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**Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / <i>Air &amp; Space Operations Center (AOC)</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	0.000	25.661	21.102	37.621	0.000	37.621	17.761	18.097	10.505	18.760	Continuing	Continuing
674596: <i>AOC WS Modifications</i>	0.000	0.000	0.000	12.278	0.000	12.278	0.000	0.000	0.000	0.000	Continuing	Continuing
675218: <i>Applications Development</i>	0.000	14.580	11.462	15.285	0.000	15.285	7.507	7.650	3.828	7.931	Continuing	Continuing
675220: <i>Unit Level</i>	0.000	8.756	7.232	7.666	0.000	7.666	7.816	7.963	4.147	8.254	Continuing	Continuing
675221: <i>Personnel Recovery Command and Control (PRC2)</i>	0.000	2.325	2.408	2.392	0.000	2.392	2.438	2.484	2.530	2.575	Continuing	Continuing

**Note**

This program, BA 07 PE 0207410F, project 674596, AOC WS Modifications Development, is a new start.  
 This program, BA 07 PE 0207410F, project 674596, AOC WS Modifications Test and Evaluation, is a new start.  
 This program, BA 07 PE 0207410F, project 674596, AOC WS Modifications Training, is a new start.

This program, BA 07 PE 0207410F, project 675218, C2AOS-C2IS Modifications (rebaselined to include efforts formerly known as C2AOS-C2IS II), is a new start.

The Air Force is evaluating the continuing requirement for AOC WS Modifications program funding across appropriations through the FYDP for the FY18 PB.

**A. Mission Description and Budget Item Justification**

The Air and Space Operations Center Weapon System (AOC WS) program element provides development of Command and Control (C2) capabilities across the entire spectrum of air and space operations from the strategic to the tactical level. There are four funded projects within the AOC WS program element:

AOC WS Modifications allow for the consolidation to a single baseline across the AOC WS enterprise and provide required modifications for the AOC WS to remain interoperable, certified, supportable, and compliant through the development, integration, testing, fielding, and sustainment of new capabilities and upgrades. Modifications are required for the AOC WS to keep pace with evolving Government Off the Shelf (GOTS) components, integrated Commercial Off the Shelf (COTS) components, Department of Defense (DoD) directives, and changes in the underlying Information Technology (IT) environment, as well as to deliver effective training solutions for the user.

Applications Development provides worldwide operational level C2 capabilities, which include: air battle planning, management, and execution; operational level C2 of Integrated Air and Missile Defense (C2 of IAMD); in support of DoD, Coalition Partners, and other government agencies.

Unit Command and Control (UC2) provides both scheduling and mission preparation activities at the wing and squadron level, and the capabilities to report and track the success of each mission and influence decisions of future Air Battle Planning.

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Personnel Recovery Command and Control (PRC2) provides an adaptive, networked, decentralized and situationally-appropriate personnel recovery command and control system which supports personnel accountability and recovery missions worldwide. PRC2 delivers a globally accessible, collaborative, interoperable and integrated system to prevent, prepare for and respond to isolating events across the Range of Military Operations in the joint/coalition operating environment. The system collects, stores and delivers personnel/identity biometric data, emergency locator beacon registrations, isolated personnel reports, evasion plans of action, incident reports and other information management capabilities for predictive, preventive and personnel vulnerability analysis/assessment in support of Personnel Recovery across DoD and other national and international entities.

This program is in Budget Activity 7, Operational System Development. These budget activities include 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.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	25.662	21.193	17.595	0.000	17.595
Current President's Budget	25.661	21.102	37.621	0.000	37.621
Total Adjustments	-0.001	-0.091	20.026	0.000	20.026
• Congressional General Reductions	-0.001	-0.091			
• 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	20.026	0.000	20.026

**Change Summary Explanation**

- FY 2017 funding increased \$7.848M in order to accelerate the completion of Air Execution Information System (AXIS) to enable retirement of Theater Battle Management Core Systems Force Level (TBMCS FL)

- FY 2017 funding increased \$12.278M in order to fund the Air Operations Center (AOC) Weapon System (WS) Modification Program. The Air Force is evaluating the continuing requirement for AOC WS Modifications program funding across appropriations through the FYDP for the FY18 PB.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2017 Air Force **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 674596 / AOC WS Modifications
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
674596: AOC WS Modifications	0.000	0.000	0.000	12.278	0.000	12.278	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

This program, BA 07 PE 0207410F, project 674596, AOC WS Modifications Development, is a new start.  
 This program, BA 07 PE 0207410F, project 674596, AOC WS Modifications Test and Evaluation, is a new start.  
 This program, BA 07 PE 0207410F, project 674596, AOC WS Modifications Training, is a new start.

