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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604288F / <i>Survivable Airborne Operations Center</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	50.038	95.788	203.213	0.000	203.213	609.966	856.916	837.722	738.364	Continuing	Continuing
646507: <i>Survivable Airborne Operations Center (SAOC)</i>	-	50.038	95.788	203.213	0.000	203.213	609.966	856.916	837.722	738.364	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Survivable Airborne Operations Center (SAOC), formerly known as the E-4B National Airborne Operations Center (NAOC) Recapitalization effort, will replace the aging E-4B fleet which faces capability gaps, diminishing manufacturing sources, increased maintenance costs, and parts obsolescence as it approaches the end of its serviceable life. The recapitalization effort is informed by Air Force and Department of Defense analyses used to determine a holistic approach to replacing the aging E-4B fleet and capabilities of other nuclear and national command and control mission sets.

SAOC will provide POTUS, SECDEF and the CJCS a worldwide, survivable, and enduring node of the National Military Command System (NMCS) to fulfill national security requirements throughout all stages of conflict. As a command, control and communications center directing US forces, executing emergency war orders and coordinating the activities of civil authorities including national contingency plans, this capability ensures continuity of operations plans and continuity of government as required in a national emergency or after negation/destruction of ground command and control centers. SAOC will fulfill the requirements of the AF Nuclear Mission by providing Nuclear Command, Control and Communications (NC3) capabilities to execute Nuclear Command and Control (NC2) Concept of Operations (CONOPS) that enable the exercise of authority and direction by the President to command and control US military nuclear weapon operations.

Program funding includes funds for emerging requirements to support program office operations, management services (Federally Funded Research and Development Centers [FFRDC], Advisory and Assistance Services [A&AS], etc.), Program Management Support (PMS), security, facilities, prototyping, equipment, integrate Digital Engineering and other efforts as required to establish the required program office capabilities. Funding will also support all activities required to award and execute development contract(s) for the SAOC Weapon System to include supporting test activities and prototype, development, sustainment, and integration activities of NC3 or other DoD programs supporting SAOC development.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY21 \$0.391M was expended for civilian pay expenses in this program element, and in FY22 \$4.2M 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.

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B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	59.390	133.253	0.000	0.000	0.000
Current President's Budget	50.038	95.788	203.213	0.000	203.213
Total Adjustments	-9.352	-37.465	203.213	0.000	203.213
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-37.465			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-7.569	0.000			
• SBIR/STTR Transfer	-1.783	0.000			
• Other Adjustments	0.000	0.000	203.213	0.000	203.213

Change Summary Explanation

FY 2021 reflects reprogramming adjustments in the amount of \$7.569M that went to other Air Force higher priority bills.

FY 2022 reflects an enacted Air Force requested \$37.465M transfer to PE 0303131F.

The FY 2022 President's Budget submittal did not reflect FY 2023 through FY 2026 funding. Therefore, an explanation of the change between the two budget positions for FY 2023 cannot be made in a relevant manner.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Title: SAOC	50.038	95.788	203.213
Description: The SAOC weapon system will be comprised of a Commercial Derivative Aircraft (CDA), mission system, and ground support systems. The CDA will be hardened to protect against nuclear and electromagnetic effects and modified with an aerial refueling capability to enable sustained airborne operations. The mission system will integrate secure communications and planning capabilities on modern information technology (IT) infrastructure based on a Modular Open System Architecture (MOSA). The ground systems include aircrew trainers, mission crew trainers, maintenance training devices, ground support equipment, test and sustainment system integration laboratories, and other ground systems to enable the operations, sustainment, and future modifications of the SAOC weapon system across the lifecycle.			
FY 2022 Plans:			
-Complete SAOC Acquisition Strategy approval			
-Complete development of the System Requirements Document (SRD)			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
<ul style="list-style-type: none"> -Complete industry-supported market research to support Request for Proposal (RFP) release and documentation development for milestone decisions -Complete and release the SAOC RFP and begin source selection -Expand planning, prototyping, and acquisition activities with industry that are required for integration of, or in support of, NC3 systems, directed systems, communications systems, Advanced Battle Management System (ABMS), mission system laboratories, or other assets/hardware -Support development, modernization, or sustainment of required NC3, Command, Control and Communications (C3), Cryptographic, Open Architecture/Open Mission System, and other capabilities to ensure systems are sustainable and available to integrate into the SAOC Weapon System -Conduct mitigation activities for diminishing manufacturing issues impacting mission systems to avoid upgrade/redesign expense -Continue to implement the infrastructure, training, and preparation activities and investments to develop the Digital Engineering Environment to execute and support the development and lifecycle sustainment of the SAOC Weapon System -Continue the program office manning growth-path required to support the SAOC system development <p><i>FY 2023 Plans:</i></p> <ul style="list-style-type: none"> -Conclude Source Selection activities, complete Milestone requirements, and award the SAOC contract(s) to begin executing Engineering and Manufacturing Development (EMD) contract activities -Continue supporting development and modernization of required NC3, Command, Control and Communications (C3), Cryptographic, Open Architecture/Open Mission System, and other capabilities to ensure systems are sustainable and available to integrate into the SAOC Weapon System -Support test planning and preparation activities -Continue to implement the infrastructure, training, and preparation activities and investments to develop the Digital Engineering Environment to execute and support the development and lifecycle sustainment of the SAOC Weapon System -Continue program office manning growth-path required to support the SAOC system development <p><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></p> <ul style="list-style-type: none"> -Funding increased because of continued program pre-development preparatory activities to mitigate risk and prepare for program execution, and award of the EMD contract 			
Accomplishments/Planned Programs Subtotals	50.038	95.788	203.213

