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

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605101F / <i>RAND Project Air Force</i>
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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	-	37.655	38.398	39.720	0.000	39.720	40.715	41.550	43.054	43.904	Continuing	Continuing
661110: <i>Project Air Force</i>	-	37.655	38.398	39.720	0.000	39.720	40.715	41.550	43.054	43.904	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

PAF is organized in four primary research program areas: Strategy & Doctrine (SD); Force Modernization & Employment (FME); Workforce, Development & Health (WDH); and Resource Management (RM). Integrative research projects are also conducted with direct support provided through the most applicable program. Research programs address organizational crosscutting issues as defined by specific research themes approved by the Department of the Air Force Steering Group which is tri-chaired by the Under Secretary of the Air Force, Vice Chief of Staff of the Air Force, and Vice Chief of Space Operations. These research programs encompass a wide spectrum of topics including external challenges to national security; joint and coalition operations; integrated roadmap development for Air and Space military capabilities; enhancing, tailoring and reducing infrastructure to meet new force requirements; potential changes to the Active/Reserve/National Guard/Civilian/Contractor manpower mix; and improved weapon system costing.

The research program will continue to build upon research foundations, examining the evolving security environment, emerging threats, national and military strategy, transformation approaches including investment strategies to provide capabilities within changing Defense budgets, operational concepts to meet evolving and increasingly joint missions, exploiting advanced technologies, increasing the effectiveness and efficiency of combat support, and developing the total force (Active/Reserve/National Guard/Civilian/Contractor). These efforts will continue to inform and support decision-making by senior Department of the Air Force leadership regarding personnel management and training; improving logistical efficiencies and force sustainment; ongoing conflicts and joint operations; force structure capabilities, limitations, and operational concepts; and making force structure tradeoffs within resource constraints to meet future national security and Air Force needs.

Future research will build upon earlier work to continue to help the Department of the Air Force to rapidly and appropriately adapt to the changing world environment and emerging threats; continue to modernize and employ its force structure to provide capabilities within changing DoD budgets; assess lessons learned from recent and ongoing conflicts; develop and utilize its total force; and enhance the support of our aerospace forces, ranging from sustainment of the force structure to agile combat support.

PAF research spans functional and organizational boundaries and is managed in a manner to facilitate independence and freedom from organizational bias thereby providing perspectives and insights to senior Department of the Air Force leaders free from parochial influences not necessarily in the best interest of the Department of the Air Force at large. Benefits of independent non-Department of Defense analysis of complex present day and emerging issues are shared beyond the Air and Space Forces. PAF study results are given wide dissemination within the DOD on a routine basis and are deposited with the Defense Technical Information Center available to a broad range of qualified government and commercial-sector individuals and activities.

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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 element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY22 0M was expended for civilian pay expenses in this program element, and in FY23 0M is forecasted for civilian pay expenses in this program element.

In FY23, a 5.154M reduction was applied by Department of the Air Force as an initial share of the reduction referenced in FY 23 section 8026(e) of the Appropriations Law to 'the total amount appropriated in this Act for FFRDCs .... Historically this reduction has not been applied to the RAND Project Air Force program element to a significant degree. Funds from this reduction were restored by the Department of Air Force as an unfunded requirement in FY23 to avoid critical impacts and cancellations to ongoing studies. The budget requests for FY25 and FY24 are in line with the FY 23 appropriation, prior to the reduction (which was later effectively reversed by Air Force), and the amount appropriated in FY22 on an inflation adjusted basis.

Please note that the grand total of Staff Years of Technical Effort (STE) requested by RAND Project Air Force as part of the Department's FFRDC budget request has remained constant at 127 STE from FY22 to FY24.

This program provides for continuing analytical research across a broad spectrum of aerospace issues and concerns. The Project AIR FORCE (PAF) research agenda is focused primarily on mid to long-term problems; in addition, PAF provides quick response assistance for senior Air Force officials on high priority, near term issues. Within these areas, PAF addresses difficult and complex, far-reaching and inter-related questions linked to future strategies, approaches and policies, in order to enhance Air Force senior leadership's deliberations and decision making on major issues. The Air Force Steering Group, chaired by the Vice Chief of Staff, reviews, monitors, and approves PAF annual research efforts. Each project is initiated, processed, and approved in accordance with PAF Sponsoring Agreement which requires General Officer (or SES equivalent) sponsorship and involvement on a continuing basis.

FY23 Actuals and FY24 TriChair Approved Projects are identified in the table below.

