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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	0.000	6.402	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.402
EH2: EMARSS ADV DEV	-	0.933	-	-	-	-	-	-	-	-	0.000	0.933
EH3: EMARSS Payloads ADV DEV	-	5.469	-	-	-	-	-	-	-	-	0.000	5.469

A. Mission Description and Budget Item Justification

Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) will be divested by Fiscal Year (FY) 2025. EMARSS is C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT). Budget Item Justification is addressed in each Project.

Airborne Reconnaissance Low - Enhanced (ARL-E) was terminated in FY 2022.

The Guardrail Common Sensor (GRCS) will be divested by FY 2025. The RC-12X GRCS is a fixed-wing, airborne COMINT and Electronic Intelligence (ELINT) collection and precision targeting location system. GRCS provides a persistent capability to detect, locate and classify/identify high value targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army INSCOM Aerial Exploitation Battalions providing AISR support to combatant commanders. The Army's Acquisition Objective/Army's Procurement Objective is 19 RC-12X; seven (7) fielded to 3rd Military Intelligence Battalion (MI BN); and seven (7) fielded to the 204th MI BN, and five (5) trainers within TRADOC and INSCOM. Budget Item Justification is addressed in each Project.

Research Development Technology & Evaluation (RDT&E) and procurement funding currently planned will address obsolescence issues for critical SIGINT and Electronic Intelligence (ELINT) capabilities on the GRCS platform. These investments ensure GRCS AISR support in the A2AD environment is not impacted, which would prevent critical intelligence collection at large standoff which is needed to address long range targeting of peer threats and maintain system relevancy.

UNCLASSIFIED

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B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>
Previous President's Budget	17.165	0.000	0.000	-	0.000
Current President's Budget	6.402	0.000	0.000	-	0.000
Total Adjustments	-10.763	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-10.763	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH2 / EMARSS ADV DEV
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
EH2: EMARSS ADV DEV	-	0.933	-	-	-	-	-	-	-	-	0.000	0.933
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Project EH2 has no budget request for Fiscal Year (FY) 2025. FY 2023 is the last year of funding for this effort due to divestiture.

A. Mission Description and Budget Item Justification

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army INSCOM Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

0305206A EH2 has no Fiscal Year (FY) 2025 funding request due to Army decision to no longer invest in legacy aircraft.

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

	FY 2023	FY 2024	FY 2025
Title: Non-Recurring Engineering	0.933	-	-
Description: This funding line supports non-recurring engineering (NRE), development of type certificates (TC), testing, integration of Modifications in Service of current or future EMARSS Army Aerial, Intelligence, Surveillance and Reconnaissance (AISR) systems. Funding provides for the integration of Department of Defense (DoD) mandated safety equipment to meet current and evolving International Standards. It also enhances aircraft communications, navigations and surveillance (CNS); aircraft survivability equipment (ASE) to include integration of Air Launched Effects onto Army fixed wing platforms; integration of AISR mission equipment package (MEP); as well as solving obsolescence issues and increasing commonality across EMARSS aircraft.			
Accomplishments/Planned Programs Subtotals	0.933	-	-

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

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• A02112: EMARSS SEMA MODS	1.591	-	0.000	-	0.000	-	-	-	-	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH2 / EMARSS ADV DEV

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

Line Item	FY 2023	FY 2024	FY 2025	FY 2025	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Cost To	
			Base	OCO	Total					Complete	Total Cost
• AZ2054: EMARSS PAYLOADS	-	-	-	-	-	-	-	-	-	-	-
• EH3: EMARSS Payloads ADV DEV	5.469	-	0.000	-	0.000	-	-	-	-	0.000	5.469

Remarks

The EMARSS Research Development Technology & Evaluation (RDT&E) efforts are found in the following two project lines; 0305206AEH2 EMARSS ADV DEV (Fixed Wing Project Office) and 0305206AEH3 EMARSS Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting Aircraft Procurement Army (APA) lines are A02112 (P-1 Line #20) for Fixed Wing and AZ2054 (P-1 Line #15) for Aerial Intelligence. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

D. Acquisition Strategy

The acquisition strategy, supported by the EMARSS Capabilities Production Document (CPD), is to design, test and field 24 systems as well as provide enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); Communications Intelligence (COMINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar; line-of-site (LOS) and beyond line-of-site (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations. The EMARSS fleet of 23 systems consists of the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); seven (7) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT); one (1) aircraft was damaged beyond economical repair.

