Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0607142A *I Aviation Rocket System Product Improvement and Development*

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	10.899	3.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
EW9: *Aviation Rocket System Product Improvement and Dev*	-	10.899	3.014	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Aviation Rockets and Small Guided Munitions Product Improvement and Development line funds the development, integration and test of current and future munitions and launchers, and their interface to platforms. Additionally, it will fund a range of improvement initiatives to modernize the Hydra-70 2.75 inch rocket and launcher system. The current Hydra-70 2.75 inch rocket system requires performance improvements to comply with 1) US Code - Title 10, Chapter 141, Section 2389 "Ensuring Safety regarding Insensitive Munitions", 2) Department of Defense (DoD) Directive 5000.1, Chairman of the Joint Chiefs of Staff (CJCS) Instruction 3170.01C, Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD (AT&L)) Memorandum of January 26, 1999, "Exemption for Existing Inventory Items to Insensitive Munitions (IM) Requirements", 3) signed Initial Capability Document (ICD) for Army Aviation Weapons, Sub-Systems and Munitions (AAWSSM), 4) Air Launched Effects (ALE) Initial Capability Refinement Document (ICRD) dated 21 October 2019, and 5) existing/emerging Headquarters, Department of the Army (HQDA) G-3/5/7 and U.S. Army Training and Doctrine Command (TRADOC) aviation weapon requirements for guided and unguided rocket and munition systems. Improvements to existing rocket systems and munitions will include design, qualification and integration of precision guidance capability, increased lethality, improved target suppression, increased standoff range, reduced minimum engagement range, improved pre-launch constraints and munitions communications/programmability, increased stowed kills, increased product reliability, improved hardness against unplanned stimuli, reduced Warfighter workload, and reduced environmental impact for both manned and unmanned applications.

PE 0607142A has no FY 2025 funding request.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	11.312	3.014	0.000	-	0.000
Current President's Budget	10.899	3.014	0.000	-	0.000
Total Adjustments	-0.413	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.413	-			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607142A / *Aviation Rocket System Product Improvement and Development*	Project (Number/Name) EW9 / *Aviation Rocket System Product Improvement and Dev*	

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
EW9: *Aviation Rocket System Product Improvement and Dev*	-	10.899	3.014	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Aviation Rockets and Small Guided Munitions Product Improvement and Development line funds the development, integration and test of current and future munitions and launchers, and their interface to platforms. Additionally, it will fund a range of improvement initiatives to modernize the Hydra-70 2.75 inch rocket and launcher system. The current Hydra-70 2.75 inch rocket system requires performance improvements to comply with 1) US Code - Title 10, Chapter 141, Section 2389 "Ensuring Safety regarding Insensitive Munitions", 2) Department of Defense (DoD) Directive 5000.1, Chairman of the Joint Chiefs of Staff (CJCS) Instruction 3170.01C, Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD (AT&L)) Memorandum of January 26, 1999, "Exemption for Existing Inventory Items to Insensitive Munitions (IM) Requirements", 3) signed Initial Capability Document (ICD) for Army Aviation Weapons, Sub-Systems and Munitions (AAWSSM), 4) Air Launched Effects (ALE) Initial Capability Refinement Document (ICRD) dated 21 October 2019, and 5) existing/emerging Headquarters, Department of the Army (HQDA) G-3/5/7 and U.S. Army Training and Doctrine Command (TRADOC) aviation weapon requirements for guided and unguided rocket and munition systems. Improvements to existing rocket systems and munitions will include design, qualification and integration of precision guidance capability, increased lethality, improved target suppression, increased standoff range, reduced minimum engagement range, improved pre-launch constraints and munitions communications/programmability, increased stowed kills, increased product reliability, improved hardness against unplanned stimuli, reduced Warfighter workload, and reduced environmental impact for both manned and unmanned applications.

