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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force</i> / BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604007F / E-7
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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	-	411.704	681.039	418.513	0.000	418.513	297.334	161.838	167.697	171.006	0.000	2,309.131
644413: E-7A	-	411.704	681.039	418.513	0.000	418.513	297.334	161.838	167.697	171.006	0.000	2,309.131
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Note
This program, BA 4, PE 0604007F, project 644413, E-7 C2ISR, is a new start.

A. Mission Description and Budget Item Justification

This budget line funds the E-7A program. The E-7A program replaces the unsustainable E-3 Airborne Warning and Control System (AWACS). The E-3 AWACS, first fielded in the 1970s, is at the end of its service life, and costly to maintain. The E-7A will be the USAF's principal airborne sensor for detecting, identifying, tracking, and reporting aerial tracks for the Joint Force Air Component Commander (JFACC).

The E-7A will provide multiple benefits and increased capabilities to the USAF and the Joint Services, including but not limited to: 1) ability to detect and track highly maneuverable, small radar cross-section airborne targets (modern and emerging threats); 2) enable greater airborne battlespace awareness through its precise, real-time air picture of sufficient quality to control and direct individual aircraft under a wide range of environmental and operational conditions; and 3) mitigate reliability, operational availability, maintainability, and sustainability issues.

The E-7A is a highly modified Airborne Battle Management and Command and Control aircraft integrating a Boeing 737-700 Next Generation (737NG) airframe with reinforced Section 46, a Northrop Grumman Multi-Role Electronically Scanned Array Radar mounted on the aircraft's Section 46, and two 180-kVA generators added to commercial CFM-56 engines mounted beneath each wing.

FY2025 funding will support continued rapid prototyping of two E-7As. Rapid prototyping consists of completing end items and modification components for two aircraft to support test and evaluation; hardware and software modernization development efforts to ensure compliance with US cybersecurity and program protection standards; development efforts to ensure navigation and communication systems comply with GPS M-Code and Narrowband SATCOM mandates; development efforts to design and build aircrew, mission crew, and maintenance trainers; design and build-out contractor and government System Integration Laboratories supporting development, integration, and test activities, and provide analysis and products supporting future requirements and airworthiness certification.

E-7 Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR): C2ISR system improvements investigate and develop future capabilities of the E-7 weapon system. These efforts also include but are not limited to advanced sensors, advanced communications, self-protection, enhanced cyber protection, and obsolescence resolution to ensure that the E-7 successfully integrates with joint and coalition forces in a net-centric environment. C2ISR primarily supports pre-systems acquisition in the areas of materiel solution analysis and technology development. This is accomplished by prototyping and demonstrating capabilities required by the warfighter. C2ISR also supports an analytical comparison of suitability, life-cycle cost and system capabilities of alternative materiel solutions beyond the current E-7A

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that satisfy an established capability need identified in a Capability Development Document (CDD), Rapid Prototyping Requirements Document (RPRD), or Rapid Fielding Requirements Document (RFRD).

E-7A is not fully funded across the Future Years Defense Program. While continuing to evaluate the contractor proposal, the Department of the Air Force is assessing all options to address the funding shortfalls for MTA programs including additional funding in a future budget request, performance trade based on technical maturity, or transition to alternative pathways.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, 3.677M was expended for civilian pay expenses in this program element. In FY24, 8.014M is forecasted for civilian pay expenses in this program element.

This effort is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	426.776	681.039	417.774	0.000	417.774
Current President's Budget	411.704	681.039	418.513	0.000	418.513
Total Adjustments	-15.072	0.000	0.739	0.000	0.739
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-15.072	0.000			
• Other Adjustments	0.000	0.000	0.739	0.000	0.739

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: E-7A	411.704	681.039	412.513
Description: Funds will be used to continue E-7A rapid prototyping.			
FY 2024 Plans: Continue Rapid Prototyping effort including the following tasks: - complete end items and potential modification components for up to two aircraft to support test and evaluation			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>- development efforts to ensure compliance with US cyber security and program protection standards - development efforts to ensure navigation and communication systems comply with GPS M-Code and Narrowband SATCOM mandates</p> <p>- design and build aircrew, mission crew, and maintenance trainers</p> <p>- design and build-out contractor and government System Integration Laboratories supporting development, integration, and test activities</p> <p>- provide analysis and products supporting future requirements and airworthiness certification.</p> <p>Program office will continue to support Operational Assessment (OA) of coalition systems providing basis for follow-on production/fielding decisions, undertake Depot Source of Repair (DSOR) analysis, and assemble FAA airworthiness certification package.</p> <p>FY 2025 Plans: Continue Rapid Prototyping effort including the following tasks:</p> <ul style="list-style-type: none"> - complete end items and modification components for up to two aircraft to support test and evaluation - hardware and software modernization development efforts to ensure compliance with US cybersecurity and program protection standards - development efforts to ensure navigation and communication systems comply with GPS M-Code and Narrowband SATCOM mandates - design and build aircrew, mission crew, and maintenance trainers - design and build-out contractor and government System Integration Laboratories supporting development, integration, and test activities - provide analysis and products supporting future requirements and airworthiness certification - begin to integrate E-7A capabilities into the two (2) 737NG aircraft. <p>Program office will also continue to support coalition systems and conduct laboratory System Maturity and Capability Demonstrations, providing basis for follow-on production/fielding decisions planned for FY25, continue analysis, and assemble FAA and Military airworthiness certification packages.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funds decrease due to anticipated reduction in long lead items in FY25 based on original program office estimate.</p>				
<p>Title: E-7 C2ISR</p> <p>Description: E-7 C2ISR efforts include but are not limited to advanced sensors, advanced communications, self-protection, enhanced cyber protection, and obsolescence resolution to ensure that the E-7 successfully integrates with joint and coalition forces in a net-centric environment.</p> <p>FY 2025 Plans:</p>		-	-	6.000