The Air Force is evaluating the continuing requirement for AOC WS Modifications program funding across appropriations through the FYDP for the FY18 PB.

**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.

In FY17, AOC WS Modifications are required to enable the retirement of Theater Battle Management Core System Force Level (TBMCS FL) and the legacy AOC 10.1 system. Further, AOC WS Modifications are required for the AOC to keep pace with evolving COTS/GOTS components, DoD directives, changes in the underlying IT environment, and to remain interoperable, certified, supportable, and compliant through the development, integration, testing, fielding, training, and sustainment of new capabilities and upgrades to the AOC WS. Additionally, FY17 AOC WS Modification activities evolve the AOC through development, integration, and test of progressively improving capabilities in support of mission requirements at Geographic and Functional AOCs, as well as Support and Manpower Augmentation units, keeping the AOC current and interoperable with the Combatant Commands (CCMD), cyber requirements, and next generation weapon systems/weapons.

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

	FY 2015	FY 2016	FY 2017
<b>Title:</b> AOC WS Modifications Development	-	-	10.228
<b>Description:</b> Conduct AOC WS infrastructure development and mission capability integration. Develop, integrate, and test modification updates to the AOC WS leveraging a robust, open, Net-Centric infrastructure with a Service Oriented Architecture (SOA). Develop, test, and deliver effective training solutions. Conduct system maintenance and interoperability updates.			
<b>FY 2017 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / <i>Air &amp; Space Operations Center (AOC)</i>	<b>Project (Number/Name)</b> 674596 / <i>AOC WS Modifications</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p>- Initiate Air Reserve Component (ARC) training solution, Operations Support Center (OSC), and Functional (planned name change to Global) AOC site requirements Design/Development modifications.</p> <p>- Integrate 3rd party GOTS mission application updates (e.g., C2AOS-C2IS, Global Command and Control-Joint (GCCS-J), Master Air Attack Plan Tool Kit (MAAPTK), etc.).</p> <p>-- This includes infrastructure updates (e.g., Agile Core Services, etc.) and modifying automated business process (Mission Threads) implementations.</p>				
<p><b>Title:</b> AOC WS Modifications Test and Evaluation</p> <p><b>Description:</b> Plan and implement comprehensive contractor testing (integration and test, functional testing, security testing, etc.), Developmental Test and Evaluation (DT&amp;E), and Operational Test and Evaluation (OT&amp;E) on AOC WS modification baseline updates, to include test planning, test conduct, and documentation review.</p> <p><b>FY 2017 Plans:</b></p> <p>-Conduct frequent contractor and developmental testing, including Warfighter Assessment Workshops, Risk Reduction Events, Information Assurance Assessments, etc.</p> <p>-Facilitate Developmental Test &amp; Evaluation (DT&amp;E) and Operational Test and Evaluation (OT&amp;E).</p>		-	-	1.800
<p><b>Title:</b> AOC WS Modifications Training</p> <p><b>Description:</b> Plan and conduct AOC WS modification training analysis, planning, and development, to include both contractor-developed capabilities and supplemental training for contractor modified 3rd party capabilities. This includes development of effective training solutions and baseline updates to provide more effective training capabilities. This also includes curriculum and courseware / material development, instructor training, class / Computer Based Training conduct, and training surveys / analysis / updates / enhanced simulation capabilities.</p> <p><b>FY 2017 Plans:</b></p> <p>-Plan and conduct training updates to reflect baseline changes (3rd party applications, infrastructure, automated business processes, etc.) and operational training needs.</p> <p>-Support training preparation and development for ARC sites.</p>		-	-	0.250
<b>Accomplishments/Planned Programs Subtotals</b>		-	-	12.278

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / <i>Air &amp; Space Operations Center (AOC)</i>	<b>Project (Number/Name)</b> 674596 / <i>AOC WS Modifications</i>

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

Line Item	FY 2015	FY 2016	FY 2017	FY 2017	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Cost To	Total Cost
			Base	OCO	Total					Complete	
• OPAF: BA03: Line Item # 834530: <i>Air and Space Operations Ctr-WPN SYS</i>	0.000	0.000	0.000	0.000	0.000	41.335	37.608	38.340	39.003	-	-