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

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E. Acquisition Strategy
Based on National Airborne Operations Center (NAOC), Executive Airlift, Airborne National Command Post (ABNCP), Take Charge and Move Out (TACAMO) [NEAT] Analysis of Alternatives (AoA) findings and revalidated Capabilities Development Document (CDD) required capabilities, the SAOC program is pursuing an accelerated market research phase to finalize the acquisition strategy and rapidly pursue system development. The SAOC acquisition strategy involves the award of development and production contracts on a competitive basis to an offeror(s) who will procure required aircraft, bring each aircraft to a common configuration, make required modifications, develop and integrate the mission system into each aircraft and provide required ground systems.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Air Force												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 4				PE 0604288F / Survivable Airborne Operations Center				646507 / Survivable Airborne Operations Center (SAOC)							
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EMD	C/TBD	TBD : TBD	-	-		-		134.866	Sep 2023	-		134.866	Continuing	Continuing	-
Pre-Development Contract Activities/Studies	C/Various	TBD : TBD	-	14.434	Apr 2021	60.348	Jan 2022	28.655	Oct 2022	-		28.655	Continuing	Continuing	-
Subtotal			-	14.434		60.348		163.521		-		163.521	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Direct Mission Support	C/Various	Various : Bedford, MA : TBD	-	15.647	Oct 2020	15.402	Oct 2021	6.021	Oct 2022	-		6.021	Continuing	Continuing	-
Direct Cite Civilian Pay	TBD	Not specified. : Hanscom AFB, MA	-	0.374	Jul 2021	4.000	Oct 2021	4.282	Oct 2022	-		4.282	Continuing	Continuing	-
Subtotal			-	16.021		19.402		10.303		-		10.303	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC	SS/CPFF	Various : Bedford, MA : Hanscom AFB, MA	-	10.004	Oct 2020	6.064	Oct 2021	14.104	Oct 2022	-		14.104	Continuing	Continuing	-
EPASS (A&AS)	C/CPFF	Various : Bedford, MA : Hanscom AFB, MA	-	7.821	Jul 2021	7.240	Jul 2022	12.255	Jul 2023	-		12.255	Continuing	Continuing	-
PMA - Other	Various	Various : Bedford, MA : Hanscom AFB, MA	-	1.758	Oct 2020	2.734	Oct 2021	3.030	Oct 2022	-		3.030	Continuing	Continuing	-
Subtotal			-	19.583		16.038		29.389		-		29.389	Continuing	Continuing	N/A

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Appropriation/Budget Activity 3600 / 4				R-1 Program Element (Number/Name) PE 0604288F / <i>Survivable Airborne Operations Center</i>			Project (Number/Name) 646507 / <i>Survivable Airborne Operations Center (SAOC)</i>				
	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals	-	50.038	95.788	203.213	-	203.213	Continuing	Continuing	N/A		

Remarks

Product Development:
 -FY22 increase in Pre-Development Contract Activities/Studies from FY21 accelerates pre-development activities by investing in necessary product development to prepare program for execution in 4QTR FY23
 -Decrease in FY23 Pre-Development Contract Activities/Studies is due to concluding pre-EMD preparatory activities
 -Increase in FY23 due to EMD contract award 4QTR FY23

Support:
 -FY22 Direct Mission Support continues implementation of digital engineering tool infrastructure and efforts
 -Decrease in FY23 Direct Mission Support is due to completing deployment of digital engineering tool infrastructure

Management Services:
 -Increase in FY23 attributed to continuing program office ramp up to support EMD contract award 4QTR FY23

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604288F / <i>Survivable Airborne Operations Center</i>	Project (Number/Name) 646507 / <i>Survivable Airborne Operations Center (SAOC)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Survivable Airborne Operations Center Development</i>				
Requirements and CONOPs Revalidation	1	2022	1	2022
Acquisition Strategy Refinement and RFP Development	2	2022	4	2022
Pre-EMD Contract Activities, Studies & Prototyping	1	2021	4	2023
Source Selection	1	2023	4	2023
Milestone B	4	2023	4	2023
EMD	4	2023	4	2027