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

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</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	-	29.683	4.140	12.789	-	12.789	13.832	10.438	10.646	8.970	0.000	90.498
DX5: <i>Electronic Warfare And Management Tool</i>	-	16.168	1.960	5.022	-	5.022	7.933	7.564	7.754	6.058	0.000	52.459
DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>	-	11.581	-	5.596	-	5.596	4.287	1.260	1.261	1.262	0.000	25.247
VS6: <i>Integrated Electronic Warfare Systems</i>	-	1.934	2.180	2.171	-	2.171	1.612	1.614	1.631	1.650	0.000	12.792

**A. Mission Description and Budget Item Justification**

A portion of this funding line is a key enabler of the Army Modernization Priorities in support of Electronic Warfare Planning and Management Tool (EWPMT) program.

This Program Element (PE) encompasses engineering and manufacturing development for tactical Electronic Warfare (EW). The Integrated Electronic Warfare System (IEWS) is a capability set that integrates electronic attack, protect and support functions to dramatically improve the ability to seize, retain, and exploit an advantage within the electromagnetic spectrum (EMS). It is based on a modular, scalable and open architecture to allow Army Brigade Combat Team (BCT) and Joint Force Commander's to tailor capability responses against a variety of EW threats/scenarios.

The IEWS capability set is structured along four program lines of effort: 1) Project DX5 Electronic Warfare Planning and Management Tool (EWPMT), 2) Project DX6 Multi-Function EW (MFEW), 3) Project VS6 Counter Radio-Controlled Improvised Explosive Devices (RCIED) Electronic Warfare (CREW) which provides current defensive electronic attack capability.

Project DX5 - This funding line is in support of the Electronic Warfare Planning and Management Tool (EWPMT) which is a key enabler of Army Modernization Priorities, APNT CFT and Network CFT. EWPMT is the Commander's tool to control, manage, and dominate the Electromagnetic Spectrum (EMS). It will provide the ability to remotely control & manage Electronic Warfare (EW) assets in order to execute offensive and defensive Electronic Attack, EW targeting, and synchronize EW and Spectrum Management Operations (SMO) across Intelligence, Operations, and Signals in support of Multi-Domain Operations (MDO). As a Commander's tool, EWPMT is predominantly utilized by the Cyber Electromagnetic Activities (CEMA) cell for mission planning, access to national and strategic sensors, data repositories, as well as enabling the synchronization of EW, Signals Intelligence (SIGINT) operations, and Cyber Domains. EWPMT supports the MDO Task Force (MDTF) and other units getting authorization for early equipping via Operational Needs Statement (ONS).

Project DX6 - MFEW-AL is the Army's only program providing tactical Commanders with deep look, organic, airborne, offensive electronic warfare (EW), empowering Commanders to shape the Electromagnetic Spectrum (EMS) to their advantage. The MFEW Air Large system will provide: 1) Offensive Electronic Attack (OEA) - Non-Kinetic Fires capability with the intent of denying, degrading, or disrupting enemy communications capability and non-communications emitters; 2) Electronic Warfare Support (ES) - Capability to search, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic (EM) energy for the

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Army	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>
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purpose of immediate threat recognition, targeting, planning, and execution of future operations; 3) Dissemination of Military Information Support Operations (MISO) products; and 4) Support of Offensive Cyber Operations (OCO) and Multi-Domain Operations.

Project VS6 - Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW) provides protection of ground forces operating in vehicle convoys, single vehicles and fixed locations in operational theaters which enables freedom of movement across the depth and breadth of the operational environment. Current CREW systems are programmable with techniques to mitigate emerging threats. In order to keep pace with the threat evolution, development efforts will provide fielded CREW systems as well as other Electronic Warfare (EW) systems with techniques that mitigate the range of threats as required. These development efforts may include development of new techniques, integration of existing techniques, as well as hardware and software development and integration in order to pace the threat.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	30.840	4.243	2.216	-	2.216
Current President's Budget	29.683	4.140	12.789	-	12.789
Total Adjustments	-1.157	-0.103	10.573	-	10.573
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.157	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	10.573	-	10.573
• FFRDC Transfer	-	-0.103	-	-	-