**Remarks**

**D. Acquisition Strategy**

The acquisition strategy builds on existing capabilities using evolutionary acquisition to standardize and modify the AOC WS. The initial capability was AOC WS Increment 10.0, which fielded the 10.0 configuration to five operational sites, plus a Help Desk and a Formal Training Unit. The second increment, Increment 10.1, upgraded these locations to an integrated baseline and fielded the baseline to additional operational and reserve units worldwide. The last increment, AOC 10.2, evolved the AOC to a Net-Centric environment, compliant with DoD SOA standards. The AOC WS Modifications program builds upon these evolutionary weapon system updates to develop, integrate, test, train, deliver, and sustain new capabilities and baseline updates to the AOC WS. The AOC WS Modifications program will leverage an AOC WS Long-Term Modification and Sustainment (LTM&S) contract, projected to be awarded in 4QFY16, which will provide for government led integration of the AOC WS enterprise. The AOC WS Program Management Office (PMO) will provide technical oversight to the AOC WS Modification program, led by a Government AOC Weapon System (WS) Chief Engineer. Additionally, significant technical expertise will be provided by MITRE, MIT Lincoln Laboratory, and Engineering & Technology Acquisition Support Services contractors.

**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 2017 Air Force** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 674596 / AOC WS Modifications
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<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
AOC WS Modification Development	C/TBD	TBD : TBD	0.000	0.000		0.000		7.978	Jan 2017	0.000		7.978	Continuing	Continuing	TBD
AOC WS Training	C/Various	TBD : TBD	0.000	0.000		0.000		0.250	May 2017	0.000		0.250	Continuing	Continuing	TBD
<b>Subtotal</b>			0.000	0.000		0.000		8.228		0.000		8.228	-	-	-

<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
AOC WS Modifications Test	Various	Various : Various	0.000	0.000		0.000		1.800	Jan 2017	0.000		1.800	Continuing	Continuing	TBD
<b>Subtotal</b>			0.000	0.000		0.000		1.800		0.000		1.800	-	-	-

<b>Management Services (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Engineering Services	Various	Various : Various	0.000	0.000		0.000		1.250	Oct 2016	0.000		1.250	Continuing	Continuing	TBD
Program Management Administration	C/Various	Various : Various	0.000	0.000		0.000		1.000	Dec 2016	0.000		1.000	Continuing	Continuing	TBD
<b>Subtotal</b>			0.000	0.000		0.000		2.250		0.000		2.250	-	-	-

**Remarks**  
The Air Force is evaluating the continuing requirement for AOC WS Modifications program funding across appropriations through the FYDP for the FY18 PB.



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 674596 / AOC WS Modifications

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
ARC/Operations Support Center (OSC)/ Functionals MODs Design/Development																												
ARC/OSC/Functionals MODs Test (DT/OT)																												
GOTS Integration MODs Design/Development																												
GOTS Integration MODs Test (DT/OT)																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / <i>Air &amp; Space Operations Center (AOC)</i>	<b>Project (Number/Name)</b> 674596 / <i>AOC WS Modifications</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ARC/Operations Support Center (OSC)/Functionals MODs Design/Development	3	2017	3	2018
ARC/OSC/Functionals MODs Test (DT/OT)	3	2018	4	2018
GOTS Integration MODs Design/Development	3	2017	4	2018
GOTS Integration MODs Test (DT/OT)	4	2017	4	2018

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)				<b>Project (Number/Name)</b> 675218 / Applications Development			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
675218: <i>Applications Development</i>	0.000	14.580	11.462	15.285	0.000	15.285	7.507	7.650	3.828	7.931	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

This program, BA 07 PE 0207410F, project 675218, C2AOS-C2IS Modifications (rebaselined to include efforts formerly known as C2AOS-C2IS II), is a new start.

