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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605028A / <i>Armored Multi-Purpose Vehicle (AMPV)</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	34.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	34.262
EB5: <i>Armored Multi-Purpose Vehicle</i>	-	34.262	-	-	-	-	-	-	-	-	0.000	34.262

A. Mission Description and Budget Item Justification

This funding line is directly aligned to the Next Generation Combat Vehicle (NGCV) Army Modernization Priority. The Armored Multi-Purpose Vehicle (AMPV) is the materiel solution for replacement of the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV) within the Armored Brigade Combat Team (ABCT). It will mitigate current and future capability gaps in force protection, mobility, reliability, and interoperability across the Spectrum of Conflict. The AMPV will replace five mission roles currently performed by the M113 FoV by transferring the current M113 mission equipment packages to a new Military Vehicle Derivative platform. In total, the AMPV FoV will account for approximately 30% of the ABCT's tracked fleet and consists of the following five variants:

1. Mission Command Vehicle (MCcmd): This platform enables effective mission command planning and execution for both the Tactical Operations Center and Tactical Command Vehicle versions of the MCcmd. It will host current Battle Command Systems, future replacements, and upgrades of hardware and software.
2. Medical Treatment (MT) Vehicle: This platform will provide a protected surgical environment, with adequate lighting and accessible medical equipment. It will provide a capability for immediate medical care for one patient by a medical crew of four.
3. Medical Evacuation (ME) Vehicle: This platform will conduct ambulance type activities and provide casualty evacuation for up to four litters or six ambulatory patients, with a crew of three medical attendants.
4. General Purpose (GP) Vehicle: This platform will operate throughout the battle space by conducting re-supply, maintenance, casualty evacuation, and other tasks within the formation.
5. Mortar Carrier (MC) Vehicle: This platform will provide immediate responsive fire support to conduct fast-paced offensive operations.

The AMPV program was initiated as an Acquisition Category (ACAT) ID program at Milestone B (MS B). The Defense Acquisition Executive signed the Acquisition Decision Memorandum (ADM) on 22 December 2014, authorizing entry into the Engineering and Development phase and approving contract award to BAE Systems Land & Armaments, L.P. The vehicle was developed to the Capability Development Document, which was approved 21 June 2013 and revised 24 October 2016. The DAE issued an ADM 26 September 2017 that approved revising the acquisition documentation tailoring plan, revising Milestone C entrance criteria, and increasing the Low Rate Initial Production (LRIP) quantity to 551 vehicles (to recognize the Army's desire for early fielding of AMPVs for the European Deterrence Initiative). AMPV was re-designated as an ACAT IC program on 1 November 2017, with the Army Acquisition Executive (AAE) and as the Milestone Decision Authority. The Army convened an Army Systems Acquisition Review Council (ASARC) for Milestone C on December 20, 2018, and the AAE signed the ADM on January 25, 2019. As a result of vehicle delivery delays, the AAE approved a revised Acquisition Program Baseline to adjust the program schedule on January 7, 2021.

The Fiscal Year (FY) 2022 planned program primarily consisted of finalizing efforts associated with Production Qualification Testing (PQT), Initial Operational Test & Evaluation (IOT&E), Live Fire Test and Evaluation (LFT&E) and corrective action implementation resulting from test results. Prime contractor support was required

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for testing and engineering to ensure adequate system support packages were available during the tests. Government test locations were used for the tests and government personnel were responsible for the overall management of the efforts.

