Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force											Date: March 2024	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604006F / *Dept of the Air Force Tech Architecture*							
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	-	48.808	2.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
645352: *Department of the Air Force Technical Architecture Design, Integration, and Evaluation*	-	48.808	2.620	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

The Department of the Air Force (DAF) Tech Architecture resources activities to oversee and shape the technical architecture of the entire Air Force and Space Force and foster modular and agile architectures within individual programs and across programs to rapidly deliver warfighting capability. The complexity of modern conflict requires decision making and coordinated effects at expanding ranges and increasingly rapid timelines driving the need for flexible, integrated systems that work together instead of exquisite individual systems that operate in isolation. As a result, the system-of-systems integrated architecture is just as important as the design of individual systems to ensure that systems have the necessary interoperability and composability as well as the capacity to rapidly modernize as needed to defeat the rapidly evolving adversary capabilities. Successful commercial companies follow a similar approach across product lines, enabling seamless operation across platforms as well as rapid modernization of hardware and software for each of their products.

The complexity of modern conflict and the need for an effective family of systems to counter peer threats requires an office responsible for architecting across the entire USAF and USSF portfolio of systems to coordinate acquisition of those systems. Historically, acquisition has been done in the absence of a system-of-systems integrated reference architecture which has yielded systems that often only address a single use case (lack of composability); do not work together as desired (lack of interoperability); are unable to evolve or adopt new technologies (lack of ability to rapidly modernize); or fail to deliver the warfighter's desired operational effects (lack of military utility). The DAF Tech Architecture leads technical architectures for the entire DAF Air and Space portfolio to enable accelerated agile delivery of integrated warfighter capabilities in support of national security objectives.

The DAF Tech Architecture leads the development of reference technical architectures which are foundational to a modular open system approach and are key to ensuring successful system-of-systems acquisitions. Reference architectures facilitate understanding the impact each system has on DAF missions and assessing system-of-systems performance to prioritize investments, expose duplicative capabilities, and identify capability gaps. The reference technical architectures guide and constrain programs to ensure delivery of systems that are composable, interoperable, and able to be modernized; as well as providing a framework to integrate them together ensuring military utility for complex missions such as Decision Superiority and Information Advantage, Agile Combat Employment, Rapid All-Domain Kill Chains, Logistics Under Attack, Space Domain Awareness, and Space Defense. The architectures must keep pace with the adversary, maturing as threats advance and new technological opportunities arise. Without a reference technical architectures, the DAF will continue to acquire singular exquisite systems instead of modular, open system-of-systems capabilities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*

The DAF Tech Architecture will work with architecture stakeholders to develop policy, standards, and processes to ensure capability and composability of architectures from a single aircraft sensor to the entirety of the USAF and USSF. Training, tools, and infrastructure required for architecture will be developed and provided to organize, train, and equip the DAF acquisitions force.

To ensure successful system-of-systems acquisition, DAF Tech Architecture validates architecture designs by integrating them into the complex mission threads in the field, highlighting architectural gaps, validating military utility, and assessing architecture performance. A comprehensive understanding of mission threads, concepts of operation (CONOPS), and current/future systems is used to inform the development of an architectural minimum viable product (MVP); rapidly delivering critical technology with a bridge to acquisition and scaling. By integrating open architectures and solutions in complex mission scenarios on the battlefield, the DAF Tech Architecture has and will continue to deliver critical capability while uncovering mission-critical gaps. Architecture integration in system-of-systems mission threads and environments is critical to deliberately advancing the DAF's technological edge by informing architecture design, acquisition investments, system requirements for future capabilities, and acquisition baseline updates for current systems.

This activity is directed by the DAF Chief Architect Officer (CAO) with oversight by the Secretary of the Air Force along with the Chief of Staff of the Air Force, Chief of Space Operations, and Senior Acquisition Executive. This activity is executed by the Air Force Research Laboratory.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver Department of the Air Force Tech Architecture. 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, 0605831F and/or 0604858F.

