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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army **Date:** March 2019

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605049A / <i>Missile Warning System Modernization (MWSM)</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	12.480	8.266	1.539	-	1.539	1.551	1.752	1.739	1.739	0.000	29.066
XT4: <i>Advanced Threat Detection System (ATDS)</i>	-	12.480	8.266	1.539	-	1.539	1.551	1.752	1.739	1.739	0.000	29.066

A. Mission Description and Budget Item Justification

ATDS will provide enhanced missile warning capabilities for current and future Army rotary-wing, small fixed wing, tilt-rotor platforms, and Special Operations rotary wing aircraft. Primary capability achieved through ATDS is the agility necessary to rapidly react to evolving threats.

B. Program Change Summary (\$ in Millions)

	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020 Base</u>	<u>FY 2020 OCO</u>	<u>FY 2020 Total</u>
Previous President's Budget	55.810	28.276	90.129	-	90.129
Current President's Budget	12.480	8.266	1.539	-	1.539
Total Adjustments	-43.330	-20.010	-88.590	-	-88.590
• Congressional General Reductions	-0.011	-0.010			
• Congressional Directed Reductions	-42.810	-20.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.509	-			
• Adjustments to Budget Years	-	-	-88.590	-	-88.590

Change Summary Explanation

FY 2018, FY 2019, and FY 2020 funding were decreased based on delayed Material Development Decision (MDD) which required an updated strategy. Army Acquisition Executive (AAE) was briefed 22 Oct 2018. Per policy, the estimated dollar value meets the criteria for an Acquisition Category (ACAT) II program. As such, the PEO issued an Acquisition Decision Memorandum (ADM) authorizing the PM to evaluate candidate technologies to protect aircraft from emerging MANPADS threats to inform an acquisition strategy before returning in 2nd Quarter FY 2020.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605049A / <i>Missile Warning System Modernization (MWSM)</i>				Project (Number/Name) XT4 / <i>Advanced Threat Detection System (ATDS)</i>			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
XT4: <i>Advanced Threat Detection System (ATDS)</i>	-	12.480	8.266	1.539	-	1.539	1.551	1.752	1.739	1.739	0.000	29.066
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

ATDS will provide enhanced missile warning capabilities for current and future Army rotary-wing, small fixed wing, tilt-rotor platforms, and Special Operations rotary wing aircraft. Primary capability achieved through ATDS is the agility necessary to rapidly react to evolving threats.

Justification:

FY 2020 Base Research Development Test and Evaluation (RDTE) dollars in the amount of \$1.539 million funds enhanced market research and system engineering program management, and engineering support for an advanced missile warning system. The program is evaluating candidate technologies capable of being developed and fielded to the US Army to protect aircraft from emerging Man Portable Air Defense Systems (MANPADS).

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

	FY 2018	FY 2019	FY 2020
Title: ATDS	12.480	7.321	1.539
Description: Develop, test, integrate, and field an advanced missile warning system.			
FY 2019 Plans: FY 2019 Base RDTE dollars in the amount of \$7.321 million will fund enhanced market research activities to assess existing and/or proposed technologies available for future development.			
FY 2020 Plans: FY 2020 Base RDTE dollars in the amount of \$1.539 million will fund enhanced market research activities to assess existing and/or proposed technologies available for future development.			
FY 2019 to FY 2020 Increase/Decrease Statement: Funding decrease was due to MDD delay.			
Title: FY 2019 SBIR / STTR Transfer	-	0.945	-
Description: FY 2019 SBIR / STTR Transfer			
FY 2019 Plans: FY 2019 SBIR / STTR Transfer			
FY 2019 to FY 2020 Increase/Decrease Statement:			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
FY 2019 SBIR / STTR Transfer			
Accomplishments/Planned Programs Subtotals	12.480	8.266	1.539

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

N/A

Remarks

D. Acquisition Strategy

ATDS is pre-MDD. Army Acquisition Executive (AAE) was briefed 22 Oct 2018. Per policy, the estimated dollar value meets the criteria for an ACAT II program. As such, the PEO issued an Acquisition Decision Memorandum (ADM) authorizing the PM to evaluate candidate technologies to protect aircraft from emerging MANPADS threats to inform an acquisition strategy before returning in 2QFY2020.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army												Date: March 2019				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 5				PE 0605049A / Missile Warning System Modernization (MWSM)				XT4 / Advanced Threat Detection System (ATDS)								
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Systems Engineering Program Management - SEPM	TBD	PM ASE : HSV, AL	-	1.291		1.700	Jan 2019	1.539	Oct 2019	-		1.539	0.000	4.530	Continuing	
FY 2019 SBIR / STTR Transfer	TBD	Various : Various	-	-		0.945		-		-		-	0.000	0.945	-	
Subtotal			-	1.291		2.645		1.539		-		1.539	0.000	5.475	N/A	
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Material Solution Analysis	TBD	PM ASE : HSV, AL	-	1.700		1.406	Mar 2019	-		-		-	0.000	3.106	Continuing	
Laboratory Updates	TBD	PM ASE : HSV, AL	-	1.718		1.405	Mar 2019	-		-		-	0.000	3.123	Continuing	
Software Development	Various	Various : PM ASE, HSV, AL	-	-		1.405	Mar 2019	-		-		-	0.000	1.405	Continuing	
Analysis of Alternatives	Various	Various : Various	-	7.604		1.405		-		-		-	0.000	9.009	Continuing	
Subtotal			-	11.022		5.621		-		-		-	0.000	16.643	N/A	
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Matrix Support	TBD	PM ASE : HSV, AL	-	0.167		-		-		-		-	0.000	0.167	Continuing	
Subtotal			-	0.167		-		-		-		-	0.000	0.167	N/A	
Project Cost Totals			-	12.480		8.266		1.539		-		1.539	0.000	22.285	N/A	
Remarks																

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605049A / <i>Missile Warning System Modernization (MWSM)</i>	Project (Number/Name) XT4 / <i>Advanced Threat Detection System (ATDS)</i>

Event Name	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
PEO Acquisition Decision Memorandum (ADM)					▲ 1	[Redacted]																						
Enhanced Market Research																												
Return to AAE									▲ 2																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605049A / <i>Missile Warning System Modernization (MWSM)</i>	Project (Number/Name) XT4 / <i>Advanced Threat Detection System (ATDS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
PEO Acquisition Decision Memorandum (ADM)	1	2019	1	2019
Enhanced Market Research	2	2019	2	2020
Return to AAE	2	2020	2	2020