

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0604458F I Air & Space Ops Center							
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	0.000	60.971	-	-	-	-	-	-	-	-	-	60.971
644945: AOC Inc 10.2	0.000	60.971	-	-	-	-	-	-	-	-	-	60.971
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Program MDAP/MAIS Code: N42												
Note In FY 2014, Project Number 644945, AOC Inc. 10.2, efforts were transferred from PE 0207410F, AOC WS, Project Number 675117 in order to improve transparency of ACAT 1 Acquisition programs. AOC Increment 10.2 received a Milestone B decision 11 October 2013. In FY 2015, PE 0604458F, Air & Space Ops Center, project number 644945 AOC Increment 10.2 development efforts, were transferred to PE 0605458F Air & Space Ops Center 10.2, project number 654945 AOC 10.2 Development, in order to align post Milestone B development efforts with funding in RDT&E Budget Activity 05, System Development & Demonstration (SDD). AOC 10.2 is PRCP Program Number (PNO) N42.												
A. Mission Description and Budget Item Justification The Air Operations Center Weapon System (AOC WS), AN/USQ-163 Falconer, the senior element of the Theater Air Control System (TACS), is the weapon system the Commander, Air Force Forces (COMAFFOR) provides the Combined/Joint Force Air Component Commander (C/JFACC) for planning, executing, and assessing theater-wide air and space operations. The C/JFACC provides air, space and cyber support to the Combined/Joint Forces Commander (C/JFC) by coordinating, deconflicting and assessing the progress of various weapon systems to advance the C/JFC's campaign. The AOC WS develops operations strategy and planning documents. The weapon system also disseminates tasking orders; executes day-to-day peacetime and combat air, space and cyber operations; and provides rapid reaction to immediate situations by exercising positive control of friendly forces. The AOC WS Increment 10.2 program keeps the AOC interoperable, certified, supportable, and compliant through the integration, testing and fielding of new capabilities and sustainment upgrades to the AOC WS baseline. The program supports mission requirements at Geographic and Functional AOCs, as well as Support and Manpower Augmentation units. To keep the AOC current and interoperable with the COCOMs, cyber requirements, and fifth generation weapon system/weapons, the AOC WS program plans to evolve the AOC through the integration and test of progressively improving capabilities. These activities ensure a system of systems engineering perspective for the AOC WS, and include weapon system standardization activities as defined by AOC WS requirements documents. The Modernization contractor, which was awarded the Modernization contract on 25 October 2011, conducted AOC 10.2 pre-Engineering and Manufacturing Development (EMD) activities, including a Systems Requirements Review (SRR), an Interim Design Review (IDR), and a delta-Preliminary Design Review (delta-PDR). In accordance with AOC 10.2 Milestone Decision Authority (MDA) direction (23 June 2010), the AOC 10.2 Modernization program conducted prototyping and Limited Early Install (LEI) activities through an iterative build methodology prior to Milestone B (MS B) to reduce integration risk and improve user feedback in the acquisition process. AOC 10.2 EMD												

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force				Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 Program Element (Number/Name) PE 0604458F I Air & Space Ops Center				
activities include the design (i.e., Critical Design Review), development, integration of 3rd party capabilities, testing (Contractor in-plant system testing, Developmental Test and Evaluation, Operational Test and Evaluation, Operational Assessment, Test Readiness Review, etc.) of the AOC 10.2 baseline, as well as build-up and fielding of the Help Desk (HD), Formal Training Unit (FTU), and Combined Air Operations Center-eXperimental (CAOC-X) suite.						
Activities also include studies and analysis to support current program planning and execution, as well as future program planning.						
This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) for FY14 because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.						
B. Program Change Summary (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget		58.861	-	-	-	-
Current President's Budget		60.971	-	-	-	-
Total Adjustments		2.110	-	-	-	-
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		4.000	-			
• SBIR/STTR Transfer		-1.890	-			
• Other Adjustments		-	-	-	-	-
Change Summary Explanation						
Below Threshold Reprogramming (BTR) of \$4.000M FY14 from C2AOS-C2IS 0207410F to AOC 10.2 0604458F.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2014	FY 2015	FY 2016
Title: AOC WS Inc 10.2				59.965	-	-
Description: AOC 10.2 infrastructure modernization and mission capability integration. Development of a robust, open, Net-Centric infrastructure with a Service Oriented Architecture (SOA).						
FY 2014 Accomplishments:						
Effort completed prototyping and LEI activities to support risk reduction and operational feedback. Following the Milestone B decision, the program entered into an Engineering Manufacturing Development contract award to perform development activities, including but not limited to the following: a) AOC 10.2 development, systems analysis, and corresponding documentation, b) capability provider engagement and integration, c) initiate build-up and fielding of the IOT&E sites including the help desk, FTU,						

