
36	0603116A	Lethality Advanced Technology	03	U	20,582
37	0603117A	Army Advanced Technology Development	03	U	136,280

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38	0603118A	Soldier Lethality Advanced Technology	03	U	148,458	154,639		154,639
39	0603119A	Ground Advanced Technology	03	U	281,637	415,846		415,846
40	0603134A	Counter Improvised-Threat Simulation	03	U	23,920	21,486		21,486
41	0603386A	Biotechnology for Materials - Advanced Research	03	U	51,774	56,853		56,853
42	0603457A	C3I Cyber Advanced Development	03	U	61,426	41,354		41,354
43	0603461A	High Performance Computing Modernization Program	03	U	222,220	301,964		301,964
44	0603462A	Next Generation Combat Vehicle Advanced Technology	03	U	294,491	471,434		471,434
45	0603463A	Network C3I Advanced Technology	03	U	205,576	177,917		177,917
46	0603464A	Long Range Precision Fires Advanced Technology	03	U	138,482	202,830		202,830
47	0603465A	Future Vertical Lift Advanced Technology	03	U	255,323	272,551		272,551
48	0603466A	Air and Missile Defense Advanced Technology	03	U	125,027	99,147		99,147
49	0603920A	Humanitarian Demining	03	U	18,684	21,000		21,000
	Advanced Technology Development				2,145,309	2,532,690		2,532,690
51	0603305A	Army Missile Defense Systems Integration	04	U	56,579	118,001		118,001
52	0603308A	Army Space Systems Integration	04	U	25,401	30,945		30,945
53	0603327A	Air and Missile Defense Systems Engineering	04	U	15,000	15,000		15,000
54	0603619A	Landmine Warfare and Barrier - Adv Dev	04	U	44,933	55,953	6,000	61,953
55	0603639A	Tank and Medium Caliber Ammunition	04	U	61,641	51,488		51,488
56	0603645A	Armored System Modernization - Adv Dev	04	U	154,010	135,122		135,122
57	0603747A	Soldier Support and Survivability	04	U	2,791	4,060		4,060
58	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	U	113,365	72,314		72,314

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Department of the Army
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(Dollars in Thousands)

Mar 2023

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Line No	Program Element Number	Item	Act	Se c	FY 2024 Request
38	0603118A	Soldier Lethality Advanced Technology	03	U	102,778
39	0603119A	Ground Advanced Technology	03	U	40,597
40	0603134A	Counter Improvised-Threat Simulation	03	U	21,672
41	0603386A	Biotechnology for Materials - Advanced Research	03	U	59,871
42	0603457A	C3I Cyber Advanced Development	03	U	28,847
43	0603461A	High Performance Computing Modernization Program	03	U	255,772
44	0603462A	Next Generation Combat Vehicle Advanced Technology	03	U	217,394
45	0603463A	Network C3I Advanced Technology	03	U	105,549
46	0603464A	Long Range Precision Fires Advanced Technology	03	U	153,024
47	0603465A	Future Vertical Lift Advanced Technology	03	U	158,795
48	0603466A	Air and Missile Defense Advanced Technology	03	U	21,015
49	0603920A	Humanitarian Demining	03	U	9,068
	Advanced Technology Development				1,455,986
51	0603305A	Army Missile Defense Systems Integration	04	U	12,904
52	0603308A	Army Space Systems Integration	04	U	19,120
53	0603327A	Air and Missile Defense Systems Engineering	04	U	
54	0603619A	Landmine Warfare and Barrier - Adv Dev	04	U	47,537
55	0603639A	Tank and Medium Caliber Ammunition	04	U	91,323
56	0603645A	Armored System Modernization - Adv Dev	04	U	43,026
57	0603747A	Soldier Support and Survivability	04	U	3,550
58	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	U	65,567

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Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment	FY 2023 Total Enactment
59	0603774A	Night Vision Systems Advanced Development	04	U	62,534	97,478		97,478
60	0603779A	Environmental Quality Technology - Dem/Val	04	U	22,491	76,749		76,749
61	0603790A	NATO Research and Development	04	U	3,639	3,805		3,805
62	0603801A	Aviation - Adv Dev	04	U	1,138,457	1,157,472		1,157,472
63	0603804A	Logistics and Engineer Equipment - Adv Dev	04	U	10,797	24,638		24,638
64	0603807A	Medical Systems - Adv Dev	04	U	27,768	5,598		5,598
65	0603827A	Soldier Systems - Advanced Development	04	U	25,288	23,444		23,444
66	0604017A	Robotics Development	04	U	78,309	26,555		26,555
67	0604019A	Expanded Mission Area Missile (EMAM)	04	U	26,855	258,320		258,320
68	0604020A	Cross Functional Team (CFT) Advanced Development & Prototyping	04	U		77,000		77,000
69	0604035A	Low Earth Orbit (LEO) Satellite Capability	04	U	18,922	35,509		35,509
70	0604036A	Multi-Domain Sensing System (MDSS) Adv Dev	04	U	50,548	47,915		47,915
71	0604037A	Tactical Intel Targeting Access Node (TITAN) Adv Dev	04	U	28,347	863		863
72	0604100A	Analysis Of Alternatives	04	U	9,723	10,659		10,659
73	0604101A	Small Unmanned Aerial Vehicle (SUAV) (6.4)	04	U	892	1,425		1,425
74	0604103A	Electronic Warfare Planning and Management Tool (EWPMT)	04	U				
75	0604113A	Future Tactical Unmanned Aircraft System (FTUAS)	04	U	76,349	134,719		134,719
76	0604114A	Lower Tier Air Missile Defense (LTAMD) Sensor	04	U	408,766	380,147		380,147
77	0604115A	Technology Maturation Initiatives	04	U	127,725	219,742		219,742
78	0604117A	Maneuver - Short Range Air Defense (M-SHORAD)	04	U	37,939	274,838		274,838

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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59	0603774A	Night Vision Systems Advanced Development	04	U	73,675
60	0603779A	Environmental Quality Technology - Dem/Val	04	U	31,720
61	0603790A	NATO Research and Development	04	U	4,143
62	0603801A	Aviation - Adv Dev	04	U	1,502,160
63	0603804A	Logistics and Engineer Equipment - Adv Dev	04	U	7,604
64	0603807A	Medical Systems - Adv Dev	04	U	1,602
65	0603827A	Soldier Systems - Advanced Development	04	U	27,681
66	0604017A	Robotics Development	04	U	3,024
67	0604019A	Expanded Mission Area Missile (EMAM)	04	U	97,018
68	0604020A	Cross Functional Team (CFT) Advanced Development & Prototyping	04	U	117,557
69	0604035A	Low Earth Orbit (LEO) Satellite Capability	04	U	38,851
70	0604036A	Multi-Domain Sensing System (MDSS) Adv Dev	04	U	191,394
71	0604037A	Tactical Intel Targeting Access Node (TITAN) Adv Dev	04	U	10,626
72	0604100A	Analysis Of Alternatives	04	U	11,095
73	0604101A	Small Unmanned Aerial Vehicle (SUAV) (6.4)	04	U	5,144
74	0604103A	Electronic Warfare Planning and Management Tool (EWPMT)	04	U	2,260
75	0604113A	Future Tactical Unmanned Aircraft System (FTUAS)	04	U	53,143
76	0604114A	Lower Tier Air Missile Defense (LTAMD) Sensor	04	U	816,663
77	0604115A	Technology Maturation Initiatives	04	U	281,314
78	0604117A	Maneuver - Short Range Air Defense (M-SHORAD)	04	U	281,239

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79	0604119A	Army Advanced Component Development & Prototyping	04	U	179,483	198,111		198,111
80	0604120A	Assured Positioning, Navigation and Timing (PNT)	04	U	80,858	57,620		57,620
81	0604121A	Synthetic Training Environment Refinement & Prototyping	04	U	198,815	242,468		242,468
82	0604134A	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	U	12,891	14,840		14,840
83	0604135A	Strategic Mid-Range Fires	04	U		404,291		404,291
84	0604182A	Hypersonics	04	U	305,406	238,168		238,168
85	0604403A	Future Interceptor	04	U	6,643	8,179		8,179
86	0604531A	Counter - Small Unmanned Aircraft Systems Advanced Development	04	U	18,449	35,110		35,110
87	0604541A	Unified Network Transport	04	U	33,879	36,966		36,966
88	0604644A	Mobile Medium Range Missile	04	U	275,989			
89	0604785A	Integrated Base Defense (Budget Activity 4)	04	U	2,040			
90	0305251A	Cyberspace Operations Forces and Force Support	04	U	55,895	55,599		55,599
999	999999999	Classified Programs	04	U				
		Advanced Component Development & Prototypes			3,799,417	4,631,111	6,000	4,637,111
91	0604201A	Aircraft Avionics	05	U	6,411	3,335		3,335
92	0604270A	Electronic Warfare Development	05	U	29,683	4,140		4,140
93	0604601A	Infantry Support Weapons	05	U	77,027	83,329		83,329
94	0604604A	Medium Tactical Vehicles	05	U	9,177	22,163		22,163
95	0604611A	JAVELIN	05	U	8,202	16,186		16,186

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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79	0604119A	Army Advanced Component Development & Prototyping	04	U	204,914
80	0604120A	Assured Positioning, Navigation and Timing (PNT)	04	U	40,930
81	0604121A	Synthetic Training Environment Refinement & Prototyping	04	U	109,714
82	0604134A	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	U	16,426
83	0604135A	Strategic Mid-Range Fires	04	U	31,559
84	0604182A	Hypersonics	04	U	43,435
85	0604403A	Future Interceptor	04	U	8,040
86	0604531A	Counter - Small Unmanned Aircraft Systems Advanced Development	04	U	64,242
87	0604541A	Unified Network Transport	04	U	40,915
88	0604644A	Mobile Medium Range Missile	04	U	
89	0604785A	Integrated Base Defense (Budget Activity 4)	04	U	
90	0305251A	Cyberspace Operations Forces and Force Support	04	U	
999	999999999	Classified Programs	04	U	19,200
		Advanced Component Development & Prototypes			4,420,315
91	0604201A	Aircraft Avionics	05	U	13,673
92	0604270A	Electronic Warfare Development	05	U	12,789
93	0604601A	Infantry Support Weapons	05	U	64,076
94	0604604A	Medium Tactical Vehicles	05	U	28,226
95	0604611A	JAVELIN	05	U	7,827

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96	0604622A	Family of Heavy Tactical Vehicles	05	U	27,406	53,014		53,014
97	0604633A	Air Traffic Control	05	U	4,244	2,623		2,623
98	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05	U		109,849		109,849
99	0604642A	Light Tactical Wheeled Vehicles	05	U	1,980			
100	0604645A	Armored Systems Modernization (ASM) - Eng Dev	05	U	118,296	63,131		63,131
101	0604710A	Night Vision Systems - Eng Dev	05	U	41,831	92,951		92,951
102	0604713A	Combat Feeding, Clothing, and Equipment	05	U	1,598	1,566		1,566
103	0604715A	Non-System Training Devices - Eng Dev	05	U	28,605	18,588		18,588
104	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	U	58,633	55,541		55,541
105	0604742A	Constructive Simulation Systems Development	05	U	21,424	29,481		29,481
106	0604746A	Automatic Test Equipment Development	05	U	8,486	5,178		5,178
107	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	U	12,182	8,189		8,189
108	0604798A	Brigade Analysis, Integration and Evaluation	05	U	20,976	21,086		21,086
109	0604802A	Weapons and Munitions - Eng Dev	05	U	287,787	285,778	600	286,378
110	0604804A	Logistics and Engineer Equipment - Eng Dev	05	U	49,201	75,669		75,669
111	0604805A	Command, Control, Communications Systems - Eng Dev	05	U	19,372	44,993		44,993
112	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	U	43,023	5,513		5,513
113	0604808A	Landmine Warfare/Barrier - Eng Dev	05	U	28,622	37,150		37,150
114	0604818A	Army Tactical Command & Control Hardware & Software	05	U	146,291	131,190		131,190
115	0604820A	Radar Development	05	U	124,832	71,259		71,259

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96	0604622A	Family of Heavy Tactical Vehicles	05	U	44,197
97	0604633A	Air Traffic Control	05	U	1,134
98	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05	U	142,125
99	0604642A	Light Tactical Wheeled Vehicles	05	U	53,564
100	0604645A	Armored Systems Modernization (ASM) - Eng Dev	05	U	102,201
101	0604710A	Night Vision Systems - Eng Dev	05	U	48,720
102	0604713A	Combat Feeding, Clothing, and Equipment	05	U	2,223
103	0604715A	Non-System Training Devices - Eng Dev	05	U	21,441
104	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	U	74,738
105	0604742A	Constructive Simulation Systems Development	05	U	30,985
106	0604746A	Automatic Test Equipment Development	05	U	13,626
107	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	U	8,802
108	0604798A	Brigade Analysis, Integration and Evaluation	05	U	20,828
109	0604802A	Weapons and Munitions - Eng Dev	05	U	243,851
110	0604804A	Logistics and Engineer Equipment - Eng Dev	05	U	37,420
111	0604805A	Command, Control, Communications Systems - Eng Dev	05	U	34,214
112	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	U	6,496
113	0604808A	Landmine Warfare/Barrier - Eng Dev	05	U	13,581
114	0604818A	Army Tactical Command & Control Hardware & Software	05	U	168,574
115	0604820A	Radar Development	05	U	94,944

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Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment	FY 2023 Total Enactment
116	0604822A	General Fund Enterprise Business System (GFEBs)	05	U	15,395	10,402		10,402
117	0604827A	Soldier Systems - Warrior Dem/Val	05	U	6,219	19,408		19,408
118	0604852A	Suite of Survivability Enhancement Systems - EMD	05	U	93,207	100,384		100,384
119	0604854A	Artillery Systems - EMD	05	U	25,000	48,106		48,106
120	0605013A	Information Technology Development	05	U	125,109	104,134		104,134
121	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	U	65,230	67,519		67,519
122	0605028A	Armored Multi-Purpose Vehicle (AMPV)	05	U	34,262			
123	0605030A	Joint Tactical Network Center (JTNC)	05	U	15,752	17,936		17,936
124	0605031A	Joint Tactical Network (JTN)	05	U	27,849	30,150		30,150
125	0605035A	Common Infrared Countermeasures (CIRCM)	05	U	15,982	11,523		11,523
126	0605036A	Combating Weapons of Mass Destruction (CWMD)	05	U				
127	0605038A	Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) Sensor Suite	05	U	7,340			
128	0605041A	Defensive CYBER Tool Development	05	U	18,811	39,029		39,029
129	0605042A	Tactical Network Radio Systems (Low-Tier)	05	U	27,688	4,426		4,426
130	0605047A	Contract Writing System	05	U	20,195	13,742		13,742
131	0605049A	Missile Warning System Modernization (MWSM)	05	U				
132	0605051A	Aircraft Survivability Development	05	U	60,127	19,123		19,123
133	0605052A	Indirect Fire Protection Capability Inc 2 - Block 1	05	U	175,604	131,093		131,093
134	0605053A	Ground Robotics	05	U	15,763	26,809		26,809
135	0605054A	Emerging Technology Initiatives	05	U	219,284	244,047		244,047

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116	0604822A	General Fund Enterprise Business System (GFEBs)	05	U	2,965
117	0604827A	Soldier Systems - Warrior Dem/Val	05	U	11,333
118	0604852A	Suite of Survivability Enhancement Systems - EMD	05	U	79,250
119	0604854A	Artillery Systems - EMD	05	U	42,490
120	0605013A	Information Technology Development	05	U	104,024
121	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	U	102,084
122	0605028A	Armored Multi-Purpose Vehicle (AMPV)	05	U	
123	0605030A	Joint Tactical Network Center (JTNC)	05	U	18,662
124	0605031A	Joint Tactical Network (JTN)	05	U	30,328
125	0605035A	Common Infrared Countermeasures (CIRCM)	05	U	11,509
126	0605036A	Combating Weapons of Mass Destruction (CWMD)	05	U	1,050
127	0605038A	Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) Sensor Suite	05	U	
128	0605041A	Defensive CYBER Tool Development	05	U	27,714
129	0605042A	Tactical Network Radio Systems (Low-Tier)	05	U	4,318
130	0605047A	Contract Writing System	05	U	16,355
131	0605049A	Missile Warning System Modernization (MWSM)	05	U	27,571
132	0605051A	Aircraft Survivability Development	05	U	24,900
133	0605052A	Indirect Fire Protection Capability Inc 2 - Block 1	05	U	196,248
134	0605053A	Ground Robotics	05	U	35,319
135	0605054A	Emerging Technology Initiatives	05	U	201,274

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136	0605143A	Biometrics Enabling Capability (BEC)	05	U	4,326	11,091		11,091
137	0605144A	Next Generation Load Device - Medium	05	U	14,835	22,439		22,439
138	0605145A	Medical Products and Support Systems Development	05	U	927			
139	0605148A	Tactical Intel Targeting Access Node (TITAN) EMD	05	U	54,972	108,987		108,987
140	0605203A	Army System Development & Demonstration	05	U	122,175	143,616		143,616
141	0605205A	Small Unmanned Aerial Vehicle (SUAV) (6.5)	05	U	2,192	6,530		6,530
142	0605206A	CI and HUMINT Equipment Program-Army (CIHEP-A)	05	U				
143	0605216A	Joint Targeting Integrated Command and Coordination Suite (JTIC2S)	05	U				
144	0605224A	Multi-Domain Intelligence	05	U	9,313	6,008		6,008
145	0605225A	SIO Capability Development	05	U	22,713			
146	0605231A	Precision Strike Missile (PrSM)	05	U	181,574	259,506		259,506
147	0605232A	Hypersonics EMD	05	U	107,404	633,499		633,499
148	0605233A	Accessions Information Environment (AIE)	05	U	16,177	10,088		10,088
149	0605235A	Strategic Mid-Range Capability	05	U		5,016		5,016
150	0605236A	Integrated Tactical Communications	05	U		12,447		12,447
151	0605450A	Joint Air-to-Ground Missile (JAGM)	05	U	2,467	2,366		2,366
152	0605457A	Army Integrated Air and Missile Defense (AIAMD)	05	U	154,257	263,545		263,545
153	0605531A	Counter - Small Unmanned Aircraft Systems Sys Dev & Demonstration	05	U	49,667	14,892		14,892
154	0605625A	Manned Ground Vehicle	05	U	194,936	554,925		554,925
155	0605766A	National Capabilities Integration (MIP)	05	U	13,454	17,030		17,030

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136	0605143A	Biometrics Enabling Capability (BEC)	05	U	
137	0605144A	Next Generation Load Device - Medium	05	U	36,970
138	0605145A	Medical Products and Support Systems Development	05	U	
139	0605148A	Tactical Intel Targeting Access Node (TITAN) EMD	05	U	132,136
140	0605203A	Army System Development & Demonstration	05	U	81,657
141	0605205A	Small Unmanned Aerial Vehicle (SUAV) (6.5)	05	U	31,284
142	0605206A	CI and HUMINT Equipment Program-Army (CIHEP-A) Joint Targeting Integrated Command and Coordination Suite	05	U	2,170
143	0605216A	(JTIC2S)	05	U	9,290
144	0605224A	Multi-Domain Intelligence	05	U	41,003
145	0605225A	SIO Capability Development	05	U	
146	0605231A	Precision Strike Missile (PrSM)	05	U	272,786
147	0605232A	Hypersonics EMD	05	U	900,920
148	0605233A	Accessions Information Environment (AIE)	05	U	27,361
149	0605235A	Strategic Mid-Range Capability	05	U	348,855
150	0605236A	Integrated Tactical Communications	05	U	22,901
151	0605450A	Joint Air-to-Ground Missile (JAGM)	05	U	3,014
152	0605457A	Army Integrated Air and Missile Defense (AIAMD) Counter - Small Unmanned Aircraft Systems Sys Dev &	05	U	284,095
153	0605531A	Demonstration	05	U	36,016
154	0605625A	Manned Ground Vehicle	05	U	996,653
155	0605766A	National Capabilities Integration (MIP)	05	U	15,129

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156	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	05	U	2,470	9,376		9,376
157	0605830A	Aviation Ground Support Equipment	05	U	1,158	2,959		2,959
158	0303032A	TROJAN - RH12	05	U	3,362	3,761		3,761
159	0304270A	Electronic Warfare Development	05	U	75,520	99,938		99,938
		System Development & Demonstration			3,178,005	4,317,752	600	4,318,352
160	0604256A	Threat Simulator Development	06	U	60,749	138,937		138,937
161	0604258A	Target Systems Development	06	U	41,769	64,132		64,132
162	0604759A	Major T&E Investment	06	U	91,130	142,031		142,031
163	0605103A	Rand Arroyo Center	06	U	31,087	33,631		33,631
164	0605301A	Army Kwajalein Atoll	06	U	242,279	309,005		309,005
165	0605326A	Concepts Experimentation Program	06	U	80,386	86,824		86,824
166	0605502A	Small Business Innovative Research	06	U	374,118			
167	0605601A	Army Test Ranges and Facilities	06	U	362,223	417,567		417,567
168	0605602A	Army Technical Test Instrumentation and Targets	06	U	57,584	67,962		67,962
169	0605604A	Survivability/Lethality Analysis	06	U	35,042	36,500		36,500
170	0605606A	Aircraft Certification	06	U	2,398	4,777		4,777
171	0605702A	Meteorological Support to RDT&E Activities	06	U	6,389	6,958		6,958
172	0605706A	Materiel Systems Analysis	06	U	20,771	22,004		22,004
173	0605709A	Exploitation of Foreign Items	06	U	13,631	6,186		6,186
174	0605712A	Support of Operational Testing	06	U	54,797	70,718		70,718

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156	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	05	U	27,243
157	0605830A	Aviation Ground Support Equipment	05	U	1,167
158	0303032A	TROJAN - RH12	05	U	3,879
159	0304270A	Electronic Warfare Development	05	U	137,186
		System Development & Demonstration			5,639,364
160	0604256A	Threat Simulator Development	06	U	38,492
161	0604258A	Target Systems Development	06	U	11,873
162	0604759A	Major T&E Investment	06	U	76,167
163	0605103A	Rand Arroyo Center	06	U	37,078
164	0605301A	Army Kwajalein Atoll	06	U	314,872
165	0605326A	Concepts Experimentation Program	06	U	95,551
166	0605502A	Small Business Innovative Research	06	U	
167	0605601A	Army Test Ranges and Facilities	06	U	439,118
168	0605602A	Army Technical Test Instrumentation and Targets	06	U	42,220
169	0605604A	Survivability/Lethality Analysis	06	U	37,518
170	0605606A	Aircraft Certification	06	U	2,718
171	0605702A	Meteorological Support to RDT&E Activities	06	U	
172	0605706A	Materiel Systems Analysis	06	U	26,902
173	0605709A	Exploitation of Foreign Items	06	U	7,805
174	0605712A	Support of Operational Testing	06	U	75,133

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Department of the Army
FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment	FY 2023 Total Enactment
175	0605716A	Army Evaluation Center	06	U	65,693	67,058		67,058
176	0605718A	Army Modeling & Sim X-Cmd Collaboration & Integ	06	U	2,537	6,097		6,097
177	0605801A	Programwide Activities	06	U	90,443	89,793		89,793
178	0605803A	Technical Information Activities	06	U	31,174	37,652		37,652
179	0605805A	Munitions Standardization, Effectiveness and Safety	06	U	54,922	60,645		60,645
180	0605857A	Environmental Quality Technology Mgmt Support	06	U	1,724	1,912		1,912
181	0605898A	Army Direct Report Headquarters - R&D - MHA	06	U	48,798	53,271		53,271
182	0606002A	Ronald Reagan Ballistic Missile Defense Test Site	06	U	78,187	89,602		89,602
183	0606003A	CounterIntel and Human Intel Modernization	06	U	10,641	1,424		1,424
184	0606105A	Medical Program-Wide Activities	06	U	37,616			
185	0606942A	Assessments and Evaluations Cyber Vulnerabilities	06	U	5,466	5,816		5,816
186	0909999A	Financing for Cancelled Account Adjustments	06	U	101			
	Management Support				1,901,655	1,820,502		1,820,502
187	0603778A	MLRS Product Improvement Program	07	U	11,865	18,463		18,463
188	0605024A	Anti-Tamper Technology Support	07	U	8,544	9,284		9,284
189	0607131A	Weapons and Munitions Product Improvement Programs	07	U	39,994	54,674	2,500	57,174
190	0607136A	Blackhawk Product Improvement Program	07	U	14,599			
191	0607137A	Chinook Product Improvement Program	07	U	65,960	67,513		67,513
192	0607139A	Improved Turbine Engine Program	07	U	250,533	228,036		228,036
193	0607142A	Aviation Rocket System Product Improvement and Development	07	U	8,831	11,312		11,312

