

UNCLASSIFIED

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 0604852A / <i>Suite of Survivability Enhancement Systems - EMD</i>
--	---

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	-	93.207	100.384	79.250	-	79.250	79.688	79.784	80.635	81.535	0.000	594.483
FE8: <i>Vehicle Protection Suite</i>	-	93.207	100.384	79.250	-	79.250	79.688	79.784	80.635	81.535	0.000	594.483

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 will develop mature and integrate solutions onto multiple ground combat vehicles increase the protection of the Army's ground systems from both current and next generation direct or indirect fired threat munitions.

The Vehicle Protection Suite (VPS) Project (FE8) 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 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. Additionally, the VPS project will install and characterize Non-Developmental Item (NDI) Active Protection Systems on 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 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 Bradley and Stryker pending Army leadership approval.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	96.132	109.702	99.525	-	99.525
Current President's Budget	93.207	100.384	79.250	-	79.250
Total Adjustments	-2.925	-9.318	-20.275	-	-20.275
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-9.318	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-2.925	-	-	-	-
• SBIR/STTR Transfer	-	-	-	-	-
• Adjustments to Budget Years	-	-	-20.275	-	-20.275

UNCLASSIFIED

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

Appropriation/Budget Activity
 2040: *Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)*

R-1 Program Element (Number/Name)
 PE 0604852A / *Suite of Survivability Enhancement Systems - EMD*

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 2022	FY 2023
	16.000	-
Congressional Add Subtotals for Project: FE8	16.000	-
Congressional Add Totals for all Projects	16.000	-

Change Summary Explanation

Decreased funding due to higher Army priorities..

UNCLASSIFIED

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

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 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
FE8: <i>Vehicle Protection Suite</i>	-	93.207	100.384	79.250	-	79.250	79.688	79.784	80.635	81.535	0.000	594.483
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 2022	FY 2023	FY 2024
<p>Title: Vehicle Protection System Base Kit Integration of Non-Developmental Items (NDI) and Developmental Technologies</p> <p>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.</p> <p>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, Mobile Protected Firepower (MPF) and AMPV. Begin ATEC Developmental and Operational Testing on the Bradley and Abrams.</p> <p>FY 2024 Plans: On Bradley and Abrams, complete VBK with LWR vehicle level testing, logistic product development and complete ATEC developmental and operational testing (DT/OT). Continuing VBK with LWR integration design efforts on AMPV, Stryker and MPF, which includes integration design development, platform prototype build, and logistics products development, and begin ATEC Developmental and Operational Test planning.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>	41.251	55.136	46.475

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
Funding decrease is due to completing the maturation activities and focused on continuing VBK with LWR integration activities for AMPV, Stryker, and MPF platforms.				
<p>Title: Survivability Improvements</p> <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 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. Begin interim Soft Kill acquisition program to continue system maturation to support future integration activities 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 Urgent Material Release (UMR) activities.</p> <p>FY 2024 Plans: Continue passive and reactive armor tile engineering development, testing, and logistic product development on ground combat platforms. Continue interim Soft Kill acquisition program for system maturation to support future integration activities on ground combat platforms. Continued engineering studies, characterization / demonstrations, improvement assessments, B-kit development, platform integration, and testing of Active Protection Systems, Camouflage, Concealment, Deception and Obscuration (CCDO) (Signature Management (SIGMAN)) and other emerging technologies. Continue execution of Bradley expedited active protection system to include system-level testing, UMR activities, planning to support future Conditional Material Release, and delta A Kit development to support MAF compliant system.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease is due to projected reduction in cost and delayed initiation of the Soft Kill Acquisition Program of Record until FY25.</p>		27.075	32.000	18.843
<p>Title: Vehicle Protection Suite Government Engineering and Program Management</p> <p>Description: Government program management support and program oversight.</p> <p>FY 2023 Plans: Funding is provided for program management support for continued VPS efforts/integration onto multiple ground combat vehicles to include VPS Base Kits (VBK) w/LWR, Survivability</p>		5.931	9.584	10.869