- FY 2017 funding increased \$7.848M in order to accelerate the completion of Air Execution Information System (AXIS) to enable the retirement of Theater Battle Management Core Systems Force Level (TBMCS FL)

**A. Mission Description and Budget Item Justification**

This project funds operational development necessary to acquire and modify segments of Air Force's Command and Control (C2) capabilities and services. Applications Development provides worldwide operational capabilities for AF C2 in support of DoD, Coalition Partners, and other government agencies. These efforts focus on, but are not limited to, support of the Joint Forces Air Component Commander (JFACC) that provides air, space and cyber support as presented to the AOC and to other Air Force and Joint Services C2 systems. Applications Development efforts deliver capabilities identified in the Joint Command and Control (JC2) Capability Development Document (CDD) (2013). Applications Development activities include but are not limited to the following: Command and Control Air Operations Suite - Command and Control Information Services (C2AOS-C2IS) needs identified in the Capability Definition Package (CDP) (2012). C2AOS-C2IS creates web-enabled information services to expose air operations data using standardized schemas, such as those developed by the Air Operations Community of Interest (AO COI). C2AOS-C2IS also develops, matures, fields, and maintains modular net-centric C2 applications for air battle planning, execution, and management functions to include: Network Enabled Weapons (NEW); C2AOS-C2IS will focus on but not be limited to, the remainder of CDP and Theater Battle Management Core Systems - Force Level (TBMCS FL) functionality along with the capabilities to include applications and services to support air mission and Friendly Order of Battle (FrOB) execution, Alerting, Publish and Subscribe, Content Management and Reporting; and integration with a Joint Command and Control (JC2) Reference Architecture (RA) host infrastructure environment.

In FY17, core development activities will be to complete development of Air Execution Information System (AXIS). Funding originally allocated to C2AOS-C2IS II was realigned internally within the program to C2AOS-C2IS Development (formerly C2AOS-C2IS I) to accelerate the AXIS program. The acceleration of development and completion of AXIS allows for planned retirement of the legacy TBMCS FL system. The revised fielding strategy to retire TBMCS FL all at once reduces the technical and operational complexities of incrementally deploying the applications. AXIS encompasses the remaining TBMCS FL capability and functionality missing from the suite of C2AOS-C2IS applications. Full retirement of TBMCS FL provides modernized and improved capability to the warfighter, resolves security issues, and reduces future sustainment costs. Additional FY17 activities include fixing deficiencies coming out of individual developmental tests (DT), maintaining information assurance (IA) posture and ensuring integration and testing of all Capability Packages (CP). Also, FY17 will include preparation for Request for Proposal (RFP) release and source selection of the C2AOS-C2IS Modification program.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force	<b>Date:</b> February 2016
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<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / <i>Air &amp; Space Operations Center (AOC)</i>	<b>Project (Number/Name)</b> 675218 / <i>Applications Development</i>
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Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

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.

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

	FY 2015	FY 2016	FY 2017
<p><b>Title:</b> NATO</p> <p><b>Description:</b> NATO and International Cooperation Research and Development. Efforts to develop air, space, intelligence, surveillance, reconnaissance and cyber Information Exchange Requirements and capabilities between U.S. and NATO / Coalition systems to promote interoperability.</p> <p><b>FY 2015 Accomplishments:</b> - Developed requirements and capabilities between U.S. and NATO / Coalition systems to promote interoperability.</p> <p><b>FY 2016 Plans:</b> - In FY 2016, PE 0207410F, (Air &amp; Space Operations Center (AOC)), Project 675218, (Application Development) efforts were transferred to PE 0604281, (Tactical Data Networks Enterprise), Project 655050, (TDL System Integration) as the requirements do not exist for Application Development.</p> <p><b>FY 2017 Plans:</b> N/A</p>	0.382	0.000	0.000
<p><b>Title:</b> C2AOS-C2IS Development (rebaselined to include efforts formerly known as C2AOS-C2IS I and II)</p> <p><b>Description:</b> C2AOS-C2IS Development program develops modular net-centric C2 applications for air battle planning, execution and management functions and creates web-enabled information services to expose air operations data in TBMCS applications and systems using standardized schemas including Capability Packages (CP) 1, 2 &amp; 3                      - CP 1: Air Tasking Order Management System (ATOMS), Request Information Services for Command and Control (RISC2) &amp; Network Enabled Weapons (NEW)                      - CP 2: C2 of IAMD Planner and Airspace Management Application - Airspace Information Service (ASMA-ASIS)                      - CP 3: Air Execution Information System (AXIS)</p> <p><b>FY 2015 Accomplishments:</b>                      - Awarded Engineering Change Notices (ECN) to allow for deprecation of TBMCS FL to all four contracts (ASMA-ASIS, RISC2, C2 of IAMD, ATOMS)                      - Conducted Warfighter Assessments (WA)                      - Continued the development of ATOMS, RISC2, ASMA-ASIS and C2 of IAMD capabilities and began testing</p>	12.800	9.430	13.790