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force									Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 Program Element (Number/Name) PE 0604458F I Air & Space Ops Center							
C. Accomplishments/Planned Programs (\$ in Millions)									FY 2014	FY 2015	FY 2016
CAOC-X and pre-planning for one Geographic site, d) Integration and Test Lab (ITL) operation and management, e) continued planning, coordination, and execution of Contractor System Testing / Developmental Test and Evaluation / Operational Test and Evaluation, f) planning, preparation, and analysis and design efforts for continued 10.2 baseline improvements, and g) other government costs to include government furnished equipment to include hardware, software, licenses, support, and costs in government integration facilities. Program continues risk mitigation and development / test execution activities to support upcoming MS C decision in FY15. Program Office completed Critical Design Review and the Integrated Baseline Review with prime contractor.											
Title: AOC WS Inc 10.2 Test and Evaluation Description: Test and Evaluation FY 2014 Accomplishments: Planned and implemented comprehensive Modernization contractor testing (in-plant integration and test, functional testing, security testing, etc.) on the AOC 10.2 baseline, to include test planning, conducting test, and documentation review. Completed Warfighter Analysis Workshop build 4 giving insight to system from a user perspective. Completed build 4 Risk Reduction Event reviewing current status of system build.									1.006	-	-
Accomplishments/Planned Programs Subtotals									60.971	-	-
D. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• RDTE: BA07: PE 0207410F: Air and Space Operations Center Weapon System (AOC WS), Project 675117	-	-	-	-	-	-	-	-	-	-	264.584
• RDTE: BA05: PE 0605458F: Air & Space Operations Center Inc 10.2, Project 654945	-	85.938	47.946	-	47.946	-	-	-	-	-	135.509
• OPAF: BA03: Line Item # 834560: Air & Space Operations Ctr - Inc 10.2	-	-	24.405	-	24.405	51.283	43.585	32.313	32.895	373.583	437.974
Remarks											

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604458F / <i>Air & Space Ops Center</i>	
<u>E. Acquisition Strategy</u> The acquisition strategy builds on existing capabilities using evolutionary acquisition to standardize, modernize and sustain the AOC. The AOC Modernization Contract was competitively awarded on 25 October 2011, but due to contract protests and associated delays, the actual start date was 20 December 2011. The Modernization contractor is using a system of systems perspective, and is following systems engineering rigor, to evolve AOC to a Net-Centric environment, compliant with DoD Service Oriented Architecture (SOA) standards. <u>F. Performance Metrics</u> 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.		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0604458F / <i>Air & Space Ops Center</i>						Project (Number/Name) 644945 / <i>AOC Inc 10.2</i>			
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		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 of Contract
AOC 10.2 Modernization	C/Various	Various : Various,	0.000	2.035	Oct 2013	-		-		-		-	-	2.035	TBD
AOC 10.2 Modernization Contract	C/Various	Northrop Grumman : Herndon, VA	0.000	49.147	Oct 2013	-		-		-		-	-	49.147	TBD
Training	C/Various	Various : Various,	0.000	-		-		-		-		-	-	-	TBD
Subtotal			0.000	51.182		-		-		-		-	-	51.182	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		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 of Contract
Subtotal			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		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 of Contract
Test	Various	Various : Various,	0.000	1.006	Oct 2013	-		-		-		-	-	1.006	TBD
Subtotal			0.000	1.006		-		-		-		-	-	1.006	-
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		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 of Contract
Systems Engineering	SS/ Various	MITRE : Bedford, MA	0.000	4.014	Oct 2013	-		-		-		-	-	4.014	TBD
Program Management Administration	Various	Various : Hanscom AFB, MA	0.000	4.769	Oct 2013	-		-		-		-	-	4.769	TBD
Subtotal			0.000	8.783		-		-		-		-	-	8.783	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force										Date: February 2015					
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0604458F / Air & Space Ops Center					Project (Number/Name) 644945 / AOC Inc 10.2					
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	60.971		-		-		-		-	-	60.971	-
Remarks															
In FY 2014, Project Number 644945, AOC Increment 10.2, efforts were transferred from PE 0207410F, AOC WS, project number 675117 in order to improve transparency of ACAT 1 Acquisition programs.															
In FY 2015, PE 0604458F, Air & Space Ops Center project number 644945 AOC Increment 10.2, development efforts were transferred to PE 0605458F Air & Space Ops Center 10.2, project number 654945, AOC 10.2 Development, in order to align post Milestone B development efforts with funding in RDT&E Budget Activity 05, System Development & Demonstration (SDD).															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force	Date: February 2015
---	----------------------------

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604458F / Air & Space Ops Center	Project (Number/Name) 644945 / AOC Inc 10.2
--	--	---

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 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
AOC Inc 10.2 Milestone B (OCT 2013)	■																											
AOC Inc 10.2 Critical Design Review (MAR 2014)		■																										
AOC Inc 10.2 Milestone C (NOV 2015)									■																			
AOC Inc 10.2 Full Deployment Decision (DEC 2016)													■															
AOC Inc 102 Design/Development	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604458F / <i>Air & Space Ops Center</i>	Project (Number/Name) 644945 / <i>AOC Inc 10.2</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AOC Inc 10.2 Milestone B (OCT 2013)	1	2014	1	2014
AOC Inc 10.2 Critical Design Review (MAR 2014)	2	2014	2	2014
AOC Inc 10.2 Milestone C (NOV 2015)	1	2016	1	2016
AOC Inc 10.2 Full Deployment Decision (DEC 2016)	1	2017	1	2017
AOC Inc 102 Design/Development	1	2014	3	2015