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
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 2022	FY 2023	FY 2024
<p>Improvements (RAT and Signature Management (CCDO)), trade studies, platform integration, vehicle testing, and logistic product development.</p> <p>FY 2024 Plans: Funding is provided for program management support for VPS programs to include VPS Base Kits (VBK) w/LWR, Survivability Improvements (RAT and Signature Management (CCDO)), trade studies, platform integration, vehicle testing, and logistic product development.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase is to support the new efforts in Survivability Improvements, VBK w/LWR, and trade study analysis and feasibility assessment.</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 (Future Tranches). A Trade Study/feasibility assessment will provide the data deemed sufficient for the identification of capabilities to pursue in Future Tranches. 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 and evolution of those capabilities used to protect against those threats.</p> <p>FY 2024 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 to address platform capability gaps. This analysis will identify capabilities to pursue in future tranches.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase is due to conducting Trade Study/Feasibility assessments and/or characterization/demonstration to identify ground combat vehicle survivability capability gaps that will fall into future tranches.</p>		2.950	-	3.063
<p>Title: SBIR/STTR Transfer</p> <p>Description: Funding transferred in accordance with Title 15 USC 638</p>		-	3.664	-

UNCLASSIFIED

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

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 2022	FY 2023	FY 2024
FY 2023 Plans: Funding transferred in accordance with Title 15 USC 638.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC 638.			
Accomplishments/Planned Programs Subtotals	77.207	100.384	79.250

	FY 2022	FY 2023
Congressional Add: Bradley Family of Vehicles (BFV) Active Protection System	16.000	-
FY 2022 Accomplishments: 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	-

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>
• 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, SEPT 2021 CARD # 03005 was approved for VPS CDD and resides within the JCIDS repository.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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

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>
July 2022 Annual VPS Governance Board was held and approved by the co-chaired Maneuver Capabilities Development and Integration Directorate (MCDID) and Next Generation Combat Vehicle (NGCV) Cross Functional Team (CFT).											

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) now known as Signature Management (SIGMAN), top attack 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. A Tranche IV trade study/feasibility assessment will initiate in FY 2024 to define the next set of Unmanned Aircraft System (UAS) and cooperative protection and integration of artificial intelligence into vehicle survivability technologies.

UNCLASSIFIED

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

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
--	--	--

Management Services (\$ 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			
Vehicle Protection Suite Program Management	MIPR	TACOM Warren, Michigan : Various	18.807	5.931	Dec 2021	9.584	Oct 2022	10.869	Dec 2023	-		10.869	24.549	69.740	-
SBIR/STTR Transfer	TBD	Various : Various	-	-		3.664		-		-		-	0.000	3.664	-
Subtotal			18.807	5.931		13.248		10.869		-		10.869	24.549	73.404	N/A

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			
Vehicle Protection System Base Kit	Various	Various: TBD : TBD	69.324	32.277	Jun 2022	55.136	Jun 2023	32.262	Jun 2024	-		32.262	32.010	221.009	-
Survivability Improvements	Various	Various TACOM Warren : Warren, MI	13.028	25.252	Jan 2022	28.391	Jan 2023	16.913	Jan 2024	-		16.913	230.687	314.271	-
Bradley Family of Vehicles (BFV) Active Protection System	Various	Various : BAE Sterling Heights, MI	16.000	16.000	May 2022	-		-		-		-	0.000	32.000	-
Subtotal			98.352	73.529		83.527		49.175		-		49.175	262.697	567.280	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			
Vehicle Protection Suite Trade Study	MIPR	Various : TACOM Warren Michigan	3.103	2.950	Mar 2022	-		3.063	Mar 2024	-		3.063	0.000	9.116	-
Subtotal			3.103	2.950		-		3.063		-		3.063	0.000	9.116	N/A

UNCLASSIFIED

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

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
--	--	--

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			
Survivability Improvements	MIPR	Various Army Test and Evaluation Command (ATEC) : Various	7.346	1.823	Jun 2022	3.609	Jun 2023	1.930	Jun 2023	-		1.930	1.823	16.531	-
Vehicle Protection System Base Kit	MIPR	Various Army Test and Evaluation Command (ATEC) : Various	6.874	8.974	Oct 2022	-		14.213	Jun 2023	-		14.213	76.663	106.724	-
Subtotal			14.220	10.797		3.609		16.143		-		16.143	78.486	123.255	N/A

Remarks
N/A

	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	134.482	93.207	100.384	79.250	-	79.250	365.732	773.055	N/A