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH2 / EMARSS ADV DEV	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Army Testing																												
Developmental Initiatives for Performance Enhancements																												

Note
 FY21 \$1.998 FY22 \$1.834 FY23 \$2.096

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / <i>Airborne Reconnaissance Systems</i>	Project (Number/Name) EH2 / <i>EMARSS ADV DEV</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Non-Recurring Engineering	3	2019	2	2021
Army Testing	3	2021	4	2023
Developmental Initiatives for Performance Enhancements	3	2022	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems				Project (Number/Name) EH3 / EMARSS Payloads ADV DEV			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
EH3: EMARSS Payloads ADV DEV	-	5.469	-	-	-	-	-	-	-	-	0.000	5.469
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) will be divested by Fiscal Year (FY) 2025. EMARSS is C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

This funding line supported critical enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Communications Intelligence (COMINT); Signals Intelligence (SIGINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR); Line-Of-Site (LOS) and Beyond Line-Of-Sight (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations.

0305206A EH3 has no Fiscal Year (FY) 2025 funding request due to Army decision to no longer invest in legacy aircraft.

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

	FY 2023	FY 2024	FY 2025
Title: EMARSS - Sensor Enhancement	4.481	-	-
Description: Enhancement of EMARSS Joint All-Domain Operations (JADO) SIGINT capabilities to decrease target identification time, increase probability of intercept, and increased signal simultaneity. Efforts include software porting and design analysis of modular open system architecture.			
Title: EMARSS - Sensor Engineering Support	0.905	-	-
Description: Matrix engineering support for sensor enhancements.			
Title: Program Management Support	0.083	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH3 / EMARSS Payloads ADV DEV

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Description: Program Management Office (PMO) support and travel, as well as Systems Engineering and Technical Assistance (SETA) support.			
Accomplishments/Planned Programs Subtotals	5.469	-	-

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>			<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u>		
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>	
• A02112: EMARSS SEMA MODS	1.591	-	0.000	-	0.000	-	-	-	-	-	Continuing	Continuing
• AZ2054: EMARSS PAYLOADS	-	-	-	-	-	-	-	-	-	-	-	-
• EH2: EMARSS ADV DEV	0.933	-	0.000	-	0.000	-	-	-	-	-	0.000	0.933

Remarks

The EMARSS Research Development Technology & Evaluation (RDT&E) efforts are found in the following two (2) project lines; 0305206AEH2 EMARSS ADV DEV (Fixed Wing Project Office) and 0305206AEH3 EMARSS Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting procurement lines are A02112 and AZ2054. AZ2054 funding supports subsequent procurement and integration of the RDTE funded sensor enhancements. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

D. Acquisition Strategy

EMARSS will be divested by Fiscal Year 2025. The acquisition strategy, supported by the EMARSS CPD, was to provide critical enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Electro-Optical (EO)/Infrared (IR) Full-Motion Video (FMV), Communications Intelligence (COMINT); Signals Intelligence (SIGINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR); Line-Of-Site (LOS) and Beyond Line-Of-Sight (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations. The EMARSS fleet of 24 systems consists of the following variants: eight EMARSS-G (Geo-INT); four EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight EMARSS-M (Multi-INT); and four EMARSS-S (SIGINT). Loss of an EMARSS-M in 2020 reduced the operational fleet to 23 aircraft.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH3 / EMARSS Payloads ADV DEV
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Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	C/CR	PEO IEW&S, PM SAI : APG, MD	1.110	0.192	Nov 2022	-		-		-		-	0.000	1.302	-
Subtotal			1.110	0.192		-		-		-		-	0.000	1.302	N/A

Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
SIGINT Sensor Enhancement	C/CPFF	AASKI : Tinton Falls, NJ	17.149	4.987	Jan 2023	-		-		-		-	0.000	22.136	-
Subtotal			17.149	4.987		-		-		-		-	0.000	22.136	N/A

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Sensor Engineering Support	MIPR	CCDC : APG, MD	1.123	0.290	Dec 2022	-		-		-		-	0.000	1.413	-
Subtotal			1.123	0.290		-		-		-		-	0.000	1.413	N/A

			Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			19.382	5.469	-	-	-	-	0.000	24.851	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH3 / EMARSS Payloads ADV DEV

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
SIGINT Sensor Enhancement																												

Note
Execution of FY 2023 funding continues into FY 2024 due to non-severable contract.

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH3 / EMARSS Payloads ADV DEV

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
QRC to EMARSS POR Modification and Conversion	2	2015	4	2019
EMARSS Fielding	3	2017	4	2019
Advanced LiDAR Development	2	2018	2	2020
Advanced LiDAR Analysis Study	2	2020	2	2020
Advanced LiDAR PDR	2	2020	2	2020
SIGINT Sensor Enhancement	2	2020	4	2024

Note
Execution of FY 2023 funding continues into FY 2024 due to non-severable contract.