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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401319F / VC-25B
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	1,780.498	730.183	799.429	680.665	0.000	680.665	-	-	-	-	-	-
655250: VC-25B	1,780.498	730.183	799.429	680.665	0.000	680.665	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Program MDAP/MAIS Code: 425

Note
FY10-14 Prior Years Funding \$27.29M was executed in PE 0401314F, BPAC 675355

A. Mission Description and Budget Item Justification

The VC-25B Program, formerly known as the Presidential Aircraft Recapitalization (PAR) Program, will replace the Presidential VC-25A fleet which faces capability gaps, rising maintenance costs, and parts obsolescence as it ages beyond 30 years. The VC-25B Program Office will deliver a new fleet of aircraft to meet the requirements for the President to execute the duties of Head of State, Chief Executive, and Commander-in-Chief. The VC-25B Program will uniquely modify two Boeing 747-8 commercial aircraft to provide the President, staff, and guests with safe and reliable air transportation with the equivalent level of communications capability and security available in the White House. The modifications to the 747-8 aircraft will include an electrical power upgrade with dual Auxiliary Power Units that are usable in flight, a mission communication system, a work and rest environment, an executive interior, military avionics, a self-defense system, autonomous enplaning and deplaning, and autonomous baggage loading. No significant changes to the existing VC-25A Concept of Operations or Concept of Employment are expected.

In August 2012, the Defense Acquisition Executive (DAE), as the VC-25B Milestone Decision Authority, approved the Materiel Development Decision. The Capability Development Document (CDD) was validated by the Joint Requirements Oversight Council in November 2014. In January 2015, the Secretary of the Air Force's Determination and Findings designated the Boeing 747-8 aircraft as the airframe platform, and the DAE's Acquisition Decision Memorandum authorized Pre-Milestone B (Pre-MS B) contracts aimed at improving affordability and reducing program execution risk. In February 2015, the Assistant Secretary of the Air Force for Acquisition approved a Justification and Approval designating Boeing as the sole source for Pre-MS B activities; and Post-MS B design, integration, modification, and test activities. The DAE approved the initial acquisition strategy in September 2015. MS B certification occurred in September 2016. In March 2017, the White House reaffirmed the minimum set of requirements necessary to meet Presidential mission needs; these requirements are codified in the March 2017 CDD. The DAE approved the updated acquisition strategy and the Acquisition Program Baseline (APB) in December 2018.

This budget supports Post-MS B design, integration, modification, and test of two aircraft to make them Presidential mission ready. In FY20, the program continued Engineering and Manufacturing development (EMD) activities to include design integration and start of aircraft modification, as well as test planning and initiation of Product Support (PS) activities. In FY21 and FY22, the program continues EMD activities to include modification, test, and PS activities.

Funds may be used to lease test equipment, as well as address emerging and short-notice Diminishing Manufacturing Sources and Material Shortage (DMSMS) issues.

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This program element may include necessary civilian pay expenses required to manage, execute, and deliver VC-25B system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY20 \$2.992M was expended for civilian pay expenses in this program element, and in FY21 \$3.356M is forecasted for civilian pay expenses in this program element.

This program is in Budget Activity 5, System Development an Demonstration (SDD); however, it will not enter full rate production as stated below.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	757.923	800.889	584.585	0.000	584.585
Current President's Budget	730.183	799.429	680.665	0.000	680.665
Total Adjustments	-27.740	-1.460	96.080	0.000	96.080
• 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	-27.740	0.000			
• Other Adjustments	0.000	-1.460	96.080	0.000	96.080

Change Summary Explanation

The decrease in FY20 was for Small Business Innovation Research (SBIR).

The decrease in FY21 was the VC-25B program share of a \$48.6M Congressional undistributed mark applied across the Air Force RTD&E portfolio.

The increase in FY22 is due to re-phasing funds in the FYDP to align to program requirements and fully funding the program to the service cost position.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Title: VC-25B EMD, Product Support, & Program Management Administration (PMA)	727.647	793.396	664.756
Description: Execute EMD activities and accomplish PMA to support the Program Office. FY22 will continue EMD activities such as the management, integration, modification, test/verification, certification, and product support to deliver two Presidential mission-ready VC-25B Aircraft and utilize modeling and simulation, system integration labs (SILs), and mockups to assist in design, modification, and test events.			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<p><i>FY 2021 Plans:</i> Funds in FY 2021 continue EMD activities, aircraft modification, test, and product support activities, as well as support PMA.</p> <p><i>FY 2022 Plans:</i> Funds in FY 2022 will continue EMD activities, aircraft modification, test and product support activities, as well as support PMA with transition from EMD activities to Developmental Test and Evaluation (DT&E), and the ramp up of product support activities.</p> <p><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i> The decrease in funding is due to the transition from EMD activities to Developmental Test and Evaluation (DT&E).</p>			
<p><i>Title:</i> VC-25B Government Test</p> <p><i>Description:</i> Government test activities to prepare for, oversee, and conduct test events.</p> <p><i>FY 2021 Plans:</i> Funds in FY 2021 are for conducting test planning with participating test organizations and contractors and to participate in verification testing in SILs, contractor facilities and government facilities, as well as aircraft functional checkout.</p> <p><i>FY 2022 Plans:</i> Funds in FY2022 will be used to conduct flight, ground, and SIL testing with the participating test organizations and contractors. The tests to be conducted include taxi, first flight, type certification and mission systems.</p> <p><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i> The increase in funding is due to the program leaving the flight test planning stage and entering into flight test. Flight test operations require a significant growth in funding due to the level of effort required to support test operations.</p>	2.536	6.033	15.909
Accomplishments/Planned Programs Subtotals	730.183	799.429	680.665

