Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

3600: Research, Development, Test & Evaluation, Air Force I BA 7:

PE 0102326F I Region/Sector Operation Control Center Modernization Program

Operational Systems Development

	-																
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost					
Total Program Element	-	1.570	1.272	-	-	-	-	-	-	-	-	2.842					
674592: R/SAOC MODERNIZATION	-	1.570	1.272	-	-	-	-	-	-	-	-	2.842					
Quantity of RDT&E Articles	-	-	-	-	-	-	-	_	-	-							

Note

Efforts in this program element, 0102326F, will complete in FY15.

A. Mission Description and Budget Item Justification

A. Mission Description and Budget Item Justification

Battle Control System-Fixed (BCS-F) is the operational equipment replacement in the fixed air defense sites, Region/Sector Air Operations Center (R/SAOC), also known as Region Air Operations Center-Air Defense Sector (RAOC-ADS). The BCS-F Program supports a battle management command and control system with capability to integrate data from civil and military defense surveillance systems into a comprehensive, recognized air picture. This integrated air picture enhances the North American Aerospace Defense/Combatant Commander's (NORAD/CC's) capability to conduct peacetime air sovereignty, transition, and warfare. The BCS-F system serves as the Air Force's Homeland Defense battle management, command, and control hub and integrates data from radar sensors, data links, and the supporting communications architecture. It provides the tactical communications and data link capabilities that enable planning, directing, coordinating, and controlling forces for air surveillance, air defense, and control of sovereign US air space. BCS-F is a bi-national program with Canada, ensuring air defense and surveillance capability, including Hawaii. BCS-F achieved Initial Operational Capability in October 2006 and full deployment declaration in Nov 2012. The National Capital Region - Integrated Air Defense System (NCR-IADS) is a post-September 11, 2001 rapidly fielded capability to improve low altitude detection capability in order to prosecute airborne threats to the NCR. The Air Defense Sector (ADS) feeds the Air Picture and Targets of Interest (TOI) to the NCR-IADS. NCR-IADS provides ground-based air defense of the NCR airspace, and provides an integrated air surveillance picture, fire control quality air picture, ground air defense weapons, enhanced regional situational awareness and forensic data collection capabilities for the warfighter.

This program is in Budget Activity 07, 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.

PE 0102326F: Region/Sector Operation Control Center M... Air Force Page 1 of 7

R-1 Line #130

Exhibit R-2, RDT&E Budget Item Justification: PB	2016 Air Force					Date: Fe	bruary 2015	
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Operational Systems Development	r Force / BA 7:	R-1 Program Ele PE 0102326F / F			ontrol Cent	er Moderniz	zation Progra	т
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 E	Base	FY 2016	OCO	FY 2016 T	otal
Previous President's Budget	1.624	1.522		_		_		_
Current President's Budget	1.570	1.272		_		_		_
Total Adjustments	-0.054	-0.250		_		_		_
Congressional General Reductions	-	-						
Congressional Directed Reductions	_	_						
Congressional Rescissions	_	_						
Congressional Adds	_	_						
Congressional Directed Transfers	_	_						
Reprogrammings	_	-						
SBIR/STTR Transfer	-0.054	-						
 Other Adjustments 	-	-0.250		-		-		-
•							Ţ	
C. Accomplishments/Planned Programs (\$ in Milli	ions)					FY 2014	FY 2015	FY 2016
C. Accomplishments/Planned Programs (\$ in Milli Title: Battle Control System Modernization Upgrades Description: The development, systems engineering	3	ne BCS Modernizat	tion Upgrades	program to		FY 2014 1.570	FY 2015 1.272	FY 2016 -
Title: Battle Control System Modernization Upgrades	g, test and evaluation of th		, 0		include			FY 2016
Title: Battle Control System Modernization Upgrades Description: The development, systems engineering Release 3.2.2 efforts and beyond. FY 2014 Accomplishments: Performed development, systems engineering, test a	g, test and evaluation of the and evaluation of the and evaluation of the and evaluation and the test and evaluation of the and eval	Modernization Up	grades prograi	n to include	include			FY 2016
Title: Battle Control System Modernization Upgrades Description: The development, systems engineering Release 3.2.2 efforts and beyond. FY 2014 Accomplishments: Performed development, systems engineering, test a Release of 3.2.2 efforts and RM Redundancy. FY 2015 Plans: Efforts include, but are not limited to, systems engine	g, test and evaluation of the and evaluation of the and evaluation of the and evaluation and the test and evaluation of the and eval	Modernization Up	grades prograi	n to include	include			FY 2016
Title: Battle Control System Modernization Upgrades Description: The development, systems engineering Release 3.2.2 efforts and beyond. FY 2014 Accomplishments: Performed development, systems engineering, test a Release of 3.2.2 efforts and RM Redundancy. FY 2015 Plans: Efforts include, but are not limited to, systems engine program, such as RM and modification studies like th FY 2016 Plans:	g, test and evaluation of the and evaluation of the and evaluation of the and evaluation and the test and evaluation of the and eval	Modernization Up	grades prograi S Modernizatio	n to include n Upgrades	include			FY 2016
Title: Battle Control System Modernization Upgrades Description: The development, systems engineering Release 3.2.2 efforts and beyond. FY 2014 Accomplishments: Performed development, systems engineering, test at Release of 3.2.2 efforts and RM Redundancy. FY 2015 Plans: Efforts include, but are not limited to, systems engine program, such as RM and modification studies like th FY 2016 Plans: N/A	g, test and evaluation of the and evaluation of the BCS ering and the test and evalue ADS-B.	Modernization Upg	grades prograi S Modernizatio	n to include n Upgrades	include	1.570	1.272	FY 2016
Title: Battle Control System Modernization Upgrades Description: The development, systems engineering Release 3.2.2 efforts and beyond. FY 2014 Accomplishments: Performed development, systems engineering, test at Release of 3.2.2 efforts and RM Redundancy. FY 2015 Plans: Efforts include, but are not limited to, systems engine program, such as RM and modification studies like th FY 2016 Plans: N/A	g, test and evaluation of the BCS ering and the test and evaluation of the BCS ering and the test and evalue ADS-B.	Modernization Upgaluation of the BCS Accomplishmen	grades progran S Modernizatio	n to include n Upgrades	include	1.570	1.272	-
Title: Battle Control System Modernization Upgrades Description: The development, systems engineering Release 3.2.2 efforts and beyond. FY 2014 Accomplishments: Performed development, systems engineering, test at Release of 3.2.2 efforts and RM Redundancy. FY 2015 Plans: Efforts include, but are not limited to, systems engine program, such as RM and modification studies like the FY 2016 Plans: N/A D. Other Program Funding Summary (\$ in Millions)	g, test and evaluation of the BCS ering and the test and evaluation of the BCS ering and the test and evalue ADS-B.	Modernization Upg	grades prograi	n to include n Upgrades	include	1.570	1.272	-

