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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

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 0207522F / <i>Airbase Air Defense Systems (ABADS)</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	8.737	0.000	8.737	26.575	19.636	14.616	14.617	Continuing	Continuing
640410: <i>Tech Maturation & Risk Reduct</i>	-	0.000	0.000	8.737	0.000	8.737	26.575	19.636	14.616	14.617	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note
 C-sUAS development efforts were previously funded in PE 0604287F. This is not a new start effort.

A. Mission Description and Budget Item Justification

Airbase Air Defense Systems (ABADS)

The Air Force Counter-small Unmanned Aircraft System (C-sUAS) program will be the principal USAF program to defend against the emerging and growing small unmanned aerial system threat. This program protects strategic assets vital to national security while bedded down and while on the move. It also protects personnel deployed in theater. Small UASs are inexpensive and commercially available and have been used to target US Service members, Allies and Coalition partners. This threat will evolve continuously as commercially available drone technology and drones advance rapidly. The USAF will be analyzing the evolving threat and evaluating new capabilities to take on this threat, while also designing an architecture and new systems to bring down life cycle cost so that capability can be fielded to all 180+ AF installations and protect AF assets globally.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver Airbase Air Defense System capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F.

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	8.737	0.000	8.737
Total Adjustments	0.000	0.000	8.737	0.000	8.737
• 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	0.000	0.000			
• Other Adjustments	0.000	0.000	8.737	0.000	8.737

Change Summary Explanation

Effort realigned from PE 0604287F in the FY2021 budget.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Airbase Air Defense Systems (ABADS)	0.000	0.000	8.737	0.000	8.737
Description: Airbase Air Defense Systems (ABADS) The Air Force Counter-small Unmanned Aircraft System (C-sUAS) will continue to defend against the emerging and growing small unmanned aerial system threat. This program protects strategic assets vital to national security while bedded down and while on the move. This program will continue to adapt quickly to keep pace with commercially available drone technology and advancements in emerging threats.					
FY 2020 Plans: N/A					
FY 2021 Base Plans: - Will develop Command, Control, Communication, Computers, and Intelligence (C4I), to include but not limited to artificial intelligence development for operator task automation, closed-loop training system for operator certification and proficiency, track fusion updates, Link 16 capability integration, BDOC of the future development, standardize application data models, design physical on-premise network for cloud implementation. - Will develop Electronic Warfare upgrades, to include but not limited to new Ninja skills from new external agencies, and leverage full Ninja capability within Medusa C2.					

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C. Accomplishments/Planned Programs (\$ in Millions)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
- Will develop Urgent Need System Upgrades, to include but not limited to false alarm reduction, increase line of bearing accuracy and finalize integration of all components. - Will have PMO Support to include but not limited to, modeling and simulation capability, test range support, system integration labs and contractor support. FY 2021 OCO Plans: N/A FY 2020 to FY 2021 Increase/Decrease Statement: Effort realigned from PE 0604287F in the FY2021 budget.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	8.737	0.000	8.737

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPAF 03 0207522F: <i>Airbase Air Defense Systems (ABADS)</i>	0.000	0.000	51.512	-	51.512	27.485	25.578	11.792	11.642	Continuing	Continuing

Remarks

E. Acquisition Strategy

Implement a "Government-as-the-Integrator" approach by procuring integration services independent of systems being developed through existing integration service contracts within the DoD. The services will establish processes and support tools to enable integration of planned projects. Example integration services include, but are not limited to, establishing a continuous integration/continuous deployment (CI/CD) software pipeline, implementing Agile DevSecOps processes and deploying model-based design. Leverage small business innovative research opportunities to generate new code to produce capabilities for detection and defeat new sUAS platforms. Leverage urgent need support contracts to develop innovative and incremental changes to systems fielded for C-sUAS urgent needs. Accomplish system verification-fix-verification loops earlier in the lifecycle for planned projects by leveraging independent integration services from systems being developed. Integration services will be acquired from existing integration service contracts within the DoD.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0207522F / Airbase Air Defense Systems (ABADS)	Project (Number/Name) 640410 / Tech Maturation & Risk Reduct

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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

FY21 Events																												
Software Development																												
Test																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0207522F / Airbase Air Defense Systems (ABADS)	Project (Number/Name) 640410 / Tech Maturation & Risk Reduct

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>FY21 Events</i>				
Software Development	1	2021	4	2022
Test	1	2021	4	2022