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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604852A / <i>Suite of Survivability Enhancement Systems - EMD</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	62.012	96.132	109.702	-	109.702	99.525	81.274	81.301	82.092	0.000	612.038
FE8: <i>Vehicle Protection Suite</i>	-	62.012	96.132	109.702	-	109.702	99.525	81.274	81.301	82.092	0.000	612.038

A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Modernization Priorities in support of the Vehicle Protection Suite (VPS) program.

Current ground combat vehicle platforms and tactical wheeled vehicles within Army Brigade Combat Teams (BCTs) lack the ability to effectively detect, track, divert, disrupt, neutralize, or destroy incoming direct or indirect fired threat munitions. Current solutions to defeat these threats, Explosive Reactive Armor (ERA) and Slat armor, do not provide preemptive or active protection and impose secondary blast hazards to crew, dismounted soldiers, and adjacent vehicles and equipment. The Suite of Vehicle Protection Systems - EMD PE 0604852A will develop and mature solutions to increase the protection of the Army's ground systems from both current and next generation direct or indirect fired threat munitions.

The Active Protection System will install and characterize Non-Developmental Item (NDI) Active Protection Systems on Abrams, Bradley, and Stryker demonstrator vehicles. The Active Protection System effort will assess the maturity, performance, and integration risk of NDI Active Protection Systems, develop and refine Abrams, Bradley, and Stryker Active Protection System installation kit designs, and build prototypes necessary to conduct performance and safety testing to obtain an Active Protection System Urgent Materiel Release (UMR). Active Protection System effort will execute installation design refinement and required testing to meet urgent fielding of NDI APS on Abrams, Bradley and Stryker pending Army leadership approval. The Active Protection System NDI effort served to inform the Vehicle Protection Suite Trade Study.

The Vehicle Protection Suite (VPS) Project (FE8) will design, mature, and evaluate combinations of active, reactive, and passive solutions and leverage both Horizontal Technology Integration (HTI) principles and the Army's Vehicle Base Kit (VBK) to develop tailored vehicle Survivability Sets that will mitigate existing protection gaps, allow for future technology insertion to meet evolving threats, and minimize the impact to the current capabilities hosted on Army ground system platforms.

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B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	62.012	106.354	0.000	-	0.000
Current President's Budget	62.012	96.132	109.702	-	109.702
Total Adjustments	0.000	-10.222	109.702	-	109.702
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-26.222			
• Congressional Rescissions	-	-			
• Congressional Adds	-	16.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	109.702	-	109.702

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: FE8: *Vehicle Protection Suite*

Congressional Add: *Bradley Family of Vehicles (BFV) Active Protection System*

	FY 2021	FY 2022
	16.000	16.000
Congressional Add Subtotals for Project: FE8	16.000	16.000
Congressional Add Totals for all Projects	16.000	16.000

Change Summary Explanation

FY 2023 funding decrease reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604852A / Suite of Survivability Enhancement Systems - EMD				Project (Number/Name) FE8 / Vehicle Protection Suite			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
FE8: <i>Vehicle Protection Suite</i>	-	62.012	96.132	109.702	-	109.702	99.525	81.274	81.301	82.092	0.000	612.038
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Current ground combat vehicle platforms and tactical wheeled vehicles within Army Brigade Combat Teams (BCTs) lack the ability to effectively detect, track, divert, disrupt, neutralize, or destroy incoming direct or indirect fired threat munitions. Current solutions to defeat these threats, Explosive Reactive Armor (ERA) and Slat armor, do not provide preemptive or active protection and impose secondary blast hazards to crew, dismounted soldiers, and adjacent vehicles and equipment.

Vehicle Protection Suite (VPS) will design, mature, integrate, evaluate, and field combinations of active, reactive, and passive solutions and leverage both Horizontal Technology Integration (HTI) principles and the Army's Vehicle Protection System Base Kit (VBK) to develop configurable vehicle Survivability Sets that will mitigate existing protection gaps, allow for future technology insertion to meet evolving threats, and minimize the impact to the current capabilities hosted on Army ground combat and tactical vehicle platforms.