**Change Summary Explanation**

Fiscal Year (FY) 2024 Total funding increase for 0604270A is \$10.573M (DX5 +\$5.022M, DX6 +\$5.596M, and VS6 -\$0.045M) to support engineering and logistics development, capability maturation, performance technology improvements, system hardening, and sensor integration.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>				<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
DX5: <i>Electronic Warfare And Management Tool</i>	-	16.168	1.960	5.022	-	5.022	7.933	7.564	7.754	6.058	0.000	52.459
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This funding line is in support of the Electronic Warfare Planning and Management Tool (EWPMT) which is a key enabler of Army Modernization Priorities, APNT CFT and Network CFT. EWPMT is the Commander's tool to control, manage, and dominate the Electromagnetic Spectrum (EMS). It will provide the ability to remotely control & manage Electronic Warfare (EW) assets in order to execute offensive and defensive Electronic Attack, EW targeting, and synchronize EW and Spectrum Management Operations (SMO) across Intelligence, Operations, and Signals in support of Multi-Domain Operations (MDO). As a Commander's tool, EWPMT is predominantly utilized by the Cyber Electromagnetic Activities (CEMA) cell for mission planning, access to national and strategic sensors, data repositories, as well as enabling the synchronization of EW, Signals Intelligence (SIGINT) operations, and Cyber Domains. EWPMT supports the MDO Task Force (MDTF) and other units getting authorization for early equipping via Operational Needs Statement (ONS).

**Justification:**

Fiscal Year (FY) 2024 Base RDT&E funds in the amount of \$5.022 million fund EWPMT capability maturation, performance improvements, system hardening, and Terrestrial Layer System (TLS) / Multi-Function Electronic Warfare (MFEW) and other sensor integration.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> EWPMT	16.168	1.888	5.022
<b>Description:</b> EWPMT software application provides Electronic Warfare and Spectrum Management soldiers the ability to plan, coordinate, integrate, and synchronize Cyber Electromagnetic Activities (CEMA) across all Warfighting Functions in support of Multi-Domain Operations across all Army echelons.			
<b>FY 2023 Plans:</b> Maintain EWPMT software capability and prepare for Army fielding in FY24.			
<b>FY 2024 Plans:</b> EWPMT capability maturation, performance improvements, system hardening, and Terrestrial Layer System (TLS) / Multi-Function Electronic Warfare (MFEW) and other sensor integration.			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> FY24 Increase of \$3.062 million funds EWPMT capability maturation, performance improvements, and system hardening.			
<b>Title:</b> SBIR/STTR Transfer	-	0.072	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Description:</b> Small Business Innovative Research (SBIR) / Small Business Technology Transfer (STTR)			
<b>FY 2023 Plans:</b> Funding to be transferred in accordance with Title 15 USC S638			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding to be transferred in accordance with Title 15 USC S638			
<b>Accomplishments/Planned Programs Subtotals</b>	16.168	1.960	5.022

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• K00002: <i>EW Planning &amp; Management Tools (EWPMT)</i>	0.783	-	21.278	-	21.278	26.945	18.356	8.798	3.183	0.000	79.343

**Remarks**  
Supports EWPMT fielding to Army 2030.

**D. Acquisition Strategy**  
EWPMT is an Acquisition Category II program of record that follows an agile acquisition strategy under the governance and requirements in the Information System Capability Development Document. The acquisition strategy includes the delivery of software biannually as part of Development, Security, Operations (DEVSECOPS) model that will include refined or new capability and functionality. Operations will include executing fielding activities and supporting experimentation while moving to a continuous Authority to Operate. This acquisition and requirements strategy enables frequent delivery of critical EW planning and management capabilities in response to changing threat, technology, and techniques in support of MDO.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>
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<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Office Support	Various	PM Electronic Warfare & Cyber : Aberdeen Proving Ground, MD	13.914	0.647	Nov 2021	0.166	Feb 2023	0.285	Nov 2023	-		0.285	Continuing	Continuing	Continuing
SBIR/STTR Transfer	TBD	TBD : TBD	0.604	-		0.072	Apr 2023	-		-		-	0.000	0.676	-
<b>Subtotal</b>			14.518	0.647		0.238		0.285		-		0.285	Continuing	Continuing	N/A

**Remarks**  
Fiscal Year (FY) 2024 funds in the amount of \$0.285 million represent Program Management Office (PMO) support staff labor, government travel, and shared support costs.

