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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0102326F I Region/Sector Operation Control Center Modernization Program							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.000	10.868	3.347	0.000	3.347	9.322	0.000	6.475	0.789	0.000	30.801
674592: R/SAOC MODERNIZATION	-	0.000	10.868	3.347	0.000	3.347	9.322	0.000	6.475	0.789	0.000	30.801
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Regional/Sector Operation Center Modification program supports the NORAD/NORTHCOM homeland defense and air sovereignty mission for fixed Air Defense Sectors.

BATTLE CONTROL SYSTEM-FIXED (BCS-F): BCS-F is the effort to implement the bi-national program with Canada. The BCS-F Program is an AF Homeland Defense battle management command and control system with the capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive air picture. BCS-F provides tactical communications and data link capabilities with other military and civil systems responsible for planning, directing, coordinating and controlling forces for air surveillance, air defense, and control of sovereign US air space. This integrated air picture enhances the capability to conduct peacetime air sovereignty operations and transition to active air defense operations in the event of aggression.

BATTLE CONTROL SYSTEM-FIXED MODIFICATION ONE (BCS-F Modification 1). BCS-F Modification 1 effort will implement Automatic Dependent Surveillance-Broadcast (ADS-B) and Earth Center Earth Fixed (ECEF) into the BCS-F system. ADS-B provides the BCS-F system the capability to ingest Global Position System (GPS) based location data at the Air Defense Sectors from ADS-B equipped aircraft. Implementation of ADS-B on aircraft flying in US airspace is mandated by the Federal Aviation Administration (FAA) by 2020. ECEF is a three-dimensional earth model that eliminates artificial boundaries in the two-dimensional BCS-F stereographic plane. ECEF also allows the ingestion and processing of sensor, target, track, and graphical data without compromising data accuracy due to translation errors. The BCS-F Modification 1 effort will be executed as a Cooperative Program between the US and Canada.

In FY17, BCS-F Modification 1 was a new start.

This program is in Budget Activity 7, Operational System Development because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production.

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B. Program Change Summary (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget		0.000	10.868	12.721	0.000	12.721
Current President's Budget		0.000	10.868	3.347	0.000	3.347
Total Adjustments		0.000	0.000	-9.374	0.000	-9.374
• 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	-9.374	0.000	-9.374
Change Summary Explanation FY2018 reduction of 9.374M for higher AF priorities.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018
Title: BATTLE CONTROL SYSTEMS MODIFICATION 1				0.000	10.868	3.347
Description: The systems engineering, development, risk reduction, integration, test & evaluation and fielding of the BCS-F Modification 1 effort. The BCS-F Modification 1 effort will be executed as a Cooperative Program between the US and Canada.						
FY 2016 Accomplishments: - N/A						
FY 2017 Plans: Activities include, but are not limited to: - Developing a test strategy and systems engineering related documentation - Conducting test and evaluation, risk reduction, and integration for ADS-B and ECEF						
FY 2018 Plans: Activities include, but are not limited to: - Will continue developing test strategy and systems engineering related documentation - Will continue conducting test and evaluation, risk reduction, and integration for ADS-B and ECEF - Will execute source selection activities and award a competitively selected contract - Will continue to document changes to the program that could affect the system baseline - Will continue test and cyber-security planning						

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C. Accomplishments/Planned Programs (\$ in Millions)								FY 2016	FY 2017	FY 2018	
- Will continue to identify, monitor and mitigate technical risks											
Accomplishments/Planned Programs Subtotals								0.000	10.868	3.347	
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• OPAF:BA03 Line Item # 833030: Battle Control System - Fixed	2.018	5.677	6.415	0.000	6.415	3.033	3.086	3.142	3.199	0.000	26.570
Remarks											
E. Acquisition Strategy											
Acquisition Strategy: The Program Management Office (PMO) will pursue full and open competition for BCS Modification 1 efforts. The BCS-F PMO is finalizing a Project Arrangement (PA) to become a cooperative program with Canada for the ADS-B and ECEF efforts. These two efforts are anticipated to be awarded concurrently for development in a single release to the Air Defense Sectors.											
Management Strategy: Efforts supporting ADS-B and ECEF will be managed by BCS-F PMO in conjunction with Canada PMO and are under the purview of the Air Force Program Executive Officer for Battle Management (AFPEO BM). Air Force Life Cycle Management Center (AFLCMC) is the Contracting Authority.											
Contracting Strategy: The BCS-F PMO will utilize full and open competition with a small business set-aside where viable to complete the development and integration of ADS-B and ECEF capabilities. Cost Plus contract with some Fixed Price CLINS will be utilized where possible and appropriate.											
F. 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.											