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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0207328F / <i>Stand In Attack Weapon</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	0.000	243.076	298.585	375.528	0.000	375.528	405.136	381.648	299.313	301.956	Continuing	Continuing
653133: <i>Stand In Attack Weapon</i>	0.000	243.076	298.585	375.528	0.000	375.528	405.136	381.648	299.313	301.956	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Stand-in Attack Weapon (SiAW) system will provide capability to strike rapidly re-locatable targets that create the Anti-Access/Area Denial (A2/AD) environment for 5th Generation and Future Advanced Aircraft. SiAW targets include Theater Ballistic Missile Launchers, Land Attack and Anti-Ship Cruise Missile Launchers, Jammers, Anti-Satellite Systems, and Integrated Air Defense Systems. The SiAW missile system is being developed under a Digital Acquisition (DA) approach that emphasizes agility and innovation. Interim combat capability is pursued through the Navy's Advanced Anti-Radiation Guided Missile-Extended Range (AARGM-ER) program with improved warhead/fuze and F-35 integration (including Universal Armament Interface [UAI] and Mission Planning).

Implements Digital Acquisition tenants of Open, Agile, and Digital; builds and establishes industrial base innovation around the program's enterprise for modularity and adaptability for the life cycle of the weapons system. Leverages common component development, in collaboration with other weapon systems, to reduce redundant costs between systems with similar subsystems requirements. Invests in analytical, data management, digital environments, networks, facilities, and security infrastructure upgrades supporting development of this program's capabilities, while leveraging DoD and DAF enterprise IT solutions. Expands program office staff, facilities, and security infrastructure to support the required classification levels for this program's activities. Engages with DoD, DAF, and industry stakeholders to refine threat analysis, refine inventory requirements, and plan upgrade requirements. Capitalizes on and incorporates successful laboratory research and development efforts applicable to this program's capability.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

FY24 RDT&E funding for PE 27328F, Program 653133 is in compliance with budgeted end items per the approved test strategy and FY23 Omnibus, Sec. 8059.

The total cost of the Stand-in Attack Weapon Rapid Prototyping Middle Tier of Acquisition effort is 1,130.1 million, including RDT&E and procurement of prototype units. The SiAW RP program is fully funded across the Future Years Defense Program.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In PY 6.584M was expended for civilian pay expenses in this program element, and in CY 10.569M is forecasted for civilian pay expenses in this program element.

The FY2025 funding request was reduced by -5.000 million to account for the availability of prior year execution balances

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This program element may include necessary emergent or unanticipated civilian pay expenses required to manage, execute, and deliver SiAW for emergent or unanticipated weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605828F.

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 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	263.152	298.585	381.867	0.000	381.867
Current President's Budget	243.076	298.585	375.528	0.000	375.528
Total Adjustments	-20.076	0.000	-6.339	0.000	-6.339
• 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	-13.218	0.000			
• SBIR/STTR Transfer	-6.858	0.000			
• Other Adjustments	0.000	0.000	-6.339	0.000	-6.339

Change Summary Explanation

FY23 adjustments are -7.118M on FY23-80PA; Below Threshold Reprogramming (BTR) of -6.099M and -6.858M for Small Business Innovative Research (SBIR) FY25 funding request was reduced by -5.000M to account for the availability of prior year execution balances; -2.000M move to Enterprise Digital Material Management (DMM) and inflation increases