<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EMD Contract- EWPMT Software Development & Interim Contractor Support	C/IDIQ	Raytheon : Fort Wayne, IN	0.674	7.686	Nov 2021	0.201	Feb 2023	-		-		-	0.000	8.561	14.953
Contract - EWPMT Fielding, Training, Support and Product Improvement	C/CPFF	TBD : TBD	-	-		-		2.647	Apr 2024	-		2.647	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.674	7.686		0.201		2.647		-		2.647	Continuing	Continuing	N/A

**Remarks**  
FY24 funds in the amount of \$2.647 million represent funding for EWPMT performance and functionality improvements on the EWPMT Fielding, Training, Support and Product Improvement Contract.

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EWPMT Technical and Engineering Support	Various	Various : Various	37.540	7.394	Dec 2021	1.521	Feb 2023	1.620	Nov 2023	-		1.620	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>
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<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
<b>Subtotal</b>			37.540	7.394		1.521		1.620		-		1.620	Continuing	Continuing	N/A

**Remarks**  
FY24 funds in the amount of \$1.440 million represent EWPMPT capability maturation and sensor integration.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EWPMT Test Support	Various	Various : Various	8.244	0.441	Jan 2022	-		0.470	Jun 2024	-		0.470	Continuing	Continuing	Continuing
<b>Subtotal</b>			8.244	0.441		-		0.470		-		0.470	Continuing	Continuing	N/A

**Remarks**  
FY24 funds in the amount of \$0.470 million provides the ability to execute functional testing and participate in integration events.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	60.976	16.168	1.960	5.022	-	5.022	Continuing	Continuing	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>			<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>	

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Full Deployment Decision (FDD)							▲ 1 FDD																					
Full Operational Capability (FOC)															▲ 3 FOC													
EWPMT Contract Software Development & Interim Contractor...	PoP 29 JUL 2014 - 31 DEC 2023																											
EWPMT Contract Fielding, Training, Support and Product I...	PoP JAN 2024 - JAN 2029																											
EWPMT Fielding ARMY 2030	EWPMT Fielding ARMY 2030																											
EWPMT Fielding TOTAL ARMY	EWPMT Fielding TOTAL ARMY																											
Cybersecurity, Functional, and Acceptance Testing	Cybersecurity, Functional, and Acceptance Testing (2x per FY)																											
TLS Operational Assessment (OA) Support											▲ 2 TLS OA Support																	
EWPMT Software Updates	EWPMT Software Updates (2x per FY minimally)																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Full Deployment Decision (FDD)	3	2023	3	2023
Full Operational Capability (FOC)	4	2025	4	2025
EWPMT Contract Software Development & Interim Contractor Support	4	2014	1	2024
EWPMT Contract Fielding, Training, Support and Product Improvement	2	2024	2	2029
Test CD1 (Government Confidence test)	2	2016	2	2016
Limited Deployment Decision for CD1	4	2016	4	2016
CD1 Fielding	4	2016	3	2018
Initial Operational Capability (IOC)	1	2017	1	2017
Development and Test for CD2	4	2016	4	2018
Development and Test for CD3	3	2018	3	2020
Development for CD4 and Test for EWPMT Increment I	4	2019	4	2021
Initial Operational Test & Evaluation (IOT&E)	3	2021	4	2021
Development and Test for CD1	4	2014	3	2016
EWPMT Fielding ARMY 2030	3	2024	2	2027
EWPMT Fielding TOTAL ARMY	3	2027	4	2029
Cybersecurity, Functional, and Acceptance Testing	3	2022	4	2029
TLS Operational Assessment (OA) Support	4	2024	4	2024
EWPMT Software Updates	1	2024	4	2028

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>				<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>	-	11.581	-	5.596	-	5.596	4.287	1.260	1.261	1.262	0.000	25.247
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

MFEW-AL is the Army's only program providing tactical Commanders with deep look, organic, airborne, offensive electronic warfare (EW), empowering Commanders to shape the Electromagnetic Spectrum (EMS) to their advantage. The MFEW Air Large system will provide: 1) Offensive Electronic Attack (OEA) - Non-Kinetic Fires capability with the intent of denying, degrading, or disrupting enemy communications capability and non-communications emitters; 2) Electronic Warfare Support (ES) - Capability to search, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic (EM) energy for the purpose of immediate threat recognition, targeting, planning, and execution of future operations; 3) Dissemination of Military Information Support Operations (MISO) products; and 4) Support of Offensive Cyber Operations (OCO) and Multi-Domain Operations.