FY23			FY24		
Projects STE			Projects STE		
SDP	7	19.75	8,182,425	8	20.00 8,568,000
FMEP	6	20.25	8,389,575	7	24.00 10,281,600
WDHP	7	20.75	8,596,725	8	20.00 8,568,000
RMP	7	21.25	8,803,875	7	21.00 8,996,400
CV Reserve		4.00	1,657,200		2.00 856,800
<b>TOTAL</b>	<b>27</b>	<b>86.00</b>	<b>35,629,800</b>	<b>30</b>	<b>87.00 37,270,800</b>

PAFC23 Task # / STE / \$ : Title  
 Strategy and Doctrine Program (SDP)  
 S310 / 3 / 1.24M : China and Russia Space Net Assessment Project  
 S320 / 2.5 / 1.04M : Integrated Deterrence with Allies and Partners - Implications for Department of the Air Force (DAF) Security Cooperation (SC)

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<p>S330 / 2.75 / 1.14M : Long-Range Strike Options to Stay Below the Nuclear Threshold</p> <p>S340 / 3 / 1.24M : Crisis Stability in Space</p> <p>S350 / 3 / 1.24M : Plan Blue 23 Wargame Analytic Effort &amp; Title 10 Wargame Integration</p> <p>S360 / 2 / 0.83M : Lessons Learned from Space Operations with Allies and Partners and Implications for Security Cooperation (SC)</p> <p>S370 / 2.5 / 1.04M : United States Air Force (USAF) Missions in Competition with Russia and China</p> <p>S301 / 1 / 0.41M : SDP Concept Formulation</p> <p>SDP / 19.75 / 8.18M : SDP Total</p> <p>Force Modernization and Employment Program (FMEP)</p> <p>F310 / 3 / 1.24M : Data-centric Warfighting - Sharing at Speed and Scale</p> <p>F320 / 2.75 / 1.14M : Artificial Intelligence (AI) for Space Domain Awareness</p> <p>F330 / 3 / 1.24M : Enhancing Space Mission Assurance to Cyber Threats</p> <p>F340 / 3.5 / 1.45M : Characterizing Air Force Electromagnetic Battle Management</p> <p>F350 / 3.5 / 1.45M : Formulating The Future Aerial Refueling Enterprise For Peer-Conflict</p> <p>F360 / 3.5 / 1.45M : Integration of Op C2 and Intel to Meet the Pacing Threat in PACAF</p> <p>F301 / 1 / 0.41M : FMEP Concept Formulation</p> <p>FMEP / 20.25 / 8.39M : FMEP Total</p> <p>Workforce, Development, and Health Program (WDHP)</p> <p>W310 / 3.5 / 1.45M : Developing Digital Airmen: Talent Management of Tomorrow</p> <p>W320 / 3 / 1.24M : Analysis of Barriers to USSF Talent Management Transformation</p> <p>W330 / 2.5 / 1.04M : Optimization of Active and Reserve Component Force Structure</p> <p>W340 / 2.5 / 1.04M : Exploring the Use of Advanced Learning Technologies to Enhance the Efficiency and Effectiveness of Air Force Training</p> <p>W350 / 2 / 0.83M : Synchronizing the U.S. Air Force (USAF) USAF and U.S. Space Force (USSF) in a Department of the Air Force (DAF)-Wide Acquisition Workforce</p> <p>W360 / 3.75 / 1.55M : Reducing Racial/Ethnic and Gender Disparities in Force Development</p> <p>W370 / 2.5 / 1.04M : Manning the Nuclear Deterrence Operations (NDO) Force Through 2040</p> <p>W301 / 1 / 0.41M : WDHP Concept Formulation</p> <p>WDHP / 20.75 / 8.6M : WDHP Total</p> <p>Resource Management Program (RMP)</p> <p>R310 / 3.5 / 1.45M : Cost for Effectiveness - Efficiency of Critical Infrastructure Protection Options</p> <p>R320 / 3 / 1.24M : Civil Engineer and Logistics Challenges in Generating Sorties Under Attack Within the Agile Combat Employment Construct</p> <p>R330 / 2 / 0.83M : Transforming United States Space Force's (USSF's) Capability Development</p> <p>R340 / 2.75 / 1.14M : Assessment of Digital Engineering: Its Implications for Weapon System Programs and Supply Chain Adoption</p> <p>R350 / 3 / 1.24M : Energizing and Synchronizing Research, Development, and Technology Transfer for the Use of Space</p> <p>R360 / 3 / 1.24M : Transforming Legacy Logistics Support to Agile Combat Employment (ACE) Operations in a Contested Environment</p> <p>R370 / 3 / 1.24M : Accelerating and Improving Nuclear Safety Design Certification of Weapon Systems Through Digital Engineering</p>		