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.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	50.000	2.620	2.899	0.000	2.899
Current President's Budget	48.808	2.620	0.000	0.000	0.000
Total Adjustments	-1.192	0.000	-2.899	0.000	-2.899
• 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	-1.192	0.000			
• Other Adjustments	0.000	0.000	-2.899	0.000	-2.899

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*

Change Summary Explanation

FY24 and out, FYDP funding reduced for higher Air Force priorities.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: DAF Architecture Design and Integration	48.808	2.620	-

Description: The DAF Tech Architecture leads the development of technical architectures for the entire DAF Air and Space portfolio to enable accelerated agile delivery of integrated warfighter capabilities in support of national security objectives. Architectures will be developed to address critical operational needs as specified by the Secretary of the Air Force along with the Chief of Staff of the Air Force, Chief of Space Operations, Senior Acquisition Executive, and C3BM Program Office.
Architecture Design develops technical reference architectures in coordination with, but not limited to Air and Space Staffs, Program Executive Offices, Major Commands, and Deltas leveraging a collaborative digital environment and architecture repository. These architectures enable scalability, flexibility, and interoperability through application of modular open system approaches, open standards, specified interfaces, and defined intra/inter-system relationships. Architectures consist of, but are not limited to, strategy, digital system-of-systems models, technology standards, reference implementations, and system interface specifications. Architecture Design analyzes architectures using approaches such as modeling and simulation to assess operational feasibility and performance of new capabilities across science, technology, research, and development enterprises informing acquisition strategy to maximize system-of-systems lethality.
Architecture Design works with SAF/AQ and SAF/SQ leadership to deliver policy, procedures, and processes, driving the use of architectures throughout acquisitions and ensuring that the DAF delivers interoperable, modular, open systems designs. Architecture Design also works with architecture stakeholders to design and instantiate infrastructure, such as a collaborative digital environment and architecture repository, to support architecture development and sharing. Architecture Design drives programs and platforms to be built with agility via open systems and open standards so that they can adapt and upgrade components quickly in response to threats or opportunities to integrate technology as advances are made.
Architecture Integration gauges opportunities and develops architecturally-sound, high impact Minimum Viable Products (MVPs) to validate architectures and accelerate transition to programs, delivering capabilities that warfighters need. This effort integrates MVP capabilities into the force-level (i.e., architecture level) operational scenarios that will stress architecture designs and provide real-world assessments of military utility and technical performance.
Integration efforts provide essential feedback to architecture designs, capturing real-world system-of-systems interactions as well as warfighter perspectives to ensure architectures deliver on mission needs. Integration of DAF architectures in complex operational missions is key to delivering superior system-of-systems capabilities to address critical warfighting priorities and gaps.

FY 2024 Plans:
Requirements moved to 0604003F ABMS in FY2024 in support of the C3BM PEO.

FY 2024 to FY 2025 Increase/Decrease Statement:

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Currently no FY25 funding/plans			
Title: DAF Architecture Force Integration	0.000	0.000	-
Description: Department of the Air Force (DAF) Architecture Force Integration evaluates opportunities and delivers architecturally-sound, high impact Minimum Viable Product (MVP) capabilities with roadmaps for programs to scale capabilities that warfighters need. This work is a deliberate campaign that integrates capabilities at the force-level (i.e., architecture level). This process also uncovers mission-critical gaps that may not be uncovered at test ranges—meaning they would have been discovered on the road to conflict when it could be too late to correct. Therefore, a regular campaign to deliver time-critical technology with a bridge to scaling at the architecture level is critical to deliberately advancing the DAF's technological edge and impacts overall architecture design, funding priorities among multiple capability areas, investments, requirements for future capabilities, and acquisition baseline updates for current systems. The DAF Architecture Force Integration pillar conducts technical sprints to integrate (and when required develop) Minimum Viable Products (MVPs) that address the gaps identified in the Architecture Design Pillar by delivering focused, well-designed, and tangible fixes. This effort also includes Force Integration infrastructure, test personnel, range access, consumables, travel, operational concept and non-materiel development and technical sprints to solve near-term gaps. ***FY 2024 Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Currently no FY25 funding/plans			
Accomplishments/Planned Programs Subtotals	48.808	2.620	-