PE 0607142A has no FY 2025 funding request.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Guided Air-to-Ground Rocket (AGR) variants (Advanced Precision Kill Weapon System (APKWS))	1.044	1.064	-
Description: These funds will be used to optimize current and future air-to ground variant integration on the Apache and for activities required to obtain an Army Materiel Release. This effort will utilize in-house expertise and Other Government Agencies in order to complete activities, including design and build of all-up-round (AUR) containers and test assets, conduct of environmental qualification testing, performance of ground firings, update of aviation platform software, support of Apache weapon survey firings, technical support to platform integration and testing, and development and revision of training/maintenance materiel.			
FY 2024 Plans: Complete characterization of performance changes/improvements of single variant block upgrade (SVBU) guided rockets and qualification for use on Army Aviation platforms will be conducted.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0607142A / *Aviation Rocket System Product Improvement and Development*	**Project (Number/Name)** EW9 / *Aviation Rocket System Product Improvement and Dev*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
EW9 has no FY 2025 funding request.			
Title: Army Aviation Weapons	7.018	1.467	-
Description: These funds will be used for fielded Army Aviation modular weapon systems and their interface to fielded launchers and platforms. These efforts will utilize in-house subject matter expertise, Other Government Agencies, defense industry capabilities, and Other Transactional Agreements to complete activities, including technical assessment, risk reduction efforts, technology maturation, demonstration, engineering design, engineering/manufacturing development, test, integration and document preparation for Army Aviation manned and unmanned platforms. ***FY 2024 Plans:*** 1. Continue analysis, engineering design, and demonstration of warhead, fuze, propulsion, sensor, datalink and navigation technologies that will enable future munitions to meet requirements of the Army Aviation Weapons, Sub-Systems and Munitions Initial Capability Document and the Army Aviation Munition Strategy. 2. Continue modeling and simulation, studies, assessments, risk reduction effort and documentation to determine feasibility of the adaptation of future guided and unguided munition technologies. 3. Continue launcher concept development to prototype development, integration, and testing phase with future and enduring munitions. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** EW9 has no FY 2025 funding request.			
Title: Modular Effects Launcher (MEL)/Launcher Electronics Assembly (LEA)	2.837	0.483	-
Description: These funds will be used to upgrade and enhance launcher components to support current and future munitions outlined in the Army Aviation Weapons, Sub-Systems and Munitions Initial Capability Document, dated 17 July 2018, and the Air Launched Effects (ALE) Initial Capability Refinement Document (ICRD), dated 21 October 2019. This effort allows the Government to align technology-enabling solutions with the Army Aviation Weapons, Sub-Systems and Munitions Initial Capability Document, maturing technological developments of launcher component prototypes to mitigate launcher limitations. The launcher component efforts will define and provide the interfaces between aircraft and emerging munitions utilizing a nonproprietary, open systems architecture allowing easy compatibility when integrating onto aviation platforms. The inherent flexibility of an open architecture serves as a building block for future weapon systems. ***FY 2024 Plans:*** Integrate enduring munitions with the emerging launcher technology. ***FY 2024 to FY 2025 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0607142A / *Aviation Rocket System Product Improvement and Development*	**Project (Number/Name)** EW9 / *Aviation Rocket System Product Improvement and Dev*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
EW9 has no FY 2025 funding request.			
Accomplishments/Planned Programs Subtotals	10.899	3.014	-

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• E37300: *Rocket, Hydra 70, All Types*	171.697	87.293	34.302	-	34.302	111.746	92.568	92.568	93.316	Continuing	Continuing

Remarks

E37300 procures guided and unguided Hydra Rockets

D. Acquisition Strategy

The Acquisition Strategy utilizes in-house expertise, Other Government Agencies, defense industry capabilities, and when appropriate Other Transactional Agreements. The strategy allows the Government the ability to support urgent operational needs and unanticipated requirements, which require immediate and expert attention.

This strategy will allow the Government to maintain the relevance of the Hydra-70 all-up-round rocket, its variants, and Small Guided Munitions, and posture for emerging requirements and capabilities, while leveraging new authorities and progressing as many technologies as funding allows.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607142A / *Aviation Rocket System Product Improvement and Development*	Project (Number/Name) EW9 / *Aviation Rocket System Product Improvement and Dev*	

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
System Engineering/ Project Management	Various	Various : Performers	13.280	1.562	Nov 2022	0.464	Nov 2023	-		-		-	Continuing	Continuing	-
		Subtotal	13.280	1.562		0.464		-		-		-	Continuing	Continuing	N/A

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
Advanced Precision Kill Weapon System (APKWS)	MIPR	CCDC : Redstone Arsenal, AL	2.798	0.894	Apr 2023	0.708	Apr 2024	-		-		-	0.000	4.400	-
Army Aviation Weapons	MIPR	Various : Various Performers	12.784	5.002	Mar 2023	0.961	Mar 2024	-		-		-	Continuing	Continuing	-
Modular Effects Launcher (MEL)/Launcher Electronics Assembly (LEA)	MIPR	CCDC : Redstone Arsenal, AL	10.670	2.431	Mar 2023	0.404	Mar 2024	-		-		-	Continuing	Continuing	-
		Subtotal	26.252	8.327		2.073		-		-		-	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
Research Studies	MIPR	CCDC : Redstone Arsenal, AL	4.926	1.010	Apr 2023	0.477	Jan 2024	-		-		-	Continuing	Continuing	-
		Subtotal	4.926	1.010		0.477		-		-		-	Continuing	Continuing	N/A

	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
Project Cost Totals	44.458	10.899		3.014		-		-		-	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0607142A / *Aviation Rocket System Product Improvement and Development*	**Project (Number/Name)** EW9 / *Aviation Rocket System Product Improvement and Dev*