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Mar 2023

Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2024 Request
175	0605716A	Army Evaluation Center	06	U	71,118
176	0605718A	Army Modeling & Sim X-Cmd Collaboration & Integ	06	U	11,204
177	0605801A	Programwide Activities	06	U	93,895
178	0605803A	Technical Information Activities	06	U	31,327
179	0605805A	Munitions Standardization, Effectiveness and Safety	06	U	50,409
180	0605857A	Environmental Quality Technology Mgmt Support	06	U	1,629
181	0605898A	Army Direct Report Headquarters - R&D - MHA	06	U	55,843
182	0606002A	Ronald Reagan Ballistic Missile Defense Test Site	06	U	91,340
183	0606003A	CounterIntel and Human Intel Modernization	06	U	6,348
184	0606105A	Medical Program-Wide Activities	06	U	
185	0606942A	Assessments and Evaluations Cyber Vulnerabilities	06	U	6,025
186	0909999A	Financing for Cancelled Account Adjustments	06	U	
	Management Support				1,624,585
187	0603778A	MLRS Product Improvement Program	07	U	14,465
188	0605024A	Anti-Tamper Technology Support	07	U	7,472
189	0607131A	Weapons and Munitions Product Improvement Programs	07	U	8,425
190	0607136A	Blackhawk Product Improvement Program	07	U	1,507
191	0607137A	Chinook Product Improvement Program	07	U	9,265
192	0607139A	Improved Turbine Engine Program	07	U	201,247
193	0607142A	Aviation Rocket System Product Improvement and Development	07	U	3,014

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Department of the Army
FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment
194	0607143A	Unmanned Aircraft System Universal Products	07	U	4,426	10,512		10,512
195	0607145A	Apache Future Development	07	U	9,700	25,074		25,074
196	0607148A	AN/TPQ-53 Counterfire Target Acquisition Radar System	07	U	46,009	61,559		61,559
197	0607150A	Intel Cyber Development	07	U	3,611	13,343		13,343
198	0607312A	Army Operational Systems Development	07	U	28,029	26,131		26,131
199	0607313A	Electronic Warfare Development	07	U	5,673	6,432		6,432
200	0607315A	Enduring Turbine Engines and Power Systems	07	U				
201	0607665A	Family of Biometrics	07	U	1,101	1,114		1,114
202	0607865A	Patriot Product Improvement	07	U	125,851	152,312		152,312
203	0203728A	Joint Automated Deep Operation Coordination System (JADOCS)	07	U	24,556	19,311		19,311
204	0203735A	Combat Vehicle Improvement Programs	07	U	272,438	194,229		194,229
205	0203743A	155mm Self-Propelled Howitzer Improvements	07	U	168,683	116,510		116,510
206	0203744A	Aircraft Modifications/Product Improvement Programs	07	U	10,000			
207	0203752A	Aircraft Engine Component Improvement Program	07	U	127	148		148
208	0203758A	Digitization	07	U	3,759			
209	0203801A	Missile/Air Defense Product Improvement Program	07	U	122	3,109		3,109
210	0203802A	Other Missile Product Improvement Programs	07	U	9,956	9,027		9,027
211	0205412A	Environmental Quality Technology - Operational System Dev	07	U	253	793		793
212	0205778A	Guided Multiple-Launch Rocket System (GMLRS)	07	U	58,516	20,180		20,180
213	0208053A	Joint Tactical Ground System	07	U	11,379	8,813		8,813

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Department of the Army
FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2024 Request
194	0607143A	Unmanned Aircraft System Universal Products	07	U	25,393
195	0607145A	Apache Future Development	07	U	10,547
196	0607148A	AN/TPQ-53 Counterfire Target Acquisition Radar System	07	U	54,167
197	0607150A	Intel Cyber Development	07	U	4,345
198	0607312A	Army Operational Systems Development	07	U	19,000
199	0607313A	Electronic Warfare Development	07	U	6,389
200	0607315A	Enduring Turbine Engines and Power Systems	07	U	2,411
201	0607665A	Family of Biometrics	07	U	797
202	0607865A	Patriot Product Improvement	07	U	177,197
203	0203728A	Joint Automated Deep Operation Coordination System (JADOCS)	07	U	42,177
204	0203735A	Combat Vehicle Improvement Programs	07	U	146,635
205	0203743A	155mm Self-Propelled Howitzer Improvements	07	U	122,902
206	0203744A	Aircraft Modifications/Product Improvement Programs	07	U	
207	0203752A	Aircraft Engine Component Improvement Program	07	U	146
208	0203758A	Digitization	07	U	1,515
209	0203801A	Missile/Air Defense Product Improvement Program	07	U	4,520
210	0203802A	Other Missile Product Improvement Programs	07	U	10,044
211	0205412A	Environmental Quality Technology - Operational System Dev	07	U	281
212	0205778A	Guided Multiple-Launch Rocket System (GMLRS)	07	U	75,952
213	0208053A	Joint Tactical Ground System	07	U	203

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FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment	FY 2023 Total Enactment
216	0303028A	Security and Intelligence Activities	07	U	24,506			
217	0303140A	Information Systems Security Program	07	U	15,680	17,209		17,209
218	0303141A	Global Combat Support System	07	U	43,643	22,600		22,600
219	0303142A	SATCOM Ground Environment (SPACE)	07	U	16,186	18,297		18,297
222	0305179A	Integrated Broadcast Service (IBS)	07	U	5,430	9,926		9,926
223	0305204A	Tactical Unmanned Aerial Vehicles	07	U	8,410	4,500		4,500
224	0305206A	Airborne Reconnaissance Systems	07	U	11,782	17,165		17,165
225	0305219A	MQ-1C Gray Eagle UAS	07	U				
226	0307665A	Biometrics Enabled Intelligence	07	U	2,066			
227	0708045A	End Item Industrial Preparedness Activities	07	U	101,466	132,270		132,270
999	999999999	Classified Programs	07	U	2,993	6,664		6,664
		Operational Systems Development			1,416,677	1,286,510	2,500	1,289,010
228	0608041A	Defensive CYBER - Software Prototype Development	08	U	108,041	94,831		94,831
		Software And Digital Technology Pilot Programs			108,041	94,831		94,831
Total Research, Development, Test and Evaluation, Army					14,660,654	17,142,121	9,100	17,151,221

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Department of the Army
FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2023

Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Se c	FY 2024 Request
216	0303028A	Security and Intelligence Activities	07	U	301
217	0303140A	Information Systems Security Program	07	U	15,323
218	0303141A	Global Combat Support System	07	U	13,082
219	0303142A	SATCOM Ground Environment (SPACE)	07	U	26,838
222	0305179A	Integrated Broadcast Service (IBS)	07	U	9,456
223	0305204A	Tactical Unmanned Aerial Vehicles	07	U	
224	0305206A	Airborne Reconnaissance Systems	07	U	
225	0305219A	MQ-1C Gray Eagle UAS	07	U	6,629
226	0307665A	Biometrics Enabled Intelligence	07	U	
227	0708045A	End Item Industrial Preparedness Activities	07	U	75,317
999	999999999	Classified Programs	07	U	8,786
	Operational Systems Development				1,105,748
228	0608041A	Defensive CYBER - Software Prototype Development	08	U	83,570
	Software And Digital Technology Pilot Programs				83,570
Total Research, Development, Test and Evaluation, Army					15,775,381

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160	06	0604258A	Target Systems Development.....	Volume 4a - 9
161	06	0604759A	Major T&E Investment.....	Volume 4a - 23
162	06	0605103A	Rand Arroyo Center.....	Volume 4a - 43
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164	06	0605326A	Concepts Experimentation Program.....	Volume 4a - 68
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168	06	0605604A	Survivability/Lethality Analysis.....	Volume 4a - 112
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170	06	0605702A	Meteorological Support to RDT&E Activities.....	Volume 4a - 124
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178	06	0605805A	Munitions Standardization, Effectiveness and Safety.....	Volume 4a - 194
179	06	0605857A	Environmental Quality Technology Mgmt Support.....	Volume 4a - 217
180	06	0605898A	Army Direct Report Headquarters - R&D - MHA.....	Volume 4a - 224
181	06	0606002A	Ronald Reagan Ballistic Missile Defense Test Site.....	Volume 4a - 232
182	06	0606003A	CounterIntel and Human Intel Modernization.....	Volume 4a - 239
183	06	0606105A	Medical Program-Wide Activities.....	Volume 4a - 244
184	06	0606942A	Assessments and Evaluations Cyber Vulnerabilities.....	Volume 4a - 247
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Army Modeling & Sim X-Cmd Collaboration & Integ	0605718A	175	06.....	Volume 4a - 149
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Army Test Ranges and Facilities	0605601A	166	06.....	Volume 4a - 84
Assessments and Evaluations Cyber Vulnerabilities	0606942A	184	06.....	Volume 4a - 247
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Ronald Reagan Ballistic Missile Defense Test Site	0606002A	181	06.....	Volume 4a - 232
Small Business Innovative Research	0605502A	165	06.....	Volume 4a - 81
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Target Systems Development	0604258A	160	06.....	Volume 4a - 9
Technical Information Activities	0605803A	177	06.....	Volume 4a - 177
Threat Simulator Development	0604256A	159	06.....	Volume 4a - 1

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	60.749	138.937	38.492	-	38.492	33.544	14.199	11.732	11.859	0.000	309.512
976: Army Threat Sim (ATS)	-	60.749	138.937	38.492	-	38.492	33.544	14.199	11.732	11.859	0.000	309.512

A. Mission Description and Budget Item Justification

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.

This funding line supports testing of Army Modernization Priority Programs.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	61.422	18.437	11.581	-	11.581
Current President's Budget	60.749	138.937	38.492	-	38.492
Total Adjustments	-0.673	120.500	26.911	-	26.911
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	120.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.673	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	26.911	-	26.911

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army		Date: March 2023	
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	
Congressional Add Details (\$ in Millions, and Includes General Reductions)		FY 2022	FY 2023
Project: 976: Army Threat Sim (ATS)			
Congressional Add: Threat Cyberspace Operations		3.000	-
Congressional Add: Cyber Security Operations Center		40.000	90.500
Congressional Add: Supply Chain Illumination to Counter Emerging Threats		-	5.000
Congressional Add: Threat Counter Artificial Intelligence		-	12.500
Congressional Add: UAS Center of Excellence		-	12.500
Congressional Add Subtotals for Project: 976		43.000	120.500
Congressional Add Totals for all Projects		43.000	120.500
Change Summary Explanation			
Increase in FY 2024 funding is for the Multi-Domain Operation (MDO) driven threats and targets investments are critical in enabling a MDO contested and realistic Future Operating Environment for critical Operational Test events across the FYDP. A detailed threat gap analysis identified critical shortfalls in MDO threat capabilities and ensured alignment with Army G2 threat assessments.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
976: Army Threat Sim (ATS)	-	60.749	138.937	38.492	-	38.492	33.544	14.199	11.732	11.859	0.000	309.512
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 2022	FY 2023	FY 2024
Title: Threat Information Warfare	5.683	5.601	7.799
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 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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604256A / <i>Threat Simulator Development</i>	Project (Number/Name) 976 / <i>Army Threat Sim (ATS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p>FY 2024 Plans: Sustainment of existing threat-based Red Team capabilities, including previously developed toolsets and distributed operations infrastructure. Maintain Red Team Certification and Accreditation (C&A) required for on-network operations. Continued development of 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in funding for the Multi-Domain Operation (MDO) driven threats and targets investments are critical in enabling a MDO contested and realistic Future Operating Environment for critical Operational Test events across the FYDP. A detailed threat gap analysis identified critical shortfalls in MDO threat capabilities and ensured alignment with Army G2 threat assessments.</p>			
<p>Title: Threat Electronic Warfare</p> <p>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 (air and ground), data spoofing, detection of Low Probability Intercept (LPI) waveforms, artificial intelligence (AI), network modeling, passive detection systems, and advanced electronic support systems such as Angle of Arrival (AoA) and Time Difference of Arrival (TDoA), Cognitive RF processing techniques against Low Probability of Detect (LPD) and Low Probability of Intercept (LPI) signals. 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 Systems Under Test (SUT)/ Programs of Record (POR).</p>		7.711	8.136
			27.100

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604256A / <i>Threat Simulator Development</i>	Project (Number/Name) 976 / <i>Army Threat Sim (ATS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>Develops and prototypes threat Electronic System (ES) by leveraging state-of-the-art commercially available Software Defined Radio (SDR) technology incorporating Angle of Arrival (AoA) and Time Difference of Arrival (TDoA) and Cognitive RF processing techniques against Low Probability of Detect (LPD) and Low Probability of Intercept (LPI) signals.</p> <p>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 FY 2023.</p> <p>FY 2024 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 FY 2024.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in funding for the Multi-Domain Operation (MDO) driven threats and targets investments are critical in enabling a MDO contested and realistic Future Operating Environment for critical Operational Test events across the FYDP. A detailed threat gap analysis identified critical shortfalls in MDO threat capabilities and ensured alignment with Army G2 threat assessments. The increase in funding will provide a robust threat representative PNT enterprise within the Army to fully evaluate the susceptibility of US "Blue Force" PNT/Alternate Navigation systems against current and emerging denial and deception capabilities and techniques. Funding provides the ability to immerse Artificial Intelligence/Machine Learning-enabled blue force systems in an operationally relevant MDO test environment and perform actions that emulate real-world threats to those systems.</p>			
Title: Threat Network and Mission Command		4.355	4.027
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.			3.593

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604256A / <i>Threat Simulator Development</i>	Project (Number/Name) 976 / <i>Army Threat Sim (ATS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<i>FY 2023 Plans:</i> 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 Joint Warfighting Assessment (JWA) and anticipated excursion test events for numerous Systems Under Test/ Programs of Record (SUT / POR) currently identified through FY2023.			
<i>FY 2024 Plans:</i> 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 Joint Warfighting Assessment (JWA) and anticipated excursion test events for numerous Systems Under Test/ Programs of Record (SUT / POR). Threat Operations will continue to support multiple Army test events as well as procure new control systems to support future Multi Domain Operations. Development will continue with new system integrations 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.			
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Decrease in funding due to higher Army priorities.			
<i>Title:</i> SBIR/STTR Transfer		-	0.673
<i>FY 2023 Plans:</i> Funding transferred in accordance with Title 15 USC §638			
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals		17.749	18.437
		38.492	
		FY 2022	FY 2023
<i>Congressional Add:</i> Threat Cyberspace Operations		3.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604256A / <i>Threat Simulator Development</i>	Project (Number/Name) 976 / <i>Army Threat Sim (ATS)</i>	
		FY 2022	FY 2023
FY 2022 Accomplishments: 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). Provided cyber red team Information Operations (IO) weapons, Command and Control (C2) infrastructure, and research for advanced threat capabilities targeting Army programs, systems, and commands. Furthered efforts executed under FY21 185 \$3,750K Program Increase "Threat Simulator Development"			
Congressional Add: Cyber Security Operations Center FY 2022 Accomplishments: Prototype capability evaluated the feasibility of providing cyber security services and expertise to the Defense Industrial Base (DIB). Refined techniques for providing on-site and remote DIB assistance with assessment, training, response, and mitigation of cyber vulnerabilities and industrial supply chains. Continued 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 significantly increased 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. FY 2023 Plans: FY 2023 Congressional Add Funding will provide prototype capability to evaluate the feasibility of providing cyber security services and expertise to the Defense Industrial Base (DIB). Provides for the development of techniques for providing on-site and remote DIB assistance with assessment, training, response, and mitigation of cyber vulnerabilities and industrial supply chains. Funding also develops and will demonstrate 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.		40.000	90.500
Congressional Add: Supply Chain Illumination to Counter Emerging Threats FY 2023 Plans: Congressional Add FY2023 funding provides the Supply Chain Illumination (WODEN Team) exhaustive illumination assessments of Army/DoD Program / Platform Supply Chains and associated reports for a combination of components and/or vendors. The Supply Chain team can assist the requesting agency with conducting Critical Function Analysis (CFA) on requested components or assess components to determine criticality and enhance overall horizontal protection against shared threats.		-	5.000
Congressional Add: Threat Counter Artificial Intelligence		-	12.500

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604256A / <i>Threat Simulator Development</i>	Project (Number/Name) 976 / <i>Army Threat Sim (ATS)</i>

	FY 2022	FY 2023
FY 2023 Plans: FY2023 Congressional Add funding provides the capability for Threat Counter Artificial Intelligence (TCAI) to test emerging and evolving DOD/Army artificial intelligence (AI) and Machine Learning (ML) capabilities against operationally relevant and realistic threats.		
Congressional Add: UAS Center of Excellence FY 2023 Plans: Congressional Add FY2023 provides the development of a UAS/Counter UAS Center of Excellence including critical urban operating areas at the Redstone Test Center and Huntsville International Airport for the purpose of assessing UAS and Counter UAS detection, identification and mitigation technologies supporting DOD and DOJ. Capability also creates the premiere center to test and validate America's Counter UAS technologies charged with protecting critical infrastructure such as airports, power plants, dams, neighborhoods, etc. from drone incursions.	-	12.500
Congressional Adds Subtotals	43.000	120.500

C. Other Program Funding Summary (\$ in Millions)
 N/A

Remarks

D. Acquisition Strategy
 N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	41.769	64.132	11.873	-	11.873	15.756	15.189	15.321	15.489	Continuing	Continuing
238: <i>Aerial Targets</i>	-	35.680	57.722	8.420	-	8.420	12.428	11.444	11.536	11.662	Continuing	Continuing
459: <i>Ground Targets</i>	-	6.089	6.410	3.453	-	3.453	3.328	3.745	3.785	3.827	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.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	42.404	19.132	11.821	-	11.821
Current President's Budget	41.769	64.132	11.873	-	11.873
Total Adjustments	-0.635	45.000	0.052	-	0.052
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	45.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.635	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.052	-	0.052

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

Project: 238: *Aerial Targets*

Congressional Add: *UAS Swarm Threat and Mitigation*

Congressional Add: *Replacement of Engines for Aerial Targets*

Congressional Add: *UAS Swarm Threat Representation, Detection and Mitigation*

FY 2022	FY 2023
25.000	-
-	10.000
-	25.000

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army		Date: March 2023	
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	
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2022	FY 2023
Congressional Add: HEL Power and Thermal Subsystem		-	10.000
Congressional Add Subtotals for Project: 238		25.000	45.000
Congressional Add Totals for all Projects		25.000	45.000
Change Summary Explanation Increased funding due to revised economic assumptions.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
238: Aerial Targets	-	35.680	57.722	8.420	-	8.420	12.428	11.444	11.536	11.662	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This 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 2022	FY 2023	FY 2024
Title: Towed Targets/Ancillary devices.	0.556	0.475	0.410
Description: Engineering & Manufacturing Development (EMD) phase activities for Towed Targets/Ancillary devices.			
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 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 2024 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 X-Tow, Glide Tow and Sphere Tow Targets. These targets emulate current threats or provide calibrated radar cross section sources at a very low cost to the Army Directed Energy Program Office, Rapid Capabilities and Critical Technologies Office (RCCTO), Center for Countermeasures/Office of the Secretary of Defense (CCM/OSD), the USAF Three Dimensional			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 238 / <i>Aerial Targets</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>Long Range Radar and the Navy Enterprise Air Surveillance Radar. Design of the X-Tow target will be reviewed and optimized to reduce production cost. Design and development of a 6 inch Sphere Tow target will be initiated to meet future test requirements. The Global Positioning System (GPS) receiver and Data Logger Unit used in the Sphere Tow, X-Tow and Cruise Missile Tow targets will be updated to the latest technology to provide test personnel with precise location of the targets during testing. Investigate and test other cost-saving towed systems specifically modifications to the Cruise Missile Tow Target for High Energy Laser system tests.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.</p>			
<p>Title: Aerial Virtual Targets.</p> <p>Description: EMD phase activities for Aerial Virtual Targets.</p> <p>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.</p> <p>FY 2024 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</p>		0.895	0.717
			0.515

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 238 / <i>Aerial Targets</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
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 2023 to FY 2024 Increase/Decrease Statement: Army decreased funding in FY 2024 due to higher Army priorities.			
Title: Army Ground Aerial Target Control System (AGATCS).		3.800	3.398
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.			3.233
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 2024 Plans: AGATCS engineering and manufacturing to provide new capabilities and new features for 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. Funds maintenance of compliance with DODI 8510.01 mandate / DOD Risk Management Framework on all target control systems to ensure a secure operating posture. Funds development of 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 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 238 / <i>Aerial Targets</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Army decreased funding in FY 2024 due to higher Army priorities.				
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 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 2024 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, Patriot, 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. FY 2023 to FY 2024 Increase/Decrease Statement: Army decreased funding in FY 2024 due to higher Army priorities.		1.559	3.832	1.474
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		3.870	3.836	2.788

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 238 / <i>Aerial Targets</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
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 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 2024 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 Test & Evaluation 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 2023 to FY 2024 Increase/Decrease Statement: Army decreased funding in FY 2024 due to higher Army priorities.			
Title: SBIR/STTR Transfer FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638		-	0.464
Accomplishments/Planned Programs Subtotals		10.680	12.722
			8.420

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 238 / <i>Aerial Targets</i>	
		FY 2022	FY 2023
Congressional Add: UAS Swarm Threat and Mitigation FY 2022 Accomplishments: 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 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 was 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.		25.000	-
Congressional Add: Replacement of Engines for Aerial Targets FY 2023 Plans: Congressional Add FY 2023 provides the development a new US manufactured engine for the MQM-178 Aerial Target Platform. Provides Army Multi-Domain Operations (MDO) programs with an ideal cruise missile surrogate.		-	10.000
Congressional Add: UAS Swarm Threat Representation, Detection and Mitigation FY 2023 Plans: Congressional Add FY 2023 provides the development of US produced UAS platforms, ground control system, mission planner/simulation, payloads, and system mobility for Army CTC's and DT & OT weapons testing in support of Army readiness and modernization. Also includes the 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.		-	25.000
Congressional Add: HEL Power and Thermal Subsystem FY 2023 Plans: Develop a new U.S. manufactured engine for the MQM-178 Aerial Target Platform. The MQM-178 provides a high speed, unmanned, threat realistic target for the testing of Army ACAT I/II major munitions and missile programs. Provides Army Multi-Domain Operations programs with an ideal cruise missile surrogate. Funds will provide for development of replacement engine, modification of the current MQM-178 target design, design and build support equipment, manufacture of four flight test assets (includes aircraft and spares) and integration of prototype systems, ground and flight test events.		-	10.000
Congressional Adds Subtotals		25.000	45.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / Target Systems Development	Project (Number/Name) 238 / Aerial Targets
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy		
N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
459: Ground Targets	-	6.089	6.410	3.453	-	3.453	3.328	3.745	3.785	3.827	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 2022	FY 2023	FY 2024	
Title: Mobile Ground Target Operations (MGTO)									3.375	2.017	1.719	
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 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 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 2024 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												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 459 / <i>Ground Targets</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreased in FY 2024 for higher Army priorities.</p>			
<p>Title: Mobile Ground Targets Hardware (MGTH)</p> <p>Description: MGTH provides a mix of actual threat assets and surrogate targets to support Army T&E events.</p> <p>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.</p> <p>FY 2024 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 systems. 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase will support new development of surface targets representing emerging Air Defense Artillery (ADA) ground threats and will perform analysis, research, design, and development of threat representative infrared and radar cross section signatures integrated into current and future surface target platforms.</p>		1.395	0.515
<p>Title: Ground Virtual Targets</p> <p>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.</p>		1.319	0.708
			0.722

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>		Project (Number/Name) 459 / <i>Ground Targets</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
<p>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.</p> <p>FY 2024 Plans: Will continue engineering and manufacturing for Ground Virtual Targets for evolving Army and DoD simulation standards and evolving implementation techniques. Will focus specifically on the modeling of threat Integrated Air Defense Assets (IADS) following a new format from National Ground Intelligence Center (NGIC). These new Overarching Dynamic Electronic-warfare System Standard Architecture (ODESSA) models will define the radar parameters in a standard format that will permit near real-time threat emitter updates by ingesting these pulse descriptor words (PDW) directly into the Software Defined Radio / Radar (SDR) emitter currently being developed. Using Intelligence Community (IC) validated models will shorten the validation of the threat emitters by not less than 75% of the current time it takes a threat emitter to complete the validation phase and will provide archiving and distribution of simulation target models to simulation developers throughout the Army and DoD Test & Evaluation 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 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</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 459 / <i>Ground Targets</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
to Close Combat Weapon Systems, Strategic and Operational Rockets and Missiles, and Tactical Aviation and Ground Munition offices.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.			
Title: Low Cost Ground Targets		-	2.936
<p>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.</p> <p>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 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.</p> <p>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.</p> <p>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)</p>			0.350

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604258A / <i>Target Systems Development</i>	Project (Number/Name) 459 / <i>Ground Targets</i>		
B. Accomplishments/Planned Programs (\$ in Millions) 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. <i>FY 2024 Plans:</i> Continue to build in sufficient quantities to provide threat emitters 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 (TBCF) operational system. Develop Time Space Position Information (TSPI) interface requirements that will permit the tracking of targets real-time to support developmental and operational tests as well as training exercises. <i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Army decreased funding in FY 2024 due to higher Army priorities.		FY 2022	FY 2023	FY 2024
<i>Title:</i> SBIR/STTR Transfer <i>FY 2023 Plans:</i> Funding transferred in accordance with Title 15 USC §638 <i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC §638		-	0.234	-
Accomplishments/Planned Programs Subtotals		6.089	6.410	3.453
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	91.130	142.031	76.167	-	76.167	78.455	92.518	95.866	97.043	Continuing	Continuing
983: Reagan Test Site (RTS) T&E Investments	-	6.141	6.769	8.401	-	8.401	4.222	8.414	8.503	8.596	Continuing	Continuing
984: Major Developmental Testing Instrumentation	-	36.639	43.861	33.532	-	33.532	26.803	28.783	33.231	33.726	Continuing	Continuing
986: Major Operational Test Instrumentation	-	29.301	39.023	6.730	-	6.730	7.883	6.128	4.413	4.460	Continuing	Continuing
EY9: Range Radar Replacement Program (RRRP)	-	18.005	50.065	26.355	-	26.355	38.398	48.042	48.555	49.084	Continuing	Continuing
FF1: Cyber Blue Team	-	1.044	2.313	1.149	-	1.149	1.149	1.151	1.164	1.177	0.000	9.147

A. Mission Description and Budget Item Justification

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, 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.

