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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 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305206A / <i>Airborne Reconnaissance Systems</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	0.000	11.782	17.165	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	28.947
EH2: <i>EMARSS ADV DEV</i>	-	1.834	2.096	-	-	-	-	-	-	-	0.000	3.930
EH3: <i>EMARSS Payloads ADV DEV</i>	-	5.916	15.069	-	-	-	-	-	-	-	0.000	20.985
EH5: <i>ARL Payloads ADV DEV</i>	-	0.017	-	-	-	-	-	-	-	-	0.000	0.017
EH7: <i>Guardrail Common Sensor (GRCS) Payloads</i>	-	4.015	-	-	-	-	-	-	-	-	0.000	4.015

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.

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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 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305206A / <i>Airborne Reconnaissance Systems</i>
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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	24.460	17.165	20.368	-	20.368
Current President's Budget	11.782	17.165	0.000	-	0.000
Total Adjustments	-12.678	0.000	-20.368	-	-20.368
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-12.678	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-20.368	-	-20.368

Change Summary Explanation

Fiscal Year (FY) 2024 funding decrease reflects the ARL-E program termination and Army decision to no longer invest in legacy aircraft.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems				Project (Number/Name) EH2 / EMARSS ADV DEV			
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
EH2: EMARSS ADV DEV	-	1.834	2.096	-	-	-	-	-	-	-	0.000	3.930
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Project EH2 has no budget request for Fiscal Year (FY) 2024. 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).

The FY23 funding line of \$2.096 million supports NRE, development of TC, testing, integration of Modifications in Service of current or future EMARSS AISR systems. Funding provides for the integration of Department of Defense (DoD) mandated safety equipment to meet current and evolving International Standards and future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. 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.

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

	FY 2022	FY 2023	FY 2024
Title: Non-Recurring Engineering	1.834	2.096	-
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.			
FY 2023 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH2 / EMARSS ADV DEV

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>This funding line supports NRE, development of TC, testing, studies, 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 and future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. 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); design and integration of Modular Open System Architecture (MOSA) onto Army fixed wing platforms as well as solving obsolescence issues and increasing commonality across EMARSS aircraft.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in FY24 funding due to Army decision to no longer invest in legacy aircraft.</p>			
Accomplishments/Planned Programs Subtotals	1.834	2.096	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• A02112: EMARSS SEMA MODS	1.568	1.591	0.000	-	0.000	-	-	-	-	Continuing	Continuing
• AZ2054: EMARSS PAYLOADS	-	0.456	0.000	-	0.000	-	-	-	-	Continuing	Continuing
• EH3: EMARSS Payloads ADV DEV	5.916	15.069	0.000	-	0.000	-	-	-	-	0.000	20.985

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)

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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>
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-3, RDT&E Project Cost Analysis: PB 2024 Army **Date:** March 2023

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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Management Services (\$ in Millions)				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	RO	FW PO/ PM SAI : Huntsville, AL/ Aberdeen, MD	0.809	0.156	Jan 2022	0.178	Jan 2023	-		-		-	0.000	1.143	-
Subtotal			0.809	0.156		0.178		-		-		-	0.000	1.143	N/A

Product Development (\$ in Millions)				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			
Non-Recurring Engineering	SS/CPFF	Textron;MIT; TDD-A; RTC : Wichita, KS' Lexington, MA	7.716	1.678	May 2022	-		-		-		-	0.000	9.394	-
Subtotal			7.716	1.678		-		-		-		-	0.000	9.394	N/A

Test and Evaluation (\$ in Millions)				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			
Testing	MIPR	AFTD RTC;MIT;TDD-A : Eglin, AFB, FL; Lexington, MA	1.636	-		1.918	May 2023	-		-		-	0.000	3.554	-
Subtotal			1.636	-		1.918		-		-		-	0.000	3.554	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			
Project Cost Totals			10.161	1.834	2.096	-	-	-	0.000	14.091	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

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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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
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 2024 Army		Date: March 2023
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 2024 Army										Date: March 2023		
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 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
EH3: EMARSS Payloads ADV DEV	-	5.916	15.069	-	-	-	-	-	-	-	0.000	20.985
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) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) Radar; 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) 2024 funding request.