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p>- Fielded ASMA Fieldable Prototype to 603rd and 613th AOCs; Established product in AOC 10.1 RE13 and 10.2 baseline</p> <p><b>FY 2016 Plans:</b></p> <ul style="list-style-type: none"> <li>- Continue development of ATOMS, RISC2, ASMA-ASIS and C2 of IAMD</li> <li>- Start contractor and development tests</li> <li>- Release RFP for AXIS</li> <li>- Conduct source selection for AXIS</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- FY17 funding increase due to the acceleration of the AXIS award and development</li> <li>- Accomplish bug fixes from testing and continue development of ASMA-ASIS, RISC2, C2 of IAMD and ATOMS</li> <li>- Prioritize Baseline Change Requests (BCR)</li> <li>- Conduct integration activities</li> <li>- Complete development of AXIS</li> <li>- Maintain IA posture</li> </ul>				
<p><b>Title:</b> C2AOS-C2IS Modifications (rebaselined to include efforts formerly known as C2AOS-C2IS II)</p> <p><b>Description:</b> The C2AOS-C2IS Modifications program updates the fielded C2AOS-C2IS baseline to remain interoperable, certified, supportable, and compliant through the development, integration, testing, fielding, and sustainment of new capabilities and upgrades. C2AOS-C2IS Modifications fine tunes capabilities for C2 of 4th and 5th Generation Fighter Platforms, maintains information assurance posture via cyber updates, and updates user interfaces as needed.</p> <p>This program, BA 07 PE 0207410F, project 675218, C2AOS-C2IS Modifications, is a new start.</p> <p><b>FY 2015 Accomplishments:</b> N/A</p> <p><b>FY 2016 Plans:</b> N/A</p> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Prioritize and work requirements for modification contract</li> <li>- Release RFP for C2AOS-C2IS Modifications contract</li> <li>- Conduct source selection to prepare for contract award</li> </ul>		0.000	0.000	0.300
<b>Title:</b> Test and Evaluation		1.398	2.032	1.195

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force	<b>Date:</b> February 2016
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<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675218 / Applications Development
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p><b>Description:</b> Test and Evaluation</p> <p><b>FY 2015 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>- Test and Evaluation continued to focus on Developmental Test and Evaluation (DT&amp;E) and Operational Test and Evaluation (OT&amp;E), including test planning, conduct and documentation review</li> <li>- Participated in multiple test events</li> </ul> <p><b>FY 2016 Plans:</b></p> <ul style="list-style-type: none"> <li>- Test and Evaluation will participate in multiple Warfighter Assessments (WA), Risk Reduction Testing (RRT) and DT events and regression testing</li> <li>- Prepare for DT and OT</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Conduct integration tests and RRTs</li> <li>- Conduct AXIS DT</li> <li>- Conduct combined DT of the five projects (ASMA-ASIS, RISC2, C2 of IAMD, ATOMS and AXIS)</li> <li>- Prepare for OT</li> </ul>			
<b>Accomplishments/Planned Programs Subtotals</b>	14.580	11.462	15.285

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

**Remarks**

**D. Acquisition Strategy**  
Projects will be awarded following full and open competition and will use an evolutionary acquisition strategy based on incremental development leveraging the C2 Applications and Information Services Development (C2AD) Indefinite Delivery/Indefinite Quantity (ID/IQ) contract. The Air Force Life Cycle Management Center, Operations C2 Division (AFLCMC/HBB) manages the integration of C2AOS-C2IS efforts into the AOC WS.

**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 2017 Air Force** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675218 / Applications Development
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<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Air Tasking Order Management System (ATOMS)	C/Various	Lockheed Martin : Colorado Springs, CO	0.000	3.898	Jun 2015	1.093	Mar 2016	2.520	Dec 2016	0.000		2.520	0.000	7.511	-
Request Information Services for Command and Control (RISC2)	C/Various	Science Applications International Corporation : McLean, VA	0.000	0.349	Dec 2014	0.900	Mar 2016	1.290	Jan 2017	0.000		1.290	0.000	2.539	-
Air Space Management Application-Air Space Information Service (ASMA-ASIS)	C/Various	Leidos, Inc. : Reston, VA	0.000	1.177	Feb 2015	0.800	Mar 2016	1.240	Dec 2016	0.000		1.240	0.000	3.217	-
Command and Control of Integrated Air and Missile Defense (C2 of IAMD)	C/Various	Lockheed Martin : Colorado Springs, CO	0.000	2.018	Jun 2015	0.860	Jun 2016	1.670	Dec 2016	0.000		1.670	0.000	4.548	-
Air Execution Information System (AXIS)	C/TBD	TBD : TBD	0.000	0.000		0.650	Jul 2016	4.518	Dec 2016	0.000		4.518	0.000	5.168	-
<b>Subtotal</b>			0.000	7.442		4.303		11.238		0.000		11.238	0.000	22.983	-