This funding line supports testing of Army Modernization Priority Programs.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0604759A / Major T&E Investment			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	93.617	107.706	69.131	-	69.131
Current President's Budget	91.130	142.031	76.167	-	76.167
Total Adjustments	-2.487	34.325	7.036	-	7.036
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	34.400			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.487	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	7.036	-	7.036
• FFRDC Transfer	-	-0.075	-	-	-
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 986: Major Operational Test Instrumentation					
Congressional Add: Major operational test instrumentation					
Congressional Add: Congressional Add: Exportable Live Virtual Constructive Command Center (XLCC)					
Congressional Add: Congressional Add: Expanding the Operational Test Command					
Congressional Add Subtotals for Project: 986					
Congressional Add Totals for all Projects					
Change Summary Explanation					
FY24 funding increased to support high voltage power supply upgrade for radar test equipment,.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
983: Reagan Test Site (RTS) T&E Investments	-	6.141	6.769	8.401	-	8.401	4.222	8.414	8.503	8.596	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 2022	FY 2023	FY 2024
Title: Radar Reliability Improvement Program (RRI).	0.500	0.500	0.500
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 2023 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 2024 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
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				
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 2023 Plans: TM Modernization should complete in FY23; the component will utilize the requested funds for wrap up efforts. FY 2023 to FY 2024 Increase/Decrease Statement: Decrease due to TM Modernization completion in FY 2023.		2.500	1.000	-
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 2023 Plans: Assessment of antenna servo systems and continue engineering design activities. Prototyping and testing of new servo methodologies will be implemented, and begin installation of new servos at one radar (MMW). FY 2024 Plans: Installation of new servos at a second radar (ALCOR). FY 2023 to FY 2024 Increase/Decrease Statement: Decrease due to Non-Recurring Engineering (NRE) being done in FY23.		-	2.500	2.124
Title: RTS Range Enhancements for Hypersonic Vehicle Testing		0.100	0.150	0.400

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
<p>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.</p> <p>FY 2023 Plans: Continue maturing and deploying enhanced tracking algorithms to the RTS sensor suite and planning & support for experimentation & testing in space.</p> <p>FY 2024 Plans: Continue maturing and deploying enhanced tracking algorithms to the RTS sensor suite and planning & support for experimentation & testing in space.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increased efforts at improving software algorithms.</p>				
<p>Title: Digital Focal Plane Array (DFPA) Technology Insertion</p> <p>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).</p> <p>FY 2023 Plans: Installation and test of IR cameras; work RMF accreditation package for cyber security; IV&V; test system.</p> <p>FY 2024 Plans: Continue installation and test of IR cameras; work RMF accreditation package for cyber security; IV&V; test system.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to RTS plans to invest significant funds in FY24 in hardware purchases and installation</p>		-	0.330	1.000
<p>Title: Transmitter/Receiver & Optics Improvements</p> <p>Description: ROSA requirement funded with Centralized Test Evaluation Improvement Program (CTEIP) funds under the KREMS Technology Refresh Program. Army dollars realigned to support other RTS' requirements. Various small scale efforts to update & upgrade optical systems, as well as radar transmitter and receiver subsystems at the KREMS radars.</p>		2.041	1.042	1.337

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
FY 2023 Plans: Continue to maintain and increase the operability of RTS capabilities across all KREMS radars.			
FY 2024 Plans: Continue to maintain and increase the operability of RTS capabilities across all KREMS radars.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.			
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.		1.000	1.000
FY 2023 Plans: 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 2023 to FY 2024 Increase/Decrease Statement: Planned completion of upgrade with no funding needed in 2024.			
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 2024 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.			1.000
FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to start of project.			
Title: SBIR/STTR Transfer FY 2023 Plans:		-	0.247
			-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638			
Title: ALTAIR High Voltage Power Supply Upgrade Description: Leverage work done on TRADEX High Voltage Power Supply (HVPS) to begin looking at a replacement HVPS for the ALTAIR radar. FY 2024 Plans: Begin studies and specifications for new HVPS; perform market research and begin engineering preparations at the radar site for a new power supply. FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to completion of TRADEX upgrade and beginning of ALTAIR upgrade.		-	-
Accomplishments/Planned Programs Subtotals		6.141	8.401
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
984: Major Developmental Testing Instrumentation	-	36.639	43.861	33.532	-	33.532	26.803	28.783	33.231	33.726	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 technology shortfalls, and generally result from development programs managed by a professional project management team. All projects are designed to support both test and training requirements, as applicable.

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. 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 2022	FY 2023	FY 2024
Title: EMD phase contract activity of the Test Network Modernization.	12.725	16.024	16.641
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), 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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
consistent with operations and cybersecurity requirements. This effort supports Long Range Precision Fires, Next Generation Combat Vehicle and Future Vertical Lift Cross-Functional Teams.			
<p>FY 2023 Plans: The Test Network Modernization effort will continue in the engineering and manufacturing phase. FY 2023 funds in the amount of \$16.024 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.</p> <p>FY 2024 Plans: The Test Network Modernization effort will continue in the engineering and manufacturing phase. FY 2024 funds in the amount of \$16.641 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.</p>			
<p>Title: EMD for the Applied Environments Modernization.</p> <p>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.</p> <p>FY 2023 Plans: Will continue EMD phase for Applied Environments Modernization program. In FY 2023 funds in the amount of \$7.472 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 Chamber, Large Temperature Conditioning Shroud, High Energy X-Ray Tube System and Large Portable Temperature Conditioning System.</p> <p>FY 2024 Plans: Will continue EMD phase for Applied Environments Modernization program. In FY 2024 funds in the amount of \$4.828 Million will be used to continue with the purchase of equipment utilized for testing environmental effects at Yuma Test Center (YTC) and</p>		5.698	7.472
			4.828

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
Redstone Test Center (RTC). Specific equipment to be upgraded in FY2024 includes: Full Spectrum Solar Light System (WSMR), Replacement Temperature Humidity Chambers (RTC), Temperature/Humidity Chamber Upgrades (ATC).			
FY 2023 to FY 2024 Increase/Decrease Statement: Decrease due to less modernization requirements for environmental effects at the test centers from FY 2023 to FY 2024.			
Title: EMD phase contract activity for Robotics/UAS Instrumentation Suite		6.569	6.902
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 2023 Plans: Funds in the amount of \$6.902 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 to FY 2024 Increase/Decrease Statement: Funding decrease due to completion of effort in FY 2023.			
Title: EMD phase contract activity for ATEC Fiber Modernization		5.225	5.381
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.			5.105
FY 2023 Plans: Funds in the amount of \$5.381 Million will used to continue the acquisition of hardware needed to revitalize and replace the fiber network backbone at Yuma Test Center (YTC), Electronic Proving Grounds (EPG), and Aberdeen Test Center (ATC), as well as conduct environmental impact assessments for ATC, EPG, YTC and White Sands Test Center (WSTC) and Red Stone Test Center (RTC).			
FY 2024 Plans: Funds in the amount of \$5.105 Million will used to continue the acquisition and installation of hardware needed to revitalize and replace the fiber network at ATC, EPG, and YTC.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
Decrease due to more refined estimates.			
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 2023 Plans: Funds in the amount of \$6.481 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 2024 Plans: Funds in the amount of \$6.958 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 to FY 2024 Increase/Decrease Statement: Slight increase due to more refined estimates.		6.422	6.481
Title: SBIR/STTR Transfer FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638		-	1.601
Accomplishments/Planned Programs Subtotals		36.639	43.861
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
986: Major Operational Test Instrumentation	-	29.301	39.023	6.730	-	6.730	7.883	6.128	4.413	4.460	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 2022	FY 2023	FY 2024
Title: Exportable Live Virtual Constructive Command Center (XLCC)	3.701	4.454	6.730
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.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
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 2022	FY 2023	FY 2024
FY 2023 Plans: Funds in the amount of \$4.454 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 2024 Plans: Funds in the amount of \$6.730 Million will create an 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 Software/hardware updates to allow flexibility and modularity in system capabilities in order to deploy ILTE to a multitude of ranges and test sites.					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the integration of OPFOR Mortars and Anti-Tank as well as realistic Red-Blue operations. This will require modification of the current Integrated Live-Virtual-Constructive (LVC) Test Environment (ILTE)/ Exportable Live Virtual Constructive Command Center (XLCC) software needed for Operational Test Command to support near term testing or indirect fires.					
Title: SBIR/STTR FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638			-	0.169	-
Accomplishments/Planned Programs Subtotals			3.701	4.623	6.730
			FY 2022	FY 2023	
Congressional Add: Major operational test instrumentation			25.600	-	
FY 2022 Accomplishments: T&E Investment advanced hardware and software to properly conduct operational testing on 31 Army modernization efforts in development by Army Futures Command. Added near-peer					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
threat live, virtual, and constructive components (ideally reconfigurable/programmable threat simulators and simulations) that operated 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. Enhanced Real Time Casualty Assistance (RTCA) simulation that included kinetic weapons as well as directed energy weapons, electronic warfare, cyber operations, and a converged Electronic Warfare/Cyber capability. Integrated constructive simulation to augment single, one-on-one RTCA effects calculation as well as replicating supporting systems-of-systems via high-fidelity modeling. Upgraded 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. Supported 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 Add: Congressional Add: Exportable Live Virtual Constructive Command Center (XLCC) FY 2023 Plans: Develop of prototype threat assets across multiple bands capable of emulating synchronized joint effects in a highly contested, congested RF environment. Incorporate Time, Space, Position Information collection equipment onto threat assets to aid in keep threat assets on System Under Test (SUT). Integrate high fidelity simulations; and kinetic and non-kinetic RTCA effects.		-	30.500
Congressional Add: Congressional Add: Expanding the Operational Test Command FY 2023 Plans: Congressional Add funds of \$3.900 million to expand the Operational Test Command. Funding would expand testing and evaluation lab capability at Texas A&M University-Central Texas to enable enhanced support for Operational Test Command (OTC) at Fort Hood. Additionally, federal dollars used for this CPF enables OTC to compete at the cutting edge of technology by establishing a low-cost doctoral program in predictive analytics. Investments in programs like the doctoral program provided by Texas A&M University-Central Texas incentivize our military and civilian workforce, allowing DoD to retain talent.		-	3.900
Congressional Adds Subtotals		25.600	34.400
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
EY9: Range Radar Replacement Program (RRRP)	-	18.005	50.065	26.355	-	26.355	38.398	48.042	48.555	49.084	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. RRRP will deliver capability in three (3) block increments: Block I will recapitalize or replace existing radar systems, Block II will develop a Long Range Radar (LRR) which is compliant with ATEC's Test Capability Requirements Document (TCRD), and Block III will develop LRRs and Medium Range Radars (MRRs) to meet ATEC Block III TCRD Addendum. 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 and MOTRs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: EMD Phase	18.005	48.238	26.355
Description: : Provides acceptance testing of Short, Medium, Long Range, and MPS-39 MOTR instrumentation radars and continues development of the first Block II Long Range radar prototype and Block III radars.			
FY 2023 Plans: Continue development of the first Block II Long Range radar prototype, development of Block III radars, and acceptance testing of Medium, Long Range, and MPS-39 MOTR instrumentation radars.			
FY 2024 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023			
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 2022	FY 2023	FY 2024
FY24 in the amount of \$26.355M provides funding for acceptance testing of Medium and Long Range instrumentation radars and continues development Block II Long Range radar prototype and development of Block III radars.					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease from FY23 to FY24 due to completion of acceptance testing for the MPS-39 MOTR instrumentation radars and short range radars.					
Title: FY23 SBIR/STTR Transfer			-	1.827	-
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.					
Accomplishments/Planned Programs Subtotals			18.005	50.065	26.355
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
N/A					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
FF1: <i>Cyber Blue Team</i>	-	1.044	2.313	1.149	-	1.149	1.149	1.151	1.164	1.177	0.000	9.147
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 2022	FY 2023	FY 2024
Title: Cyber Blue Teams	1.044	2.229	1.149
Description: Management and oversight of Cyber Blue Team vulnerability assessments.			
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 2024 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 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0604759A / <i>Major T&E Investment</i>	Project (Number/Name) FF1 / <i>Cyber Blue Team</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
FY 2023 to FY 2024 funding decrease due to higher Army priorities.			
Title: SBIR/STTR		-	0.084
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals		1.044	2.313
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support					PE 0605103A / Rand Arroyo Center							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	31.087	33.631	37.078	-	37.078	38.045	38.894	39.309	39.738	Continuing	Continuing
732: Arroyo Center Spt	-	31.087	33.631	37.078	-	37.078	38.045	38.894	39.309	39.738	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 into the following core competencies research areas: Personnel, Training, and Health; Forces and Logistics; and Strategy, Doctrine and Resources; applied national security knowledge; academic rigor; multidisciplinary teams; and dynamism, which includes innovation and agility. 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. The Arroyo Center Policy Committee (ACPC), is 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. RAND-Arroyo research is sponsored by Army Senior Leaders and Army Major Commands. In FY21, the ACPC 1) directed a change in the execution of the RAND-Arroyo program which resulted in a change to the business model and 2) directed a consolidation of existing resources for the RAND-Arroyo program.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	32.296	35.542	36.915	-	36.915
Current President's Budget	31.087	33.631	37.078	-	37.078
Total Adjustments	-1.209	-1.911	0.163	-	0.163
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.209	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.163	-	0.163
• FFRDC Transfer	-	-1.911	-	-	-

Change Summary Explanation

Increased funding due to revised economic assumptions.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605301A / Army Kwajalein Atoll							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	242.279	309.005	314.872	-	314.872	306.721	316.901	319.857	327.974	0.000	2,137.609
DW7: Army Kwajalein Atoll Facilities Sustainment	-	21.189	68.683	77.482	-	77.482	78.981	82.248	82.313	83.212	0.000	494.108
DW8: Army Kwajalein Atoll Installation Services	-	165.897	179.306	170.928	-	170.928	145.849	146.825	148.822	150.408	0.000	1,108.035
DW9: Army Kwajalein Atoll Restoration And Modernization	-	44.076	49.037	49.938	-	49.938	65.036	70.643	71.201	76.817	0.000	426.748
DX2: Army Kwajalein Test Ranges and Mission Support	-	11.117	11.979	16.524	-	16.524	16.855	17.185	17.521	17.537	0.000	108.718

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 11 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army</i> / BA 6: <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605301A / <i>Army Kwajalein Atoll</i>
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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)	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	240.877	309.005	267.085	-	267.085
Current President's Budget	242.279	309.005	314.872	-	314.872
Total Adjustments	1.402	0.000	47.787	-	47.787
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.402	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	47.787	-	47.787

Change Summary Explanation

Increased funding for LOGCAP requirement and to restore resources at Kwajalein.

Pacific Deterrence Initiative (PDI) funding slightly decreases from FY 2023 (\$302.924 million) to FY2024 (\$295.907 million) which represents the planned lifecycle of this effort.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
DW7: Army Kwajalein Atoll Facilities Sustainment	-	21.189	68.683	77.482	-	77.482	78.981	82.248	82.313	83.212	0.000	494.108
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 2022	FY 2023	FY 2024
Title: Real Property Maintenance 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 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 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 2024 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	21.061	66.047	77.340

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
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 to FY 2024 Increase/Decrease Statement: Increased funding in FY24 accommodates for rising cost of LOGCAP contract costs.			
Title: Environmental Quality		0.128	0.134
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..			0.142
FY 2023 Plans: Will continue oversight and management of environmental workload			
FY 2024 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 to FY 2024 Increase/Decrease Statement: Increase for lifecycle planned efforts.			
Title: SBIR/STTR Transfer		-	2.502
Description: FUNDING TRANSFERRED IN ACCORDANCE WITH TITLE 15 USC 638.			-
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638				
Accomplishments/Planned Programs Subtotals		21.189	68.683	77.482
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
DW8: Army Kwajalein Atoll Installation Services	-	165.897	179.306	170.928	-	170.928	145.849	146.825	148.822	150.408	0.000	1,108.035
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 2022	FY 2023	FY 2024
Title: Army Airfields (AAF) and Heliports (AHP)	7.500	8.212	8.627
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 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 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 2024 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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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 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 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments			
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 2023 Plans: Will continue to provide necessary/routine Army Community Services to the Installation. FY 2024 Plans: Will continue to provide necessary/routine Army Community Services to the Installation. FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments		0.271	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 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		0.416	0.449
			0.303
			0.460

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
programs, Boys and Girls Club of America programs, instructional programs, recreational programs, programs that promote leadership and citizenship, intervention services, and teen programs. FY 2024 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 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments				
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 2023 Plans: Will continue to provide necessary/routine engineering services to the Installation. FY 2024 Plans: Will continue to provide necessary/routine engineering services to the Installation. FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments		4.265	4.683	3.110
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		0.251	0.268	0.283

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>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.</p> <p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments</p>			
<p>Title: Fire and Emergency Services (FES)</p> <p>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.</p> <p>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</p>		4.787	5.303
			5.219

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
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 2022	FY 2023	FY 2024
<p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments</p>					
<p>Title: Financial Management (FM) Activities</p> <p>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.</p> <p>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 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.</p> <p>FY 2024 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</p>			0.629	0.671	0.709

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 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 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments			
Title: Food Services		8.781	8.746
Description: Provides for the operation of dining facilities including contract employees, food service supplies, and equipment life-cycle replacement.			9.725
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 2024 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 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments			
Title: Unaccompanied Housing		1.549	1.683
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.			1.730
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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
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 2024 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 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments			
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 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 2024 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 2023 to FY 2024 Increase/Decrease Statement:		1.674	1.810
			1.844

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
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 2022	FY 2023	FY 2024
Change due to annual cost adjustments					
<p>Title: Materiel Maintenance</p> <p>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.</p> <p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments</p>			2.797	3.099	3.096
<p>Title: Municipal Services</p> <p>Description: Provides for municipal services including grounds maintenance, custodial, pest management, solid waste or refuse handling operations, pavement clearance.</p> <p>FY 2023 Plans: Will provide necessary/routine municipal services to the Installation.</p> <p>FY 2024 Plans: Will provide necessary/routine municipal services to the Installation.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in Funding in FY24 reflects internal rebalancing to accommodate projected execution levels and priorities.</p>			1.848	6.092	4.964
Title: Installation Command and Management			62.648	46.877	37.399

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
<p>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.</p> <p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in funding is due to planned lifecycle of the effort.</p>				
<p>Title: Personnel Services Delivery</p> <p>Description: Provides a human resource specialist responsible for providing all aspects of human resource management, administrative, and counsel to the Garrison Staff.</p> <p>FY 2023 Plans: Will continue to provide human resource support to the Garrison Staff.</p> <p>FY 2024 Plans: Will continue to provide human resource support to the Garrison Staff.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments</p>		0.126	0.134	0.142
<p>Title: Physical Security Matters</p>		5.399	5.982	6.148

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>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.</p> <p>FY 2023 Plans: Will continue to provide the necessary physical security procedures and materials to ensure USAG-KA maintains all proper security measures.</p> <p>FY 2024 Plans: Will continue to provide the necessary physical security procedures and materials to ensure USAG-KA maintains all proper security measures.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments</p>			
<p>Title: Army Security Programs</p> <p>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.</p> <p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments</p>		0.126	0.134
<p>Title: Supply Logistics</p> <p>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</p>		40.270	62.023

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
delivered to the installation, management of non-deployable installation property, and receipt, storage, issue, reutilization and tracking of hazardous materials.			
<p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in Funding in FY24 reflects an increase in the LOGCAP effort and fuel distribution for the Island.</p>			
<p>Title: Transportation Services</p> <p>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.</p> <p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>		2.853	3.558
			4.093

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
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 2022	FY 2023	FY 2024
Change due to annual cost adjustments					
Title: Utilities			17.449	18.049	18.366
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 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 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 2024 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					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
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 to FY 2024 Increase/Decrease Statement: Increase reflects economic assumptions				
Title: Environmental Quality		2.051	2.274	2.312
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 2023 Plans: Will provide necessary/routine environmental quality services to the Installation.				
FY 2024 Plans: Will provide necessary/routine environmental quality services to the Installation.				
FY 2023 to FY 2024 Increase/Decrease Statement: Change due to annual cost adjustments				
Title: Anti-Terrorism (AT)		0.207	0.229	0.233
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.				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<i>FY 2023 Plans:</i> 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. <i>FY 2024 Plans:</i> 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. <i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Change due to annual cost adjustments			
<i>Title:</i> SBIR/STTR Transfer <i>Description:</i> SBIR/STTR <i>FY 2023 Plans:</i> Funding transferred in accordance with Title 15 USC §638 <i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC §638		-	6.259
Accomplishments/Planned Programs Subtotals		165.897	179.306
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
DW9: Army Kwajalein Atoll Restoration And Modernization	-	44.076	49.037	49.938	-	49.938	65.036	70.643	71.201	76.817	0.000	426.748
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 2022	FY 2023	FY 2024
Title: Recapitalization Deficit R&M	44.076	47.247	49.938
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 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 2024 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 2023 to FY 2024 Increase/Decrease Statement: Increase due to planned lifecycle efforts.			
Title: SBIR/STTR Transfer	-	1.790	-
Description: SBIR/STTR			
FY 2023 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638				
Accomplishments/Planned Programs Subtotals		44.076	49.037	49.938
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
DX2: Army Kwajalein Test Ranges and Mission Support	-	11.117	11.979	16.524	-	16.524	16.855	17.185	17.521	17.537	0.000	108.718
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 2022	FY 2023	FY 2024
Title: Contractor Support (C4IM Services)	9.386	9.820	14.767
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 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.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
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 2024 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 2023 to FY 2024 Increase/Decrease Statement: The cost of contract services increased during the re-compete.				
Title: Civilian Pay		0.291	0.304	0.317
Description: Civilian Pay				
FY 2023 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
Cost increase based on new civilian pay rates.			
FY 2024 Plans: Cost increase based on new civilian pay rates.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increase reflects updated civilian pay rate.			
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 2023 Plans: Pay Garrison to provide housing, food support, etc. FY 2024 Plans: Pay Garrison to provide housing, food support, etc.		1.440	1.440
Title: SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC §638 FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638		-	0.415
Accomplishments/Planned Programs Subtotals		11.117	16.524
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	80.386	86.824	95.551	-	95.551	86.470	85.897	86.975	93.919	0.000	616.022
312: Army/Joint Experimentation	-	45.122	34.940	35.982	-	35.982	36.531	37.033	37.651	38.062	0.000	265.321
317: Current Force Capability Gaps	-	35.264	51.863	59.555	-	59.555	49.939	48.864	49.324	55.857	0.000	350.666
33B: Soldier-Centered Analyses For Future Force	-	-	0.021	0.014	-	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 deliver an MDO ready force by 2030. 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 Persistent 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 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	79.585	87.122	87.326	-	87.326
Current President's Budget	80.386	86.824	95.551	-	95.551
Total Adjustments	0.801	-0.298	8.225	-	8.225
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.801	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	8.225	-	8.225
• FFRDC Transfer	-	-0.298	-	-	-
Change Summary Explanation					
FY 24 increase in funding is in support of requirement determination, documentation and integration activities for areas such as Soldier and Robotic development, Air Defense and Artillery formations, Sustainment watercraft and maneuver support vehicles, and Cyber, Networks and Services, Electromagnetic Spectrum Operations and Tactical Radios.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605326A / <i>Concepts Experimentation Program</i>				Project (Number/Name) 312 / <i>Army/Joint Experimentation</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
312: <i>Army/Joint Experimentation</i>	-	45.122	34.940	35.982	-	35.982	36.531	37.033	37.651	38.062	0.000	265.321
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. Deliver Army 2030 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 validate Army 2030 and provide insights into how the Army will design the Army of 2040 and beyond. 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 validate Army 2030 and provide insights into how the Army will design the Army of 2040 and beyond.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Experimentation - Project Convergence - High-Fidelity Live-Virtual-Constructive Experiments	45.122	33.678	35.982

