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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0604445F / <i>Wide Area Surveillance</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	19.268	0.000	2.760	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.028
675899: <i>Wide Area Surveillance</i>	19.268	0.000	2.760	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.028

Program MDAP/MAIS Code: 519

A. Mission Description and Budget Item Justification

Wide Area Surveillance (WAS) consists of two advanced sensor systems, the Stateside Affordable Radar System (STARS) and Scorpion, incorporated into a single WAS System. Based on existing technological capabilities, WAS detects/tracks low, slow and other asymmetrical threats in the airspace and meets the user needs by sensing stressing airborne targets in complex environments with affordable sensors. The sensor outputs will be incorporated into the Battle Control Systems-Fixed (BCS-F) air picture and utilized as the North American Aerospace Defense Command/ Northern Command (NORAD/NORTHCOM) Command and Control (C2) air surveillance system of record.

Some aspects of the WAS program are classified. These will be provided on a need-to-know basis.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver WAS system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY21 0.000M was expended for civilian pay expenses in this program element, and in FY22 0.000M is forecasted for civilian pay expenses in this program element.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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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	0.000	2.760	0.000	0.000	0.000
Current President's Budget	0.000	2.760	0.000	0.000	0.000
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force										Date: April 2022		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0604445F / <i>Wide Area Surveillance</i>				Project (Number/Name) 675899 / <i>Wide Area Surveillance</i>			
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
675899: <i>Wide Area Surveillance</i>	19.268	0.000	2.760	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.028
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Wide Area Surveillance (WAS) consists of two advanced sensor systems, the Stateside Affordable Radar System (STARS) and Scorpion, incorporated into a single WAS System. Based on existing technological capabilities, WAS detects/tracks low, slow and other asymmetrical threats in the airspace and meets the user needs by sensing stressing airborne targets in complex environments with affordable sensors. The sensor outputs are incorporated into the Battle Control Systems-Fixed (BCS-F) air picture and utilized as the North American Aerospace Defense Command/ Northern Command (NORAD/NORTHCOM) Command and Control (C2) air surveillance system of record. This effort is for a S1 Block 2 for the STARS system.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver Wide Area Surveillance weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY21 \$0.000M was expended for civilian pay expenses in this program element, and in FY22 \$0.000M is forecasted for civilian pay expenses in this program element.

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

	FY 2021	FY 2022	FY 2023
Title: Development, Test & Fielding	0.000	2.760	0.000
Description: Development, Test & Fielding			
FY 2022 Plans: Support STARS (S1) Block 2 Configuration Upgrade			
FY 2023 Plans: N/A			
FY 2022 to FY 2023 Increase/Decrease Statement: No FY23 funds are currently approved			
Accomplishments/Planned Programs Subtotals	0.000	2.760	0.000

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
• OPAF 03 Line Item 834240: <i>Wide Area Surveillance</i>	47.538	38.794	8.190	-	8.190	0.000	0.000	-	-	243.071	337.593

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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>
• OPAF 05 861900: <i>Spares and repair parts</i>	1.904	0.013	4.997	-	4.997	5.346	5.405	5.518	-	0.000	23.183

Remarks

D. Acquisition Strategy

The Wide Area Surveillance (WAS) strategy is a single step acquisition approach for full capability to develop, produce, and field highly capable and sustainable advanced sensors in the National Capital Region. Science & technology contracts were let prior to the Engineering and Manufacturing Development phase for both sub-systems. The Cost Plus Fixed-Fee (CPFF) contract for Stateside Affordable Radar System (STARS) was awarded to a single developer to design, build, integrate, and test the STARS system. A subsequent task order was awarded (Jul 17) to include pre-operational site support. The CPFF contract for Scorpion was awarded (Aug 17) to a single developer to complete the design, build, integration, and testing of the Scorpion system, and conduct pre-operational site support. This strategy includes a single delivery approach with 8 STARS and 67 Scorpion systems for a total of 75 sub-systems delivered to achieve FOC. The pre-operational contract for the Scorpion system transitioned to Interim Contract Support (ICS) in Dec 2018, STARS system transitioned to ICS in June 2019. RDT&E funds supported a Block 2 version of the STARS system.

Air Force Program Executive Officer (PEO) DIGITAL (AFPEO DIGITAL) is the PEO for WAS. Air Force Life Cycle Management Center (AFLCMC) is the Contracting Authority for the WAS program and provides contracts, legal, and comptroller support. Air Force Program Executive Officer (PEO) DIGITAL (AFPEO DIGITAL) is the program's Milestone Decision Authority (MDA).

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

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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			
Wide Area Surveillance (WAS) S1 Block 2 NRE	Various	Raytheon : El Segundo, CA	9.013	-		-		-		-		-	0.000	9.013	0.000
Wide Area Surveillance (WAS) S1 Block 2 Development	Various	Raytheon : El Segundo, CA	9.505	-		0.949	Sep 2022	-		-		-	0.000	10.454	-
Subtotal			18.518	-		0.949		-		-		-	0.000	19.467	N/A

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			
Test Support	Various	46 Test Squadron : Eglin AFB, FL	0.050	-		0.330	Mar 2022	-		-		-	0.000	0.380	-
Subtotal			0.050	-		0.330		-		-		-	0.000	0.380	N/A

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			
A&AS	Various	AFLCMC/HBDB : Hanscom AFB, MA	0.700	-		1.481	Jul 2022	-		-		-	0.000	2.181	-
Subtotal			0.700	-		1.481		-		-		-	0.000	2.181	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		19.268	-	2.760	-	-	0.000	22.028	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604445F / <i>Wide Area Surveillance</i>	Project (Number/Name) 675899 / <i>Wide Area Surveillance</i>
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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

Wide Area Surveillance	
Scorpion Contractor Logistics Support (CLS)	
STARS Contractor Logistics Support (CLS)	
STARS and Scorpion combined CLS	
Scorpion Sole Source LRIP	
Initial Operational Test and Evaluation (IOT&E)	
STARS Block 2 Contract Award	
STARS Block 2 Development Effort	
Scorpion Milestone C Full Rate Production (FRP)	
Scorpion Limited Source Competition FRP Base	
Scorpion Limited Source Competition FRP Option	
STARS Block 1 Site 5 Production	
STARS FRP Decision	
STARS Block 2 Production	
Full Operating Capability (FOC)	

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

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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Wide Area Surveillance				
Scorpion Contractor Logistics Support (CLS)	4	2021	1	2024
STARS Contractor Logistics Support (CLS)	4	2021	1	2024
STARS and Scorpion combined CLS	1	2023	4	2027
Scorpion Sole Source LRIP	1	2021	4	2022
Initial Operational Test and Evaluation (IOT&E)	1	2021	4	2021
STARS Block 2 Contract Award	3	2021	3	2021
STARS Block 2 Development Effort	3	2021	2	2023
Scorpion Milestone C Full Rate Production (FRP)	4	2021	4	2021
Scorpion Limited Source Competition FRP Base	4	2021	4	2023
Scorpion Limited Source Competition FRP Option	4	2022	4	2024
STARS Block 1 Site 5 Production	1	2021	2	2022
STARS FRP Decision	2	2023	2	2023
STARS Block 2 Production	2	2023	4	2025
Full Operating Capability (FOC)	4	2025	4	2025