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Warhead / Electronic Safe and Arm Fuze (ESAF) Development / System Engineering / Program Management (SEPM)	13.314	0.000	0.000
Description: Development of a new warhead and ESAF to support AARGM-ER. Will design, test, and certify new warhead/ESAF.			
FY 2024 Plans: Work was completed in FY23. No ESAF/SEPM activity in FY24.			
FY 2025 Plans: No ESAF/SEPM activity in FY25.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
N/A				
<p>Title: Universal Armament Interface (UAI) / Anti-Radiation Homing (ARH) message / SEPM</p> <p>Description: Develop and test a UAI/ARH message set for the AARGM-ER missile.</p> <p>FY 2024 Plans: Work completed in FY23. No UAI/ARH activity in FY24.</p> <p>FY 2025 Plans: No UAI/ARH activity in FY25.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: N/A</p>		1.650	0.000	0.000
<p>Title: F-35 Integration</p> <p>Description: Integration of the AARGM-ER and SiAW missiles onto the F-35. Efforts for aircraft integration will address the F-35 aircraft software development, Mission Planning capability, engineering to support weapon integration, testing, and airworthiness certification for the missile carriage and employment efforts.</p> <p>FY 2024 Plans: Continue integrating the AARGM-ER on the F-35 as an interim combat capability; includes ground testing, F-35 weapon integration, launcher adapter development and mission planning. Begin integration of the SiAW missiles onto the F-35.</p> <p>FY 2025 Plans: Complete integrating the AARGM-ER on the F-35 as interim combat capability; includes ground testing, F-35 weapon integration, launcher adapter development, mission planning, and flight testing. Continue integration of SiAW missile onto the F-35 to include ground testing, mission planning, mission, data development, system integration lab testing and JSE integration.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding decreased due to completion of AARGM-ER test events.</p>		3.949	51.791	45.375
<p>Title: SiAW Development</p> <p>Description: Conduct development and testing of discrete SiAW technologies as well as the integrated SiAW weapons system. This includes the development of an initial SiAW capability via the Middle Tier Acquisition described in Section A, as well as a post-MTA activity that will bring additional capability and integrate the weapon onto the F-35.</p> <p>FY 2024 Plans:</p>		148.425	210.031	224.264

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Begin ramp up for SiAW prototyping development competitive selection.			
FY 2025 Plans: Execute Development, Risk Reduction (RR), system security, anti-tamper capabilities and begin Integrated Test (IT) for SiAW weapon system. Begin the establishment of the Integrated Digital Environments (IDE). This includes establishment of modeling and simulation capability through the maturation of the digital thread and establishment of the virtual twin.			
FY 2024 to FY 2025 Increase/Decrease Statement: Funding increased due to increase activities associated with SiAW Prototyping Development Efforts.			
Title: Target/Test Assets, Testing, & Support	75.738	36.763	105.889
Description: Provides associated government and contract support for F-35 developmental and operational testing for AARGM-ER and SiAW. Includes required test assets and support, flight test equipment, construction and procurement of targets to meet mission requirements, test wing and range support to include both sea and land ranges, and ground/flight test support.			
FY 2024 Plans: Complete AARGM-ER test efforts. Begin SiAW missile test support, purchasing test equipment, target construction, range/ground support, and test assets. Continue target/threat emitter acquisition to include weapon cybersecurity support and test investments and development of flight telemetry and termination system.			
FY 2025 Plans: Continue SiAW missile test support, purchasing test equipment, target construction, range/ground support, and test assets. Continue target/threat emitter acquisition to include weapons cybersecurity support and test investments, and development and certification of flight telemetry and termination system. Start procuring test and integration assets for full envelope certification.			
FY 2024 to FY 2025 Increase/Decrease Statement: Funding increased due to SiAW test events and purchase of long lead items needed for the test activities.			
Accomplishments/Planned Programs Subtotals	243.076	298.585	375.528

D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025	FY 2025	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Cost To	Total Cost
			Base	OCO	Total					Complete	
• RDTE 07 0205601N: <i>AARGM-ER (Navy)</i>	76.314	51.807	26.381	-	26.381	22.264	10.500	9.633	9.835	Continuing	Continuing
• MPAF 02 0207328F: <i>Stand-In Attack Weapon</i>	77.975	41.947	173.048	-	173.048	149.231	347.358	399.293	407.209	7,205.703	8,801.764

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks
 RDTE: US Navy AARGM-ER Program Office, Anti-Radiation Missile Improvement Systems Development US Navy appropriation RDT&E 1319.
 MPAF: Funding contained in procurement document utilized to procure initial production lot of AARGM-ER weapons.