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / <i>Concepts Experimentation Program</i>	Project (Number/Name) 312 / <i>Army/Joint Experimentation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p>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 integrates the Army's contribution to Joint All Domain Operations. PC is a Secretary of the Army priority for Live Prototyping Experimentation in support of the 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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / <i>Concepts Experimentation Program</i>	Project (Number/Name) 312 / <i>Army/Joint Experimentation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p>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.</p> <p>FY 2024 Plans: FY24 funding enables FCC/USAJMC to lead the Joint Warfighting Assessment (JWA), Project Convergence, 4 x Army Focused Warfighting Experiment (AFWE) assessments (AEWE, Cyber Quest, MSSPIX, MFIX), and other Live Field Experimentation activities.</p> <p>Resources 2 x FTEs in support of the Joint Test Element, 27 CMEs, and travel associated with assigned experimentation event travel. FY24 experiments will continue to 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.</p> <p>JMC executes PC24 IAW Army priorities to aggressively advance solutions in the areas of people, weapons systems, command and control, information, and terrain, and integrates the Army's contribution to Joint All Domain Operations. Through experimentation and learning, PC24 helps ensure that the Army has the right people, with the right systems, appropriately enabled, in the right places to support the Joint fight.</p> <p>JMC executes JWA 24 as the annual capstone force modernization exercise for the U.S. Army. JWA 24 will integrate and assess 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; and (3) develop future strategic readiness and interoperability in the JIM warfighting team.</p> <p>In FY24, the JTE continues to generate operational solutions to urgent, specific Joint Warfighter problems through a short-term rigorous test program process.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / <i>Concepts Experimentation Program</i>	Project (Number/Name) 312 / <i>Army/Joint Experimentation</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Funding change reflects planned lifecycle of this effort.				
Title: SBIR/STTR Transfer		-	1.262	-
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.				
Accomplishments/Planned Programs Subtotals		45.122	34.940	35.982
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
317: Current Force Capability Gaps	-	35.264	51.863	59.555	-	59.555	49.939	48.864	49.324	55.857	0.000	350.666
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 to deliver Army 2030 and Design Army 2040. Funding ensures that the FCC acts independently and serves as the voice of the Warfighter, complementing the materiel and non-materiel developers by providing total capability management that integrates all doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) considerations. This project provides AFC and FCC resources to execute Capability Development and Integration Directorate (CDID) Battle Lab experimentation, assessments and analysis addressing the Army's most significant modernization challenges. FCC plans and conducts experiments to gain insights and recommendations in the development of integrated concepts and requirements to inform Army Senior Leader modernization decisions through the results of a rigorous Campaign of Learning. Funding in this project 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 2022	FY 2023	FY 2024
Title: CDID/ACM JCIDS Requirements Documentation	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.			
Title: Requirements Determination	-	22.165	34.769
Description: This accomplishment is a renaming of previous CDID/ACM 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.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / <i>Concepts Experimentation Program</i>	Project (Number/Name) 317 / <i>Current Force Capability Gaps</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p>FY 2024 Plans: Funding in FY24 ensures continuation of requirement determination, documentation and integration in support of all FCC CDIDs. This will include areas of Soldier and Robotic development, Air Defense and Artillery formations, Sustainment watercraft and maneuver support vehicles, and Cyber Army Capability Managers (ACM) areas of Cyberspace, Networks and Services, Electromagnetic Spectrum Operations and Tactical Radios. Cyber ACMs provide support to the Army's Cyber priorities and Cross Functional Team efforts. Funding ensures highly technical requirements development expertise for the Multi-Domain Task Force (MDTF). This ensures use of highly technical expertise to provide quick-response systems engineering support for Multi Domain Operations, MDTF, and other high-priority study areas.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase reflects an increased focus on requirements development supporting Multi Domain Operations and MDTF.</p>			
<p>Title: Accelerated Capabilities Development</p> <p>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.</p>		3.782	-
<p>Title: Army Focused Warfighting Experiments (AFWE)</p> <p>Description: This accomplishment is a renaming of the above Accelerated Capabilities Development accomplishment to update mission and terminology.</p> <p>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 of 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.</p> <p>FY 2023 Plans:</p>		-	6.332

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / <i>Concepts Experimentation Program</i>	Project (Number/Name) 317 / <i>Current Force Capability Gaps</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
FCC conducts AFWE experiments to continue identification and assessment of Multi Domain Operations solutions and to refine operational and organizational concepts.			
FY 2023 to FY 2024 Increase/Decrease Statement: FY24 reflects decrease due to plan to execute AFWE in Project 312 - Army/Joint Experimentation within the same Program Element.			
Title: Battle Lab Experimentation and Support		1.419	17.050
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 delivery of Army 2030 and identifies opportunities to modernize the Army of 2040.			18.133
FY 2023 Plans: Funds provide CDID Battle Lab capacity in order 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 2024 Plans: Funds provide FY24 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 2023 to FY 2024 Increase/Decrease Statement: FY24 increase for Air Space Total Awareness for Rapid Tactical Execution (ASTARTE) and FCC Forge requirements.			
Title: Army Capability-based Architecture Development and Integration Environment (ArCADIE)		6.027	0.408
Description: ArCADIE is the Army's authoritative source for architecture data and supports the community of practice requirement. ArCADIE provides an environment into which applications, software, and new functionality can be integrated while preserving access and linkage to existing data and artifacts. It provides standardized tool sets and enables software license sharing to reduce costs. ArCADIE employs a federation strategy to provide one integrated data store, regardless of how and where data is stored, presented as one integrated data set. Stakeholders make extensive use of common core services within ArCADIE to eliminate redundancies and create efficiencies.			0.653
FY 2023 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
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 2024 Plans: ArCADIE will be maintained to enable Army futures Command to develop, verify and validate operational architecture for Army 2030 and 2040 Multi Domain Formations. It will continue to serve as the authoritative architecture data and supporting systems in accordance with DoD and DA Information Assurance and management standards. FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.				
Title: System of Systems Enhanced Small Unit (SESU) Focused Assessments Description: SESU is an Army/DARPA, CSA-directed project to support experimentation and demonstration of capabilities for small units. The Army is responsible to develop and execute virtual and live experimentation to evaluate SESU concepts, Adaptive C2 software, innovative sensors and effectors. FY 2023 Plans: Funding supports Focused Assessments, Models and Simulations, and Capstone Demonstration. FY 2024 Plans: FY24 funds final planning and execution for a full scale SESU experiment, against a pacing threat, in a real world type scenario. This will be the culminating exercise for the SESU effort prior to scheduled transition to capabilities development of select systems. Meets CSA intent for SESU capability. FY 2023 to FY 2024 Increase/Decrease Statement: FY24 reflects increase for final planning and execution for a full scale SESU experiment. SESU transitions to Program of Record or transfers to a National Training Center (NTC) mission beginning in FY25.		1.782	4.015	6.000
Title: SBIR/STTR Transfer FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638. FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.		-	1.893	-
Accomplishments/Planned Programs Subtotals		35.264	51.863	59.555

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605326A / <i>Concepts Experimentation Program</i>	Project (Number/Name) 317 / <i>Current Force Capability Gaps</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks test		
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
33B: Soldier-Centered Analyses For Future Force	-	-	0.021	0.014	-	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).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Manpower and Personnel Integration (MANPRINT) 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: 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 2024 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 2023 to FY 2024 Increase/Decrease Statement: Change reflects planned lifecycle of this effort.	-	0.020	0.014
Title: FY2023 SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC §638 FY 2023 Plans:	-	0.001	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023			
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		
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638						
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638						
Accomplishments/Planned Programs Subtotals				-	0.021	0.014
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
D. Acquisition Strategy N/A						

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605502A I Small Business Innovative Research							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	374.118	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	374.118
861: SMALL BUS TECH - AMC	-	46.111	-	-	-	-	-	-	-	-	0.000	46.111
M40: SMALL BUSINESS-AMC	-	328.007	-	-	-	-	-	-	-	-	0.000	328.007

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) 2023 or FY 2024 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)	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	374.118	0.000	0.000	-	0.000
Total Adjustments	374.118	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	374.118	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
861: SMALL BUS TECH - AMC	-	46.111	-	-	-	-	-	-	-	-	0.000	46.111
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.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M40: SMALL BUSINESS-AMC	-	328.007	-	-	-	-	-	-	-	-	0.000	328.007
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.

There is no Fiscal Year (FY) 2023 or FY 2024 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army **Date:** March 2023

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							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	362.223	417.567	439.118	-	439.118	461.129	454.155	448.841	452.807	0.000	3,035.840
F30: Army Test Ranges & Facilities	-	362.223	417.567	375.008	-	375.008	401.845	394.794	389.402	393.290	0.000	2,734.129
WD1: West Desert Test Center	-	-	-	64.110	-	64.110	59.284	59.361	59.439	59.517	0.000	301.711

Note

In FY24, this Program element (PE) will receive funding which has been transferred from appropriation 0400, PE 0605384BP Chemical & Biological Defense Program (RDT&E Management Support) to the Army 2040 appropriation, PE 0605601A / Project WD1, West Desert Test Center.

A. Mission Description and Budget Item Justification

This Program Element (PE) provides the institutional funding required to operate developmental 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 eight 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; Tropic Regions Test Centers (TRTC) at various locations; and West Desert Test Center (WDTC) and Bio Testing Division (BTD) at Dugway Proving Ground (DPG), Utah. 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 \$8.6 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
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			
This funding line supports testing of Army Modernization Priority Programs.					
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	367.125	401.643	370.357	-	370.357
Current President's Budget	362.223	417.567	439.118	-	439.118
Total Adjustments	-4.902	15.924	68.761	-	68.761
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	16.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-4.902	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	68.761	-	68.761
• FFRDC Transfer	-	-0.076	-	-	-
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: F30: Army Test Ranges & Facilities				FY 2022	FY 2023
Congressional Add: Program Increase: Counter-Unmanned Aerial System High Energy Laser Platform Integration				10.000	-
Congressional Add: Environmental Characterization for Test Operations				3.000	4.000
Congressional Add: Enterprise Enabled Multi Domain Operations (EEMDO) Cyber Testing				-	12.000
Congressional Add Subtotals for Project: F30				13.000	16.000
Congressional Add Totals for all Projects				13.000	16.000
Change Summary Explanation					
In FY24:					
Transfer of 23 direct authorizations with associated civilian labor costs and funding for the sustainment and enhancement of the Four-Dimensional Weather System (4DWX) from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605601A / Project F30, Army Test Ranges & Facilities. (+ \$4.7M)					
Transfer of 13 direct authorizations with associated civilian labor costs from 0605602A / FJ3, Technical Test Instrumentation and Targets to APE 0605601A / F30, Army Test Ranges & Facilities (+\$1.9M)					

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army		Date: March 2023
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	
<p>Functional Transfer of program and funding from the Chemical & Biological Defense Program to Army. In FY24, this PE will realign from appropriation 0400, PE 0605384BP Chemical & Biological Defense Program (RDT&E Management Support) to the 2040 appropriation, PE 0605601A / Project WD1, West Desert Test Center. (+\$64.1M)</p> <p>Inflation (i.e., Civilian Pay, etc.): (+\$10.4M)</p> <p>Army Senior Leader Full Time Equivalent (FTE) and Emerging Growth Billpayer Reductions (-91 FTEs total) (-\$12.1M)</p> <p>ARCYBER- C4IM Services Support to WSMR Total obligation authority adjustment.: (-\$0.2M)</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
F30: Army Test Ranges & Facilities	-	362.223	417.567	375.008	-	375.008	401.845	394.794	389.402	393.290	0.000	2,734.129
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY24, 23 direct authorizations will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605601A / Project F30, Army Test Ranges & Facilities.

In FY24 funding for the sustainment and enhancement of the Four-Dimensional Weather System (4DWX) will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605601A / Project F30, Army Test Ranges & Facilities.

A. Mission Description and Budget Item Justification

This Project provides the institutional funding required to operate developmental 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 \$8.6 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.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
<p>Title: Mission Support</p> <p>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 indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) IAW DoDI 3200.18 and DoDFMR 7000.14-R.</p> <p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in funding will support sustainment of test capabilities which will enable ATEC to focus on ensuring test capabilities remain viable and ready to support future Army priorities.</p>		74.395	86.777	101.224
<p>Title: T&E Civilian Pay</p> <p>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.</p> <p>FY 2023 Plans:</p>		167.947	175.681	179.338

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to inflation and civilian pay raise assumptions.</p>			
<p>Title: Contractor Support</p> <p>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. For some skillsets, there are no government civilians performing the work.</p> <p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Reflects adjustments in the contractor workforce to focus on only Army priority workload in future years.</p>		60.535	59.225
Title: Revitalization/Upgrade		-	23.022
			44.424
			5.000

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>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.</p> <p>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 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.</p> <p>FY 2024 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 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funds allocated based on program requirements in support of the sustainment of critical test infrastructure and capabilities supporting Army modernization across five MRTFB elements.</p>			
<p>Title: Physical Security Guards and Equipment</p> <p>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 Incident/Mishap Response and Assistance (CIMRA). 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</p>		11.836	10.821
			10.459

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>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.</p> <p>FY 2023 Plans: Funds will support physical security guard operations, mandatory training, qualifications and for maintenance and sustainment of weapons, GSA leased vehicles, communications, and ESS equipment at the FBR at WSTC located at WSMR and Chemical/Biological facilities at WDTG 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.</p> <p>FY 2024 Plans: Funds will support physical security guard operations, mandatory training, qualifications and for maintenance and sustainment of weapons, GSA leased vehicles, communications, and ESS equipment at the FBR at WSTC located at WSMR and Chemical/Biological facilities at WDTG 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease due to adjustments within the security guard requirement.</p>			
<p>Title: UH-60 Aircraft</p> <p>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.</p> <p>FY 2023 Plans: Funds will support UH-60 helicopter maintenance, aircrew labor, mandatory training and aircraft flying hours.</p> <p>FY 2024 Plans: Funds will continue to support UH-60 helicopter maintenance, aircrew labor, mandatory training and aircraft flying hours.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>		6.749	7.693
			8.912

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Increase due to contract changes, operating costs, and inflation.				
<p>Title: Network Enterprise Center (NEC)</p> <p>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.</p> <p>FY 2023 Plans: Funds will continue to support all labor, support equipment, and training required for the NEC operations at WSMR and YPG.</p> <p>FY 2024 Plans: Funds will continue to support all labor, support equipment, and training required for the NEC operations at WSMR and YPG.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to inflation.</p>		14.002	14.084	14.167
<p>Title: Cybersecurity Service Provider (CSSP)</p> <p>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.</p> <p>FY 2023 Plans: Funds will continue to support cyber defense oversight and continuous monitoring of information security.</p> <p>FY 2024 Plans: Funds will continue to support cyber defense oversight and continuous monitoring of information security.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase due to inflation.</p>		1.704	1.713	1.722
<p>Title: Military Construction (MILCON) Mission Unique Equipment (MUE)</p> <p>Description: MUE is defined as equipment that regulation identifies as "above standard" and necessary to fulfill the specific mission performed in the constructed new facility. MUE generally consists of personal property items that fall under the AR 420-1</p>		6.950	14.623	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
<p>definition of equipment-in-place and is not programmed into the MILCON. MUE funding includes procurement and installation of new equipment; and also costs to move existing equipment to be retained into newly constructed facilities. The standard process for MILCON programming is through the Army FIP process managed by AMC; however, ATEC has also had projects added directly through Congressional Legislation.</p> <p>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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decreased funding in FY24 due to MUE not needed in support of a MILCON project.</p>				
<p>Title: MRTFB Organizational Logistics Activities</p> <p>Description: In FY20, Army policy changed requiring organizational logistics functions be funded by organizational units and not the Army Material Command's Logistics Readiness Centers (LRC). 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; 41 Code of Federal Regulations (CFR) Part 102-34 Subpart J - Federal Fleet Report performance data collected through the Federal Automotive Statistical Tool (FAST); ammunition quality assurance and surveillance; driver's licensing; and transportation support for inbound and outbound equipment, freight and cargo.</p> <p>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; retail fuel support for vehicles and ground power generation equipment; 41 CFR Part 102-34 Subpart J - Federal Fleet Report performance data collected through the Federal Automotive Statistical Tool (FAST); driver's licensing; ammunition quality assurance and surveillance; and transportation support for inbound and outbound equipment, freight and cargo.</p> <p>FY 2024 Plans:</p>		4.737	6.975	7.084

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
Funds will support logistics activities providing support to WSTC located at WSMR, YTC located at YPG and WDTC located at DPG. These LRC 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/GSA vehicles and equipment; forward fuel support for vehicles and ground power generation equipment; 41 CFR Part 102-34 Subpart J - Federal Fleet Report performance data collected through the Federal Automotive Statistical Tool (FAST); ammunition quality assurance and surveillance; equipment authorization and utilization reporting; and transportation support for inbound and outbound equipment, freight and cargo.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase due to inflation.			
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 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 2023 to FY 2024 Increase/Decrease Statement: Decreased funding to support higher Army priorities.		0.212	0.216
Title: AMC / AFC Physical Security Officer Civ Pay Description: AMC / AFC Physical Security Officer Civ Pay FY 2023 Plans: AMC / AFC Physical Security Officer Civ Pay FY 2024 Plans: AMC / AFC Physical Security Officer Civ Pay FY 2023 to FY 2024 Increase/Decrease Statement: Civilian pay raise assumptions.		0.156	0.173
Title: Army Enterprise Business Systems (EBS) Consolidation - SOMARDS Financial Management Information System (SOFIMS)		-	0.221
			-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>Description: The Army consolidated Enterprise Business Systems (EBS) under the Acquisition Domain. The consolidation resulted in the transfer of funding 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).</p> <p>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).</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funds transferred from the Sustaining Program Evaluation Group (SS PEG) to the Equipping (EE) PEG for Army Enterprise Business Systems (EBS) Consolidation - SOFIMS.</p>			
<p>Title: SBIR/STTR Transfer</p> <p>Description: Funding transferred in accordance with Title 15 USC §638.</p> <p>FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.</p>		-	0.343
<p>Title: Four Dimensional Weather System (4DWX)</p> <p>Description: Provides 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.</p> <p>FY 2024 Plans: Provides 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. The funding is used to improve forecast accuracy in support of Army RDTE mission requirements, including the development of a full-grid climatology using 4DWX analysis and further development of probabilistic modeling, data assimilation procedures, and configuration of 4DWX to optimize test range specific requirements.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>		-	2.500

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
In FY24 funding for the sustainment and enhancement of the 4DWX system will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605601A / Project F30, Army Test Ranges & Facilities.			
Accomplishments/Planned Programs Subtotals		349.223	401.567
		FY 2022	FY 2023
Congressional Add: Program Increase: Counter-Unmanned Aerial System High Energy Laser Platform Integration		10.000	-
FY 2022 Accomplishments: 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.			
Congressional Add: Environmental Characterization for Test Operations		3.000	4.000
FY 2022 Accomplishments: Congressional Add for Environmental Characterization for Test Operations.			
FY 2023 Plans: Congressional Add for Environmental Characterization for Test Operations.			
Congressional Add: Enterprise Enabled Multi Domain Operations (EEMDO) Cyber Testing		-	12.000
FY 2023 Plans: Congressional Add for Enterprise Enabled Multi Domain Operations (EEMDO) Cyber Testing.			
Congressional Adds Subtotals		13.000	16.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605601A / Army Test Ranges and Facilities				Project (Number/Name) WD1 / West Desert Test Center			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
WD1: West Desert Test Center	-	-	-	64.110	-	64.110	59.284	59.361	59.439	59.517	0.000	301.711
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

West Desert Test Center is a new start within the Army Test Ranges and Facilities program in FY 2024.

A. Mission Description and Budget Item Justification

This project provides funding for the West Desert Test Center (WDTC) and Combat Capability Development Command (DEVCOM) Chemical and Biological Center BioTesting Division (BTD-CBC) MRTFB institutional technical and operational capability for testing DoD Chemical and Biological (CB) and Non-Traditional Agent (NTA) defense materiel, equipment, and systems from concept through production to include associated special operations Tactics, Techniques, and Procedures Development (TTPD) activities.

Efforts included in this Project are:

- (1) BTD-CBC
- (2) WDTC

Together WDTC and BTD-CBC are the reliance centers for all DoD CB defense testing and provide the United States' only combined range, chamber, toxic chemical lab, and bio-safety level 3 Biological Select Agent and Toxin (BSAT) aerosol test capability. This project funds the institutional and overhead costs to operate WDTC and BTD-CBC in compliance with the National Defense Authorization Act (NDAA) for FY03 (Public Law 107-314), Section 232, "Objective for institutional funding of test and evaluation facilities." Institutional operating costs were transferred to the consolidated OSD Chemical and Biological Defense Program consistent with Public Law 103-160 Section 1701. Those costs that are directly attributable to the use of WDTC and BTD-CBC for testing and TTPD activities under a particular program, over and above the institutional and overhead costs, are billed to the program.