D. Other Program Funding Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• MILCON PE 0401319F: <i>PAR Facilities</i>	86.000	-	-	-	-	-	-	-	-	-	-
• OPAF 03 Lineitem 843050: <i>PAR Mechanized Material Handling Equip</i>	-	-	-	-	-	-	-	-	-	-	-
• OPAF 03 Lineitem 8347240: <i>PAR CCTV/Audiovisual Equipment</i>	-	-	-	-	-	-	-	-	-	-	-

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

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF 03 Lineitem 837300: <i>PAR Base Comm Infrastructure</i>	4.010	-	-	-	-	-	-	-	-	-	-
• OPAF 02 823990: <i>Special Purpose Vehicles</i>	-	0.499	2.580	-	2.580	-	-	-	-	-	-
• O&M O&M: PE 0401319F: <i>PAR Furnishings and Equipment</i>	-	1.951	-	-	-	-	-	-	-	-	-

Remarks

E. Acquisition Strategy

The Defense Acquisition Executive (DAE), as the VC-25B Milestone Decision Authority, approved the initial VC-25B Acquisition Strategy in September 2015. The DAE approved the updated VC-25B Acquisition Strategy and set the APB in December 2018. The VC-25B Program will integrate technologically mature subsystems into two Government furnished, commercial Boeing 747-8 aircraft. The VC-25B Program will design, integrate, modify, and test two aircraft to make them Presidential mission ready. Boeing is the prime integrator for VC-25B development activities. The VC-25B Program has a single sole-source firm-fixed-price contract with multiple major contract modifications. Modifications include risk reduction activities, 747-8 commercial aircraft purchase, Preliminary Design (PD), Engineering and Manufacturing Development (EMD), and Product Support. The contract for risk reduction activities was awarded in January 2016. The contract modification to purchase two commercial aircraft was awarded in August 2017. The contract modification for PD was awarded in September 2017. The contract modification for EMD was awarded in July 2018. The initial contract modification for Product Support activities was awarded in April 2020.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force												Date: May 2021			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 5				PE 0401319F / VC-25B				655250 / VC-25B							
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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-25B Contract Activities	SS/FFP	The Boeing Company : Various	1,743.071	716.464	Oct 2019	777.831	Oct 2020	650.255	Oct 2021	-		650.255	-	-	-
Subtotal			1,743.071	716.464		777.831		650.255		-		650.255	-	-	N/A
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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 Cite Authority Civilian Pay	Various	AFLCMC/WV : WPAFB, OH	0.000	2.992	Nov 2019	3.356	Nov 2020	-		-		-	-	-	-
Subtotal			0.000	2.992		3.356		-		-		-	-	-	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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-25B Developmental Test and Evaluation	MIPR	412 TW, JITC : Various	2.835	2.536	Dec 2019	6.033	Dec 2020	15.909	Dec 2021	-		15.909	-	-	-
Subtotal			2.835	2.536		6.033		15.909		-		15.909	-	-	N/A
Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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-25B PMA Other Government Costs	Various	AFLCMC/WV : WPAFB, OH	18.007	2.296	Nov 2019	6.090	Nov 2020	10.088	Nov 2021	-		10.088	-	-	-
VC-25B PMA Contract Services	C/T&M	AFLCMC/WV : WPAFB, OH	16.585	5.895	Feb 2020	6.119	Feb 2021	4.413	Feb 2022	-		4.413	-	-	-
Subtotal			34.592	8.191		12.209		14.501		-		14.501	-	-	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force								Date: May 2021					
Appropriation/Budget Activity 3600 / 5				R-1 Program Element (Number/Name) PE 0401319F / VC-25B				Project (Number/Name) 655250 / VC-25B					
	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,780.498	730.183		799.429		680.665		-		680.665	-	-	N/A

Remarks
 FY 2010-2014 RDT&E Funding (\$27.3M) was executed in PE 0401314F, Project 675355, BA07.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force **Date: May 2021**

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401319F / VC-25B	Project (Number/Name) 655250 / VC-25B
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	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	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
VC-25B																												
EMD																												
CDR																												
Aircraft Modification																												
Product Support Activities																												
Developmental Test (DT)																												
Familiarization and Operational Test (FAM/OT)																												
Required Assets Available (RAA) for Initial Operational Capability (IOC)																												
RAA for Full Operational Capability (FOC)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401319F / VC-25B	Project (Number/Name) 655250 / VC-25B
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
VC-25B				
EMD	1	2020	2	2025
CDR	2	2020	2	2020
Aircraft Modification	2	2020	2	2024
Product Support Activities	3	2020	2	2025
Developmental Test (DT)	1	2022	4	2023
Familiarization and Operational Test (FAM/OT)	3	2024	4	2024
Required Assets Available (RAA) for Initial Operational Capability (IOC)	4	2024	4	2024
RAA for Full Operational Capability (FOC)	2	2025	2	2025