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Conduct engineering studies to determine required modifications and associated costs to support risk reduction activities for program planning. Execute cooperative Independent Research and Development.			
<i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> FY25 New Start			
Accomplishments/Planned Programs Subtotals	411.704	681.039	418.513

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF 04 0604007F: <i>E-7A Wedgetail</i>	-	-	-	-	-	1,332.568	1,317.297	1,343.803	1,370.504	Continuing	Continuing

Remarks

E. Acquisition Strategy
 The Service Acquisition Executive (SAE) designated the E-7A program a Middle Tier of Acquisition (MTA) Rapid Prototyping effort in February 2023. A sole source J&A was awarded to Boeing which resulted in an undefinitized contract action (UCA) also in February 2023.

The Milestone Decision Authority for the E-7A program is the Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics. Program management for the E-7A program is under direction of PEO Digital, located at Hanscom AFB, MA. The Air Force Life Cycle Management Center located at Wright-Patterson AFB, OH is the contracting authority for the E-7A program. AFLCMC provides contracting, legal, comptroller, programmatic, engineering, test, and logistics support.

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

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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			
E-7A Rapid Prototyping Contract	SS/CPIF	The Boeing Company : TUKWILA, WA	-	377.737	Feb 2023	628.168	Feb 2024	335.637	Feb 2025	-		335.637	Continuing	Continuing	-
E-7A Platform One Contract	C/CPAF	Seed Innovations, LLC : MONUMENT, CO	-	6.152	Aug 2023	8.400	Aug 2024	7.725	Aug 2025	-		7.725	Continuing	Continuing	-
E-7 C2ISR Risk Reduction	TBD	Various : TBD	-	-		-		6.000	Mar 2025	-		6.000	Continuing	Continuing	-
Subtotal			-	383.889		636.568		349.362		-		349.362	Continuing	Continuing	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			
E-7A Organic Software Support	PO	76th SWES : Tinker, OK	-	2.121	Mar 2023	5.300	Jan 2024	6.959	Jan 2025	-		6.959	Continuing	Continuing	-
E-7A Government Furnished Equipment (GFE)	Various	Various : TBD	-	3.735	Mar 2023	-		-		-		-	Continuing	Continuing	-
Subtotal			-	5.856		5.300		6.959		-		6.959	Continuing	Continuing	N/A

Test and Evaluation (\$ 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			
E-7A Test	Various	Various : TBD	-	1.929	Mar 2023	5.055	Jan 2024	9.780	Jan 2025	-		9.780	Continuing	Continuing	-
Subtotal			-	1.929		5.055		9.780		-		9.780	Continuing	Continuing	N/A

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

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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			
Program Management Administration	Various	AWACS & Wedgetail PMO : Hanscom AFB, MA	-	20.030	Mar 2023	34.116	Jan 2024	52.412	Jan 2025	-		52.412	Continuing	Continuing	-
Subtotal			-	20.030		34.116		52.412		-		52.412	Continuing	Continuing	N/A
Project Cost Totals			-	411.704		681.039		418.513		-		418.513	Continuing	Continuing	N/A

Remarks
E-7A effort will involve significant amounts of hardware purchases early in development which create a larger than normal amount of termination and liability costs that must be funded.

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force **Date:** March 2024

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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

E-7A PE 0604007F	
E-7A Rapid Prototyping (RP)	
E-7A RP Undefinitized Contract Action (UCA) Award	
E-7A System Requirements Review	
E-7A Software Development Lab Delivery	
E-7A Government System Integration Lab Delivery	

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
E-7A PE 0604007F				
E-7A Rapid Prototyping (RP)	2	2023	2	2028
E-7A RP Undefinitized Contract Action (UCA) Award	2	2023	2	2023
E-7A System Requirements Review	3	2023	3	2023
E-7A Software Development Lab Delivery	3	2024	3	2024
E-7A Government System Integration Lab Delivery	4	2026	4	2026