PE 0102326F: Region/Sector Operation Control Center M... Air Force UNCLASSIFIED Page 2 of 7

R-1 Line #130

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force

Date: February 2015

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

Total

3600: Research, Development, Test & Evaluation, Air Force I BA 7:

PE 0102326F I Region/Sector Operation Control Center Modernization Program

FY 2018

Operational Systems Development

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

FY 2016 FY 2016 FY 2016

Cost To

Line Item

FY 2014 FY 2015

Base OCO

FY 2017

FY 2019

FY 2020 Complete Total Cost

Remarks

E. Acquisition Strategy

Battle Control System-Increment 3: The BCS-Fixed program utilized a sole source contracting strategy that declared full deployment, completing the ACAT 1AC program.

The BCS Modernization Upgrades program used a sole source contracting strategy for the RM redundancy effort.

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.

PE 0102326F: Region/Sector Operation Control Center M...

Air Force

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	2016 Air F	orce								Date:	February	2015			
Appropriation/Budge 3600 / 7	propriation/Budget Activity 00 / 7							egion/Se	Number/Nector Oper ation Progr		ct (Number/Name) 2 I R/SAOC MODERNIZATION						
Product Developmen	ıt (\$ in M	illions)		FY 2	2014	FY 2	2015		2016 ase		2016 CO	FY 2016 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 o Contrac		
BCS Modernization Upgrade	Various	Various : ,	-	0.707	Feb 2014	0.752	May 2015	-		-		-	-	1.459	-		
RM Redundancy	SS/CPFF	Thales Raytheon Systems : Fullerton, CA		0.533	Feb 2014	-		-		-		-	-	0.533	-		
		Subtotal	-	1.240		0.752		-		-		-	-	1.992			
Support (\$ in Millions	s)			FY 2	2014	FY 2	2015		2016 ase		2016 CO	FY 2016 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 o Contrac		
		Subtotal	-	-		-		-		-		-	-	-	-		
Test and Evaluation ((\$ in Milli	ons)		FY 2014		FY 2015		FY 2016 Base			2016 CO	FY 2016 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	Total Cost	Target Value o Contrac		
46th Test Wing/Other Test Act	Various	Various : Various,	-	-		0.186	Nov 2014	-		-		-	-	0.186	-		
		Subtotal	-	-		0.186		-		-		-	-	0.186			
Management Service	s (\$ in M	illions)		FY 2	2014	FY 2	2015		2016 ase		2016 CO	FY 2016 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 o Contrac		
Program Management and Administration	Various	AFMC/AFLCMC : Hanscom AFB, MA	-	0.330	Oct 2013	0.334	Oct 2014	-		-		-	-	0.664	-		
		Subtotal	_	0.330		0.334		_		_		_	_	0.664			

PE 0102326F: *Region/Sector Operation Control Center M...* Air Force

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R-1 Line #130

Exhibit R-3, RDT&E Project Cost Analysis: PB 2	016 Air F	-orce				Date	: February	/ 2015			
Appropriation/Budget Activity 3600 / 7			PE 0102326F /	Element (Number/l Region/Sector Ope Modernization Pro	eration .	Project (Number 674592 / R/SAC	,	r/Name) C MODERNIZATION			
	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 20		Cost To	Total Cost	Target Value of Contract		
Project Cost Totals	-	1.570	1.272	-	-	-	-	2.842	-		

Remarks

PE 0102326F: Region/Sector Operation Control Center M... Air Force

Exhibit R-4, RDT&E Schedule Profile: PB 2016	Air F	orce																			Date	: F	ebru	ary	2015	5	
Appropriation/Budget Activity 3600 / 7							R-1 Program Element (Number/Name) PE 0102326F I Region/Sector Operation Control Center Modernization Program Project (Number/Name) 674592 I R/SAOC MODERNIZATI											ATIO	N-								
	FY 2014 FY 2						015 FY 2016 FY 2017 FY						FY 2018 FY 2019 FY 2					2020)								
	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
BCS-Fixed RM Redundancy							,						·				·	·									
BCS Modernization Upgrades Version 3.2.2																											-
BCS ModernizationUpgrades Version 3.2.3														-													

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
3600 / 7	, ,	- 3 (umber/Name) 2/SAOC MODERNIZATION

Schedule Details

	St	art	End			
Events	Quarter	Year	Quarter	Year		
BCS-Fixed RM Redundancy	1	2014	4	2015		
BCS Modernization Upgrades Version 3.2.2	1	2014	2	2014		
BCS ModernizationUpgrades Version 3.2.3	1	2014	2	2015		