<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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 (Joint)	MIPR	Joint Interoperability Test Command : Fort Huachuca, AZ	0.000	0.043	Jan 2015	0.050	Mar 2016	0.000		0.000		0.000	0.000	0.093	-



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675218 / Applications Development

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
ATOMS CP 1 Rel 3 Development	■																											
ATOMS CP 1 Rel 3 Testing		■	■	■																								
ATOMS CP 1 Rel 4 Development																												
ATOMS CP 1 Rel 4 Testing																												
RISC2 CP 1 Development																												
RISC2 CP 1 Testing																												
C2 of IAMD Planner CP 2 Rel 2 Development																												
C2 of IAMD Planner CP 2 Rel 2 Testing																												
C2 of IAMD Planner CP 2 Rel 3 Development																												
C2 of IAMD Planner CP 2 Rel 3 Testing																												
ASMA-ASIS CP 2 Development																												
ASMA-ASIS CP 2 Testing																												
AXIS CP 3 Rel 1 Development																												
AXIS CP 3 Rel 1 Testing																												
C2AOS-C2IS Modifications program																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675218 / Applications Development

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ATOMS CP 1 Rel 3 Development	1	2015	1	2015
ATOMS CP 1 Rel 3 Testing	2	2015	4	2015
ATOMS CP 1 Rel 4 Development	4	2015	1	2018
ATOMS CP 1 Rel 4 Testing	3	2016	2	2018
RISC2 CP 1 Development	1	2015	1	2018
RISC2 CP 1 Testing	4	2015	2	2018
C2 of IAMD Planner CP 2 Rel 2 Development	1	2015	3	2015
C2 of IAMD Planner CP 2 Rel 2 Testing	3	2015	3	2015
C2 of IAMD Planner CP 2 Rel 3 Development	4	2015	1	2018
C2 of IAMD Planner CP 2 Rel 3 Testing	2	2016	2	2018
ASMA-ASIS CP 2 Development	2	2015	1	2018
ASMA-ASIS CP 2 Testing	2	2016	2	2018
AXIS CP 3 Rel 1 Development	4	2016	4	2017
AXIS CP 3 Rel 1 Testing	3	2017	1	2018
C2AOS-C2IS Modifications program	1	2017	4	2021

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**Exhibit R-2A, RDT&E Project Justification:** PB 2017 Air Force **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675220 / Unit Level
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
675220: <i>Unit Level</i>	0.000	8.756	7.232	7.666	0.000	7.666	7.816	7.963	4.147	8.254	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Project funds are used to develop, integrate, field, and maintain Unit Command and Control (UC2) as an evolving sequence of increasing software capabilities that support the execution of the air battle plan and the air tasking order message received from the AOC. UC2 operations software systems meet needs identified in the TBMCs Operational Requirements Document (ORD) (2001), the UC2 Baseline Systems Requirement Document (SRD) and the UC2 SRD 1067 Appendix, by providing both the scheduling and mission preparation activities at the wing, group and squadron level, and the capabilities to report and track the success of each mission and influence decisions on future air battle planning. UC2 is fielded to the Wing Operations Center (WOC), the Maintenance Operations Center (MOC), the Emergency Operations Center (EOC), Crisis Action Team (CAT), and many other work-centers. UC2 requirements will be identified using the system modification request process.

In FY17, core development activities will be to complete development of UC2 1.2 and begin development of UC2 1.3. UC2 1.2 will provide Wing Commanders with a modernized Common Operating Picture (COP) and allow better situational awareness throughout base command and control (C2) nodes. UC2 1.3 will allow UC2 to be accessed on mobile platforms. Additional FY17 activities will include fixing deficiencies coming out of the associated developmental tests (DT), maintaining information assurance (IA) posture and insuring integration and testing of UC2 interfaces with other applications.

Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

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.

