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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0604445F I Wide Area Surveillance							
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	0.000	37.750	0.000	0.000	0.000	0.000	0.003	0.000	0.001	0.001	0.000	37.755
675899: Wide Area Surveillance	0.000	37.750	0.000	0.000	0.000	0.000	0.003	0.000	0.001	0.001	0.000	37.755
Program MDAP/MAIS Code: 519												
Note In FY2017, Project 675895, Wide Area Surveillance was terminated.												
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 will detect/track low, slow and other asymmetrical threats in the airspace and meet the user needs of 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 and 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 weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, and 0605898F.  As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.  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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3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		PE 0604445F I Wide Area Surveillance			
B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	16.247	0.000	0.000	0.000	0.000
Current President's Budget	37.750	0.000	0.000	0.000	0.000
Total Adjustments	21.503	0.000	0.000	0.000	0.000
• Congressional General Reductions	-0.206	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	18.901	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	3.142	0.000			
• SBIR/STTR Transfer	-0.334	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000
<b>Change Summary Explanation</b>					
FY 2018 funds include \$0.009 million pending transfer to the Rapid Prototyping Fund in accordance with PL 114-92; section 828, Penalty for Cost Overruns, as amended by PL 115-91 section 825(a).					
FY18 funds include BTR of \$3.142 million					

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0604445F / Wide Area Surveillance				Project (Number/Name) 675899 / Wide Area Surveillance			
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
675899: Wide Area Surveillance	0.000	37.750	0.000	0.000	0.000	0.000	0.003	0.000	0.001	0.001	0.000	37.755
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 will detect/track low, slow and other asymmetrical threats in the airspace and meet the user needs of 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.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Development, Test & Fielding	37.750	0.000	-
<b>Description:</b> Development, Test & Fielding			
<b>FY 2019 Plans:</b> Complete development, integration and testing of the Stateside Affordable Radar System (STARS) and Scorpion.			
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> N/A			
<b>Accomplishments/Planned Programs Subtotals</b>	37.750	0.000	-

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

<b>Line Item</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPAF 03 Line Item 834240: <i>Wide Area Surveillance</i>	73.487	87.104	80.818	-	80.818	76.031	7.893	2.239	18.183	818.915	1,164.670
• OPAF 05 861900: <i>Spares and repair parts</i>	-	-	3.007	-	3.007	3.008	3.007	3.061	3.117	0.000	15.200

**Remarks**

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force		Date: February 2019
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>

## 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 ongoing 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 ongoing 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 11 STARS and 18 Scorpion systems for a total of 29 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 will award ICS in conjunction with production contracts in FY19.

Air Force Program Executive Officer (PEO) for Battle Management (AFPEO BM) 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. The Secretary of the Air Force for Acquisition (SAF/AQ) is the program's Milestone Decision Authority (MDA).

## E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force												Date: February 2019			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0604445F / Wide Area Surveillance				Project (Number/Name) 675899 / Wide Area Surveillance					
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
Wide Area Surveillance (WAS)	Various	Various : Various	0.000	31.157	May 2018	-		-		-		-	0.000	31.157	46.000
Subtotal			0.000	31.157		-		-		-		-	0.000	31.157	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
Direct Mission	Various	Various : Various	0.000	1.981	Jan 2018	-		-		-		-	0.000	1.981	-
Subtotal			0.000	1.981		-		-		-		-	0.000	1.981	N/A
Test and Evaluation (\$ 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
Test Support	Various	46 Test Squadron : Eglin AFB, FL	0.000	0.800	Feb 2019	-		-		-		-	0.000	0.800	-
Subtotal			0.000	0.800		-		-		-		-	0.000	0.800	N/A
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
Program Management Administration	Various	AFLCMC/HBDB : Hanscom AFB, MA	0.000	3.812	Oct 2017	-		-		-		-	0.000	3.812	-
Subtotal			0.000	3.812		-		-		-		-	0.000	3.812	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	37.750		0.000		-		-		-	0.000	37.750	N/A

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	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force																Date: February 2019			
Appropriation/Budget Activity								R-1 Program Element (Number/Name)								Project (Number/Name)			
3600 / 7								PE 0604445F / Wide Area Surveillance								675899 / Wide Area Surveillance			

	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
Wide Area Surveillance																												
Scorpion Pre-operational Support																												
STARS Pre-operational Support																												
Initial Operational Test and Evaluation (IOT&E)																												
Milestone C (September 2019)																												
Initial Operation Capability (IOC)																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2020 Air Force		<b>Date:</b> February 2019
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0604445F / <i>Wide Area Surveillance</i>	<b>Project (Number/Name)</b> 675899 / <i>Wide Area Surveillance</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Wide Area Surveillance</i></b>				
Scorpion Pre-operational Support	4	2018	1	2019
STARS Pre-operational Support	4	2018	1	2020
Initial Operational Test and Evaluation (IOT&E)	3	2018	4	2019
Milestone C (September 2019)	4	2019	4	2019
Initial Operation Capability (IOC)	3	2019	3	2019