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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Army **Date:** February 2020

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0605024A / Anti-Tamper Technology Support
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	7.159	8.491	8.682	-	8.682	8.977	9.073	7.242	7.242	Continuing	Continuing
FB1: <i>Anti-Tamper Technology Support</i>	-	7.159	8.491	8.682	-	8.682	8.977	9.073	7.242	7.242	Continuing	Continuing

A. Mission Description and Budget Item Justification

Anti-Tamper (AT) Technology Support. The Protective Technologies (PT) organization is the Army's Technical Center for the DoD AT program, which is focused on preventing exploitation reverse engineering (RE) of U.S. systems lost or captured on the battlefield or sold via Foreign Military Sales (FMS) or Direct Commercial Sales (DCS). In support of this mission, PT's classified efforts are focused on AT Validation and Verification (V&V) activities with Army programs, AT/RE Lab facilities and equipment and AT/RE Lab assessments.

B. Program Change Summary (\$ in Millions)

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>
Previous President's Budget	7.251	8.491	8.691	-	8.691
Current President's Budget	7.159	8.491	8.682	-	8.682
Total Adjustments	-0.092	0.000	-0.009	-	-0.009
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.092	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.009	-	-0.009

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

Project: FB1: *Anti-Tamper Technology Support*

Congressional Add: *Anti-Tamper (AT) Congressional Add*

Congressional Add Subtotals for Project: FB1

Congressional Add Totals for all Projects

	FY 2019	FY 2020
	3.000	-
Congressional Add Subtotals for Project: FB1	3.000	-
Congressional Add Totals for all Projects	3.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Army										Date: February 2020		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0605024A / <i>Anti-Tamper Technology Support</i>				Project (Number/Name) FB1 / <i>Anti-Tamper Technology Support</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
FB1: <i>Anti-Tamper Technology Support</i>	-	7.159	8.491	8.682	-	8.682	8.977	9.073	7.242	7.242	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Anti-Tamper (AT) Technology Support. The Protective Technologies (PT) organization is the Army's Technical Center for the DoD AT program, which is focused on preventing exploitation/reverse engineering (RE) of U.S. systems lost or captured on the battlefield or sold via Foreign Military Sales (FMS) or Direct Commercial Sales (DCS). In support of this mission, PT's classified efforts are focused on AT Validation and Verification (V&V) activities with Army programs, AT/RE Lab facilities and equipment and AT/RE Lab assessments

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

	FY 2019	FY 2020	FY 2021
Title: Anti-Tamper (AT) Technology Support	4.158	8.105	8.682
Description: AT is a DoD program that encompasses the systems engineering activities intended to prevent and/or delay exploitation of critical technologies in U.S. weapon systems. These activities involve the entire life-cycle of systems acquisition, including research, development, implementation, and testing of AT measures.			
FY 2020 Plans: Will continue to build and maintain the PT core team of subject matter experts (SMEs) available for this ongoing mission to support the development of Army programs and evaluating their AT architectures. In support of that primary mission, PT must and will continue to build and maintain state-of-the-art RE capabilities to facilitate technical assessments to evaluate the vulnerabilities of micro-electronic components used in the electronic designs of Army weapons systems with critical program information (CPI) that requires protection.			
FY 2021 Plans: Will continue to build and maintain the PT core team of SMEs available for this ongoing mission to support the development of Army programs and evaluating their AT architectures. In support of that primary mission, PT must and will continue to build and maintain state-of-the-art RE capabilities to facilitate technical assessments to evaluate the vulnerabilities of micro-electronic components used in the electronic designs of Army weapons systems with CPI that requires protection.			
FY 2020 to FY 2021 Increase/Decrease Statement: FY 2021 increase supports growing number of Army programs requiring AT support and technical oversight			
Title: FY 2018 NDAA SEC 825 MDAP Cost Overrun	0.001	-	-

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
Description: FY 2018 NDAA SEC 825 MDAP Cost Overrun			
Title: FY 2020 SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC 638	-	0.386	-
FY 2020 Plans: Funding transferred in accordance with Title 15 USC 638 FY 2020 to FY 2021 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC 638			
Accomplishments/Planned Programs Subtotals	4.159	8.491	8.682

	FY 2019	FY 2020
Congressional Add: Anti-Tamper (AT) Congressional Add	3.000	-
FY 2019 Accomplishments: Anti-Tamper (AT) Congressional Add		
Congressional Adds Subtotals	3.000	-

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

N/A

Remarks

N/A

D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army **Date:** February 2020

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0605024A / <i>Anti-Tamper Technology Support</i>	Project (Number/Name) FB1 / <i>Anti-Tamper Technology Support</i>
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Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
AT CA - Accelerate new Novel Tech Solutions	TBD	AMRDEC ; , Redstone Arsenal AL	-	3.000	Mar 2019	-		-		-		-	0.000	3.000	-
FY 2018 NDAA SEC 825 MDAP Cost Overrun	TBD	N/A : N/A	-	0.001		-		-		-		-	0.000	0.001	-
FY 2020 SBIR/STTR Transfer	TBD	Various : Various	-	-		0.386		-		-		-	0.000	0.386	-
Subtotal			-	3.001		0.386		-		-		-	0.000	3.387	N/A

Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
AT V&V Activities	Various	Redstone Arsenal & Prime Contract locations : Redstone Arsenal	-	1.944	Oct 2018	2.819	Oct 2019	3.245	Oct 2020	-		3.245	0.000	8.008	-
Subtotal			-	1.944		2.819		3.245		-		3.245	0.000	8.008	N/A

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
AT/RE Lab Facilities & Equipment	Various	Redstone Arsenal, AL : Redstone Arsenal, AL	-	1.352	Oct 2018	3.567	Oct 2019	3.477	Oct 2020	-		3.477	0.000	8.396	-
Subtotal			-	1.352		3.567		3.477		-		3.477	0.000	8.396	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Army		Date: February 2020
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Event Name	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025							
	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				
AT V&V Activities	[Redacted]																															
AT/RE Lab Facilities and Equipment	[Redacted]																															
AT/RE Laboratory Assessments	[Redacted]																															
AT Congressional Add - New Novel Tech Solutions	[Redacted]				[Redacted]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Army		Date: February 2020
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AT V&V Activities	1	2017	4	2025
AT/RE Lab Facilities and Equipment	1	2017	4	2025
AT/RE Laboratory Assessments	1	2017	4	2025
AT Congressional Add - New Novel Tech Solutions	2	2019	4	2019