WDTC and BTD-CBC use unique, state-of-the-art chemical and life-science test facilities and test chambers to perform CB defense testing of protective gear, decontamination systems, detectors, equipment, and non-materiel CB defense solutions while maintaining safety, security, and surety of chemical agents and biological pathogens. WDTC also provides surveyed and instrumented outdoor ranges and specialized structures for CB simulant agent dissemination in operationally threat-relevant environments and TTPD activities.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: BioTesting Division (BTD-CBC) - MRTFB	-	-	8.613
Description: Funding maintains MRTFB test and evaluation test and evaluation (T&E) mission readiness at Bio Testing Division for biological surety laboratory operations, bio-safety risk management, and defensive T&E mission support activities. Lothar			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0605601A / Army Test Ranges and Facilities		Project (Number/Name) WD1 / West Desert Test Center	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
<p>Salomon Life Sciences Test Facility (LSTF) and Baker complex contains biosafety level (BSL) 1, 2, and 3 laboratories for testing biological weapons detectors, individual protective clothing and equipment, decontamination systems, and material survivability in a bioweapon contaminated environment. LSTF is the sole DoD Facility Certified to challenge developmental defensive test equipment with aerosolized biological warfare agents, including bacteria, viruses, and biological toxins, in BSL-3 chambers. Represents the MRTFB activity's institutional and overhead costs which cannot be charged to DoD MRTFB users in compliance with DoDI 3200.18 and DoDFMR 7000.14-R.</p> <p>FY 2024 Plans: Fund essential T&E mission support activities (civilian labor, travel, training, communications, printing and reproduction, supplies, equipment acquisition, contract support, and purchased equipment maintenance) maintaining mission readiness of the bioweapons defense technical T&E capability. These activities are resourced in compliance with DoDI 3200.18 and DoDFMR 7000.14-R.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: This is a new start in FY 2024</p>					
<p>Title: WDTC, MRTFB Civilian Pay</p> <p>Description: Supports civilian labor overhead costs for Program Budget Guidance (PBG) authorizations and the balance is customer funded. Test customers pay all costs 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 the Chemical Biological Defense Program (CBDP) mission. WDTC provides a specially trained support staff to operate and maintain all critical testing systems.</p> <p>FY 2024 Plans: Funds will support overhead costs of civilian labor for PBG authorizations, and the balance will be customer funded. Test customers will continue to pay all costs directly attributable to the use of a test facility or resource for testing of a particular program. Funding will remain essential to maintain core T&E skills as part of the Government civilian workforce used in support of the CBDP mission. WDTC will continue to provide a specially trained support staff to operate and maintain all critical testing systems.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: This is a new start in FY 2024</p>			-	-	29.373
<p>Title: WDTC, MRTFB Mission Support</p> <p>Description: Provides for ongoing sustainment of existing chemical test instrumentation and equipment at WDTC necessary for chemical laboratories, chemical/biological field and simulant chamber, data science test mission readiness, and staff functions</p>			-	-	13.754

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605601A / Army Test Ranges and Facilities	Project (Number/Name) WD1 / West Desert Test Center	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>not chargeable to a test customer. Supports annual service contracts for test equipment operations, diagnostics, calibration, and certification, as well as routine life cycle and use-related replacement of existing field, test related administrative, and analytical instrumentation components and systems. Supports test facility maintenance, handling and disposal of hazardous materials, transportation, postage, administrative supplies, tools, software, spare parts, mission unique installation costs, temporary duty/training of civilian and contractor personnel, personnel certifications, printing, reproduction, and communications. Funding supports indirect costs for MRTFB IAW DoDI 3200.18 and DoD FMR 7000.14-R.</p> <p>FY 2024 Plans: Funds will provide sustainment of existing test instrumentation and equipment at WDTC in support of operations to maintain mission readiness of chemical laboratories, chemical/biological field and simulant chamber capabilities of test data and staff functions not chargeable to a test customer. Support annual service contracts for equipment operation, diagnostics, and calibration, as well as a routine life cycle and use-related replacement of existing field, administrative, and analytical instrumentation components, and systems. Support test facility maintenance, handling, and disposal of hazardous materials, transportation, postage, administrative supplies, tools, software, spare parts, mission unique installation costs, temporary duty/training of civilian and contractor personnel, certifications, printing, reproduction, and communications. Funds will continue to support indirect costs for MRTFB IAW DoDI 3200.18 and DoD FMR 7000.14-R.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: This is a new start in FY 2024</p>			
<p>Title: WDTC, MRTFB Contractor Support</p> <p>Description: 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 as well as assist with the operation and maintenance of critical testing systems. Functions performed include chemical and biological analysis, field support, planning, report documentation as well as range operations, warehousing support, project management, recurring/general maintenance to test facilities and data acquisition support. For some skillsets, there are no government civilians performing the work.</p> <p>FY 2024 Plans: Funds will support contractor labor costs not billable to test customers. Contract labor is essential to augment core civilian T&E personnel with additional subject matter expertise, capabilities and/or capacity. Functions performed will include chemical and biological analysis, test field support, planning, and test report documentation as well as range operations, warehousing support, project management support, recurring/general maintenance to test facilities and data acquisition support.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>		-	12.370

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605601A / Army Test Ranges and Facilities	Project (Number/Name) WD1 / West Desert Test Center		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
This is a new start in FY 2024				
Accomplishments/Planned Programs Subtotals		-	-	64.110
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	57.584	67.962	42.220	-	42.220	43.439	37.353	37.655	42.123	0.000	328.336
628: Developmental Test Technology & Sustainment	-	43.599	-	-	-	-	-	-	-	-	0.000	43.599
62C: Modeling and Simulation Instrumentation	-	13.985	-	-	-	-	-	-	-	-	0.000	13.985
FJ3: Technical Test Instrumentation & Targets	-	-	67.962	42.220	-	42.220	43.439	37.353	37.655	42.123	0.000	270.752

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 critical front-end investments for development of: new test methodologies and standards; advanced test technology concepts; future T&E; advanced modeling, simulation and instrumentation prototypes; and full-scale development of T&E 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 T&E capabilities are required to support T&E requirements of Army signature modernization efforts to support development of Multi-Domain Operations (MDO)-capable Forces. These activities enable Army Futures Command (AFC) signature modernization efforts 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 T&E capabilities at all locations by replacing unreliable, uneconomical, obsolete, 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), Lower Tier Air and Missile Defense Sensor (LTAMDS), Army Tactical Missile System (ATACMS), CH-47F Chinook, Command Post Computing Environment (CPCE), Common Infrared Counter Measures (CIRCM), Counter Small Unmanned Aerial System (c-SUAS), Counter Rocket Artillery Mortar (C-RAM), Dismounted Assured PNT System (DAPS), Distributed Common Ground System - Army (DCGS-A), Capability Drop 2, Tactical Intelligence Targeting Access Node (TITAN), Precision Strike Missile (PrSM). 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 Fst,

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army			Date: March 2023		
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			
M776 Chrome Tube, M777 Long Range Cannon, Maneuver Short Range Air Defense (M-SHORAD), ManPack (MP), 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 Signature Modernization efforts to include Project Convergence and PNT Assessment Exercise (PNTAX).					
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	59.253	37.962	38.176	-	38.176
Current President's Budget	57.584	67.962	42.220	-	42.220
Total Adjustments	-1.669	30.000	4.044	-	4.044
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	30.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.669	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	4.044	-	4.044
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 628: Developmental Test Technology & Sustainment					
Congressional Add: Rapid Assurance Modernization Program - Test (RAMP-T)					
Congressional Add Subtotals for Project: 628					
Project: FJ3: Technical Test Instrumentation & Targets					
Congressional Add: Rapid Assurance Modernization Program - Test (RAMP-T)					
Congressional Add Subtotals for Project: FJ3					
Congressional Add Totals for all Projects					
Change Summary Explanation					
FY23 Congressional Add program increase for Rapid Assurance Modernization Program - Test of +\$30M.					

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605602A / Army Technical Test Instrumentation and Targets	
<p>In FY24 funding for meteorological instrumentation and technology to support RDT&E activities at Army test sites will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605602A / Project FJ3, Army Technical Test Instrumentation & Targets +\$2.763M.</p> <p>In FY24 there is a funding increase for investment in operational test and evaluation (T&E) capabilities supporting Army modernization of +\$4.681M.</p> <p>In FY24 there is a transfer of 23 manpower authorizations and associated civilian labor costs from PE 0605602A, Technical Test Instrumentation and Targets to: PE 0605601A, Army Test Ranges & Facilities +13 authorizations and PE 0605712A, Support of Operational Testing - ATEC Activities +10 manpower authorizations -\$3.586M.</p> <p>FY24 adjustment for economic assumptions +\$0.186M.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605602A / Army Technical Test Instru mentation and Targets				Project (Number/Name) 628 / Developmental Test Technology & Sustainment			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
628: Developmental Test Technology & Sustainment	-	43.599	-	-	-	-	-	-	-	-	0.000	43.599
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY23 two projects that funds ATEC's test and evaluation (T&E) capability investment requirements will be 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 T&E capabilities, and advanced instrumentation prototypes for subordinate commands of the U.S. Army Test and Evaluation Command (ATEC). These T&E capabilities are required to support developmental test (DT) requirements of high priority Army systems supporting Army signature modernization efforts. Where practical, efficiencies will be gained through the common use of DT instrumentation in operational testing (OT). A key element is upgrading 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 T&E capabilities. This Project develops and maintains DT instrumentation and T&E 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, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) 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 performance and reliability, availability, and maintainability (RAM) testing.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Developmental Test Technology Investment	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 T&E 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 C5ISR systems; performance and 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,			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605602A / <i>Army Technical Test Instrumentation and Targets</i>	Project (Number/Name) 628 / <i>Developmental Test Technology & Sustainment</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
optics and telemetry used in missile testing; acquires data recorders, signal conditioning 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 using smart devices as data collectors.			
Accomplishments/Planned Programs Subtotals		33.599	-
		FY 2022	FY 2023
Congressional Add: Rapid Assurance Modernization Program - Test (RAMP-T)		10.000	-
FY 2022 Accomplishments: Congressional Add for RAMP-T.			
Congressional Adds Subtotals		10.000	-
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605602A / Army Technical Test Instru mentation and Targets				Project (Number/Name) 62C / Modeling and Simulation Instrumentation			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
62C: Modeling and Simulation Instrumentation	-	13.985	-	-	-	-	-	-	-	-	0.000	13.985
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY23 two projects that funds ATEC's test and evaluation (T&E) capability investment requirements will be 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 to Milestone Decision Authorities and Army Senior Leaders for the acquisition and fielding of Army systems. A subordinate unit of ATEC, the Operational Test Command (OTC) is responsible for planning, execution, and reporting operational tests (OT) for all signature modernization efforts to include Army Future Command (AFC), Cross Functional Teams (CFT) programs, and other key Programs of Record on Director of Operational Test & Evaluation (DOT&E) oversight. OTC employs Modeling, Simulation, and Instrumentation (MS&I) to provide a realistic multi-domain operations (MDO) test environment with modern threat and target effects, conduct test monitoring and control, and perform data collection, reduction, and 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 2022	FY 2023	FY 2024
Title: MS&I	13.985	-	-
Description: Develops and enhances ATEC's simulation/stimulation of Mission Command; Fire Support; Air Defense; Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR); and Network systems. Improves and sustains Real-Time Casualty Assessment (RTCA) capabilities. Develops, enhances, and sustains Performance			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605602A / Army Technical Test Instru mentation and Targets	Project (Number/Name) 62C / Modeling and Simulation Instrumentation	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
Instrumentation Systems, Time Space Positioning Information (TSPI), Telemetry Systems, and Imaging Systems together with their associated data management enabling capabilities.			
Accomplishments/Planned Programs Subtotals		13.985	-
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605602A / Army Technical Test Instru mentation and Targets				Project (Number/Name) FJ3 / Technical Test Instrumentation & Targets			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
FJ3: Technical Test Instrumentation & Targets	-	-	67.962	42.220	-	42.220	43.439	37.353	37.655	42.123	0.000	270.752
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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 T&E 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 T&E capabilities developed by others (e.g., government, academia) or commercial-off-the-shelf products. These T&E 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 signature modernization efforts 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 2022	FY 2023	FY 2024
Title: Technical Test Instrumentation & Targets	-	36.578	42.220
Description: Develops, acquires, and upgrades critical T&E 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, Computers, Cyber (C5) systems; performance and 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; 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.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>FY 2023 Plans: ATEC 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.</p> <p>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.</p> <p>FY 2024 Plans: 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.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0605602A / <i>Army Technical Test Instrumentation and Targets</i>		Project (Number/Name) FJ3 / <i>Technical Test Instrumentation & Targets</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
Funds will help develop, acquire, and upgrade critical Meteorological test technology and instrumentation. Will provide 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.					
FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to inflation rates for non-pay and non-fuel purchases and funding increase for investment in operational test and evaluation (T&E) capabilities supporting Army modernization. These T&E capability investments are required to evaluate systems in a contested Multi-Domain Environment (MDO). In FY24 funding for meteorological instrumentation and technology to support RDT&E activities at Army test sites will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605602A / Project FJ3, Army Technical Test Instrumentation & 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 2023 to FY 2024 Increase/Decrease Statement: Decreased funding for TDMS to allow for synergy of execution utilizing our existing funding sources.			-	0.132	-
Title: SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC §638. FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638. FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.			-	1.252	-
Accomplishments/Planned Programs Subtotals			-	37.962	42.220
			FY 2022	FY 2023	
Congressional Add: Rapid Assurance Modernization Program - Test (RAMP-T)			-	30.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605602A / Army Technical Test Instru mentation and Targets	Project (Number/Name) FJ3 / Technical Test Instrumentation & Targets	
		FY 2022	FY 2023
FY 2023 Plans: Congressional Add for RAMP-T.			
Congressional Adds Subtotals		-	30.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0605604A / <i>Survivability/Lethality Analysis</i>							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	35.042	36.500	37.518	-	37.518	37.529	37.575	37.975	38.389	0.000	260.528
675: <i>Army Survivability Analysis & Evaluation Supp</i>	-	35.042	36.500	37.518	-	37.518	37.529	37.575	37.975	38.389	0.000	260.528

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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support		PE 0605604A I Survivability/Lethality Analysis			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	36.370	36.500	37.353	-	37.353
Current President's Budget	35.042	36.500	37.518	-	37.518
Total Adjustments	-1.328	0.000	0.165	-	0.165
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.328	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.165	-	0.165
Change Summary Explanation					
Increased funding due to revised economic assumptions.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675: Army Survivability Analysis & Evaluation Supp	-	35.042	36.500	37.518	-	37.518	37.529	37.575	37.975	38.389	0.000	260.528
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.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
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 2022	FY 2023	FY 2024
Title: Survivability, Lethality, Vulnerability Analyses (SLVA) for Ground, Aviation, Munitions, and Soldier Systems Description: This activity provides integrated multi-domain SLVA for highest priority Ground, Aviation, Munitions, and Soldier Systems. FY 2023 Plans: 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. Provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, 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 2024 Plans: Will develop and advance foundational SLVA capabilities to conduct analyses and assessments of ground, aviation, munitions, and Soldier technologies as specified by AFC/DEVCOM and AEC highest priority systems. Will provide data and analysis support throughout AFC experimentation, including the Project Convergence Campaign of Learning and the Future Study Program. For DEVCOM Centers/ARL, will work with prototype technology developers to constructively influence design and provide performance data to mature ground, aviation, munitions, and Soldier technologies and reduce risk. FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort			16.093	16.567	17.022
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 Electronic Warfare (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 2023 Plans: 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. Provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, work with materiel developers to constructively influence system design and provide relevant data to Army analytical community to support Analyses			17.429	17.927	18.235

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605604A / <i>Survivability/Lethality Analysis</i>	Project (Number/Name) 675 / <i>Army Survivability Analysis & Evaluation Supp</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
of Alternatives and other Army studies. Cyber support includes resiliency assessments of systems and Soldiers together and verification of fixes to identified vulnerabilities.			
FY 2024 Plans: Will develop and advance foundational cyber and electronic warfare analytical capabilities to conduct analyses and assessments of C4ISR technologies as specified by AFC/DEVCOM and AEC highest priority systems. Will provide data and analysis support throughout AFC experimentation, including the Project Convergence Campaign of Learning and the Future Study Program. For DEVCOM Centers/ARL, will work with prototype technology developers to constructively influence design and provide performance data to mature C4ISR technologies and reduce risk.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort			
Title: Survivability, Lethality, Vulnerability (SLV) Analyses for Developmental Air and Missile Defense Systems		1.520	2.006
Description: Conduct integrated SLV analyses for developmental air and missile defense systems, pre-planned product improvements of current systems, and recently fielded systems.			2.261
FY 2023 Plans: Conduct high-priority measurements and analysis on AMD systems, technologies and components as specified by AFC, AEC, and DEVCOM. Provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, 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 2024 Plans: Will develop and advance foundational SLV capabilities to conduct analyses and assessments of developmental air and missile defense technologies as specified by AFC/DEVCOM and AEC highest priority systems. Will provide data and analysis support throughout AFC experimentation, including the Project Convergence Campaign of Learning and the Future Study Program. For DEVCOM Centers/ARL, will work with prototype technology developers to constructively influence design and provide performance data to mature developmental air and missile defense technologies and reduce risk.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort.			
Accomplishments/Planned Programs Subtotals		35.042	36.500
C. Other Program Funding Summary (\$ in Millions)			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy		
N/A		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army Date: March 2023

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
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	2.398	4.777	2.718	-	2.718	2.253	2.257	2.281	2.306	Continuing	Continuing
092: Aircraft Certification	-	2.398	4.777	2.718	-	2.718	2.253	2.257	2.281	2.306	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 Military Airworthiness Certification Criteria (AMACC) 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, Autonomy/Artificial Intelligence/Machine Learning, Digital Engineering, Electric and Hybrid Propulsion, and other Office of the Secretary of Defense (OSD) initiatives.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0605606A / Aircraft Certification			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	2.489	2.777	2.775	-	2.775
Current President's Budget	2.398	4.777	2.718	-	2.718
Total Adjustments	-0.091	2.000	-0.057	-	-0.057
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	2.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.091	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.057	-	-0.057
Congressional Add Details (\$ in Millions, and Includes General Reductions)				FY 2022	FY 2023
Project: 092: Aircraft Certification					
Congressional Add: Program Increase - Big Data Analytics				-	2.000
Congressional Add Subtotals for Project: 092				-	2.000
Congressional Add Totals for all Projects				-	2.000
Change Summary Explanation					
Decreased funding to support higher Army priorities.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
092: Aircraft Certification	-	2.398	4.777	2.718	-	2.718	2.253	2.257	2.281	2.306	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 Military Airworthiness Certification Criteria (AMACC) 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, Autonomy/Artificial Intelligence/Machine Learning, Digital Engineering, Electric and Hybrid Propulsion, 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 2022	FY 2023	FY 2024
Title: Certification Requirements and Studies for Force Modernization Aircraft, Future Aircraft, and Advanced Aircraft Technologies	1.179	1.557	1.715
Description: Perform studies to support airworthiness certification requirements for Force Modernization and Future Aircraft Systems.			
FY 2023 Plans: Refine Army Military Airworthiness Certification Criteria (AMACC) document. Conduct technical and airworthiness qualification assessments, projects, and studies to demonstrate airworthiness and system performance for Army force modernization			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>aircraft systems and multi-system programs (e.g. AH-64E, UH-60M, MH-47G, MH-60M, etc). 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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort.</p>			
<p>Title: Design Standards</p> <p>Description: Support the development, implementation and maintenance of Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching Airworthiness qualification documentation.</p> <p>FY 2023 Plans: Develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation.</p> <p>FY 2024 Plans: Will develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort</p>		0.777	0.777
<p>Title: Commercial Derivative Aircraft</p> <p>Description: Technical and airworthiness qualification for Commercial Derivative Aircraft.</p> <p>FY 2023 Plans:</p>		0.221	0.071

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
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 2022	FY 2023	FY 2024
Continue to provide technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration.					
FY 2024 Plans: Will provide cursory technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration.					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort					
Title: Aircraft Fleet Airworthiness Certification Advancement and Synchronization			0.221	0.221	0.059
Description: Support efforts to establish and maintain aircraft safety for a fleet of aircraft.					
FY 2023 Plans: 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).					
FY 2024 Plans: Will provide support to maintain general situational awareness 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).					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort					
Accomplishments/Planned Programs Subtotals			2.398	2.777	2.718
			FY 2022	FY 2023	
Congressional Add: Program Increase - Big Data Analytics			-	2.000	
FY 2023 Plans: Congressional interest item.					
Congressional Adds Subtotals			-	2.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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) N/A		
Remarks		
D. Acquisition Strategy N/A		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	6.389	6.958	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.347
128: Meteorological Support To RDT&E Activities	-	6.389	6.958	-	-	-	-	-	-	-	0.000	13.347

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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0605702A / Meteorological Support to RDT&E Activities			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	6.521	6.958	7.463	-	7.463
Current President's Budget	6.389	6.958	0.000	-	0.000
Total Adjustments	-0.132	0.000	-7.463	-	-7.463
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.132	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-7.463	-	-7.463
Change Summary Explanation					
In FY24: 23 direct authorizations with associated civilian labor costs and funding for the sustainment and enhancement of the Four-Dimensional Weather System (4DWX) will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605601A / Project F30, Army Test Ranges & Facilities. (\$4,700K)					
In FY24 funding for meteorological instrumentation and technology to support RDT&E activities at Army test sites will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605602A / Project FJ3, Army Technical Test Instrumentation & Targets. (\$2,763K)					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
128: Meteorological Support To RDT&E Activities	-	6.389	6.958	-	-	-	-	-	-	-	0.000	13.347
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 2022	FY 2023	FY 2024
Title: Civilian Pay and Support Costs	2.280	2.398	-
Description: Funding related to Civilian Pay and associated indirect costs for meteorological support.			
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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605702A / <i>Meteorological Support to RDT&E Activities</i>	Project (Number/Name) 128 / <i>Meteorological Support To RDT&E Activities</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
support to the Army RDTE community including collaboration between Army meteorologists and NCAR toward improvements to the 4DWX System and associated system administration.			
FY 2023 to FY 2024 Increase/Decrease Statement: In FY24, associated labor costs and 23 direct authorizations will realign from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605601A / Project F30, Army Test Ranges & Facilities.			
Title: Four-Dimensional Weather System and Instrumentation		4.109	4.422
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 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 climatology 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. Also, life cycle replacement of 4DWX hardware servers and software.			
FY 2023 to FY 2024 Increase/Decrease Statement: In FY24 funding for meteorological instrumentation and technology to support RDT&E activities at Army test sites will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605602A / Project FJ3, Army Technical Test Instrumentation & Targets. In FY24 funding for the sustainment and enhancement of the Four-Dimensional Weather System (4DWX) will transfer from PE 0605702A / Project 128, Meteorological Support to RDT&E Activities to PE 0605601A / Project F30, Army Test Ranges & Facilities.			
Title: SBIR/STTR Transfer		-	0.138
Description: Funding transferred in accordance with Title 15 USC §638.			-
FY 2023 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638.				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.				
Accomplishments/Planned Programs Subtotals		6.389	6.958	-
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605706A / <i>Materiel Systems Analysis</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	20.771	22.004	26.902	-	26.902	27.365	27.391	27.647	27.913	0.000	179.993
541: <i>Materiel Sys Analysis</i>	-	20.771	22.004	26.902	-	26.902	27.365	27.391	27.647	27.913	0.000	179.993

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) 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 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0605706A / Materiel Systems Analysis			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	21.558	22.037	23.278	-	23.278
Current President's Budget	20.771	22.004	26.902	-	26.902
Total Adjustments	-0.787	-0.033	3.624	-	3.624
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.787	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	3.624	-	3.624
• FFRDC Transfer	-	-0.033	-	-	-
Change Summary Explanation					
FY24 funding is increased to support efforts for systems and engineering analyses for the development, fielding and sustainment of Army materiel systems and the development of system level performance and effectiveness data and item-level performance methodology.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
541: Materiel Sys Analysis	-	20.771	22.004	26.902	-	26.902	27.365	27.391	27.647	27.913	0.000	179.993
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Program Element (PE) resources the Combat Capabilities Development Command (DEVCOM) 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 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 2022	FY 2023	FY 2024
Title: Materiel Systems Analysis	20.771	22.004	26.902

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0605706A / <i>Materiel Systems Analysis</i>		Project (Number/Name) 541 / <i>Materiel Sys Analysis</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
<p>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.</p> <p>FY 2023 Plans: Continue to conduct integrated materiel performance and engineering analyses as AFC's repository for the body of evidence concerning Army technologies and systems. Continue to develop and maintain essential verified and validated item/system level methodologies, tools, and models and simulations. 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. 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. Provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. Continue to provide analytical support to the planning and conduct of T&E. 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. Continue to provide critical tools, policies and educational materials 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.</p> <p>FY 2024 Plans: Will develop, maintain, and advance essential verified and validated item/system level methodologies, tools, and models and simulations (M&S) to conduct integrated materiel performance and engineering analyses for AFC's highest priority technologies. Will serve as AFC's repository for the body of technical and quantitative evidence concerning AFC experimentation and Army modernization technologies and systems. For AFC and DEVCOM Centers/ARL, will implement analytical capabilities to inform system cost/ performance trades, early technology development decisions, weapons/systems performance analyses, operational energy analyses, climate change analyses, system technical and schedule risk assessments, business case analyses, cost benefit analyses, requirements definition, technology insertion studies, reliability growth studies, and Physics of Failure analyses. Will continue to provide data and analysis support throughout the Project Convergence Campaign of Learning and other AFC experimentation. Will perform studies to provide essential certified weapons system performance data for AFC and DEVCOM Centers/ARL. Will continue to provide foundational analytical tools and capabilities as the Army's Center for Reliability Growth to improve the reliability of Army systems and technologies. For DEVCOM Centers/ARL, will provide relevant data and results to</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
prototype technology developers, evaluators, senior decision makers, and downstream force-on-force modelers to constructively influence design, mature technologies, and reduce risk. FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort to include increase for climate-ground vehicles & fuels.			
Accomplishments/Planned Programs Subtotals		20.771	22.004
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	13.631	6.186	7.805	-	7.805	6.392	6.443	6.534	6.606	Continuing	Continuing
C28: Acq/Exploit Threat Items	-	13.631	6.186	7.805	-	7.805	6.392	6.443	6.534	6.606	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) 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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	13.631	6.186	6.539	-	6.539
Current President's Budget	13.631	6.186	7.805	-	7.805
Total Adjustments	0.000	0.000	1.266	-	1.266
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	1.266	-	1.266