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

	FY 2021	FY 2022	FY 2023
Title: Vehicle Protection System Base Kit Integration of Non-Developmental Items (NDI) and Developmental Technologies	33.008	41.251	58.800
Description: VBK with Laser Warning Receiver (LWR) effort to incorporate on to the ground combat vehicle platforms the LWR through the Vehicle Protection System (VPS) Base Kit based on the Modular Active Framework (MAF). The maturation and integration effort will include qualification testing, integration design development, prototype build, and platform testing and logistics products.			
FY 2022 Plans: Continue VBK with LWR integration design efforts, to include integration design development, platform prototype build, and logistics products development for the Bradley and AMPV, and begin integration efforts on the Abrams and Stryker platforms. Start the VPS base kit product enhancements maturation efforts.			
FY 2023 Plans: Complete VBK with LWR integration on the Bradley and Abrams platforms and continue integration design efforts, to include integration design development, platform prototype build, and logistics products development for the Stryker and AMPV. Begin ATEC Developmental and Operational Testing on the Bradley and Abrams.			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding Increase to complete integration and testing efforts onto Stryker and AMPV vehicles.			
Title: Survivability Improvements	7.098	27.075	41.318

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604852A / Suite of Survivability Enhancement Systems - EMD	Project (Number/Name) FE8 / Vehicle Protection Suite		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Description: Funding for the continued maturation of Science and Technology (S&T) funded protection technologies, continued maturation, design development of the platform integration, test, logistic product development, and fielding of active, reactive, and passive survivability improvements onto ground combat vehicle platforms.</p> <p>FY 2022 Plans: Will continue qualification testing and logistic product development of passive and reactive armor tiles on ground combat vehicle platforms. Continue Signature Management vehicle integration; top attack, and vehicle Camouflage, Concealment, Deception, and Obscuration (CCDO) engineering development, testing, and transportation onto ground combat vehicles. Continuation of Tranche II technology integration and testing onto ground combat platforms identified via the VPS trade study or as they emerge from industry or government S&T efforts. Procure threats to support the continued maturation and testing of VPS technologies. Initiation of the Soft Kill acquisition program for system development, platform integration planning and OT&E on ground combat platforms. Continued engineering studies, improvement assessments, testing, and characterization/demonstrations of Active Protection systems (hard kill, soft kill, and threat detection), top attack protection, radar system upgrades, CCDO, and other emerging vehicle protection technologies for integration onto ground combat platforms. Maturation efforts continue for feasibility of passive and reactive armor solutions for PEO GCS combat platforms. Planned activities include engineering development, testing, platform integration and transportation onto ground combat vehicles.</p> <p>FY 2023 Plans: Start the VPS base kit product enhancements maturation efforts. Continue passive and reactive armor tile engineering development, testing, and logistic product development on ground combat platforms. Continue Soft Kill acquisition program for system development, platform integration planning and OT&E on ground combat platforms. Continued engineering studies, improvement assessments, testing, and characterization/demonstrations of Active Protection systems and other emerging technologies. Continue execution of Bradley expedited active protection system and support system-level test and UMR activities.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Funding increase due to increased vehicle level testing and integration of PRAT and Soft Kill system development.</p>				
<p>Title: Vehicle Protection Suite Government Engineering and Program Management</p> <p>Description: Government program management support and program oversight.</p> <p>FY 2022 Plans:</p>		5.906	5.931	9.584

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604852A / Suite of Survivability Enhancement Systems - EMD	Project (Number/Name) FE8 / Vehicle Protection Suite		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Will continue government program management support to provide VPS program planning, to include the oversight of: MAC Characterization and development of MAC compliant, active, reactive and passive VPS survivability set protection solutions, Active Protection System development, CCDO program development and continuation of Survivability Improvement projects.</p> <p>FY 2023 Plans: Will continue government program management support to include the oversight of: MAC Characterization and development of MAC-compliant active, reactive and passive VPS survivability set protection solutions, Active Protection System capability development, CCDO program development and continuation of Survivability Improvement projects.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Funding increase due to the increase in program requirements, entering new phases of the programs, and program maturation.</p>				
<p>Title: VPS Trade Study</p> <p>Description: VPS will execute a trade study/feasibility assessment to identify capabilities for active, reactive and passive protection solutions, to pursue in the next phase of the program (Tranche III). A Trade Study/feasibility assessment will provide the data deemed sufficient for the identification of capabilities to pursue in Tranche III. This Trade Study/feasibility assessment will build off previous studies to identify the benefit of adding capabilities to current set. The trade study/feasibility assessment will also look at emerging threats to identify capabilities used to protect against those threats.</p> <p>FY 2022 Plans: VPS will identify preemptive, active, reactive, passive (or a combination thereof) vehicle defense capabilities that are mature. The trade study/feasibility assessment will look at capabilities that are able to detect, track, divert, disrupt, neutralize, and/or destroy incoming threats, non-lethal/lethal unmanned aircraft systems (UAS), air to ground missiles, Improvised Explosive Device (IEDs)/mines, as well as prevent, mitigate and recover from Electronic Warfare (EW) and Cyber threats. These capabilities will be analyzed via a Trade Study/feasibility assessment and/or characterization/demonstration to understand the benefit the capability or combination of capabilities provide. This analysis will identify capabilities to pursue in future tranches. Continued limited characterizations of APS solutions are planned to better understand their functionality, generate performance data, and determine suitability to be integrated onto a Stryker platform as well as other ground combat platforms.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Funding decrease is due to nearing completion of efforts.</p>		-	2.950	-
<p>Title: SBIR/STTR Transfer</p> <p>Description: Funding transferred in accordance with Title 15 USC 638</p> <p>FY 2022 Plans:</p>		-	2.925	-

