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

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0203801A / Missile/Air Defense Product Improvement Program
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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	2.996	4.520	1.511	0.000	1.511	1.513	0.000	0.000	0.000	0.000	10.540
038: Avenger PIP	-	2.996	4.520	1.511	-	1.511	1.513	-	-	-	0.000	10.540

A. Mission Description and Budget Item Justification

Avenger is a lightweight, ground-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The system protects against unmanned aircraft systems, cruise missiles, and fixed and rotary wing threats. Avenger provides day/night adverse weather operations, shoot on the move capability, rapid target engagement, and remote firing capability. It can be air dropped, lifted by helicopter and is air transportable. The system employs up to eight Stinger missiles to counter aerial threats and a .50 Caliber Machine Gun (M3P) for close-in ground and air threats. An Identification Friend or Foe (IFF) system aids in the identification of friendly aircraft in order to minimize the potential for fratricide. The Avenger fleet of 433 systems includes 169 systems that are equipped with a digital Slew-to-Cue (STC) capability to speed target detection and engagement.

FY 2025 funding of \$1.511 million provides continued obsolescence mitigation (Avenger Product Improvement).

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>
Previous President's Budget	3.109	4.520	1.508	-	1.508
Current President's Budget	2.996	4.520	1.511	-	1.511
Total Adjustments	-0.113	0.000	0.003	-	0.003
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.113	-			
• Adjustments to Budget Years	-	-	0.003	-	0.003

Change Summary Explanation

Increased funding due to revised economic assumptions.

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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) 038 / <i>Avenger PIP</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
038: <i>Avenger PIP</i>	-	2.996	4.520	1.511	-	1.511	1.513	-	-	-	0.000	10.540
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Avenger is a lightweight, ground-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle. The system protects against unmanned aircraft systems, cruise missiles, and fixed and rotary wing threats. Avenger provides day/night adverse weather operations, shoot on the move capability, rapid target engagement, and remote firing capability. It can be air dropped, lifted by helicopter and is air transportable. The system employs up to eight Stinger missiles to counter aerial threats and a .50 Caliber Machine Gun (M3P) for close-in ground and air threats. An Identification Friend or Foe (IFF) system aids in the identification of friendly aircraft in order to minimize the potential for fratricide. The Avenger fleet of 433 systems includes 169 systems that are equipped with a digital Slew-to-Cue (STC) capability to speed target detection and engagement.

The Avenger Modification - Service Life Extension Program (MOD-SLEP) consists of Project 038: Avenger Production Improvement Program (PIP) and Program Element CE8710: Avenger MODS. The ongoing MOD-SLEP addresses obsolescence of Avenger components to ensure Avenger maintains operational capability through Fiscal Year (FY) 2031. Key MOD-SLEP components are: the Targeting Console (TC), the M3P, the Avenger Fire Control Computer (AFCC), the Mode 5 IFF, the Vehicle Internal Communications (VIC-5), and the Assured Positioning Navigation and Timing (A-PNT) capability. The AFCC and TC are fielded to the STC Avengers. All other components are fielded to the entire Avenger fleet.

FY 2025 funding of \$1.511 million provides continued obsolescence mitigation (Avenger Product Improvement).

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

	FY 2023	FY 2024	FY 2025
Title: Avenger MOD-SLEP	-	1.449	1.511
Description: The Avenger MOD-SLEP consists of development activities for platform integration, software upgrades, and capability enhancements. Develops and executes test requirements and conducts limited contractor and government testing. Performs technical assessments, concept studies, cost reduction, risk reduction and development documentation.			
FY 2024 Plans: The Avenger MOD-SLEP consists of development activities for platform integration, software upgrades, and capability enhancements. Develops and executes test requirements and conducts limited contractor and government testing. Performs technical assessments, concept studies, cost reduction, risk reduction and development documentation.			
FY 2025 Plans:			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
FY 2025 funding continues obsolescence mitigation, which allows the purchase of repair parts that are no longer available. The funding also continues system testing requirements and system improvements to address evolving threats. FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 to FY 2025 funding increase represents minor increase due to economic assumptions.			
Title: A-PNT Description: This effort consists of development, integration, prototyping and testing of technologies that will provide Assured Positioning, Navigation and Timing (A-PNT) capability. The A-PNT capability, including the Anti-Jam Antenna and Defense Advanced GPS Receiver (DAGR) Distributed Device (D3), will provide M-Code capability to the Avenger system. FY 2024 Plans: Funding continues integration, prototyping and testing of the A-PNT capability, including the Anti-Jam Antenna and DAGR D3, which will provide M-Code capability. FY 2024 to FY 2025 Increase/Decrease Statement: Funding decrease represents completion of required A-PNT activities.	2.996	3.071	-
Accomplishments/Planned Programs Subtotals	2.996	4.520	1.511

C. 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>
• CE8710: AVENGER MODS	-	22.274	2.321	-	2.321	-	-	-	-	0.000	24.595

Remarks
CE8710 Avenger MODS procures the MOD-SLEP components for the Avenger system. This ensures that Avenger is viable and sustainable through FY 2031. This program is an integral part of the Army Air and Missile Defense Modernization strategy.

D. Acquisition Strategy
The Avenger MOD-SLEP addresses obsolescence of key components and ensures that Avenger is viable and sustainable through FY 2031.

The MOD-SLEP components are the TC, the AFCC, the Mode 5 IFF, the VIC-5, the M3P machine gun and A-PNT. The M3P machine gun will be fielded through attrition. The other MOD-SLEP components will be installed in the field.

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<p>Development and testing of hardware and software modifications necessary to fully integrate the A-PNT capability into the Avenger will be performed by a combination of Government and Original Equipment Manufacturer efforts, using the existing and new Engineering Service contracts. A-PNT modifications will be performed by Depot Maintenance teams.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army **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			
Avenger Modification Product Development	SS/ Various	Raytheon, The Boeing Company and others : Aberdeen Proving Grounds, MD and Huntsville, AL	10.367	2.697	Oct 2022	3.540	Oct 2023	1.511	Oct 2024	-		1.511	0.000	18.115	-
Subtotal			10.367	2.697		3.540		1.511		-		1.511	0.000	18.115	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			
Avenger Modification Test Support	Various	The Boeing Company, U.S. Army Combat Capabilities Development Command Aviation and Missiles Center and others : Huntsville, AL and Redstone Arsenal, AL	8.018	0.299	Oct 2022	0.980	Oct 2023	-		-		-	0.000	9.297	-
Subtotal			8.018	0.299		0.980		-		-		-	0.000	9.297	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		18.385	2.996	4.520	1.511	1.511	0.000	27.412	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
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Event Name	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
Materiel Release (MOD-SLEP)					 Materiel Release																							
A-PNT Integration																												
Continuing Avenger Product Improvement / Evolving Threats																												

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

Events	Start		End	
	Quarter	Year	Quarter	Year
Material Release (MOD-SLEP)	2	2024	2	2024
A-PNT Integration	1	2023	4	2024
Continuing Avenger Product Improvement / Evolving Threats	1	2020	4	2026

Note
 MOD-SLEP components are the TC, AFCC, IFF, VIC-5, M3P machine gun and A-PNT.
 TC: Targeting Console
 AFCC: Avenger Fire Control Computer
 IFF: Identification Friend or Foe
 MOD-SLEP: Modification - Service Life Extension Program
 VIC: Vehicle Internal Communications
 A-PNT: Assured Positioning, Navigation and Timing