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

	FY 2022	FY 2023	FY 2024
Title: EMARSS - Sensor Enhancement	5.524	6.287	-
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.			
FY 2023 Plans: Continues sensor software updates to develop the next generation SIGINT capability and improve performance in a near peer environment to integrate capabilities developed by other programs.			
FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in FY24 funding due to Army decision to no longer invest in legacy aircraft.			
Title: EMARSS - Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI)	-	8.300	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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 2022	FY 2023	FY 2024
<p>Description: Efforts include development of upgraded Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI) extended range antenna and associated signal processor to provide increased effective range and target processing.</p> <p>FY 2023 Plans: Continue development of Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI) modification due to VaDER obsolescence and to increase range for improved JADO mission relevancy.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: The program has no FY 2024 funding request due to Army decision to no longer invest in legacy aircraft.</p>			
<p>Title: EMARSS - Sensor Engineering Support</p> <p>Description: Matrix engineering support for sensor enhancements.</p> <p>FY 2023 Plans: Continue matrix government engineering support for sensor enhancements.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in FY24 funding due to Army decision to no longer invest in legacy aircraft.</p>	0.340	0.290	-
<p>Title: Program Management Support</p> <p>Description: Program Management Office (PMO) support and travel, as well as Systems Engineering and Technical Assistance (SETA) support.</p> <p>FY 2023 Plans: Continue Program Management Office government support and SETA support.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in FY24 funding due to Army decision to no longer invest in legacy aircraft.</p>	0.052	0.192	-
Accomplishments/Planned Programs Subtotals	5.916	15.069	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• A02112: EMARSS SEMA MODS	1.568	1.591	0.000	-	0.000	-	-	-	-	Continuing	Continuing
• AZ2054: EMARSS PAYLOADS	-	0.456	0.000	-	0.000	-	-	-	-	Continuing	Continuing
• EH2: EMARSS ADV DEV	1.834	2.096	0.000	-	0.000	-	-	-	-	0.000	3.930

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH3 / EMARSS Payloads ADV DEV

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>
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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) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) Radar; 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 2024 Army **Date:** March 2023

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 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	C/CR	PEO IEW&S, PM SAI : APG, MD	1.058	0.052	Jan 2022	0.192	Nov 2022	-		-		-	Continuing	Continuing	-
Subtotal			1.058	0.052		0.192		-		-		-	Continuing	Continuing	N/A

Product Development (\$ in Millions)				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			
LiDAR sensor enhancement	SS/CPFF	JHU APL : Laurel, MD	1.500	-		-		-		-		-	0.000	1.500	-
AWAPSS sensor enhancement	C/CPIF	BAE : Nashua, CT	0.200	-		-		-		-		-	0.000	0.200	-
SIGINT sensor enhancement	C/CPFF	CACI/Boeing : APG, MD	0.114	-		-		-		-		-	0.000	0.114	-
SIGINT sensor enhancement	C/CPFF	Lockheed Martin Integrated Systems : Marlton, NJ	0.948	-		-		-		-		-	0.000	0.948	-
Advanced LiDAR Development	SS/CPFF	Johns Hopkins University Applied Physics Laboratory, LLC : Laurel, Md	7.424	-		-		-		-		-	0.000	7.424	-
SIGINT Sensor Enhancement	C/CPFF	AASKI : Tinton Falls, NJ	11.625	5.524	Jan 2022	6.287	Jan 2023	-		-		-	Continuing	Continuing	-
SAR/MTI Development	C/CPFF	Northrop Grumman : Linthicum, MD	-	-		8.300	Feb 2023	-		-		-	0.000	8.300	-
Subtotal			21.811	5.524		14.587		-		-		-	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army			Date: March 2023
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 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				
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 2024 Army		Date: March 2023
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.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems				Project (Number/Name) EH5 / ARL Payloads ADV DEV			
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
EH5: ARL Payloads ADV DEV	-	0.017	-	-	-	-	-	-	-	-	0.000	0.017
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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

0305206A EH5 has no Fiscal Year (FY) 2024 funding request due to program termination.

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

	FY 2022	FY 2023	FY 2024
Title: New Signals (COMINT/Software Upgrades)	0.017	-	-
Description: To develop software for Signals 1, 3, 4, 5, and 6.			
Accomplishments/Planned Programs Subtotals	0.017	-	-

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

Line Item	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
• AZ2050: ARL PAYLOADS	18.381	-	0.000	-	0.000	-	-	-	-	Continuing	Continuing
• DX9: National Integration To Tactical Systems	2.796	3.197	3.187	-	3.187	3.214	3.415	3.450	3.489	0.000	22.748
• A02110: ARL SEMA MODS	14.437	-	0.000	-	0.000	-	-	-	-	Continuing	Continuing