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

Contracting strategies vary based on activity; please see R3 for additional details.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*	**Project (Number/Name)** 645352 / *Department of the Air Force Technical Architecture Design, Integration, and Evaluation*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DAF Architecture Design	Various	RAFT SBIR PhIII : Reston, VA	-	-		-		-		-		-	Continuing	Continuing	-
DAF Architecture Design and Integration Contract 1	MIPR	BAH : McLean, VA	-	1.203	Jan 2023	-		-		-		-	Continuing	Continuing	-
DAF Architecture Design and Integration Contract 2	MIPR	MIT/LL : Lexington, MA	-	2.200	Jan 2023	-		-		-		-	Continuing	Continuing	-
DAF Architecture Modeling and Analysis Contract 1	MIPR	GTRI, MITRE, MIT/LL, Aero : Various	-	3.414	Nov 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Modeling and Analysis Contract 2	MIPR	JHU APL : Laurel, MD	-	8.572	Nov 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Modeling and Analysis Infrastructure	Various	Various : Various	-	1.055	Dec 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Technology Solutions, FY22-23	Various	Various : Various	-	11.076	Jan 2023	-		-		-		-	Continuing	Continuing	-
DAF Mission Architecture	MIPR	GTRI, SEI : Various	-	2.027	Dec 2022	-		-		-		-	Continuing	Continuing	-
DAF Program Architecture	MIPR	GTRI, APL, SEI : Various	-	0.000	Dec 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Integration	Reqn	MITRE : McLean, VA	-	1.880	Oct 2022	-		-		-		-	Continuing	Continuing	-
Architecture Design Contract 1	Reqn	MITRE : McLean, VA	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Design Contract 2	Reqn	CMU SEI : Pittsburgh, PA	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Design Contract 3	Reqn	MIT/LL : Lexington, MA	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Design Contract 4	SS/CPFF	JHU APL : Laurel, MD	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Design Contract 5	MIPR	Aerospace : TBD	-	-		-		-		-		-	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*	**Project (Number/Name)** 645352 / *Department of the Air Force Technical Architecture Design, Integration, and Evaluation*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Architecture Design Contract 6	Reqn	GTRI : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Integration Contract 1	Reqn	MITRE : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Integration Contract 2	SS/CPFF	JHU APL : Laurel, MD	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Integration Contract 3	Reqn	GTRI : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Integration Contract 4	MIPR	ASI : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Integration Contract 5	SS/CPFF	Makai : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Integration Contract 6	Reqn	RAFT : Reston, VA	-	-		-		-		-		-	Continuing	Continuing	-
Architecture Integration Contract 7	Reqn	KBR : TBD	-	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	-	31.427		-		-		-		-	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DAF Architecture Initiatives Support	MIPR	BAH/SEI : Various	-	1.691	Dec 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Engineering Support	Reqn	AFRL : Various	-	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	-	1.691		-		-		-		-	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*	**Project (Number/Name)** 645352 / *Department of the Air Force Technical Architecture Design, Integration, and Evaluation*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DAF Architecture Design Test	Various	LL; APL; MITRE; GTRI; BAH : Various	-	4.210	Oct 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Execution Team 1	MIPR	Booz Allen Hamilton : McLean, VA	-	2.000	Nov 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Mission Execution	Various	Various : Various	-	0.000	Dec 2022	-		-		-		-	Continuing	Continuing	-
DAF Architecture Test Infrastructure	Various	Various : Various	-	0.000	Dec 2022	-		-		-		-	Continuing	Continuing	-
		Subtotal	-	6.210		-		-		-		-	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	Various	Various : Various	-	9.480	Oct 2022	2.620	Nov 2023	-		-		-	Continuing	Continuing	-
		Subtotal	-	9.480		2.620		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	48.808		2.620		-		-		-	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*	**Project (Number/Name)** 645352 / *Department of the Air Force Technical Architecture Design, Integration, and Evaluation*