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Funding transferred in accordance with Title 15 USC 638			
FY 2022 to FY 2023 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC 638			
Accomplishments/Planned Programs Subtotals	46.012	80.132	109.702

	FY 2021	FY 2022
Congressional Add: Bradley Family of Vehicles (BFV) Active Protection System	16.000	16.000
FY 2021 Accomplishments: Conducting government testing of the Iron Fist-Light Decoupled (IFLD) phase 2 system on a Bradley vehicle in support of the urgent material release. Testing will begin in 3Q21 and complete 4Q22. Contractor test support will be required.		
FY 2022 Plans: Funding will continue Bradley Family of Vehicles (BFV) Active Protection System Iron Fist-Light Decoupled (IFLD) efforts to include: final logistics product development, verification and validation, MWO development and validation, ECP and Level III TDP development, and Vehicle Software updates.		
Congressional Adds Subtotals	16.000	16.000

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

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• GM1911: VPS MODULAR ACTIVE PROTECTION SYSTEMS W/LASER	-	68.379	0.000	-	0.000	-	-	-	-	0.000	68.379
• GM1912: VPS SIGNATURE MANAGEMENT	-	6.907	0.000	-	0.000	-	-	-	-	0.000	6.907
• E97911: COMBAT VEHICLE RAT	-	17.755	0.000	-	0.000	-	-	-	-	0.000	17.755

Remarks
On 21 SEPT 2016 - Directed Requirement for Reactive Armor Tiles and Installation Kits received and on 17 NOV 2017 Army Requirements Oversight Council (AROC) approved VPS ICD as the requirements to move forward with production of reactive armor tiles for the Armored Multi-Purpose Vehicle (AMPV) in Fiscal Year (FY) 2022, \$17.755 million APPN: 2034A; BA 1; Line Item Number: 9847E97900; Title: Reactive Armor Tiles.

NOV 2020 Army Requirements Oversight Council (AROC) approved VPS Capability Development Document (CDD) and on 16 DEC 2020 AROCM 20-27 approved the CDD for protection improvements to include VPS Base Kit, Softkill, Hardkill, LWR, Signature Management and Obscuration as the requirements to procure VBK with

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

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
LWR for the Bradley A4 platform and procure Signature Management Paint for AMPV and Stryker In FY 2022, \$29.102 million APPN: 2033A: Procurement of W&TCV, Army; BA 1: Tracked Combat Vehicles; Line Item Number: 6652GM1900; Title: Vehicle Protection Systems (VPS).											

OCT 2021 Annual Governance Board held.

D. Acquisition Strategy

VPS Trade Studies/Feasibility Assessments will assess the cost, maturity, complexity, performance, and physical properties of enhanced survivability technologies to determine the optimal application of VPS capabilities onto the Army's ground combat platforms. In FY 2018, the VPS program initiated the initial VPS Trade Study/Feasibility Assessment to confirm survivability capabilities for focus in Tranche I and II, to include integration with Vehicle Protection System Base Kit (VBK). Focus of Tranche I was with Reactive Armor Tiles, laser threat detection with a common controller and signature management reduction. Support of Tranche efforts will be achieved through bailments, Cooperative Research and Development Agreements (CRADA), and Other Transactional Agreements (OTA) with industry and government partners. The VPS Tranche II solutions (soft and hard kill integration, threat detection, Camouflage, Concealment, Deception and Obscuration (CCDO), top protection, and other emerging protection technologies) based on the results of the Trade Study will have decision points and program initiations beginning in FY 2020. Along with the Tranche II activities starting in FY 2020, the VPS program will continue, maturation, qualification testing, platform integration, vehicle testing and fielding efforts (i.e. logistics and software development) with Tranche I programs. A Tranche III trade study/feasibility assessment will initiate in FY 2022 to define the next set of VPS technologies, based on evolving enemy threats, to focus on. These capabilities may include counter-unmanned aerial systems and the integration of artificial intelligence into vehicle survivability technologies.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604852A / Suite of Survivability Enhancement Systems - EMD	Project (Number/Name) FE8 / Vehicle Protection Suite
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Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Vehicle Protection Suite Program Management	MIPR	TACOM Warren, Michigan : Various	12.901	5.906	Jan 2021	5.931	Dec 2021	9.584	Oct 2022	-		9.584	24.549	58.871	-
SBIR/STTR Transfer	TBD	Various : Various	-	-		2.925	Apr 2022	-		-		-	0.000	2.925	-
Subtotal			12.901	5.906		8.856		9.584		-		9.584	24.549	61.796	N/A

Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Vehicle Protection System Base Kit	TBD	Various : TBD	39.716	29.608	Jun 2021	32.277	Jun 2022	58.800	Jun 2023	-		58.800	32.010	192.411	-
Survivability Improvements	MIPR	Various TACOM Warren : Warren, MI	10.956	2.072	Jan 2021	25.252	Jan 2022	37.709	Jan 2023	-		37.709	230.687	306.676	-
Radar Sensor Technology	TBD	Various TACOM Warren : Warren, MI	5.000	-		-		-		-		-	0.000	5.000	-
Bradley Family of Vehicles (BFV) Active Protection System	Various	Various : TBD	-	16.000	May 2022	16.000	May 2022	-		-		-	0.000	32.000	-
Subtotal			55.672	47.680		73.529		96.509		-		96.509	262.697	536.087	N/A

Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Vehicle Protection Suite Trade Study	MIPR	Various : TACOM Warren Michigan	3.103	-		2.950	Mar 2022	-		-		-	0.000	6.053	-
Subtotal			3.103	-		2.950		-		-		-	0.000	6.053	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604852A / Suite of Survivability Enhancement Systems - EMD	Project (Number/Name) FE8 / Vehicle Protection Suite
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Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Survivability Improvements	MIPR	Various TACOM Warren : Warren, MI	2.320	5.026	Jun 2021	1.823	Jun 2022	3.609	Jun 2023	-		3.609	1.823	14.601	-
Vehicle Protection System Base Kit	MIPR	Various TACOM Warren : Warren, MI	3.474	3.400		8.974	Oct 2022	-		-		-	76.663	92.511	-
Subtotal			5.794	8.426		10.797		3.609		-		3.609	78.486	107.112	N/A

Remarks
N/A

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	77.470	62.012	96.132	109.702	-	109.702	365.732	711.048	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604852A / Suite of Survivability Enhancement Systems - EMD	Project (Number/Name) FE8 / Vehicle Protection Suite

Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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
VPS NDI Capability Install/Characterization	[Redacted]				[Redacted]																							
VPS NDI Capability Install/Characterization	[Redacted]				[Redacted]																							
VBK - MAC and LWR (MAC) with (LWR) - Maturation and MAF Compliance	[Redacted]				[Redacted]																							
MAC and LWR Maturation and MAF Compliance	[Redacted]				[Redacted]																							
VBK - Software Development	[Redacted]				[Redacted]				[Redacted]																			
MAC and LWR Software Development	[Redacted]				[Redacted]				[Redacted]																			
VBK - Component Qualification Testing	[Redacted]				[Redacted]																							
MAC and LWR Component Qualification Testing	[Redacted]				[Redacted]																							
VBK - Integration Design (Abrams, Bradley, AMPV, Stryker)	[Redacted]				[Redacted]				[Redacted]																			
MAC and LWR Platform Integration Design	[Redacted]				[Redacted]				[Redacted]																			
VBK - Logistic Product Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]															
MAC and LWR Logistic Product Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]															
VBK - Integration Contract Awards	[Redacted]				[Redacted]				[Redacted]																			
VPS MAC Dev Contract Awards	[Redacted]				[Redacted]				[Redacted]																			
VBK - ATEC Testing	[Redacted]				[Redacted]				[Redacted]				[Redacted]															
MAC and LWR Platform Testing	[Redacted]				[Redacted]				[Redacted]				[Redacted]															
VBK - Base Kit Improvements Maturation	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
MAC and LWR - Base Kit Improvements Maturation	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
VBK - Procurement Contract Award	[Redacted]				[Redacted]				[Redacted]				[Redacted]															
MAC and LWR Procurement Contract Award	[Redacted]				[Redacted]				[Redacted]				[Redacted]															
Survivability Improvements Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
Survivability Improvements Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
Survivability Improvements - Armor Upgrade Qualification Testing	[Redacted]				[Redacted]				[Redacted]																			
Armor Upgrade Qualification Testing	[Redacted]				[Redacted]				[Redacted]																			
Survivability Improvements - Armor Upgrade Logistics Product Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]															
Armor Upgrade Logistics Product Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]															