**UNCLASSIFIED**

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<p>R301 / 1 / 0.41M : RMP Concept Formulation  RMP / 21.25 / 8.8M : RMP Total  CV Reserve  R385 / 2 / 0.83M : CV Reserve  P301 / 2 / 0.83M : Unit Concept Formulation  CVRes / 4 / 1.66M : CV Reserve Total  RAND PAF Program Total  ALL / 86 / 35.63M : RAND PAF ALL</p> <p>FY24 Tri-Chair Approved Projects  PAFC24 Task # / STE / \$ : Title  Strategy and Doctrine Program (SDP)  S410 / 2.5 / 1.07M : Adversary perceptions and reactions to U.S. proliferated LEO  S420 / 2 / 0.86M : The Day After...Taiwan  S430 / 2 / 0.86M : End Game: How Might War in Ukraine End and How Will the Outcome Shape Future Force Needs  S440 / 2 / 0.86M : Air Base Defense Gaps and Seams  S450 / 3 / 1.29M : Plan Blue 24 Wargame Analytic Effort &amp; Title 10 Wargame Integration  S460 / 2.5 / 1.07M : Deterring Multiple Nuclear-Armed Adversaries in a Post-New START Environment: Implications for Air Force Posture and Requirements  S470 / 3 / 1.29M : Objectively Comparing the Spillage Risk of Sharing Information with Key Allies/Partners against the Operational Risk of Not Sharing It  S480 / 2 / 0.86M : Monitoring Adversary Approaches to Security Cooperation (SC) and the Impact to Strategic Outcomes  S401 / 1 / 0.43M : SDP Concept Formulation  SDP / 20 / 8.57M : SDP Total  Force Modernization and Employment Program (FMEP)  F410 / 3.5 / 1.5M : Kill chain analysis and support to the USSF and USAF  F420 / 3.5 / 1.5M : Winning the First Critical Battle: Designing an Autonomous and Resilient Sensing Grid to Enable Effective JADC2 at the Forward Edge of Combat  F430 / 3 / 1.29M : Ensuring Successful Electromagnetic Operations in a Complex, Contested, and Congested Electromagnetic Environment  F440 / 2.5 / 1.07M : E-7 Kill Chain and Survivability Improvement Study  F450 / 3.5 / 1.5M : Enabling Effective Modernization for Sense-making for Key Operation Missions  F460 / 3.5 / 1.5M : Measuring the Contributions of Space across Military Operations, National Defense, and National Security  F470 / 3.5 / 1.5M : Force Mix and Munitions Planning for Autonomous and Manned Platforms in High Intensity Conflict  F401 / 1 / 0.43M : FMEP Concept Formulation  FMEP / 24 / 10.28M : FMEP Total  Workforce, Development, and Health Program (WDHP)  W410 / 3 / 1.29M : Developing Multi-Capable Airmen for Agile Combat Support  W420 / 2 / 0.86M : Science, Technology, Engineering and Math (STEM) Workforce Needs for the Development of Future Technology Required to Defeat China</p>		

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W430 / 2 / 0.86M : Manning the Nuclear Deterrence Operations (NDO) Force Through 2040: Part 2  
W440 / 2 / 0.86M : Bonus and Incentive Pay Analysis  
W450 / 2 / 0.86M : OTTI Business Model/Organizational Roles & Responsibilities  
W460 / 3 / 1.29M : Methods and processes to realize and improve EMSO readiness for the CAF  
W470 / 2 / 0.86M : Evaluation of Air Force Recruiting Enterprise Structure and Business Mode  
W480 / 3 / 1.29M : Addressing Perceptions of Racial/Ethnic and Gender Disparities in the DAF Work Environment  
W401 / 1 / 0.43M : WDHP Concept Formulation  
WDHP / 20 / 8.57M : WDHP Total  
Resource Management Program (RMP)  
R410 / 3 / 1.29M : Base Resilience Investment Strategies  
R420 / 2 / 0.86M : Expanding Combat Capability by Improving Interoperability with Joint and Allied Partners  
R430 / 3 / 1.29M : The US Defense Industrial Base (DIB) Munition Production Capacity Impacts to Air Force Wartime Surge Capability and Protracted Warfare Sustainability  
R440 / 3 / 1.29M : Global Posture Strategy to Enable Agile and Responsive Operations in (Chemical, Biological, Radiological and Nuclear) CBRN Environments  
R450 / 2.5 / 1.07M : More Effective and Efficient Modeling and Simulation Capabilities Across U.S. Space Force Communities  
R460 / 4 / 1.71M : Pacific Basing, Logistics and Sustainment Roadmap - Agile Combat Employment (ACE) 2030-2040  
R470 / 2.5 / 1.07M : Reducing Space Mission Risk from Cyber Threats to ICS and SCADA systems  
R401 / 1 / 0.43M : RMP Concept Formulation  
RMP / 21 / 9M : RMP Total  
CV Reserve  
N/A / 0 / 0M : CV Reserve  
P401 / 2 / 0.86M : Unit Concept Formulation  
CVRes / 2 / 0.86M : CV Reserve Total  
RAND PAF Program Total  
ALL / 87 / 37.27M : RAND PAF ALL

