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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0401314F I Operational Support Airlift							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	0.000	5.196	3.172	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
676024: VC-25 Avionics Modernization Program	0.000	5.196	3.172	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

A. Mission Description and Budget Item Justification

October 2017, VC-25A Avionics Modernization Program (AMP) was de-scoped from upgrading the flight deck avionics to compliance with the mandates for civil Automatic Dependent Surveillance-Broadcast (ADS-B) Out and DoD Identification Friend or Foe (IFF) Mode 5 capability supporting the President of the United States as Head of State, Chief Executive, and Commander in Chief.

Installations are aligned with the aircraft heavy maintenance (HM) schedule. The de-scoped AMP requirements to ADS-B Out and IFF Mode 5 must integrate the 2020 mandate capability in HM18-8 and HM20-9 utilizing the remaining FY18 and FY19 funds for test, tech data integration, SIL, field team and other government costs. The National Security Waiver signed by Secretary of the Air Force 11 Dec 18 included the capability for ADS-B Out and IFF Mode 5 full FAA compliance 2025, which would utilize procurement funds but has not been funded.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	
Previous President's Budget		6.681	3.172	0.000	0.000	0.000	
Current President's Budget		5.196	3.172	0.000	0.000	0.000	
Total Adjustments		-1.485	0.000	0.000	0.000	0.000	
• 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		-1.299	0.000				
• SBIR/STTR Transfer		-0.186	0.000				
• Other Adjustments		0.000	0.000	0.000	0.000	0.000	
Change Summary Explanation FY18 Funding reduction from a -\$1.299M reprogramming and -\$0.186M SBIR transfer.							
C. Accomplishments/Planned Programs (\$ in Millions)					FY 2018	FY 2019	FY 2020
Title: Design and Test					5.196	3.172	-
Description: Design and Test efforts included a Systems Integration Laboratory (SIL), material buys for the SIL, non-recurring engineering and test and evaluation.							
FY 2019 Plans: Funding to complete ADS-B Out and IFF Mode 5 2020 mandate includes correcting wiring diagrams in the WIRS system, finalizing tech data development, tech data integration into maintenance manuals, SE/PM and PMA.							
FY 2019 to FY 2020 Increase/Decrease Statement: Funding reduction BTR \$1.299M and SBIR \$0.186M to \$5.196M in FY18 and \$3.172M FY19 to complete 2020 FAA mandate.							
Accomplishments/Planned Programs Subtotals					5.196	3.172	-
D. Other Program Funding Summary (\$ in Millions) N/A							
Remarks The National Security Waiver signed by Secretary of the Air Force 11 Dec 18 included the capability for ADS-B Out/IFF Mode 5 full FAA compliance 2025, which will utilize procurement funds but has not been funded.							

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E. Acquisition Strategy VC-25A AMP, ADS-B Out and IFF Mode 5 is being accomplished by developmental integration of commercial off-the-shelf systems, hardware procurement and installation aligns with HM depot schedules. A Cost Plus Incentive Fee (CPIF) contract was awarded Sep 17 to complete non-recurring engineering, kit, tech data and SIL development. The remaining RDT&E effort includes the second kit, install, correcting wiring diagrams in the WIRS system, finalizing tech data development, tech data integration into maintenance manuals, SE/PM, Other Government Cost (OGC) and PMA. Delivery of the first aircraft is scheduled in FY19 and second kit configuration in FY20.		
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force													Date: February 2019		
Appropriation/Budget Activity 3600 / 7							R-1 Program Element (Number/Name) PE 0401314F / <i>Operational Support Airlift</i>				Project (Number/Name) 676024 / <i>VC-25 Avionics Modernization Program</i>				

Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
VC-25 AMP Engineering	SS/CPIF	Oklahoma City : Tinker, AFB, OK	0.000	4.142	Jan 2018	1.800	Mar 2018	-		-		-	0.000	5.942	-
Subtotal			0.000	4.142		1.800		-		-		-	0.000	5.942	N/A

Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
OGC/PMA	MIPR	Not specified. : TBD	0.000	1.054	Jul 2018	1.372	Jul 2019	-		-		-	0.000	2.426	-
Subtotal			0.000	1.054		1.372		-		-		-	0.000	2.426	N/A

			Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	5.196	3.172	-	-	-	0.000	8.368	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force											Date: February 2019				
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	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
AMP																												
OGC/PMA																												
ADS-B Out NRE																												
Test and Evaluation 1																												
NRE																												
Test and Evaluation 2																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force		Date: February 2019
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
AMP				
OGC/PMA	4	2018	4	2019
ADS-B Out NRE	4	2018	4	2019
Test and Evaluation 1	2	2018	4	2018
NRE	2	2018	3	2018
Test and Evaluation 2	2	2019	4	2019

Note

Funding request submitted in FY21 POM.