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
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Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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
Survivability Improvements – Armor TDP Development																												
Survivability Improvements - CCDO Testing AMPV, MPF, OMFV																												
Survivability Improvements - CCDO Platform Integration MPF, OMFV																												
Survivability Improvements - CCDO Production Contracts																												
Survivability Improvements - CCDO Log Product Development and Provisioning																												
Survivability Improvements - Top Attack Environmental Testing																												
Survivability Improvements - Top Attack Platform Testing																												
Survivability Improvements - Top Attack Integration																												
Survivability Improvements - Top Attack Log Product Development and Provisioning																												
Survivability Improvements - Top Attack Production Contracts																												
Survivability Improvements - Tranche II Technology Maturation & Development																												
Survivability Improvements – Government Energetic Qualification																												
Survivability Improvements - Soft Kill Platform Integration Contract Award																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
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Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027								
	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					
Survivability Improvements - Soft Kill System Development Contract Award													▲ 5																				
Survivability Improvements - Soft Kill Platform Integration Contract																													▲ 7				
Survivability Improvements - Soft Kill System Development																																	
Survivability Improvements - Soft Kill Platform Integration and Test Support																																	
Radar Sensor Technology - CONOPS and Requirements Development																																	
Radar Sensor Technology - SRR	▲ 1 SRR																																
Radar Sensor Technology - Integration and Testing																																	
Radar Sensor Technology - Final Design Review/Transition																																	
Vehicle Protection Suite Trade Study																																	
Bradley Iron Fist Light Decoupled (IFLD) Phase 2 Testing																																	

Note
n/a

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
VPS NDI Capability Install/Characterization	2	2018	3	2021
VBK - MAC and LWR (MAC) with (LWR) - Maturation and MAF Compliance	4	2019	4	2021
VBK - Software Development	4	2019	4	2023
VBK - Component Qualification Testing	1	2020	2	2022
VBK - Integration Design (Abrams, Bradley, AMPV, Stryker)	1	2021	4	2024
VBK - Logistic Product Development	4	2021	1	2026
VBK - Integration Contract Awards	3	2021	2	2023
VBK - ATEC Testing	3	2023	3	2025
VBK - Base Kit Improvements Maturation	2	2022	4	2027
VBK - Procurement Contract Award	2	2023	2	2023
Survivability Improvements Development	1	2020	4	2025
Survivability Improvements - Armor Upgrade Qualification Testing	1	2020	4	2022
Survivability Improvements - Armor Upgrade Logistics Product Development	4	2021	1	2023
Survivability Improvements ? Armor TDP Development	3	2022	4	2023
Survivability Improvements - CCDO Testing AMPV, MPF, OMFV	2	2021	4	2026
Survivability Improvements - CCDO Platform Integration MPF, OMFV	2	2024	4	2025
Survivability Improvements - CCDO Production Contracts	3	2022	4	2026
Survivability Improvements - CCDO Log Product Development and Provisioning	4	2021	4	2022
Survivability Improvements - Top Attack Environmental Testing	1	2021	3	2021
Survivability Improvements - Top Attack Platform Testing	3	2021	2	2022
Survivability Improvements - Top Attack Integration	2	2022	2	2022
Survivability Improvements - Top Attack Log Product Development and Provisioning	3	2022	4	2022

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604852A / Suite of Survivability Enhancement Systems - EMD	Project (Number/Name) FE8 / Vehicle Protection Suite
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Events	Start		End	
	Quarter	Year	Quarter	Year
Survivability Improvements - Top Attack Production Contracts	2	2024	2	2024
Survivability Improvements - Tranche II Technology Maturation & Development	3	2020	4	2027
Survivability Improvements ? Government Energetic Qualification Testing	1	2021	4	2022
Survivability Improvements - Soft Kill Platform Integration Contract Award	1	2026	1	2026
Survivability Improvements - Soft Kill System Development Contract Award	2	2024	2	2024
Survivability Improvements - Soft Kill Platform Integration Contract	1	2027	1	2027
Survivability Improvements - Soft Kill System Development	2	2024	4	2026
Survivability Improvements - Soft Kill Platform Integration and Test Support	1	2027	4	2027
Radar Sensor Technology - CONOPS and Requirements Development	4	2020	2	2021
Radar Sensor Technology - SRR	2	2021	2	2021
Radar Sensor Technology - Integration and Testing	2	2021	1	2022
Radar Sensor Technology - Final Design Review/Transition	2	2022	2	2022
Vehicle Protection Suite Trade Study	1	2022	2	2023
Bradley Iron Fist Light Decoupled (IFLD) Phase 2 Testing	4	2021	4	2022

Note

n/a