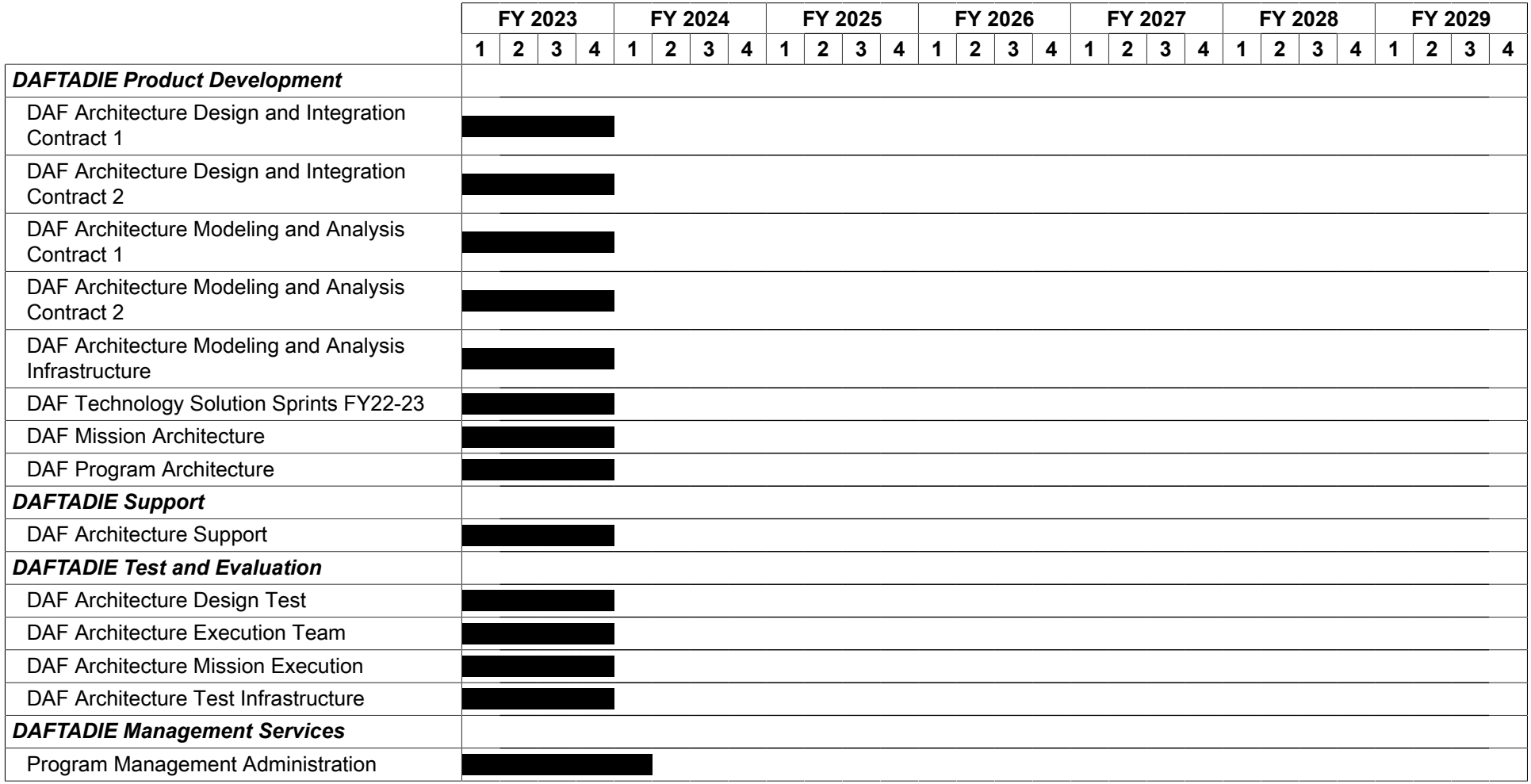

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0604006F / *Dept of the Air Force Tech Architecture*	**Project (Number/Name)** 645352 / *Department of the Air Force Technical Architecture Design, Integration, and Evaluation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
DAFTADIE Product Development				
DAF Architecture Design and Integration Contract 1	1	2023	4	2023
DAF Architecture Design and Integration Contract 2	1	2023	4	2023
DAF Architecture Modeling and Analysis Contract 1	1	2023	4	2023
DAF Architecture Modeling and Analysis Contract 2	1	2023	4	2023
DAF Architecture Modeling and Analysis Infrastructure	1	2023	4	2023
DAF Technology Solution Sprints FY22-23	1	2023	4	2023
DAF Mission Architecture	1	2023	4	2023
DAF Program Architecture	1	2023	4	2023
DAFTADIE Support				
DAF Architecture Support	1	2023	4	2023
DAFTADIE Test and Evaluation				
DAF Architecture Design Test	1	2023	4	2023
DAF Architecture Execution Team	1	2023	4	2023
DAF Architecture Mission Execution	1	2023	4	2023
DAF Architecture Test Infrastructure	1	2023	4	2023
DAFTADIE Management Services				
Program Management Administration	1	2023	1	2024