B. Program Change Summary (\$ in Millions)	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	35.560	0.000	0.000	-	0.000
Current President's Budget	34.262	0.000	0.000	-	0.000
Total Adjustments	-1.298	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.298	-			
• SBIR/STTR Transfer	-	-			

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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
EB5: <i>Armored Multi-Purpose Vehicle</i>	-	34.262	-	-	-	-	-	-	-	-	0.000	34.262
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Armored Multi-Purpose Vehicle (AMPV) is the materiel solution for replacement of the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV) within the Armored Brigade Combat Team (ABCT). It will mitigate current and future capability gaps in force protection, mobility, reliability, and interoperability across the Spectrum of Conflict. The AMPV will replace five mission roles currently performed by the M113 FoV by transferring the current M113 mission equipment packages to a new Military Vehicle Derivative platform. In total, the AMPV FoV will account for approximately 30% of the ABCT's tracked fleet and consists of the following five variants:

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The AMPV program was initiated as an Acquisition Category (ACAT) ID program at Milestone B (MS B). The Defense Acquisition Executive signed the Acquisition Decision Memorandum (ADM) on 22 December 2014, authorizing entry into the Engineering and Development phase and approving contract award to BAE Systems Land & Armaments, L.P. The vehicle was developed to the Capability Development Document, which was approved 21 June 2013 and revised 24 October 2016. The DAE issued an ADM 26 September 2017 that approved revising the acquisition documentation tailoring plan, revising Milestone C entrance criteria, and increasing the Low Rate Initial Production (LRIP) quantity to 551 vehicles (to recognize the Army's desire for early fielding of AMPVs for the European Deterrence Initiative). AMPV was re-designated as an ACAT IC program on 1 November 2017, with the Army Acquisition Executive (AAE) and as the Milestone Decision Authority. The Army convened an Army Systems Acquisition Review Council (ASARC) for Milestone C on December 20, 2018, and the AAE signed the ADM on January 25, 2019. As a result of vehicle delivery delays, the AAE approved a revised Acquisition Program Baseline to adjust the program schedule on January 7, 2021.

The Fiscal Year (FY) 2022 planned program primarily consisted of finalizing efforts associated with Production Qualification Testing (PQT), Initial Operational Test & Evaluation (IOT&E), Live Fire Test and Evaluation (LFT&E) and corrective action implementation resulting from test results. Prime contractor support was required for testing and engineering to ensure adequate system support packages were available during the tests. Government test locations were used for the tests and

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government personnel were responsible for the overall management of the efforts. This program supports the Next Generation Combat Vehicle (NGCV) Cross Functional Team (CFT).

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

	FY 2022	FY 2023	FY 2024
<p>Title: Armored Multi-Purpose Vehicle (AMPV) Product Development</p> <p>Description: AMPV Product Development costs included all efforts provided under the AMPV Engineering and Manufacturing Development (EMD) prime contract along with Government Furnished Material (GFM). Significant examples of prime contract effort included: development engineering, system engineering/program management, prototype hardware procurement, prototype system level fabrication and integration, software development, support to the government test program, and oversight of subcontractors/suppliers. Also included are all efforts performed by subcontractors / suppliers who are under contract to the AMPV EMD prime contractor. This element also included the recurring manufacturing cost to procure the vehicles that will support Full-Up System Level (FUSL) live fire testing.</p>	22.439	-	-
<p>Title: AMPV Government Program Management Costs</p> <p>Description: AMPV Government Program Management costs included efforts to provide Government oversight of the AMPV program. This included Systems Engineering and Program Management. Government and support Contractor salaries are included, as well as travel and other support costs that are required to effectively manage the program. Costs in this category do not include Government Furnished Material or efforts that are specific and unique to end item testing that is performed at Government test locations.</p>	3.196	-	-
<p>Title: Government Test Costs</p> <p>Description: Government Test costs were for efforts required to perform and validate system-related tests. This element included costs of the detailed planning, conduct, support, data reduction, and reports from such testing. Also included were costs necessary to acquire data during the conduct of the Government tests. The actual test articles (i.e., functionally configured systems) were excluded from this element. Also excluded are prime contractor costs incurred in support of the Government system level test.</p>	8.627	-	-
Accomplishments/Planned Programs Subtotals	34.262	-	-