Change Summary Explanation

The increases are for the effort on the acquisition of foreign material and the conclusion of Foreign Material Program (FMP) exploitation.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605709A / <i>Exploitation of Foreign Items</i>				Project (Number/Name) C28 / <i>Acq/Exploit Threat Items</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
C28: <i>Acq/Exploit Threat Items</i>	-	13.631	6.186	7.805	-	7.805	6.392	6.443	6.534	6.606	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 2022	FY 2023	FY 2024
Title: Army Foreign Materiel Program (FMP) Acquisition 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 2023 Plans: Will conduct Foreign Materiel Acquisition of threat related foreign ground materiel systems and state of the art technologies of military significance. FY 2024 Plans: Will conduct Foreign Materiel Acquisition of threat related foreign ground materiel systems and state of the art technologies of military significance. FY 2023 to FY 2024 Increase/Decrease Statement: The increases reflects an increased focus on the acquisition of foreign material.	4.498	2.206	7.805
Title: Army Foreign Materiel Program (FMP) Exploitation 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	9.133	3.980	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605709A / <i>Exploitation of Foreign Items</i>	Project (Number/Name) C28 / <i>Acq/Exploit Threat Items</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p><i>FY 2023 Plans:</i> Will conduct Foreign Materiel Acquisition of threat related foreign ground materiel systems and state of the art technologies of military significance.</p> <p><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Decrease in funding is due to planned lifecycle and effort completion.</p>			
Accomplishments/Planned Programs Subtotals		13.631	6.186
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	54.797	70.718	75.133	-	75.133	75.901	76.057	76.888	77.734	0.000	507.228
001: ATEC Joint Tests And Follow-On Test & Eval	-	0.355	-	-	-	-	-	-	-	-	0.000	0.355
V02: ATEC Activities	-	54.442	70.718	75.133	-	75.133	75.901	76.057	76.888	77.734	0.000	506.873

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.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	55.122	70.718	72.760	-	72.760
Current President's Budget	54.797	70.718	75.133	-	75.133
Total Adjustments	-0.325	0.000	2.373	-	2.373
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.325	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	2.373	-	2.373

Change Summary Explanation

Increased funding due to revised economic assumptions.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
001: ATEC Joint Tests And Follow-On Test & Eval	-	0.355	-	-	-	-	-	-	-	-	0.000	0.355
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 2022	FY 2023	FY 2024
Title: Army Joint Test Element (JTE) Management Support	0.355	-	-
Description: Funds the civilian salaries and related non-labor requirements that support the JMC-APG.			
Accomplishments/Planned Programs Subtotals	0.355	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks**D. Acquisition Strategy**

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
V02: ATEC Activities	-	54.442	70.718	75.133	-	75.133	75.901	76.057	76.888	77.734	0.000	506.873
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note												
In FY24 there is a transfer of 10 full-time equivalents (FTEs) and associated civilian labor costs from PE 0605602A / FJ3, Technical Test Instrumentation and Targets to PE 0605712A / V02 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, training, supplies, equipment, and temporary duty travel.												
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 2022	FY 2023	FY 2024	
Title: Operational Test Command Civilian Pay									43.420	44.497	47.756	
Description: This funding supports the cost of civilian labor for OTC authorizations.												
FY 2023 Plans: Will continue to support the costs of civilian labor for OTC authorizations.												
FY 2024 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605712A / <i>Support of Operational Testi ng</i>	Project (Number/Name) V02 / ATEC Activities	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
Will continue to support the costs of civilian labor for OTC authorizations.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increase in funding is due to realignment of funding from PE 0605602A / Project FJ3, Army Technical Test Instrumentation & Targets to cover ten civilian FTEs that transferred as well.			
Title: Operational Test Command Operations Support Description: OTC operational costs including mission support and information technology contracts, logistics training, equipment, travel, facility maintenance and supplies. FY 2023 Plans: Continue to support operational costs including mission support and information technology contracts, logistics, training, equipment, travel, and supplies 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 2024 Plans: Continue to support operational costs including mission support and information technology contracts, logistics, training, equipment, travel, and supplies that are required to conduct the operational test mission. Contracted support includes test support requirements; information technology (IT) and network support and licensing; facilities maintenance and technology modernization updates. FY 2023 to FY 2024 Increase/Decrease Statement: Increase in funding is due to cost for non-pay and non-fuel purchases.		11.022	12.171
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 operational test (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.		-	13.211
			13.865

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605712A / <i>Support of Operational Testi</i> <i>ng</i>	Project (Number/Name) V02 / ATEC Activities	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p><i>FY 2023 Plans:</i> OTC will sustain test capabilities to provide a realistic MDO test 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.</p> <p><i>FY 2024 Plans:</i> Funds support all OTC Test Technology Support Service contracts that sustain existing technology systems to provide a realistic multi-domain operational environment with modern kinetic and non-kinetic battlefield effects, provide test monitoring and control, and provide the data collection and analysis tools for the Army modernization efforts at OTC's all five geographical locations at Fort Hood, Fort Bragg, Fort Bliss, Fort Sill and Fort Huachuca.</p> <p><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Increase due to planned Lifecycle effort.</p>			
<p><i>Title:</i> SBIR/STTR Transfer</p> <p><i>Description:</i> Funding transferred in accordance with Title 15 USC §638.</p> <p><i>FY 2023 Plans:</i> Funding transferred in accordance with Title 15 USC §638.</p> <p><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC §638.</p>		-	0.839
Accomplishments/Planned Programs Subtotals		54.442	70.718

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605712A / Support of Operational Testi ng	Project (Number/Name) V02 / ATEC Activities
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	65.693	67.058	71.118	-	71.118	73.112	70.188	71.535	78.782	0.000	497.486
302: Army Evaluation Center	-	65.693	67.058	71.118	-	71.118	73.112	70.188	71.535	78.782	0.000	497.486

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; electronic warfare (EW); artificial intelligence (AI); safety of materiel solutions; and viability of emerging technologies and engineering change proposals 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. 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 Effects (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: personnel training, career development, supplies and equipment, hardware, software, temporary duty (TDY) travel, and other external Other Government Agency (OGA) support as well as methodology development required to evaluate emerging technologies and instrumentation requirements.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023		
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				
AEC consists of seven directorates - Analytics, Artificial Intelligence, and Digital Engineering Evaluation Directorate; Aviation-Fires Evaluation Directorate; Ballistic Missile Defense Evaluation Directorate (primarily funded by the Missile Defense Agency); Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance 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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget		65.854	67.058	67.182	-	67.182
Current President's Budget		65.693	67.058	71.118	-	71.118
Total Adjustments		-0.161	0.000	3.936	-	3.936
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-0.161	-			
• SBIR/STTR Transfer		-	-			
• Adjustments to Budget Years		-	-	3.936	-	3.936
Change Summary Explanation						
Increased funding due to revised economic assumptions.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
302: Army Evaluation Center	-	65.693	67.058	71.118	-	71.118	73.112	70.188	71.535	78.782	0.000	497.486
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 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. 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 Effects (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: personnel training, career development, supplies and equipment, hardware, software, temporary duty (TDY) travel, 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; Aviation-Fires Evaluation Directorate; Ballistic Missile Defense Evaluation Directorate (primarily funded by the Missile Defense Agency; Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance 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

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0605716A / Army Evaluation Center	Project (Number/Name) 302 / Army Evaluation Center		
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 2022	FY 2023	FY 2024
Title: Army Evaluation Center Civilian Pay			60.530	61.620	64.489
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 real-world events, AEC provides Capability and 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 principal 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 2023 Plans:					
Will continue to fund operational costs for AEC including civilian pay (approximately 91% 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					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
<p>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.</p> <p>FY 2024 Plans: Will continue to fund operational costs for AEC including civilian pay (approximately 91% 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 Army Futures Command CFT concept, RCCTO, and the AI Task Force. Lead Project Convergence planning, execution, and reporting 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.</p>			
<p>Title: Army Evaluation Center Operations Support</p> <p>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 (484 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.</p> <p>FY 2023 Plans: Funding will continue to support AEC operational support costs including contract support, software licenses, training, life cycle replacement of equipment.</p> <p>FY 2024 Plans:</p>		5.163	5.438
			6.629

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
Funding will continue to support AEC operational support costs including contract support, software licenses, training, life cycle replacement of equipment.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.			
Accomplishments/Planned Programs Subtotals		65.693	67.058
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	2.537	6.097	11.204	-	11.204	11.234	11.240	11.274	11.342	0.000	64.928
S03: Analysis M&S Tools and Services	-	2.537	6.097	11.204	-	11.204	11.234	11.240	11.274	11.342	0.000	64.928

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 to support effectively the Army's analytic requirements.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support		PE 0605718A I Army Modeling & Sim X-Cmd Collaboration & Integ			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	2.633	6.097	6.177	-	6.177
Current President's Budget	2.537	6.097	11.204	-	11.204
Total Adjustments	-0.096	0.000	5.027	-	5.027
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.096	-			
• Adjustments to Budget Years	-	-	5.027	-	5.027
Change Summary Explanation					
Increase in funding supports the modernization of CAA models, simulations, and analytic capabilities.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
S03: Analysis M&S Tools and Services	-	2.537	6.097	11.204	-	11.204	11.234	11.240	11.274	11.342	0.000	64.928
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 2022	FY 2023	FY 2024
Title: Develop M&S tools and technology	1.668	3.863	7.639
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 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 2024 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605718A / Army Modeling & Sim X-Cmd d Collaboration & Integ	Project (Number/Name) S03 / Analysis M&S Tools and Services	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>FY24 funds will be distributed among activities that promote the fourth priority of the Army M&S Strategy: develop M&S tools and technology. Specific FY24 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in funding is for development of network modeling scenarios and models for the test/evaluation and analysis network within CAA suit of models</p>			
<p>Title: Develop M&S standards, architectures, networks and environments</p> <p>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.</p> <p>FY 2023 Plans: 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.</p> <p>FY 2024 Plans: 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. 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase is to support Enduring Advantages-Analysys Working group initiatives and cost adjustments.</p>		0.869	2.012
Title: SBIR/STTR		-	0.222

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605718A / Army Modeling & Sim X-Cmd d Collaboration & Integ	Project (Number/Name) S03 / Analysis M&S Tools and Services		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Description: Funding transferred in accordance with Title 15 USC §638				
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638				
Accomplishments/Planned Programs Subtotals		2.537	6.097	11.204
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	90.443	89.793	93.895	-	93.895	94.897	95.773	96.882	98.010	0.000	659.693
EU9: <i>Army Science Board</i>	-	2.108	2.300	2.319	-	2.319	2.343	2.346	2.371	2.397	0.000	16.184
M02: <i>Med Cmd Spt (Non-AMHA)</i>	-	23.384	11.729	12.108	-	12.108	12.258	12.528	12.697	12.974	0.000	97.678
M15: <i>ARI Mgmt/ADM Act</i>	-	5.722	5.960	5.951	-	5.951	5.984	6.031	6.094	6.160	0.000	41.902
M16: <i>Standardization Groups</i>	-	4.145	4.381	5.044	-	5.044	5.119	5.067	4.965	4.980	0.000	33.701
M23: <i>US Army Corps of Engineers Base Operations</i>	-	34.018	36.151	37.295	-	37.295	37.881	38.418	39.078	39.641	0.000	262.482
M42: <i>ARDEC Cmd/Ctr Support</i>	-	3.857	7.632	8.105	-	8.105	8.106	8.116	8.203	8.292	0.000	52.311
M44: <i>CECOM Cmd/Ctr Spt</i>	-	3.330	4.912	5.170	-	5.170	5.170	5.176	5.232	5.289	0.000	34.279
M46: <i>AMCOM Cmd/Ctr Spt</i>	-	3.362	4.007	4.223	-	4.223	4.224	4.228	4.274	4.320	0.000	28.638
M47: <i>TACOM Cmd/Ctr Spt</i>	-	3.622	3.942	4.214	-	4.214	4.214	4.219	4.263	4.310	0.000	28.784
M55: <i>Edgewood Chemical Biological Center</i>	-	2.616	4.126	4.631	-	4.631	4.736	4.749	4.779	4.690	0.000	30.327
M58: <i>SECOM CMD/CTR Spt</i>	-	2.168	2.370	2.440	-	2.440	2.441	2.444	2.469	2.497	0.000	16.829
M76: <i>Armament Group Support</i>	-	2.111	2.283	2.395	-	2.395	2.421	2.451	2.457	2.460	0.000	16.578

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 in support of the 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).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0605801A / Programwide Activities			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	96.558	89.793	93.413	-	93.413
Current President's Budget	90.443	89.793	93.895	-	93.895
Total Adjustments	-6.115	0.000	0.482	-	0.482
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-6.115	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.482	-	0.482
Change Summary Explanation					
Increased funding due to revised economic assumptions.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
EU9: Army Science Board	-	2.108	2.300	2.319	-	2.319	2.343	2.346	2.371	2.397	0.000	16.184
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 2022	FY 2023	FY 2024
Title: Army Science Board	2.108	2.216	2.319
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.			
<p>Currently, the Secretary of the Army has approved four permanent subcommittees to the Board:</p> <p>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</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>	Project (Number/Name) EU9 / <i>Army Science Board</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		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 C4ISR 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 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 2024 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 to FY 2024 Increase/Decrease Statement: Increase in funding reflects planned lifecycle for this effort.			
Title: SBIR/STTR Transfer		-	0.084
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638.				
Accomplishments/Planned Programs Subtotals		2.108	2.300	2.319
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M02: Med Cmd Spt (Non-AMHA)	-	23.384	11.729	12.108	-	12.108	12.258	12.528	12.697	12.974	0.000	97.678
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 2022	FY 2023	FY 2024
Title: Civilian Authorized Salaries and other operational requirements	23.384	11.729	12.108
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 2023 Plans: Will fund civilian salaries and associated management and administrative expenses (support contracts, supplies, equipment, travel, etc.) at USAMRDMC.			
FY 2024 Plans: Will fund civilian salaries and associated management and administrative expenses (support contracts, supplies, equipment, travel, etc.) at USAMRDMC.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned life cycle of this effort.			
Accomplishments/Planned Programs Subtotals	23.384	11.729	12.108

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / Programwide Activities	Project (Number/Name) M02 / Med Cmd Spt (Non-AMHA)
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M15: ARI Mgmt/ADM Act	-	5.722	5.960	5.951	-	5.951	5.984	6.031	6.094	6.160	0.000	41.902
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 2022	FY 2023	FY 2024
Title: ARI Management/Administrative Actions	5.722	5.914	5.951
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 2023 Plans: Providing 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 2024 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 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>	Project (Number/Name) M15 / <i>ARI Mgmt/ADM Act</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
Funding increase supports planned lifecycle of the effort.			
Title: SBIR/STTR Transfer		-	0.046
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.			
Accomplishments/Planned Programs Subtotals		5.722	5.960
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M16: Standardization Groups	-	4.145	4.381	5.044	-	5.044	5.119	5.067	4.965	4.980	0.000	33.701
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 2022	FY 2023	FY 2024
Title: International Technology Centers Management	4.145	4.304	5.044
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 2023 Plans: 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. Facilitate U.S. Army interaction with foreign non-government entities, such as foreign private industry and academia. 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 2024 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 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>	Project (Number/Name) M16 / <i>Standardization Groups</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
Provide increased support to U.S Army engagements/interaction with foreign ministries of defense, foreign private industry and academia to address and advance technology development and materiel interoperability.			
Title: SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC §638 FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638		-	0.077
			-
Accomplishments/Planned Programs Subtotals		4.145	4.381
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M23: US Army Corps of Engineers Base Operations	-	34.018	36.151	37.295	-	37.295	37.881	38.418	39.078	39.641	0.000	262.482
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 2022	FY 2023	FY 2024
Title: ERDC Management and Administrative Actions and Other Operational Requirements	34.018	35.459	37.295
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 2023 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.			
FY 2024 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 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>	Project (Number/Name) M23 / <i>US Army Corps of Engineers Base Operations</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
Funding change reflects the planned lifecycle of this effort.			
Title: SBIR/STTR Transfer		-	0.692
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.			
Accomplishments/Planned Programs Subtotals		34.018	36.151
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>				Project (Number/Name) M42 / <i>ARDEC Cmd/Ctr Support</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M42: ARDEC Cmd/Ctr Support	-	3.857	7.632	8.105	-	8.105	8.106	8.116	8.203	8.292	0.000	52.311
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions in support of the 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 2022	FY 2023	FY 2024
Title: Management Support Description: Efforts in support of DEVCOM Armaments Center (AC) operations and management functions. FY 2023 Plans: Provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM AC. FY 2024 Plans: Will provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM AC. FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.	3.857	7.632	8.105
Accomplishments/Planned Programs Subtotals	3.857	7.632	8.105

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M44: CECOM Cmd/Ctr Spt	-	3.330	4.912	5.170	-	5.170	5.170	5.176	5.232	5.289	0.000	34.279
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification Supports the non-Army Management Headquarters Activity (non-AMHA) functions in support of the 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 2022	FY 2023	FY 2024	
Title: Management Support Description: Efforts in support of DEVCOM Command, Control, Communications, Computers, Cyber Intelligence, Surveillance and Reconnaissance (C5ISR) Center operations and management functions. FY 2023 Plans: Provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM C5ISR Center. FY 2024 Plans: Will provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM C5ISR Center. FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.									3.330	4.912	5.170	
Accomplishments/Planned Programs Subtotals									3.330	4.912	5.170	
C. Other Program Funding Summary (\$ in Millions) N/A Remarks												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / Programwide Activities	Project (Number/Name) M44 / CECOM Cmd/Ctr Spt
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M46: AMCOM Cmd/Ctr Spt	-	3.362	4.007	4.223	-	4.223	4.224	4.228	4.274	4.320	0.000	28.638
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions in support of the 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 2022	FY 2023	FY 2024
Title: Management Support	3.362	4.007	4.223
Description: Efforts in support of DEVCOM Aviation and Missile Center (AvMC) operations and management functions.			
FY 2023 Plans: Provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM AvMC.			
FY 2024 Plans: Will provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM AvMC.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.			
Accomplishments/Planned Programs Subtotals	3.362	4.007	4.223

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M47: TACOM Cmd/Ctr Spt	-	3.622	3.942	4.214	-	4.214	4.214	4.219	4.263	4.310	0.000	28.784
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification <p>This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions in support of the 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.</p> <p>Funds only select, critical, overarching management functions that enable DEVCOM GVSC to accomplish its research, development and engineering mission.</p>												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2022	FY 2023	FY 2024	
Title: Management Support Description: Efforts in support of DEVCOM Ground Vehicle Systems Center (GVSC) operations and management functions. FY 2023 Plans: Provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM GVSC. FY 2024 Plans: Will provide management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM GVSC. FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.									3.622	3.942	4.214	
Accomplishments/Planned Programs Subtotals									3.622	3.942	4.214	
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M55: Edgewood Chemical Biological Center	-	2.616	4.126	4.631	-	4.631	4.736	4.749	4.779	4.690	0.000	30.327
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions in support of the 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 2022	FY 2023	FY 2024
Title: Management Support Description: Efforts in support of DEVCOM Chemical Biological Center (CBC) operations and management functions. FY 2023 Plans: Provide continued management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM CBC. FY 2024 Plans: Will provide continued management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM CBC. FY 2023 to FY 2024 Increase/Decrease Statement: Provides increased management/administrative functions to support DEVCOM CBC mission requirements.	2.616	4.095	4.631
Title: SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC §638 FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement:	-	0.031	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638				
Accomplishments/Planned Programs Subtotals		2.616	4.126	4.631
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>				Project (Number/Name) M58 / <i>SECOM CMD/CTR Spt</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M58: <i>SECOM CMD/CTR Spt</i>	-	2.168	2.370	2.440	-	2.440	2.441	2.444	2.469	2.497	0.000	16.829
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the non-Army Management Headquarters Activity (non-AMHA) functions in support of the 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 2022	FY 2023	FY 2024
<p>Title: Management Support</p> <p>Description: Efforts in support of DEVCOM Soldier Center (SC) operations and management functions.</p> <p>FY 2023 Plans: Provide continued management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM SC.</p> <p>FY 2024 Plans: Will provide continued management and administrative functions at a level consistent with mission requirements and support needs of DEVCOM SC.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.</p>	2.168	2.370	2.440
Accomplishments/Planned Programs Subtotals	2.168	2.370	2.440

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M76: Armament Group Support	-	2.111	2.283	2.395	-	2.395	2.421	2.451	2.457	2.460	0.000	16.578
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 2022	FY 2023	FY 2024
Title: Army Scientific Support NATO Army Armaments Group 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 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 2024 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 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.	0.413	0.435	0.460
Title: Executive Agent 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. FY 2023 Plans:	1.698	1.765	1.935

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605801A / <i>Programwide Activities</i>	Project (Number/Name) M76 / <i>Armament Group Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p><i>FY 2024 Plans:</i> 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.</p> <p><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding change reflects planned lifecycle of this effort.</p>			
<p><i>Title:</i> SBIR/STTR Transfer</p> <p><i>FY 2023 Plans:</i> Funding transferred in accordance with Title 15 USC §638.</p> <p><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC §638.</p>		-	0.083
Accomplishments/Planned Programs Subtotals		2.111	2.283
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	31.174	37.652	31.327	-	31.327	32.323	35.265	33.380	33.877	Continuing	Continuing
727: <i>Tech Info Activities</i>	-	11.242	15.386	12.834	-	12.834	12.987	13.002	13.142	13.286	Continuing	Continuing
731: <i>Army High Performance Computing Centers</i>	-	2.000	2.187	2.201	-	2.201	2.223	2.225	2.250	2.274	Continuing	Continuing
733: <i>Acquisition Tech Act</i>	-	4.611	5.057	5.169	-	5.169	5.286	5.292	5.348	5.407	Continuing	Continuing
CC2: <i>Expeditionary Technologies</i>	-	4.758	5.628	5.675	-	5.675	6.193	6.199	6.265	6.333	Continuing	Continuing
DW3: <i>Army Geospatial Enterprise Implementation</i>	-	8.563	9.394	5.448	-	5.448	5.634	8.547	6.375	6.577	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) supports oversight of the development and defense of the Army Science and Technology (S&T) budget, and development of Army S&T strategy, policy and guidance. Additionally, it 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 S&T transitions and milestones, 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 (xTech 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 Critical Technology Areas 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support		PE 0605803A I Technical Information Activities			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	31.987	28.752	29.427	-	29.427
Current President's Budget	31.174	37.652	31.327	-	31.327
Total Adjustments	-0.813	8.900	1.900	-	1.900
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	8.900			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.813	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	1.900	-	1.900
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 727: Tech Info Activities					
Congressional Add: Congressional Add					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
727: Tech Info Activities	-	11.242	15.386	12.834	-	12.834	12.987	13.002	13.142	13.286	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 Army of 2040. 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 Critical Technology Areas 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 2022	FY 2023	FY 2024
Title: Conduct and support S&T program portfolio assessments and analysis.	4.385	4.910	5.100
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 supporting the Army of 2040. Supports Aviation, Network, Ground, Soldier, Basic Research, Medical, Weapons, and Sensing & Intel 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 2023 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 727 / <i>Tech Info Activities</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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, conduct portfolio 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, Aviation, Weapons, and Ground), and key focus areas (Assured Positioning, Navigation & Timing; Synthetic Training Environment; Electronic Warfare; Sensing & Intelligence; and Contested Logistics & Sustainment). 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.</p> <p>FY 2024 Plans: Provide programmatic support and oversight for basic research, applied research, advanced technology development, laboratory management, and technical transition efforts across the Army modernization priorities; perform 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, conduct portfolio 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, Aviation, Weapons, and Ground), and key focus areas (Assured Positioning, Navigation & Timing; Synthetic Training Environment; Electronic Warfare; Sensing & Intelligence; and Contested Logistics & Sustainment). 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.</p>			
<p>Title: Support Army S&T strategic planning, analysis, and prioritization.</p> <p>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; and supports technology transition. 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,</p>		5.407	5.766
			6.164

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 727 / <i>Tech Info Activities</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>Manufacturing Technology (ManTech) and 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.</p> <p>FY 2023 Plans: Develop strategic analyses to look across the S&T portfolios and provide recommendations to Army leadership for S&T efficiencies and collaborative opportunities; ensure that resources align to S&T strategy; support S&T policy development; coordinate efforts within and across the Army S&T portfolios and engage in tri service leveraging; support the Program Decision Memorandum process, tasks and guidance for Equipping PEG; develop prioritized decrement lists and recommend alternatives for a balanced portfolio; and support the plan and execution of the S&T program. 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</p> <p>FY 2024 Plans: Perform strategic analyses to look across the S&T portfolios and provide recommendations to Army leadership for S&T efficiencies and collaborative opportunities across DoD and the larger S&T community; 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 investment opportunities and recommend alternatives for a balanced portfolio; and will support the plan and execution of the S&T program. 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 the transition agreement policy to increase technology transition opportunities.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.</p>			
<p>Title: Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions.</p> <p>Description: Coordination and alignment with Programs of Record. Demonstrate technical feasibility at system and subsystem level. As technology transitions and spirals to acquisition, ensure a rapid insertion of new technology.</p> <p>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</p>		1.250	1.130
			1.350

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>		Project (Number/Name) 727 / <i>Tech Info Activities</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
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 2024 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 support the Army of 2040; 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 future funding investments.					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.					
Title: Provide Army support to Under Secretary of Defense for Research and Engineering Executive Staff for Department of Defense (DoD) wide Science and Technology oversight.			0.200	0.214	0.220
Description: Supports Army engagement in DoD/Under Secretary of Defense for Research and Engineering and cross agency Communities of Interest (COI) and committees.					
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 2024 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 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 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.					
Title: SBIR/STTR Transfer			-	0.366	-
FY 2023 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 727 / <i>Tech Info Activities</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638				
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i>				
Funding transferred in accordance with Title 15 USC §638				
Accomplishments/Planned Programs Subtotals		11.242	12.386	12.834
		FY 2022	FY 2023	
<i>Congressional Add:</i> Congressional Add		-	3.000	
<i>FY 2023 Plans:</i> Technology transfer efforts.				
Congressional Adds Subtotals		-	3.000	
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
731: Army High Performance Computing Centers	-	2.000	2.187	2.201	-	2.201	2.223	2.225	2.250	2.274	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 2022	FY 2023	FY 2024
Title: Sustain the High Performance Computing Environment and Infrastructure in Support of the CCDC Army Research Laboratory (ARL)	2.000	2.154	2.201
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 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 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 2024 Plans: Will sustain high performance computing (HPC) computational infrastructure in support of Army relevant problems in deep reinforcement learning, large-scale data analytics, and augmented physics-based simulations; assess emerging processing			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 731 / <i>Army High Performance Computing Centers</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
technologies as well as novel data management technologies to augment emerging high performance data analytic workloads required to exploit simulation results.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase reflects planned lifecycle of this effort.			
Title: SBIR/STTR		-	0.033
Description: Funding transferred in accordance with Title 15 USC §638			-
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals		2.000	2.187
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
733: Acquisition Tech Act	-	4.611	5.057	5.169	-	5.169	5.286	5.292	5.348	5.407	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 afford 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 2022	FY 2023	FY 2024
Title: ACQUISITION TECH ACT	4.611	4.872	5.169
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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 733 / <i>Acquisition Tech Act</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		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 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 2024 Plans: FY2024 efforts expand the capabilities of the server-based PMRT system to full operational capability in a cloud environment. The Army will also continue developing additional 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 FY2024, 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 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.			
Title: SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC §638 FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638		-	0.185
			-
Accomplishments/Planned Programs Subtotals		4.611	5.057
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 733 / <i>Acquisition Tech Act</i>
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
CC2: Expeditionary Technologies	-	4.758	5.628	5.675	-	5.675	6.193	6.199	6.265	6.333	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).