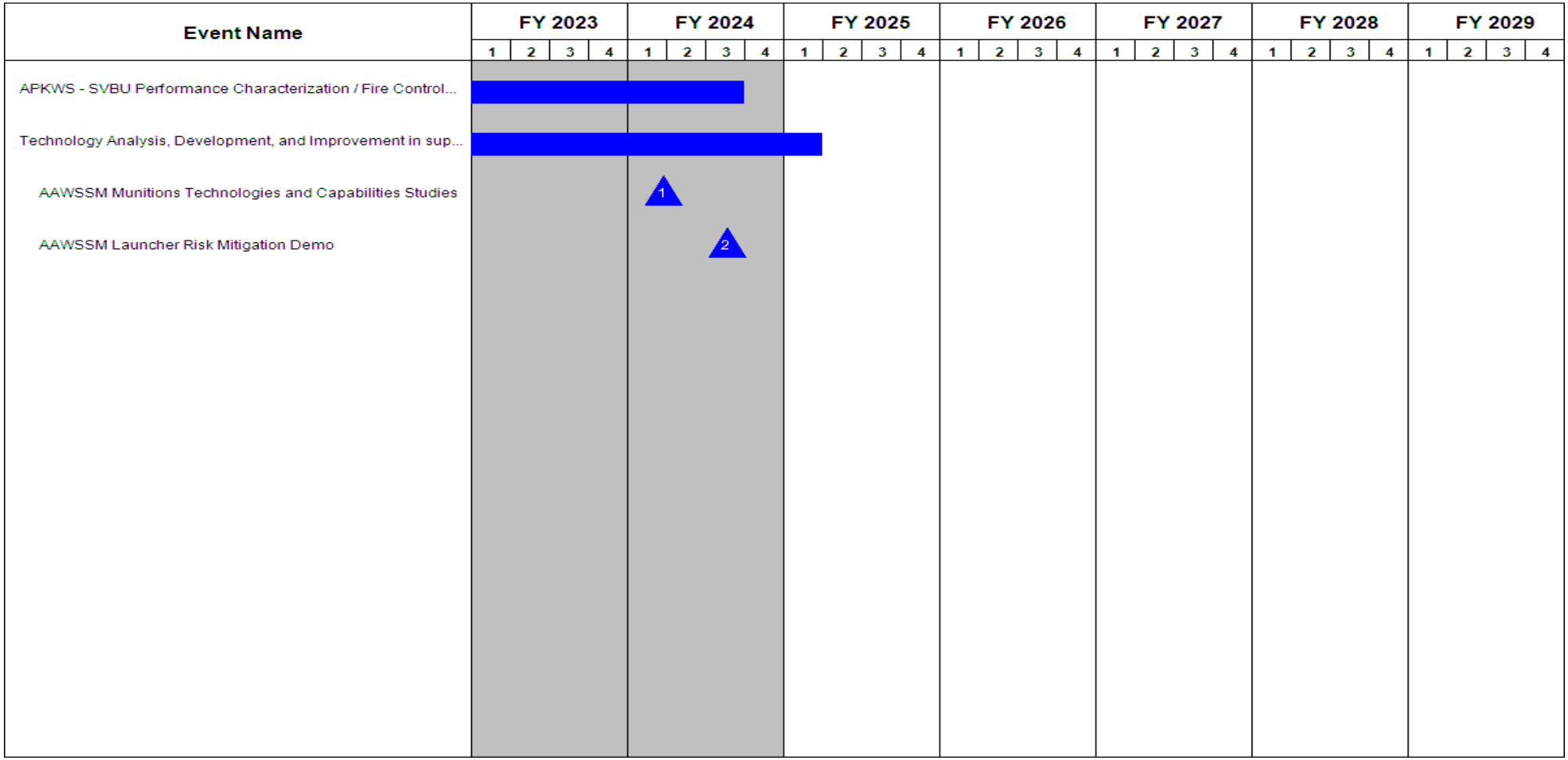

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0607142A / *Aviation Rocket System Product Improvement and Development*	**Project (Number/Name)** EW9 / *Aviation Rocket System Product Improvement and Dev*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
APKWS - AH-64E Fire Control Optimization	3	2021	2	2022
APKWS - SVBU Performance Characterization / Fire Control Optimization	3	2021	3	2024
Technology Analysis, Development, and Improvement in support of AAWSSM ICD	2	2019	1	2025
AAWSSM Munitions Technologies and Capabilities Studies	1	2024	1	2024
AAWSSM Launcher Risk Mitigation Demo	3	2024	3	2024

Note

APKWS: Advanced Precision Kill Weapon System
AAWSSM ICD: Army Aviation Weapons, Sub-Systems and Munitions Initial Capability Document
SVBU: Single Variant Block Upgrade