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• G80819: Armored Multi Purpose Vehicle (AMPV)	950.366	380.677	554.777	-	554.777	561.462	631.904	513.920	613.453	14,094.908	18,301.467

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• G99911: PRODUCTION BASE SUPPORT FOR SPECIAL CONTINGENCIES	27.500	-	0.000	-	0.000	-	-	-	-	0.000	27.500

Remarks

D. Acquisition Strategy

The AMPV program was initiated at Milestone B (MS B). The 22 December 2014 MS B Acquisition Decision Memorandum (ADM) approved contract award for the Engineering and Manufacturing Development phase plus three Low Rate Initial Production (LRIP) options to BAE Systems Land & Armaments, L.P. on a competitive basis. The Army Acquisition Executive (AAE) approved the Milestone C ADM on January 25, 2019, authorizing Low Rate Initial Production. All three LRIP options have since been exercised. As a result of vehicle delivery delays, the AAE approved a revised Acquisition Program Baseline to adjust the program schedule on January 7, 2021.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army **Date:** March 2023

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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Contractor Development Engineering	C/CPIF	BAE : Sterling Heights, MI	262.500	13.084	Dec 2021	-		-		-		-	0.000	275.584	-
Prototype Material Contractor	C/CPIF	BAE : Sterling Heights, MI	119.298	-		-		-		-		-	0.000	119.298	-
Prototype Material Government Furnished	Various	Various : .	27.673	-		-		-		-		-	0.000	27.673	-
Contractor System Engineering, Data, Test and Program Management	C/CPIF	BAE : Sterling Heights, MI	163.805	4.381	Dec 2021	-		-		-		-	0.000	168.186	-
Procurement of Live Fire Test Assets	Option/ FPIF	BAE : York, PA	50.650	-		-		-		-		-	0.000	50.650	-
Contractor Support to Qualification, Live Fire, & Operational Testing	C/CPIF	BAE : Sterling Heights, MI	56.138	4.974	Dec 2021	-		-		-		-	0.000	61.112	-
Subtotal			680.064	22.439		-		-		-		-	0.000	702.503	N/A

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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 Support	MIPR	PMO : Warren, MI	121.303	3.196	Dec 2021	-		-		-		-	0.000	124.499	-
Subtotal			121.303	3.196		-		-		-		-	0.000	124.499	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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 System Testing	MIPR	Various : .	153.144	8.627	Dec 2021	-		-		-		-	0.000	161.771	-
Subtotal			153.144	8.627		-		-		-		-	0.000	161.771	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army **Date:** March 2023

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Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			

Remarks
 Testing locations are as follows. Aberdeen Test Center (ATC) = Maryland, Yuma Test Center (YTC) = Arizona, White Sands Missile Range (WSMR) = New Mexico, Electronic Proving Ground (EPG) = Arizona, Cold Regions Test Center (CRTC) = Alaska, Tropic Regions Test Center (TRTC) = Suriname, South America, Dugway Proving Grounds (DPG) = Utah

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	954.511	34.262	-	-	-	-	0.000	988.773	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
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Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	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
EMD Contract																												
Production Qualification Testing																												
Live Fire Test																												
Initial Operational Test & Evaluation																												
Full Rate Production Decision																												
First Unit Equipped																												
Initial Operational Capability																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone B Decision	1	2015	1	2015
EMD Contract	1	2015	4	2022
Preliminary Design Review	3	2015	3	2015
Critical Design Review	3	2016	3	2016
Production Prove Out Test	4	2017	4	2018
Limited User Test	4	2018	1	2019
Milestone C	2	2019	2	2019
Low Rate Initial Production 1	2	2019	2	2019
Production Qualification Testing	1	2021	3	2022
Live Fire Test	2	2021	2	2022
Initial Operational Test & Evaluation	2	2022	3	2022
Full Rate Production Decision	1	2023	1	2023
First Unit Equipped	2	2023	2	2023
Initial Operational Capability	2	2023	2	2023