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

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Expeditionary Technology Search (xTechSearch)	4.758	5.423	5.675
Description: Funds technical scouting and competition in Army-wide disciplines through rigorous technical assessment, Soldier feedback, mentorship sponsoring, and cash prizes.			
FY 2023 Plans: 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 2024 Plans: Will conduct biannual and ad-hoc competitions with small, non-traditional technology innovation firms seeking to apply their product, technology, or concept towards a prescribed focus area supporting Army capability gaps.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.			
Title: SBIR/STTR Transfer	-	0.205	-
FY 2023 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638				
Accomplishments/Planned Programs Subtotals		4.758	5.628	5.675
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
DW3: Army Geospatial Enterprise Implementation	-	8.563	9.394	5.448	-	5.448	5.634	8.547	6.375	6.577	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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 interoperability 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 2022	FY 2023	FY 2024
Title: Enterprise Support Branch (formerly Geospatial Acquisition Support Office)	3.363	3.452	5.448
<p>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.</p> <p>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</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) DW3 / <i>Army Geospatial Enterprise Implementation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
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 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 2024 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 through continuing development of Army and the National and Allied systems for geospatial intelligence and DoD geospatial architecture, standards, systems engineering and test and certification. Provides critical capabilities to support army modernization including evaluation and integration of emerging geospatial technologies including 3D data, augmented and virtual reality, artificial intelligence/machine learning and edge computing with current Army systems and processes. Focus is on enabling interoperability across army systems and with other Services and our Allied partners. Continue to evaluate emerging technologies during Joint All Domain Command and Control exercises. 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 2023 to FY 2024 Increase/Decrease Statement: Increased funding for the "Engineer C2 Portfolio" with the primary focus on S&T Transition and M-Code migration.			
Title: SBIR/STTR		-	0.042
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) DW3 / <i>Army Geospatial Enterprise Implementation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals		3.363	3.494
		FY 2022	FY 2023
Congressional Add: FY22 Congressional Program Increase		5.200	-
FY 2022 Accomplishments: Matured and demonstrated geospatial software on edge computing devices to improve military analyses, visualization, reporting, and decision-making at the tactical edge Matured/optimized next generation geospatial analytical tools for tactical environments applicable to lower echelon and tactical edge exploitation. Provided improve situational awareness, combat planning, and facilitated more rapid decision-making for military forces at the tactical edge			
Congressional Add: FY23 Congressional Program Increase		-	5.900
FY 2023 Plans: This effort will accelerate AGE development and implementation of standards and data integration capabilities to support interoperability of Army intelligence sources via broader adoption of Open Geospatial Consortium (OGC) standards. AGC will work with Army Programs of Record and the National System for Geospatial Intelligence (NSG) to align and integrate critical geospatial data for times of national crisis and operational planning.			
Congressional Adds Subtotals		5.200	5.900
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.			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0605805A / <i>Munitions Standardization, Effectiveness and Safety</i>							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	54.922	60.645	50.409	-	50.409	50.227	48.331	44.573	45.061	0.000	354.168
297: <i>Mun Survivability & Log</i>	-	16.227	20.572	18.456	-	18.456	18.521	18.410	18.521	18.723	0.000	129.430
858: <i>Army Explosives Safety Management Program</i>	-	1.367	1.009	1.489	-	1.489	1.516	1.545	1.546	1.563	0.000	10.035
859: <i>Life Cycle Pilot Process</i>	-	20.300	23.797	5.838	-	5.838	5.861	5.863	5.926	5.991	0.000	73.576
F21: <i>NATO Ammo Evaluation</i>	-	0.496	0.766	0.772	-	0.772	0.772	0.773	0.781	0.790	0.000	5.150
F24: <i>Conventional Munitions Demil</i>	-	16.532	14.501	23.854	-	23.854	23.557	21.740	17.799	17.994	0.000	135.977

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

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 0605805A / <i>Munitions Standardization, Effectiveness and Safety</i>
<p>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.</p> <p>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 2024 funding will support NATO and JBMOU artillery and small arms ammunition interchangeability group meetings, documentation, and test operations.</p> <p>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.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0605805A / Munitions Standardization, Effectiveness and Safety			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	63.042	48.316	44.660	-	44.660
Current President's Budget	54.922	60.645	50.409	-	50.409
Total Adjustments	-8.120	12.329	5.749	-	5.749
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-5.671			
• Congressional Rescissions	-	-			
• Congressional Adds	-	18.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-8.120	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	5.749	-	5.749
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 859: Life Cycle Pilot Process					
Congressional Add: Program increase - Foamable Celluloid Materials					
Congressional Add: Program increase - Industrial Base Resiliency initiative					
Congressional Add: Program increase- Agile Manufacturing for Advanced Ammunition Materials and Manufacturing Technologies					
Congressional Add: Program increase - Neutron Radiography					
Congressional Add: Program increase- Additive Manufacturing for High Temperature Alloys					
Congressional Add Subtotals for Project: 859					
Congressional Add Totals for all Projects					
Change Summary Explanation					
Increased funding is for anti personnel landmine demilitarization effort.					

FY 2022	FY 2023
5.000	5.000
5.000	-
5.000	-
-	5.000
-	8.000
15.000	18.000
15.000	18.000

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
297: Mun Survivability & Log	-	16.227	20.572	18.456	-	18.456	18.521	18.410	18.521	18.723	0.000	129.430
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 2022	FY 2023	FY 2024	
Title: Munitions Predictive Life									2.271	2.630	3.480	
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 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												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / <i>Munitions Standardization, Effectiveness and Safety</i>	Project (Number/Name) 297 / <i>Mun Survivability & Log</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>(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.</p> <p>FY 2024 Plans: Develop techniques to improve operational lethality and readiness by utilizing commercial off the shelf environmental monitoring technologies/sensors to record temperature, humidity, shock, vibration exposure to ensure ammunition is viable for use. This development effort will investigate potential methods to overcome the high risk/cost of dedicated ammunition health monitoring sensors and predicted remaining useful life algorithms of past investments. As these commercial solutions are evaluated, the most suitable candidates will be integrated with emerging tactical 155mm ammunition storage and transportation systems to mitigate the detrimental effects of environmental exposure on the operational availability of the weapon platform. This tailored capability will be integrated into existing or emerging weapon systems to meet requirements established by the Long Range Precision Fires (LRPF) Cross Functional Team (CFT), and will feed ammunition exposure data into tactical ammunition management systems to ensure only viable ammunition is sourced for use. Conduct an in-depth analysis to establish the potential degradation conditions for 155mm propellant due to regional / seasonal environmental exposure when deployed with Extended Range Cannon Artillery (ERCA) and other Field Artillery (FA) systems, to ensure deployment of selected commercial solution to meet ammunition surveillance requirements.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.</p>			
<p>Title: Insensitive Munitions (IM) Integration Program</p> <p>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.</p> <p>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</p>		6.666	5.310
			6.700

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
<p>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.</p> <p>FY 2024 Plans: Complete full-scale full-scale IM and performance testing of medium caliber composite cartridge cases for improved response to shock and thermal threats in support of NGCV, FVL and Soldier Lethality SL modernization priorities. Finalize Phase Change Material design of container heat management technology for mortar packaging and initiate live demonstration testing. Complete hot and cold Highly Accelerated Life testing of 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. Initiate IM testing of container lid venting in selected packaging container. Continue demonstration 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. Initiate engineering IM testing of down-selected DNP formulation in end item to support Soldier Lethality (SL) modernization priority. Continue engineering IM and performance tests of Titan II formulation in end item 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 auxiliary charges for improved Fragment Impact (FI) response. Complete static fire, fragment impact and ballistic performance testing of new igniter formulations to replace Benite in 120mm tank munitions. Develop combustible cartridge case to replace metal cartridge in 105mm Tank ammunition. Evaluate propellant coating technology for improved cook-off and impact threats.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.</p>					
<p>Title: Improved Munitions Packaging</p> <p>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.</p> <p>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</p>			2.600	2.505	2.900

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0605805A / <i>Munitions Standardization, Effectiveness and Safety</i>		Project (Number/Name) 297 / <i>Mun Survivability & Log</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
<p>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.</p> <p>FY 2024 Plans:</p> <p>Develop a suite of robust ammunition consolidators to protect extended range field artillery components after their removal from depot packaging to ensure expected performance will not degrade during distribution. Develop new ammunition stowage designs for associated ammo support vehicles that maximizes inventory / complete round quantities, optimizes storage and retrieval of ammunition, maintain legacy vehicle safety and functionality, while minimizing physical demands of crew when conducting rearm and resupply operations. Continue development of light weight steel rectangular ammunition containers to meet 6.8mm ammunition qualification tests. Begin engineering design of packaging components to promote automation during storage and handling. Develop new designs or concepts for lids, latches, security seals, tie downs, palletization methods and environmental mitigation. Investigate coating materials and processes to enable stenciling/labeling/QR code marking of ammunition for accountability proposes forward of the Ammunition Storage Areas, to meet Multi Domain Operations (MDO) modernization initiatives. Conduct comprehensive industry search of emerging materials/technologies for applicability to ammunition packaging to reduce unit cost and weight in support of the JPEO Armaments & Ammunition portfolio. Conduct engineering testing on packaging prototypes and configurations designed to protect new and legacy items against environmental effects and other stimuli, as required to reflect use cases defined by the CONOPS for Extended Range Cannon Artillery (ERCA). Conduct business case analysis of 2-dimensional bar codes to individual PM Cannon Artillery System items and unitized packaging to include projectiles, fuzes, and propellant charges at the load plant. Assess M992A3 Carrier Ammunition Tracked extended range ammunition stowage designs/mechanisms for automation applicability to meet the PM SPHS/LRPF Cross Functional Team (CFT) autonomy initiatives for ERCA and other field artillery formations.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>					

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
Funding change reflects planned lifecycle of this effort.					
Title: Ammo Provider			4.690	4.727	5.376
<p>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.</p> <p>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.</p> <p>FY 2024 Plans: Conduct extensive system engineering analysis to determine expected life cycle cost and performance of a suite of ammunition logistics enabler prototypes under development to meet the Multi Domain Operations (MDO) modernization objectives for Long Range Precision Fires (LRPF), Next Generation Combat Vehicle, and Network Cross Functional Teams. These logistics enablers will be assessed through lethality, mobility, and readiness benefits as measured across multiple maneuver formations covering field artillery and large/medium caliber direct fire. Results will be used to refine user requirements and inform associated</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Programs of Record (POR) to provide for the automation and optimization of requisitions, spatial and temporal based inventory data, real-time consumption tracking, and forecasting demand for all ammo items. Extend analysis to optimize tactical multi-class storage areas to efficiently deliver configured loads that are synchronized with available transportation conveyances, and support preparation and planning for future missions to meet the objectives of the Sustainment Mission Command Predictive Logistics concept, for more efficient distribution of Ammunition and other commodities. Mature explosive safety siting techniques to inform a JPEO Material Decision. In collaboration with PM CAS and PM SPHS, develop enhanced high-fidelity models to reflect LRPF increased rate of fire concepts and the lethality and mobility resupply requirements to meet unit readiness. Develop prototypes for large caliber ammo handling and transportation enablers to meet supply chain through-put requirements/distribution velocity, and to enable automation. Integrate enablers as they mature into the Tactical Ammunition Management Micro-Services to continuously improve ammunition distribution velocity. Conduct limited user evaluations of emerging ammunition logistics enablers as they mature to gain direct soldier feedback on potential benefits while also informing RDT&E decision points through the development cycle. FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned lifecycle of this effort.				
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 2023 to FY 2024 Increase/Decrease Statement: Effort was completed in FY 2023.		-	4.649	-
Title: SBIR/STTR Transfer FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638. FY 2023 to FY 2024 Increase/Decrease Statement:		-	0.751	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638.				
Accomplishments/Planned Programs Subtotals		16.227	20.572	18.456
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
858: Army Explosives Safety Management Program	-	1.367	1.009	1.489	-	1.489	1.516	1.545	1.546	1.563	0.000	10.035
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, 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.

FY 2024 funding will support continued testing, validation, and regulatory integration for permanent, temporary and mobile ammunition and explosives facilities focusing on construction and instrumentation of destructive test structures; data collection and analyses; policy change identification and implementation. The Defense Ammunition Center/US Army Technical Center for Explosives Safety (DAC/USATCES), Engineer Research and Development Center 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. Naval Facilities Engineering and Expeditionary Warfare Center Branch to provide technical support in the areas of risk assessment Program, DDESB Science Panel, and the DoD protective construction.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Risk based explosives safety criteria	0.272	0.160	0.367
Description: Development of risk based explosives safety criteria that will aid commanders and safety personnel in the transition from regulation to risk management.			
FY 2023 Plans: Continue to leverage explosive safety personnel in support of reduced quantity distance field storage testing. Testing objectives are to establish Explosives Safety Quantity Distance, hazardous fragment distance and debris characteristics from an internal detonation using new storage container and barrier configurations. Funding allows Subject Matter Experts to determine whether Inhabited Building Distances can be reduced, determine effectiveness of barricades in reduction of debris and development of physics-based models of hazards associated with accidental explosion.			
FY 2024 Plans: Provide critical resources to support explosives testing in support of hazard research and exposure consequences. Assess hazards and risks for combat units. Development, promulgate and application of explosives safety technologies and practices.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Increase is due to additional resources needed to support explosive testing in hazard and exposure consequences.				
<p>Title: Development of enhanced protective structure designs</p> <p>Description: Develop enhanced protective structure designs that improve the survivability of Army personnel, facilities and equipment.</p> <p>FY 2023 Plans: Continue to conduct field experiments, high fidelity numerical simulations and advanced data analysis for Earth Covered Magazines (ECM). Validate the updates made to the current Earth Covered Magazine code requirements to reduce soil cover. Tailor and connect data driven ECM and Above Ground Magazine (ECM/AGM) requirements to increase explosive storage capacity.</p> <p>FY 2024 Plans: Destructive testing of protective infrastructure in support of safety regulation update to protect personnel/assets and improving protective structure design. Tailor and connect data driven Earth Covered Magazines and Above Ground Magazine (ECM/AGM) requirements to increase explosive storage capacity and reduce sustainment costs.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase tied to additional testing in Earth Covered Magazine and Above Ground Magazines (ECM and AGM).</p>		0.900	0.650	0.887
<p>Title: Development of explosive safety tools</p> <p>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.</p> <p>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.</p> <p>FY 2024 Plans: Continue to develop new methods and tools for risk assessment to improve explosive safety risk management decisions. This program will develop and implement quantity distance requirements for labs and research facilities. Participate in Non- Army explosive safety testing and determine the orientation and configuration of explosives storage configurations.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase tied to data analytics, tool development and deployment events.</p>		0.195	0.162	0.235
Title: SBIR/STTR Transfer		-	0.037	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Description: SBIR/STTR Transfer				
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.				
Accomplishments/Planned Programs Subtotals		1.367	1.009	1.489
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
859: Life Cycle Pilot Process	-	20.300	23.797	5.838	-	5.838	5.861	5.863	5.926	5.991	0.000	73.576
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Life Cycle Pilot Process Project supports the implementation of the Single Manager for Conventional Ammunition (SMCA) Industrial Base Strategic Plan through technology investigations, pilot prototyping, and industrial assessments. Purpose is to develop a knowledge base for modern, cost effective, environmentally safe, and secure Industrial Base processes and practices. This project addresses technology, producibility, cost refinement, and supply chain risks for JPEO Armaments & Ammunition portfolio. Project 859 divides into three thrust areas: Single Point Failures (SPFs); Life Cycle Cost Refinement; and Manufacturing Technology for Industrial Base Transformation. Respectively this project will mitigate supply chain and source of supply concerns; refine overall product and manufacturing costs; and assess and implement modern/ industry-standard manufacturing processes to the Industrial Base.

FY2024 funding supports efforts to improve end item manufacturing costs; bridge technology transition between research and production; and assess improved security processes; evaluate alternative materials and processes to address supply chain risks and resiliency concerns. Specifically, resources will be directed to prove-out improved artillery explosive load operations, prove-out automated artillery propulsion operations, investigate improved waste treatment operations at government-owned contractor-operated facilities. Evaluate alternative Single Point Failure materials for close combat and large caliber munitions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Life Cycle Cost Refinement	0.989	1.928	1.414
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 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 2024 Plans: Assess alternative materials/components and alternative production processes to reduce end item and production costs for transition to the Army's Industrial Base; Efforts aligned with the Army Long Range Precision Fires CFT include but are not limited			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
to improve load, assemble, and pack operations for artillery munition systems; reduction in Industrial Base waste disposal cost by assessing waste stream repurpose processes.			
FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in program priorities due to increased efforts mitigating single source and no source of supply of critical chemicals/ materials.			
Title: Single Point Failures (SPFs)		0.315	0.265
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 National Technology and Industrial Base (NTIB). Additionally, thrust area efforts will address ammunition manufacturing capability shortfalls. This area leverages RDTE accomplishments and product knowledge to satisfy manufacturing requirements.			1.980
FY 2023 Plans: 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.			
FY 2024 Plans: Continue to assess technologies and material alternatives to mitigate single source and no source of supply for in production end items and end item components. Efforts include but not limited to; assessment of alternative production processes for military grade materials; alternative materials assessment for large caliber and grenade SPF mitigation.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increase in program priorities to explore technologies and material alternatives to mitigate single source and no source of supply of critical chemicals/materials.			
Title: Manufacturing Technology for Industrial Base Transformation		3.996	3.392
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 for digital manufacturing and engineering concepts to pilot and transition processes to affected industrial base for armaments and ammunition production operations.			2.444
FY 2023 Plans:			

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / <i>Munitions Standardization, Effectiveness and Safety</i>	Project (Number/Name) 859 / <i>Life Cycle Pilot Process</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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 government-owned, contactor-operated facility; digital technology integration strategies, investigations of robotic and automated manufacturing technologies to reduce energetic waste, improve safety of manufacturing operations and provide assessment of manufacturing efficiencies by investigating flexible manufacturing lines in support of but not limited to production of munition energetic components.</p> <p>FY 2024 Plans: Continue supporting the Army's vision for transformational change across the ammunition industrial base to ensure modernized manufacturing methodologies, processes, and equipment. Design and prove-out improved artillery load, assemble and pack operations and influence design considerations to production facilities. Investigations of robotic and automated manufacturing technologies, investigate manufacturing methodologies to reduce/transform energetic waste, provide safer manufacturing operations and improve manufacturing efficiencies for armaments and ammunition production operations.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in program priorities due to increased efforts mitigating single source and no source of supply of critical chemicals/ materials.</p>			
<p>Title: SBIR/STTR Transfer</p> <p>FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.</p>		-	0.212
Accomplishments/Planned Programs Subtotals		5.300	5.797
		FY 2022	FY 2023
<p>Congressional Add: Program increase - Foamable Celluloid Materials</p> <p>FY 2022 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 technologies and evaluation of munition components made out of foamable celluloid at various funding and</p>		5.000	5.000

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	FY 2022	FY 2023
maturity levels.		
FY 2023 Plans: Optimize foamable celluloid formulations and processing conditions for specific end-item characteristics, including burn rate and mechanical strength. Optimized material shall support test and evaluation activities		
Congressional Add: Program increase - Industrial Base Resiliency initiative	5.000	-
FY 2022 Accomplishments: Effort will develop technology to strengthen energy security and resiliency for the Army's munition industrial base.		
Congressional Add: Program increase- Agile Manufacturing for Advanced Ammunition Materials and Manufacturing Technologies	5.000	-
FY 2022 Accomplishments: Investigate critical materials and techniques assessing Manufacturing solutions of high temp metal alloys and ceramics to meet Modernization and Readiness Priorities.		
Congressional Add: Program increase - Neutron Radiography	-	5.000
FY 2023 Plans: Continuing non-destructive imaging techniques using high-energy neutron radiography. Enable neutron radiography imaging technology to improve quality, warfighter safety and lethality for artillery.		
Congressional Add: Program increase- Additive Manufacturing for High Temperature Alloys	-	8.000
FY 2023 Plans: Modernization of advanced munition systems while enhancing lethality, range, and readiness. Sustain flexible agile manufacturing processes and technologies for Next Generation Armaments. Expand the ability to produce munitions on agile production line(s) that can switch between families of munitions and can be assessed for implementation in ammunition plants.		
Congressional Adds Subtotals	15.000	18.000

C. Other Program Funding Summary (\$ in Millions)
 N/A

Remarks

D. Acquisition Strategy
 N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
F21: NATO Ammo Evaluation	-	0.496	0.766	0.772	-	0.772	0.772	0.773	0.781	0.790	0.000	5.150
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 2024 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 2022	FY 2023	FY 2024
Title: New Ammo Design Qualification & NATO Mission Support	0.279	0.310	0.326
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 2023 Plans: Will continue work to support NATO small arms ammunition, direct fire grenade, and large caliber interchangeability group meetings, documentation and test operations to enable interoperability among our allies.			
FY 2024 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 to FY 2024 Increase/Decrease Statement: Increased activity planned to improve NATO interoperability.			
Title: Joint Ballistics Program Support	0.217	0.428	0.446