MFEW-AL has received CFT "Priority 2 Critical Enabler" endorsements from: Long Range Precision Fires, Assured Position Navigation & Timing, Future Vertical Lift and Network CFTs.

Justification:

Fiscal Year (FY) 2023 has no funded activities. Fiscal Year (FY) 2024 funding increase of \$5.596 million is for Gray Eagle integration, engineering and logistics development, and test leveraging existing Other Government Agencies (OGA).

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> Multi-Function Electronic Warfare (MFEW) Air Large	11.581	-	5.596
<b>Description:</b> MFEW-Air Large is an airborne Electronic Warfare payload to be integrated onto the Gray Eagle Unmanned Aerial Vehicle to provide offensive Electronic Attack (EA) and Electronic Warfare Support (ES) capability to the Brigade Combat Team (BCT).			
<b>FY 2024 Plans:</b> Gray Eagle Integration			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> No RDT&E funded activities in (FY) 2023.			
<b>Accomplishments/Planned Programs Subtotals</b>	11.581	-	5.596

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• B05000: <i>Multi-Function Electronic Warfare (MFEW) Systems</i>	-	3.060	15.941	-	15.941	23.317	3.981	3.985	3.988	0.000	54.272

**Remarks**

**D. Acquisition Strategy**

MFEW-AL is the Army's only airborne EW/Cyber enabled capability to support the maneuver commander to enable Multi-Domain Operations and Long Range Precision Fires. MFEW Acquisition strategy employs a phased development approach:

Phase 1 Other Transaction Agreement (OTA), awarded SEP 2018, was an 18-month contract to develop initial capability and support. Two (2) prototypes were built, delivered and flown at Yuma Proving Grounds (YPG) on a surrogate aircraft. The MFEW-AL prototype system successfully demonstrated EW capabilities in FEB 2020.

Phase 2 of the OTA, follow-on effort to build four (4) Engineering and Manufacturing Development (EMD) Systems for testing, qualification, flight testing and assessment to support future deployment and procurement decisions was awarded JAN 2020. Systems will be delivered and tested 3QFY23.

FY24-FY25 activities include Gray Eagle integration, engineering and logistics development, and test leveraging existing Other Government Agencies (OGA).

MFEW-AL will employ Sensor Open Systems Architecture (SOSA) open architecture to enable the pursuit of continuous capability improvements to pace the threat.

MFEW production will be in accordance with 10 U.S.C. 2371b ("Authority of the Department of Defense to carry out certain prototype projects). Upon a determination that MFEW has successfully met the OTA transition requirements, a follow-on production contract without the use of competitive procedures, is planned. Following receipt of a MS C ADM on 14 May 2021, procurement of two (2) LRIP systems awarded under existing contract mechanism.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>
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<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Office Support - MFEW Air	Various	PM Electronic Warfare & Cyber (PM EW&C) : Aberdeen Proving Ground, MD	1.744	0.158	Mar 2023	-		0.582	Jan 2024	-		0.582	12.520	15.004	-
<b>Subtotal</b>			1.744	0.158		-		0.582		-		0.582	12.520	15.004	N/A

<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MFEW OTA EMD Contract	C/FFP	C5 Consortium OTA : Acquisition Contracting Center-New Jersey	67.679	1.541	Nov 2021	-		-		-		-	0.000	69.220	-
Gray Eagle Integration	Option/CPFF	General Atomics : San Diego, CA	2.261	0.400	Mar 2023	-		4.000	Jan 2024	-		4.000	0.000	6.661	-
Engineering & Logistics Development	SS/CPFF	Lockheed Martin Corporation : Owego, NY	3.907	4.654	Mar 2023	-		0.457	Dec 2023	-		0.457	0.000	9.018	-
<b>Subtotal</b>			73.847	6.595		-		4.457		-		4.457	0.000	84.899	N/A

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Matrix Engineering - MFEW Air	Various	Various : Aberdeen Proving Ground, MD	4.079	1.584	Dec 2021	-		0.557	Jan 2024	-		0.557	0.000	6.220	-
<b>Subtotal</b>			4.079	1.584		-		0.557		-		0.557	0.000	6.220	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>			<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>	

