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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 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 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	-	14.542	162.840	160.438	0.000	160.438	165.052	218.552	151.249	364.537	Continuing	Continuing
653133: <i>Stand In Attack Weapon</i>	-	14.542	162.840	160.438	0.000	160.438	165.052	218.552	151.249	364.537	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Stand In Attack Weapon (SiAW) system will provide the capability to strike rapidly re-locatable targets that create the Anti-Access/Area Denial (A2/AD) environment. SiAW targets include Theater Ballistic Missile Launchers, Land Attack and Anti-Ship Cruise Missile launchers, GPS jammers, Anti-Satellite Systems, and Integrated Air Defense Systems. The path to the SiAW capability is through the Navy's Advanced Anti-Radiation Guided Missile-Extended Range (AARGM-ER) program with added Air Force capabilities including a new warhead/fuze and F-35 integration (including Universal Armament Interface [UAI] and Mission Planning). The Air Force plans to upgrade the AARGM-ER with advanced technologies to achieve full SiAW capability.

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 0605831F.

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	14.975	162.840	142.725	0.000	142.725
Current President's Budget	14.542	162.840	160.438	0.000	160.438
Total Adjustments	-0.433	0.000	17.713	0.000	17.713
• 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	-0.433	0.000			
• Other Adjustments	0.000	0.000	17.713	0.000	17.713

Change Summary Explanation

FY 2019 reduction of \$0.433M for SBIR

FY 2021 increase of \$17.713M for increased F-35 integration scope

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C. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p><i>FY 2020 Plans:</i> Complete missile clearance and environment checks on the F-35 and weapons integration design. Continue development of an JMPS unique planning component.</p> <p><i>FY 2021 Base Plans:</i> Continue F-35 weapons integration and launcher adapter design. Continue development of an JMPS unique planning component.</p> <p><i>FY 2021 OCO Plans:</i> N/A</p> <p><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Funding increased due to integration activities entering engineering/EMD effort with early developmental testing.</p>					
<p><i>Title:</i> Advanced Technology Risk Reduction</p> <p><i>Description:</i> Conduct risk reduction on emerging technologies for future SiAW tech insertion to maintain operational effectiveness in classified scenarios.</p> <p><i>FY 2020 Plans:</i> Continue risk reduction through technology maturation of critical components.</p> <p><i>FY 2021 Base Plans:</i> Continue risk reduction through technology maturation of critical components.</p> <p><i>FY 2021 OCO Plans:</i> N/A</p> <p><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Funding decreased due to reduction in technology maturation of critical components in preparation for entry to development.</p>					
	0.880	57.800	35.500	0.000	35.500
<p><i>Title:</i> Testing, Test Support, and Targets</p> <p><i>Description:</i> Provides associated governmental & contract support in support of developmental and operational testing to support F-35 integration. Includes required test assets & 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 as required ground/flight test support that are specific to the Air Force target set requirements.</p>					
	3.629	22.064	40.347	0.000	40.347

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTE 07 0205601N: <i>Harm Improvements</i>	99.240	119.649	49.605	-	49.605	34.825	42.249	48.225	-	0.000	393.793

Remarks

Other Program funds - US Navy AARGM-ER Program Office: HARM Improvements /Operations Systems Development US Navy appropriation RDT&E 1319

E. Acquisition Strategy

The Stand-in Attack Weapon (SiAW) program acquisition strategy is to leverage the Navy's Advanced Anti-Radiation Guided Missile-Extended Range (AARGM-ER) program with added Air Force capabilities including a new warhead/ESAF and F-35 integration (including Universal Armament Interface and Mission Planning). The Navy will be the lead for missile development and the Air Force will be the lead for F-35 integration. The SiAW program office will utilize the Navy's contracts and the F-35 joint program office contracts to accomplish integration of AARGM-ER on the F-35. The Air Force plans to upgrade AARGM-ER in the future with advanced technologies to achieve full SiAW capability.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0207328F / <i>Stand In Attack Weapon</i>	Project (Number/Name) 653133 / <i>Stand In Attack Weapon</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	Various	NGIS : Northridge, CA	-	6.900	Mar 2019	20.301	Dec 2019	16.328	Dec 2020	-		16.328	Continuing	Continuing	-
Universal Armament Interface (UAI) Anti-Radiation Homing message (ARH) & Mission Planning (MP)	Various	Various : Various	-	0.400	Mar 2019	15.336	Mar 2020	12.558	Mar 2021	-		12.558	Continuing	Continuing	-
F-35 Integration	Various	Various : Various	-	0.000		38.763	May 2020	47.078	May 2021	-		47.078	Continuing	Continuing	-
Advance Technology Risk Reduction	Various	Various : Various	-	0.880	Mar 2019	57.800	Jan 2020	35.500	Dec 2020	-		35.500	Continuing	Continuing	-
Subtotal			-	8.180		132.200		111.464		-		111.464	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Government Test Support (includes flight test equipment, targets, 96TW and range support and SEEK Eagle support)	Various	96 TW : Eglin AFB, FL	-	3.629		13.865		26.817		-		26.817	Continuing	Continuing	-
Test Asset & Test Support	MIPR	Northrup Grumman : Northridge, CA	-	-		8.199	Mar 2020	13.530	Mar 2021	-		13.530	Continuing	Continuing	-
Subtotal			-	3.629		22.064		40.347		-		40.347	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Program Management Administration (PMA)	TBD	Various : Eglin AFB, FL	-	2.733		8.576		8.627		-		8.627	Continuing	Continuing	-
Subtotal			-	2.733		8.576		8.627		-		8.627	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force **Date:** February 2020

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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

Warhead & ESAF Development	
Design Warhead & Electronic Safe and Arm Fuze	
UAI / ARH	
Design, test and validate UAI / ARH message set	
F-35A Integration	
Integration of SiAW into the internal weapon bay on F-35A	
Advanced Technology Risk Reduction	
Emerging technology maturation for future SiAW tech insertion.	
SiAW Targets and Test Support	
Flight test support, range modifications, & targets	
SiAW Program Management	
Oversight of SiAW development and F-35A integration	

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force **Date:** February 2020

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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Warhead & ESAF Development</i>				
Design Warhead & Electronic Safe and Arm Fuze	3	2019	4	2023
<i>UAI / ARH</i>				
Design, test and validate UAI / ARH message set	3	2019	4	2023
<i>F-35A Integration</i>				
Integration of SiAW into the internal weapon bay on F-35A	2	2020	4	2025
<i>Advanced Technology Risk Reduction</i>				
Emerging technology maturation for future SiAW tech insertion.	4	2019	4	2023
<i>SiAW Targets and Test Support</i>				
Flight test support, range modifications, & targets	4	2019	4	2025
<i>SiAW Program Management</i>				
Oversight of SiAW development and F-35A integration	2	2019	4	2023

Note

USAF will follow AARGM-ER's Acquisition Milestone Schedule. FY20 includes Critical Design Review (CDR).