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / <i>Munitions Standardization, Effectiveness and Safety</i>	Project (Number/Name) F21 / <i>NATO Ammo Evaluation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		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 2023 Plans: FY 2023 will continue interoperability testing and interchangeability group meetings. FY 2024 Plans: FY 2024 funding will continue to support NATO and JBMOU artillery documentation, interoperability testing and interchangeability group meetings. FY 2023 to FY 2024 Increase/Decrease Statement: Increase in FY2024 for additional interoperability testing and documentation.			
Title: SBIR/STTR Transfer FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638. FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.		-	0.028
Accomplishments/Planned Programs Subtotals		0.496	0.766
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
F24: Conventional Munitions Demil	-	16.532	14.501	23.854	-	23.854	23.557	21.740	17.799	17.994	0.000	135.977
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) 2024, the F24 projects will focus efforts on fielding alternative capabilities and developing enhancements to existing closed disposal capabilities. This effort will reduce hazardous air pollutants generated in the demil capability for the 155mm projectile Family of Scatterable Mines (FASCAM) at McAlester Army Ammunition Plant (MCAAP) deactivation furnace. The F24 Project will initiate design and fabrication of Anti-Personnel Landmine download lines for GATOR Cluster Bomb Units (CBU) and 155mm Area Denial Artillery Munitions (ADAM) projectiles.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Advanced Destruction	3.672	3.456	4.266
Description: This effort focuses on developing capabilities and capacities for the destruction of obsolete and or unsafe munitions.			
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. Complete Transition of the Ammonium Perchlorate Rocket Motor Destruction project from an Initial Operational Capability (IOC) to a Full operational capability (FOC) at Letterkenny Munitions Center (LEMC). Complete installation of the Filter Bags for reduction of Dioxan and Furan generation at the McAlester Cryofracture Destruction Facility.			
FY 2024 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Transition the Honest John Warhead demil capability to a CONUS Depot. Complete hardware improvements to reduce hazardous air pollutants generated in the demil capability for the 155mm projectile Family of Scatterable Mines (FASCAM) at the Munitions Cryofracture Disposal Facility (MCDF) and initiate final compliance testing. FY 2023 to FY 2024 Increase/Decrease Statement: Increase attributed to Honest John transition initiative.				
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. 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. Completed a critical design for the Plastic Shotgun Cartridge Demil Capability. FY 2024 Plans: Complete Operational Demonstration of the Automated Scrap Inspection (ASI) capability at Tooele Army Depot (TEAD). Conduct operation demonstration of the size reduction of rocket motor grains capability. Initiate Hardware Design of a Plastic Shotgun Cartridge Demil Capability. FY 2023 to FY 2024 Increase/Decrease Statement: Increase attributed to operational demonstration of the size reduction of double based rocket motor grains capability.		2.019	3.234	3.993
Title: Advanced Removal Description: This effort focuses on technology to remove propellant and energetics from munitions to allow closed disposal thermal treatment. FY 2023 Plans: Transition Phase I of the MK 46 Torpedo Warhead to an Execution Capability. 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. Conduct an		5.919	1.343	1.658

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605805A / <i>Munitions Standardization, Effectiveness and Safety</i>	Project (Number/Name) F24 / <i>Conventional Munitions Demil</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
operational demonstration of the D505 capability at McAlester Army Ammunition Plant. Funding will also support a final operational test of a capability to demil 2.75" Rocket Motors.			
FY 2024 Plans: Transition the D505 capability at McAlester Army Ammunition Plant. Transition a capability to demil 2.75" Rocket Motors.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increase attributed to Rocket Motor Static Fire initiative.			
Title: Advanced Waste Stream Treatment		1.787	1.523
Description: This effort focuses on handling waste streams from munitions items to continue environmentally compliant closed disposal treatment.			1.880
FY 2023 Plans: Planned initiatives include sub-scale testing of munitions containing Per- and poly-Fluoro A kyl 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. Complete final report on Air Emissions Sampling of Open Detonations and Provide Updated Emissions factors.			
FY 2024 Plans: Planned initiatives include sub-scale testing of munitions containing Per- and poly-Fluoro A kyl Substances (PFAS/PFOS). These substances are persistent 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. Complete Final report on Air Emissions Sampling of Open Detonations and Provide Updated Emissions factors.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increase attributed to PFAS/PFOS study.			
Title: Advanced Munitions Disassembly		3.135	4.416
Description: This effort focuses on developing innovative and efficient processes to disassemble munitions.			12.057
FY 2023 Plans: Planned initiatives include sub-scale testing of munitions containing Per- and poly-Fluoro A kyl Substances (PFAS/PFOS). These substances are persistent 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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
pollutants from emittance during demil operations. Complete Final report on Air Emissions Sampling of Open Detonations and Provide Updated Emissions factors.				
FY 2024 Plans: Complete operational demonstration of the Flechette demil and disposal capability. Complete hardware installation of the L525 Smoke and Illumination Signal Demil capability. The F24 Project will initiate design and fabrication of Anti Personnel Landmine download lines for GATOR Cluster Bomb Units (CBU) and 155mm Area Denial Artillery Munitions (ADAM) projectiles.				
FY 2023 to FY 2024 Increase/Decrease Statement: Increase attributed to L525 Marine Marker Demil hardware costs. In addition, the F24 Project will initiate design and fabrication of Anti Personnel Landmine download lines for GATOR CBU and 155mm ADAMS projectiles.				
Title: SBIR/STTR Transfer				
FY 2023 Plans: Adjustment for SBIR/STTR transfer.				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638.				
Accomplishments/Planned Programs Subtotals		16.532	14.501	23.854
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	1.724	1.912	1.629	-	1.629	1.326	1.341	1.354	1.370	0.000	10.656
031: Environmentally Sustainable Acquisition/Logistics	-	1.296	1.421	1.322	-	1.322	1.326	1.341	1.354	1.370	0.000	9.430
06I: Environmental Quality Technology Support	-	0.428	0.491	0.307	-	0.307	-	-	-	-	0.000	1.226

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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support		PE 0605857A I Environmental Quality Technology Mgmt Support			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	1.789	1.912	1.761	-	1.761
Current President's Budget	1.724	1.912	1.629	-	1.629
Total Adjustments	-0.065	0.000	-0.132	-	-0.132
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.065	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.132	-	-0.132
Change Summary Explanation					
Decreased funding to support higher Army priorities.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605857A / Environmental Quality Tech nology Mgmt Support				Project (Number/Name) 031 / Environmentally Sustainable Acquisition/Logistics			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
031: Environmentally Sustainable Acquisition/Logistics	-	1.296	1.421	1.322	-	1.322	1.326	1.341	1.354	1.370	0.000	9.430
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 2022	FY 2023	FY 2024
Title: Environmental Quality (EQ) Support (DEVCOM)	0.578	0.611	0.591
Description: Provide EQ Support to Acquisition Programs via Cross Functional Teams (CFTs), Program Executive Offices (PEOs) and Program Managers (PMs).			
FY 2023 Plans: Provide support to CFTs, PEOs and PMs to integrate EQ considerations into systems engineering activities. This includes 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. Analyze impending statutes and regulations impacting production, operation and support of weapon systems. Assess weapon system readiness impacts (e.g., production levels, training, operational tempo, and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. 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 2024 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,			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605857A / <i>Environmental Quality Technology Mgmt Support</i>	Project (Number/Name) 031 / <i>Environmentally Sustainable Acquisition/Logistics</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		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 2023 to FY 2024 Increase/Decrease Statement: Funding decrease represents portfolio reprioritization.			
Title: Environmental Quality Technology Management (DEVCOM)		0.718	0.758
Description: Provide management support for Army EQ technology efforts through the Safer Alternatives for Readiness (SAFR) program.			
FY 2023 Plans: 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. Manage and oversee technology integration efforts by Army Life Cycle Management Commands for weapon systems in all stages of design, procurement and operations/support. Coordinate technology requirements among members of the Army EQ Technology Teams and Cross Functional Teams, coordinate technology evaluations and operational requirements in support of weapon system platform integration, manage and oversee test plan development, oversee testing activities, and analyze test results to support weapon systems engineering decision making.			
FY 2024 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 to FY 2024 Increase/Decrease Statement: Funding decrease represents portfolio reprioritization.			
Title: SBIR/STTR Transfer (DEVCOM)		-	0.052

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
Description: Funding transferred in accordance with Title 15 USC §638 FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals		1.296	1.421
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
TBD			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605857A / Environmental Quality Technology Mgmt Support				Project (Number/Name) 061 / Environmental Quality Technology Support			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
061: Environmental Quality Technology Support	-	0.428	0.491	0.307	-	0.307	-	-	-	-	0.000	1.226
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 2022	FY 2023	FY 2024
Title: Management of Army Environmental Quality Technology Programs (DEVCOM)	0.428	0.473	0.307
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 2023 Plans: 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 2024 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 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605857A / <i>Environmental Quality Technology Mgmt Support</i>	Project (Number/Name) 061 / <i>Environmental Quality Technology Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
Reflects planned lifecycle for this effort.			
Title: SBIR/STTR Transfer		-	0.018
Description: Funding transferred in accordance with Title 15 USC §638			-
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals		0.428	0.491
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	48.798	53.271	55.843	-	55.843	56.435	56.522	57.141	57.776	0.000	385.786
FJ2: Army SHARP RDTE	-	1.471	1.244	1.254	-	1.254	1.281	1.307	1.335	1.363	0.000	9.255
M65: Army Test and Evaluation Command	-	47.327	52.027	54.589	-	54.589	55.154	55.215	55.806	56.413	0.000	376.531

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 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 the following functions: 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 efforts in support of the developmental, evaluation and operational test missions 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 2,100 developmental tests; approximately 57 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army			Date: March 2023			
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 0605898A / Army Direct Report Headquarters - R&D - MHA				
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget		48.981	53.271	55.674	-	55.674
Current President's Budget		48.798	53.271	55.843	-	55.843
Total Adjustments		-0.183	0.000	0.169	-	0.169
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-0.183	-			
• SBIR/STTR Transfer		-	-			
• Adjustments to Budget Years		-	-	0.169	-	0.169
Change Summary Explanation						
Increased funding due to revised economic assumptions.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
FJ2: Army SHARP RDTE	-	1.471	1.244	1.254	-	1.254	1.281	1.307	1.335	1.363	0.000	9.255
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 2022	FY 2023	FY 2024
Title: Role Identifications	1.471	1.199	1.254
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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 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 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 2024 Plans: SHARP is continuing the 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 in accordance with the SECDEF directed implementation of the Independent Review Commission (IRC) recommendations for an Integrated Prevention Workforce. SHARP continues the multi-year implementation of the OSD 90-day Independent Review Commission findings, decisions for SHARP re-design, prevention-focused efforts, and required program assessments.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increase from FY23 based on planned research for SHARP and planned lifecycle.			
Title: SBIR/STTR Transfer		-	0.045
Description: Funding transferred in accordance with Title 15 USC §638.			-
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals		1.471	1.244
C. Other Program Funding Summary (\$ in Millions) N/A			1.254

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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
C. Other Program Funding Summary (\$ in Millions)		
<u>Remarks</u> MDEP:VSHP does not have any other Army Line Item associated with this project.		
<u>D. Acquisition Strategy</u> N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
M65: Army Test and Evaluation Command	-	47.327	52.027	54.589	-	54.589	55.154	55.215	55.806	56.413	0.000	376.531
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 resources the workforce to execute the following functions: 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 2,100 developmental tests; approximately 57 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 2022	FY 2023	FY 2024
Title: ATEC	47.327	50.770	54.589
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,			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
assessments and experiments to provide essential information to Soldiers and acquisition decision makers supporting the American Warfighter.			
<p>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.</p> <p>FY 2024 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: 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 and minor maintenance and repair operations that support multiple ATEC facilities.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase includes civilian pay raise assumptions and inflation for non-pay and non-fuel purchases.</p>			
<p>Title: Army Enterprise Business Systems (EBS) Consolidation- Command Decision Support Systems</p> <p>Description: The Army consolidated Enterprise Business Systems (EBS) under the Acquisition Domain. The consolidation resulted in the transfer of funding \$1,034K 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).</p> <p>FY 2023 Plans:</p>		-	1.034
			-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
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 2022	FY 2023
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 2023 to FY 2024 Increase/Decrease Statement: Decrease in funding due to Enterprise Business Systems (EBS) consolidation.			
Title: SBIR/STTR Transfer		-	0.223
Description: Funding transferred in accordance with Title 15 USC §638.			-
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638.			
FY 2023 to FY 2024 Increase/Decrease Statement: FY23 SBIR/STTR funding transfer in accordance with Title 15 USC §638.			
Accomplishments/Planned Programs Subtotals		47.327	52.027
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	78.187	89.602	91.340	-	91.340	73.243	72.289	73.062	73.860	0.000	551.583
XW9: Reagan Test Site	-	78.187	89.602	91.340	-	91.340	73.243	72.289	73.062	73.860	0.000	551.583

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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support		PE 0606002A I Ronald Reagan Ballistic Missile Defense Test Site			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	80.921	90.088	90.858	-	90.858
Current President's Budget	78.187	89.602	91.340	-	91.340
Total Adjustments	-2.734	-0.486	0.482	-	0.482
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.734	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.482	-	0.482
• FFRDC Transfer	-	-0.486	-	-	-
Change Summary Explanation					
Pacific Deterrence Initiative (PDI) funding increases slightly as part of the planned lifecycle for this effort. \$21.763 million in FY 2023 to \$22.382 million in FY 2024.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0606002A / Ronald Reagan Ballistic Mi ssile Defense Test Site				Project (Number/Name) XW9 / Reagan Test Site			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
XW9: Reagan Test Site	-	78.187	89.602	91.340	-	91.340	73.243	72.289	73.062	73.860	0.000	551.583
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 2022	FY 2023	FY 2024
Title: Civilian Pay	6.753	7.306	7.600
Description: This effort covers operations and mission support functions at the RTS and is managed by USASMDC.			
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 2024 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 to FY 2024 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606002A / Ronald Reagan Ballistic Mi ssile Defense Test Site	Project (Number/Name) XW9 / Reagan Test Site		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Increased funding reflects Planned lifecycle of this effort.				
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 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 2024 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 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.		0.782	0.850	1.000
Title: Outside Obligations/Other Government Agencies (OGAs) Description: Funding provided to other Government Agencies for reimbursable-type work efforts. FY 2023 Plans: Will continue to provide support to test and evaluation of major Army and DoD missile systems. FY 2024 Plans: Will continue to provide support to test and evaluation of major Army and DoD missile systems. FY 2023 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.		2.946	3.202	3.300
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 2023 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 2024 Plans:		6.032	6.614	6.000

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606002A / <i>Ronald Reagan Ballistic Missile Defense Test Site</i>	Project (Number/Name) XW9 / <i>Reagan Test Site</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
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 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.			
Title: RTS Contractor Labor		44.139	52.607
Description: Provide funding for Prime contractor and other contract support to perform technical 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 2024 Plans: Contractor personnel will continue to provide technical 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 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.			
Title: Contractor Material		9.376	7.204
Description: Provide for materials to maintain range capabilities and support 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 2024 Plans: Will continue to provide critical non-labor materials to maintain critical range capabilities and prevent obsolescence in support of test operations.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.			
Title: Federally Funded Research and Development Centers (FFRDC) Contractor Pay		4.125	4.404
Description: Provide for technical expertise to RTS leadership for the overall performance of Range Operations.			
FY 2023 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606002A / Ronald Reagan Ballistic Mi ssile Defense Test Site	Project (Number/Name) XW9 / Reagan Test Site		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Will continue to provide technical advice to RTS leadership in support of Range operations, strategic planning, and technical execution of critical technology. FY 2024 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 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.				
Title: Contractor Meteorological Description: Provide capability for weather sensing capability which allows for test planning and execution of the program. 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 2024 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 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.		2.098	2.704	2.800
Title: Ground Transportation Description: Provide transportation of material and passenger between Kwajalein and continental U.S. (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 2024 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 to FY 2024 Increase/Decrease Statement: Increase due to inflation.		1.100	0.964	1.000
Title: Mission Specific Environmental		0.836	0.937	0.950

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606002A / <i>Ronald Reagan Ballistic Mi</i> <i>ssile Defense Test Site</i>	Project (Number/Name) XW9 / <i>Reagan Test Site</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Description: Ensures Range Readiness and all regulatory environmental requirements are compliant with range and test 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 2024 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 2023 to FY 2024 Increase/Decrease Statement: Increased funding reflects Planned lifecycle of this effort.				
Title: SBIR/STTR Transfer FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638		-	2.810	-
Accomplishments/Planned Programs Subtotals		78.187	89.602	91.340
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	10.641	1.424	6.348	-	6.348	3.450	3.465	3.533	3.572	Continuing	Continuing
FI9: Counterl Intel and Human Intel Modernization	-	10.641	1.424	6.348	-	6.348	3.450	3.465	3.533	3.572	Continuing	Continuing

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, management processes, and responsiveness. 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 protecting Army technologies and ensuring overmatch on current and future battlefields.

CI Support to Force Protection (CIFP) provides for updating the CI Threat Module, the Army CI 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 sources to record, identify, sort, and prioritize information.

The Castle Keep Portal is the Army's enterprise capability to automate workflow services, SCI program reporting, metrics, analysis, and information sharing to protect classified information within and across the defense elements of the Intelligence Community.

GEOINT Collection Integration provides rapid integration of emerging GEOINT capabilities and analysis techniques on an operational timeline (days/weeks) to provide the maximum advantage to the ground force commander. The Army GEOINT Office manages the world-wide effort to rapidly identify requirements, develop solutions, and deliver algorithm capabilities to answer difficult intelligence problems. The AGO transitioned the effort to focus on near-peer threats and denied-area intelligence operations, which requires a greater outlay than the previous efforts. The project funds software development and testing, and required infrastructure to extract, analyze, and validate new and emerging classified data sources.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support		PE 0606003A I CounterIntel and Human Intel Modernization			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	5.363	1.424	1.393	-	1.393
Current President's Budget	10.641	1.424	6.348	-	6.348
Total Adjustments	5.278	0.000	4.955	-	4.955
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	5.278	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	4.955	-	4.955
Change Summary Explanation					
FY24 funding is increased to resource activities to develop software to leverage new GEOINT sensors in the space layer and deliver capabilities to the Army Intelligence Enterprise. These are non-traditional GEOINT sensors that deliver raw data to the Army.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0606003A / CounterIntel and Human Intel el Modernization				Project (Number/Name) F19 / Counterl Intel and Human Intel Modernization			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
FI9: Counterl Intel and Human Intel Modernization	-	10.641	1.424	6.348	-	6.348	3.450	3.465	3.533	3.572	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 development and testing 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, management processes, and responsiveness. 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 protecting Army technologies and ensuring overmatch on current and future battlefields.

CI Support to Force Protection (CIFP) provides for updating the CI Threat Module, the Army CI 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 sources to record, identify, sort, and prioritize information.

The Castle Keep Portal is the Army's enterprise capability to automate workflow services, SCI program reporting, metrics, analysis, and information sharing to protect classified information within and across the defense elements of the Intelligence Community.

Geospatial intelligence (GEOINT) Collection Integration provides rapid integration of emerging GEOINT capabilities and analysis techniques on an operational timeline (days/weeks) to provide the maximum advantage to the ground force commander. The Army GEOINT Office manages the world-wide effort to rapidly identify requirements, develop solutions, and deliver algorithm capabilities to answer difficult intelligence problems. The AGO transitioned the effort to focus on near-peer threats and denied-area intelligence operations, which requires a greater outlay than the previous efforts. The project funds software development and testing, and required infrastructure to extract, analyze, and validate new and emerging classified data sources.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Army's Threat Management Informtion Sharing System	9.908	-	2.928
Description: The Counterintelligence (CI) and Human Intelligence (HUMINT) Modernization Project supports ongoing development and testing 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, management processes, and responsiveness. The required tools provide Army and DoD leadership, commanders, and warfighters the intelligence necessary for making advantageous operational planning, policies, and timely decisions.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606003A / <i>CounterIntel and Human Intel Modernization</i>	Project (Number/Name) F19 / <i>CounterIntel and Human Intel Modernization</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>Modernization of these systems is a core component of protecting Army technologies and ensuring overmatch on current and future battlefields.</p> <p>CI Support to Force Protection (CIFP) provides for updating the CI Threat Module, the Army CI 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 sources to record, identify, sort, and prioritize information.</p> <p>The Castle Keep Portal is the Army's enterprise capability to automate workflow services, SCI program reporting, metrics, analysis, and information sharing to protect classified information within and across the defense elements of the Intelligence Community.</p> <p>FY 2024 Plans: 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in funding supports development and testing of software code integrating existing and new algorithms.</p>			
<p>Title: GEOINT</p> <p>Description: GEOINT Collection Integration provides rapid integration of emerging GEOINT capabilities and analysis techniques on an operational timeline (days/weeks) to provide the maximum advantage to the ground force commander. The Army GEOINT Office manages the world-wide effort to rapidly identify requirements, develop solutions, and deliver algorithm capabilities to answer difficult intelligence problems. The AGO transitioned the effort to focus on near-peer threats and denied-area intelligence operations, which requires a greater outlay than the previous efforts. The project funds software development and testing, and required infrastructure to extract, analyze, and validate new and emerging classified data sources.</p> <p>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-</p>		0.733	1.424
			3.420

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606003A / <i>CounterIntel and Human Intel Modernization</i>	Project (Number/Name) F19 / <i>Counterl Intel and Human Intel Modernization</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p><i>FY 2024 Plans:</i> Efforts will develop software to leverage new GEOINT sensors in the space layer and deliver capabilities to the Army Intelligence Enterprise. These are non-traditional GEOINT sensors that deliver raw data to the Army.</p> <p><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Increased funding supports anticipated commercial and government deliveries and offer additional opportunities to answer ground forces intelligence requirements.</p>			
Accomplishments/Planned Programs Subtotals		10.641	1.424
<p>C. Other Program Funding Summary (\$ in Millions) N/A</p> <p>Remarks</p>			
<p>D. Acquisition Strategy N/A</p>			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	37.616	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.616
CD7: Medical Program-Wide Activities	-	37.616	-	-	-	-	-	-	-	-	0.000	37.616

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)	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	39.041	0.000	0.000	-	0.000
Current President's Budget	37.616	0.000	0.000	-	0.000
Total Adjustments	-1.425	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.425	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
CD7: Medical Program-Wide Activities	-	37.616	-	-	-	-	-	-	-	-	0.000	37.616
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 2022	FY 2023	FY 2024
Title: Medical Program-Wide Activities	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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
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.				
Accomplishments/Planned Programs Subtotals		37.616	-	-
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	5.466	5.816	6.025	-	6.025	6.185	6.360	6.428	6.499	0.000	42.779
FL2: Cyber Vulnerabilities Assessments and Evaluations	-	5.466	5.816	6.025	-	6.025	6.185	6.360	6.428	6.499	0.000	42.779

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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0606942A / Assessments and Evaluations Cyber Vulnerabilities			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	5.466	5.816	5.998	-	5.998
Current President's Budget	5.466	5.816	6.025	-	6.025
Total Adjustments	0.000	0.000	0.027	-	0.027
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.027	-	0.027
Change Summary Explanation					
Increased funding due to revised economic assumptions.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
FL2: Cyber Vulnerabilities Assessments and Evaluations	-	5.466	5.816	6.025	-	6.025	6.185	6.360	6.428	6.499	0.000	42.779
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 2022	FY 2023	FY 2024
Title: Cyberspace Operational Resiliency Assessment - Platform (CORA-P)	2.733	5.816	6.025
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 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			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023	
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0606942A / <i>Assessments and Evaluations Cyber Vulnerabilities</i>	Project (Number/Name) FL2 / <i>Cyber Vulnerabilities Assessments and Evaluations</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023
<p>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.</p> <p>FY 2024 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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase supports the planned lifecycle of the effort.</p>			
<p>Title: Cyberspace Operational Resiliency Assessment - Installation (CORA-I)</p> <p>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.</p>		2.733	-
Accomplishments/Planned Programs Subtotals		5.466	5.816
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support					PE 0909999A / Financing for Cancelled Account Adjustments							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.101
900: CLOSED ACCT ADJMT-M	-	0.101	-	-	-	-	-	-	-	-	0.000	0.101

A. Mission Description and Budget Item Justification

Financing for Closed Account Adjustments

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.101	0.000	0.000	-	0.000
Total Adjustments	0.101	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.101	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
900: CLOSED ACCT ADJMT-M	-	0.101	-	-	-	-	-	-	-	-	0.000	0.101
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 2022	FY 2023	FY 2024
Title: Closed Account Adjustments										0.101	-	-
Description: Closed Account Adjustments												
Accomplishments/Planned Programs Subtotals										0.101	-	-
C. Other Program Funding Summary (\$ in Millions) N/A												
Remarks												
D. Acquisition Strategy N/A												