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
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 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
VBK - MAC and LWR (MAC) with (LWR) - Maturation and MAF...	[Redacted]				[Redacted]																							
	MAC and LWR Maturation and MAF Compliance																											
VBK - Software Development	[Redacted]				[Redacted]																							
	MAC and LWR Software Development																											
VBK - Component Qualification Testing	[Redacted]				[Redacted]																							
	MAC and LWR Component Qualification Testing																											
VBK - Integration Design (Abrams, Bradley, AMPV, Stryker...	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	MAC and LWR Platform Integration Design																											
VBK - Logistic Product Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	MAC and LWR Logistic Product Development																											
VBK - ATEC Testing (Bradley, Abrams, AMPV, Stryker, MPF)	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	MAC and LWR Platform Testing																											
VBK - Base Kit Improvements Maturation	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	MAC and LWR - Base Kit Improvements Maturation																											
VBK - Procurement Contract Award	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	MAC and LWR Procurement Contract Award																											
Survivability Improvements Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	Survivability Improvements Development																											
Survivability Improvements - Armor Upgrade Qualificatio...	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	Armor Upgrade Qualification Testing																											
Survivability Improvements - Armor Upgrade Logistics Pr...	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	Armor Upgrade Logistics Product Development																											
Survivability Improvements - Armor TDP Development	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	ARAT III																											
Survivability Improvements - SIGMAN (previously known as...	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]							
	CCDO Testing																											

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
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 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	
Survivability Improvements - SIGMAN (previously known as...)					▲ 2																								
					CCDO Production Contracts																								
Survivability Improvements - SIGMAN (previously known as...)																													
					CCDO Log Product Development and Provisioning																								
Survivability Improvements - Top Attack Protection Armor...																													
					Top Attack Protection Armor Environmental Testing																								
Survivability Improvements - Top Attack Protection Armor...																													
					Top Attack Protection Armor Platform Testing																								
Survivability Improvements - Top Attack Protection Armor...																													
					Top Attack Protection Armor Integration																								
Survivability Improvements - Top Attack Protection Armor...																													
					Top Attack Protection Armor Log Product Development and Provisioning																								
Survivability Improvements - Top Attack Protection Armor...									▲ 4																				
									Top Attack Protection Armor Production Ready																				
Survivability Improvements - Tranche Technology Maturati...																													
					Tranche II Technology Maturation & Development																								
Survivability Improvements - Government Energetic Quali...																													
					Gov Energetic																								
Survivability Improvements - Soft Kill System Developmen...													▲ 5																
													Survivability Improvements - Soft Kill System Development																
Survivability Improvements - Soft Kill B-Kit Maturation ...																													
													Survivability Improvements - Soft Kill System Development																
Survivability Improvements - Soft Kill Platform Integrat...																					▲ 7								
																					Survivability Improvements - Soft Kill Platform Integration Co								
Survivability Improvements - Soft Kill Platform Integration																													
																					Survivability Improvements - Soft Kill Platform								

UNCLASSIFIED

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

Schedule Details

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

UNCLASSIFIED

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

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
--	--	--

Events	Start		End	
	Quarter	Year	Quarter	Year
Survivability Improvements - Top Attack Protection Armor Production Ready	2	2024	2	2024
Survivability Improvements - Tranche Technology Maturation & Development	3	2020	4	2027
Survivability Improvements - Government Energetic Qualification Testing	1	2021	4	2022
Survivability Improvements - Soft Kill System Development EMD Contract Award	2	2025	2	2025
Survivability Improvements - Soft Kill B-Kit Maturation and Validation	2	2025	1	2027
Survivability Improvements - Soft Kill Platform Integration Contract Award	2	2027	2	2027
Survivability Improvements - Soft Kill Platform Integration	2	2027	4	2028
Survivability Improvements - Soft Kill System Vehicle Testing	2	2028	2	2029
Survivability Improvements - Soft Kill A and B Kit Log Product development	1	2027	1	2030
Survivability Improvements - Interim Soft Kill Maturation	2	2023	4	2024
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
Vehicle Protection Suite Trade Study - Tranche IV	2	2024	2	2025
Bradley Iron Fist Light Decoupled (IFLD) Phase 2 Testing	4	2021	4	2022
Bradley Iron Fist Light Decoupled (IFLD) LUT / Software Testing	2	2025	4	2025
Bradley Iron Fist Light Decoupled (IFLD) UMR	4	2025	4	2025

Note

n/a