E. Acquisition Strategy

The Stand-in Attack Weapon (SiAW) program will utilize a multi-phase approach to migrate advanced technologies and weapon designs into an Model Based System Engineering (MBSE) environment and then rapidly evolve the designs for an initial capability followed by a more comprehensive capability. The first Phases (1 & 2) have been approved as a Middle Tier of Acquisition (MTA) program, and will focus on the integration of key technologies, the implementation of digital acquisition, a competitive selection, and an initial capability on a surrogate aircraft in less than 5 yrs. In Phase 3, sometimes referred to as the "Post-MTA" phase, the SiAW program plans to transition to a Major Capability Acquisition (MCA) where the capability will be improved and the system will be integrated on the F-35A.

Key tenets of the SiAW program will be the establishment/use of a MBSE environment, implementation of a Weapon Open System Architecture (WOSA), and Agile Software Development.

Air Force plans to continue Navy-led AARGM-ER investments to field an interim combat capability on the F-35.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force **Date:** March 2024

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Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Warhead / ESAF Development	MIPR	NGDS : Northridge, CA	0.000	13.314	Dec 2022	-		-		-		-	Continuing	Continuing	-
Universal Armament Interface (UAI) Anti-Radiation Homing message (ARH)	MIPR	Various : Various	0.000	1.650	Apr 2023	-		-		-		-	Continuing	Continuing	-
F-35 Integration	MIPR	Various : Various	0.000	0.899	Aug 2023	51.791	Nov 2023	44.112	Jan 2025	-		44.112	Continuing	Continuing	-
Mission Planning	MIPR	Various : Various	0.000	3.050	Apr 2023	-		1.263	Jan 2025	-		1.263	Continuing	Continuing	-
SiAW Development	Various	Various : Various	0.000	131.522	Aug 2023	179.216	Aug 2024	182.367	Dec 2024	-		182.367	Continuing	Continuing	-
Subtotal			0.000	150.435		231.007		227.742		-		227.742	Continuing	Continuing	N/A

Remarks
Northrop Grumman Defense Systems (NGDS)

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Civ Pay - Direct Cite Authorization (DCA)	Allot	AFLCMC/FZA : Wright Pat, OH	0.000	6.740	Oct 2022	10.569	Oct 2023	10.863	Oct 2024	-		10.863	Continuing	Continuing	-
Subtotal			0.000	6.740		10.569		10.863		-		10.863	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Assets AARGM-ER	MIPR	NGDS : Northridge, CA	0.000	22.056	Apr 2023	-		-		-		-	Continuing	Continuing	-
Test Assets SiAW	Various	Various : Various	0.000	45.160	Mar 2023	26.723	Apr 2024	81.668	Apr 2025	-		81.668	Continuing	Continuing	-
Government Test/Target Support (includes flight test equipment, Targets/shapes builds, 96 TW	Various	Various : Various	0.000	8.522	Oct 2022	10.040	Oct 2023	24.221	Oct 2024	-		24.221	Continuing	Continuing	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force **Date:** March 2024

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FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
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

Warhead & ESAF Development	
Design Warhead & Electronic Safe and Arm Fuze	
UAI / ARH	
Design, Test and validate UAI / ARH message set	
F-35 Integration	
AARGM-ER and SiAW integration on F-35	
SiAW Development	
SiAW Development	
SiAW Phase 2 - Contract Award	
SiAW Phase 2 - Prototype Development	
Target & Test Assets, Test, & Support	
Flight test support, range modifications, & targets for AARGM-ER and SiAW	

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Warhead & ESAF Development				
Design Warhead & Electronic Safe and Arm Fuze	1	2023	4	2023
UAI / ARH				
Design, Test and validate UAI / ARH message set	1	2023	4	2023
F-35 Integration				
AARGM-ER and SiAW integration on F-35	1	2023	4	2029
SiAW Development				
SiAW Development	3	2023	4	2026
SiAW Phase 2 - Contract Award	4	2023	4	2023
SiAW Phase 2 - Prototype Development	4	2023	4	2026
Target & Test Assets, Test, & Support				
Flight test support, range modifications, & targets for AARGM-ER and SiAW	1	2023	4	2028