Remarks

The ARL-E Research Development Technology & Evaluation (RDT&E) efforts are found in the following two (2) project lines; 0305206AEH4 ARL ADV DEV (Fixed Wing Project Office) and 0305206AEH5 ARL Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting procurement lines are A02110 and AZ2050. 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

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

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

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH5 / ARL Payloads ADV DEV
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Management Services (\$ in Millions)				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	TBD	PM SAI : Aberdeen Proving Ground, MD	0.260	-		-		-		-		-	0.000	0.260	-
Subtotal			0.260	-		-		-		-		-	0.000	0.260	N/A

Product Development (\$ in Millions)				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			
New Signals (COMINT/ Software Upgrades)	C/CPFF	Boeing Argon : Mountain View, CA	53.543	0.017	Jan 2022	-		-		-		-	0.000	53.560	-
Radar Software Electronic Protection Measures/ Enhancements	SS/CPFF	Northrup Grumman : Baltimore, MD	1.799	-		-		-		-		-	0.000	1.799	-
Subtotal			55.342	0.017		-		-		-		-	0.000	55.359	N/A

Test and Evaluation (\$ in Millions)				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			
Test Support to New Signals (COMINT/Software Upgrades)	C/CPFF	Boeing Argon : Mountain View, CA	12.690	-		-		-		-		-	0.000	12.690	-
Radar Software Electronic Protection Measures/ Enhancements	SS/CPFF	Northrup Grumman : Baltimore, MD	0.200	-		-		-		-		-	0.000	0.200	-
Subtotal			12.890	-		-		-		-		-	0.000	12.890	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
Project Cost Totals		68.492	0.017	-	-	-	0.000	68.509	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army			Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH5 / ARL Payloads ADV DEV	

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
ARL-E Signals 3 and 4 Development and Test	[Redacted]				[Redacted]																							
	Signal Development and Test																											

Note
Execution of FY 2022 funding continues into FY 2023 due to non-severable contract.

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH5 / ARL Payloads ADV DEV

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ARL-E MEP Contract Award	1	2016	1	2016
ARL-E MEP Integration	1	2016	4	2021
ARL-E Signals 3 and 4 Development and Test	2	2016	1	2023
ARL-E Signal 1 Development and Test	4	2017	2	2020
ARL-E Radar Software Enhancements Development	1	2021	4	2021
ARL-E Long Range Radar Development	4	2017	3	2019
ARL-E Long Range Radar Testing	3	2019	3	2019

Note
Execution of FY 2022 funding continues into FY 2023 due to non-severable contract.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems				Project (Number/Name) EH7 / Guardrail Common Sensor (GRCS) Payloads			
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
EH7: Guardrail Common Sensor (GRCS) Payloads	-	4.015	-	-	-	-	-	-	-	-	0.000	4.015
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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.

0305206A EH7 has no Fiscal Year (FY) 2024 funding request.

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

	FY 2022	FY 2023	FY 2024
Title: GRCS SIGINT Sensor Upgrades	3.871	-	-
Description: Funding line supports GRCS advanced signal enhancement efforts and software development and testing of signal enhancement infrastructure for GRCS updated SIGINT sensor development. Funding also supports simulation development to allow for continued software enhancements and capability development to keep pace with emerging threats and new technology as well as provide the training required to maintain military proficiency.			
Title: Program Management Support	0.144	-	-
Description: Funds support program management office (PMO) efforts including travel.			
Accomplishments/Planned Programs Subtotals	4.015	-	-

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• AZ2052: GUARDRAIL PAYLOADS	10.085	3.714	0.000	-	0.000	-	-	-	-	0.000	13.799
Remarks											

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / <i>Airborne Reconnaissance Systems</i>	Project (Number/Name) EH7 / <i>Guardrail Common Sensor (GRCS) Payloads</i>

D. Acquisition Strategy
GRCS will be divested by Fiscal Year 2025.

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army			Date: March 2023		
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems		Project (Number/Name) EH7 / Guardrail Common Sensor (GRCS) Payloads	

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
GRCS SIGINT Sensor Enhancements																												

Note
Execution of FY 2022 funding continues into FY 2023 due to non-severable contract.

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / Airborne Reconnaissance Systems	Project (Number/Name) EH7 / Guardrail Common Sensor (GRCS) Payloads

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
USFK ONS Development/JICD 4.2 Compliance	1	2019	2	2019
GRCS SIGINT Sensor Enhancements	2	2020	2	2023

Note
 JICD: Joint Interface Control Document
 GRCS SIGINT: Guardrail Common Sensor Signals Intelligence