This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	32.767	38.398	39.650	0.000	39.650
Current President's Budget	37.655	38.398	39.720	0.000	39.720
Total Adjustments	4.888	0.000	0.070	0.000	0.070
• 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	6.276	0.000			
• SBIR/STTR Transfer	-1.388	0.000			
• Other Adjustments	0.000	0.000	0.070	0.000	0.070

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p><b>Title:</b> Strategy &amp; Doctrine</p> <p><b>Description:</b> Provides for continuing analytical research across a broad spectrum of aerospace issues and concerns--strategy and doctrine.</p> <p><b>FY 2024 Plans:</b> Will conduct analytical research across a broad spectrum of aerospace issues and concerns--integrative research/direct support</p> <p><b>FY 2025 Plans:</b> Continue conducting analytical research across a broad spectrum of aerospace issues and concerns--integrative research/direct support</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increase required due to SecAF request to stand up a China-Russia Center within the four RAND program areas--specifically, Strategic and Doctrine Program.</p>	8.983	9.139	9.402
<p><b>Title:</b> Force Development</p> <p><b>Description:</b> Provides analytical research across a broad spectrum of aerospace issues and concerns--force development employment.</p> <p><b>FY 2024 Plans:</b> Will conduct analytical research across a broad spectrum of aerospace issues and concerns--force development employment.</p> <p><b>FY 2025 Plans:</b></p>	8.664	8.800	9.097

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Continue conducting analytical research across a broad spectrum of aerospace issues and concerns--force development employment. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increase required due to SecAF request to stand up a China-Russia Center within the four RAND program areas--specifically, Strategic and Doctrine Program.				
<b>Title:</b> Manpower, Personnel & Training <b>Description:</b> Provides analytical research across a broad spectrum of aerospace issues and concerns--manpower, personnel and training. <b>FY 2024 Plans:</b> Will conduct analytical research across a broad spectrum of aerospace issues and concerns--manpower, personnel and training. <b>FY 2025 Plans:</b> Continue conducting analytical research across a broad spectrum of aerospace issues and concerns--manpower, personnel and training. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increase required due to SecAF request to stand up a China-Russia Center within the four RAND program areas--specifically, Strategic and Doctrine Program.		8.994	9.364	10.042
<b>Title:</b> Resource Management <b>Description:</b> Provides analytical research across a broad spectrum of aerospace issues and concerns--resource management. <b>FY 2024 Plans:</b> Will conduct analytical research across a broad spectrum of aerospace issues and concerns--manpower, personnel and training. <b>FY 2025 Plans:</b> Continue conducting analytical research across a broad spectrum of aerospace issues and concerns--manpower, personnel and training. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increase required due to SecAF request to stand up a China-Russia Center within the four RAND program areas--specifically, Strategic and Doctrine Program.		8.879	8.955	9.028
<b>Title:</b> Integrative Research/Direct Support		2.135	2.140	2.151

**UNCLASSIFIED**

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p><b>Description:</b> Provides for continuing analytical research across a broad spectrum of aerospace issues and concerns--integrative research/direct support.</p> <p><b>FY 2024 Plans:</b> Will conduct analytical research across a broad spectrum of aerospace issues and concerns--integrative research/direct support.</p> <p><b>FY 2025 Plans:</b> Continue conducting analytical research across a broad spectrum of aerospace issues and concerns--manpower, personnel and training.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increase required due to SecAF request to stand up a China-Russia Center within the four RAND program areas--specifically, Strategic and Doctrine Program.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	37.655	38.398	39.720

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

N/A

**Remarks**

**E. Acquisition Strategy**

N/A