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MFEW Air OTA EMD																												
Developmental Test / Limited User Test																												
MFEW Air Production and Fielding																												
Gray Eagle Integration																												
Gray Eagle Developmental Test																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Tailored Milestone B	3	2018	3	2018
MFEW Air OTA Award	4	2018	4	2018
MFEW Air OTA Prototype Design & Development	4	2018	2	2020
MFEW Air OTA EMD	2	2020	2	2023
Tailored Milestone C	3	2021	3	2021
Developmental Test / Limited User Test.	3	2023	3	2023
MFEW Air Production and Fielding	3	2026	4	2031
Gray Eagle Integration	1	2024	4	2025
Gray Eagle Developmental Test	2	2025	2	2025

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>				<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
VS6: <i>Integrated Electronic Warfare Systems</i>	-	1.934	2.180	2.171	-	2.171	1.612	1.614	1.631	1.650	0.000	12.792
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW) provides protection of ground forces operating in vehicle convoys, single vehicles and fixed locations in operational theaters which enables freedom of movement across the depth and breadth of the operational environment. Current CREW systems are programmable with techniques to mitigate emerging threats. In order to keep pace with the threat evolution, development efforts will provide fielded CREW systems as well as other Electronic Warfare (EW) systems with techniques that mitigate the range of threats as required. These development efforts may include development of new techniques, integration of existing techniques, as well as hardware and software development and integration in order to pace the threat.

Justification:

Fiscal Year (FY) 2024 Base funding in the amount of \$2.171 million funds the continued support of CREW systems as well as other EW systems with techniques that mitigate the range of threats as required. These efforts include development of new techniques, integration of existing techniques, as well as hardware and software enhancement and integration in order to pace the threat.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> IEWS - CREW	1.934	2.100	2.171
<b>Description:</b> The Integrated Electronic Warfare System (IEWS) will provide multiple capabilities, to include Electronic Warfare Planning and Management Tool (EWPMT), Multi-Function EW (MFEW), and Defensive Electronic Attack (DEA). The Army's current Defensive Electronic Attack solution is Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW).			
<b>FY 2023 Plans:</b> Continue IEWS development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.			
<b>FY 2024 Plans:</b> Continue IEWS development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Fiscal Year (FY) 2024 funding increase of \$71,000 for development of new techniques, integration of existing techniques, and hardware and software development.			
<b>Title:</b> SBIR/STTR Transfer	-	0.080	-
<b>FY 2023 Plans:</b> Funding transferred in accordance with Title 15 USC §638			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC §638			
<b>Accomplishments/Planned Programs Subtotals</b>	1.934	2.180	2.171

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

N/A

**Remarks**

**D. Acquisition Strategy**

VS6 funding supports hardware and software enhancement, to include open architecture waveforms/techniques and hardware, and integration to pace the threat. Will leverage Other Government Agencies' competitively awarded contracts and task orders.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>
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<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PMO Staff/Travel for CREW	Allot	PM Electronic Warfare & Cyber : Aberdeen Proving Ground, MD	2.900	0.020	Dec 2021	0.020	Dec 2022	0.020	Dec 2023	-		0.020	0.000	2.960	-
SBIR/STTR Transfer	TBD	Various : Various	-	-		0.080		-		-		-	0.000	0.080	-
<b>Subtotal</b>			2.900	0.020		0.100		0.020		-		0.020	0.000	3.040	N/A

<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IEWE Engineering and Development	MIPR	I2WD : Aberdeen Proving Ground, MD	7.655	1.914	Dec 2021	1.780	Dec 2022	1.841	Dec 2023	-		1.841	0.000	13.190	-
<b>Subtotal</b>			7.655	1.914		1.780		1.841		-		1.841	0.000	13.190	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Continous evaluation of CREW Technologies	MIPR	Yuma Proving Ground Yuma, AZ : YPG, AZ	1.718	-		0.300	Dec 2022	0.310	Dec 2023	-		0.310	0.000	2.328	-
<b>Subtotal</b>			1.718	-		0.300		0.310		-		0.310	0.000	2.328	N/A

			Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			12.273	1.934	2.180	2.171	-	2.171	0.000	18.558	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>			<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>	

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Integrated Electronic Warfare System Development																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Integrated Electronic Warfare System Development	2	2021	4	2028