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

	FY 2015	FY 2016	FY 2017
<b>Title:</b> Software Development	7.959	6.634	7.057
<b>Description:</b> UL/UC2 and UC2 capabilities development/integration.			
<b>FY 2015 Accomplishments:</b>			
- Continued development of UC2 Rel 1.1 which provides the majority of resource management modernization			
- Prepared for testing of UC2 Rel 1.1 and fielding of UC2 Rel 1.1			
<b>FY 2016 Plans:</b>			
- Complete development of UC2 Rel 1.1			
- Test and field UC2 Rel 1.1			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675220 / Unit Level

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
- Start development of UC2 Rel 1.2 which completes the resource management modernization, provides modernization of base situational awareness map, and adds/modernizes the interfaces  <b>FY 2017 Plans:</b> - Software Development: Complete development of UC2 Rel 1.2 - Test and field UC2 Rel 1.2 - Start development of UC2 Rel 1.3 which provides mobile device compatibility			
<b>Title:</b> Testing and Test Support  <b>Description:</b> Testing and test support activities.  <b>FY 2015 Accomplishments:</b> - UL/UC2 Inc 2 SP2 fielding completion - Completed testing and evaluation of UL/UC2 Inc 2 SP3 - Fielded UL/UC2 Inc 2 SP3 - Started early user testing on UC2 Rel 1.1 to support agile development  <b>FY 2016 Plans:</b> - Support UC2 Warfighter Assessments - Complete testing of UC2 Rel 1.1 - Start testing UC2 Rel 1.2  <b>FY 2017 Plans:</b> - Support UC2 Warfighter Assessments - Complete testing of UC2 Rel 1.2 - Start testing of UC2 Rel 1.3	0.797	0.598	0.609
<b>Accomplishments/Planned Programs Subtotals</b>	8.756	7.232	7.666

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF: BA03: Line Item # 834520: Theater Battle Management C2 System	3.825	3.079	3.293	0.000	3.293	3.352	3.410	3.472	3.535	Continuing	Continuing
<b>Remarks</b>											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / <i>Air &amp; Space Operations Center (AOC)</i>	<b>Project (Number/Name)</b> 675220 / <i>Unit Level</i>

**D. Acquisition Strategy**

Projects will be awarded following full and open competition and will use an evolutionary acquisition strategy based on incremental development while incorporating agile development and testing principals. The contracting strategy is Cost Plus Fixed Fee. The acquisition and contracting strategies were approved by Program Executive Officer, Battle Management, on 20 March, 2014.

**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 2017 Air Force												Date: February 2016				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
3600 / 7				PE 0207410F / Air & Space Operations Center (AOC)				675220 / Unit Level								
<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	
Increment Development	C/CPFF	Lockheed Martin : Hampton, VA	0.000	0.220	Jan 2015	0.000		0.000		0.000		0.000	0.000	0.220	13.861	
Third Party Integration	Various	Various : Various	0.000	0.065	Jan 2015	0.000		0.000		0.000		0.000	0.000	0.065	TBD	
Unit Command & Control (UC2)	C/CPFF	Leidos Inc. : Reston, VA	0.000	6.196	Feb 2015	5.307	Jan 2016	5.700	Jan 2017	0.000		5.700	7.000	24.203	10.530	
<b>Subtotal</b>			0.000	6.481		5.307		5.700		0.000		5.700	7.000	24.488	-	
<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-	
<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	PO	46TS : Eglin AFB, FL	0.000	0.797	Dec 2014	0.598	Dec 2015	0.609	Dec 2016	0.000		0.609	Continuing	Continuing	TBD	
<b>Subtotal</b>			0.000	0.797		0.598		0.609		0.000		0.609	-	-	-	
<b>Management Services (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	C/CPAF	MITRE : Bedford, MA	0.000	0.898	Oct 2014	0.633	Oct 2015	0.646	Oct 2016	0.000		0.646	Continuing	Continuing	TBD	
Program Management Administration	C/Various	Various : Hanscom AFB, MA	0.000	0.580	Oct 2014	0.694	Nov 2015	0.711	Nov 2016	0.000		0.711	Continuing	Continuing	TBD	
<b>Subtotal</b>			0.000	1.478		1.327		1.357		0.000		1.357	-	-	-	



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2017 Air Force</b>		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675220 / Unit Level

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Inc 2 SP2 Test + Fielding	█	█																										
UC2 Rel 1.1 Development	█	█	█	█																								
Inc 2 SP3 Test + Fielding				█	█	█	█																					
UC2 Rel 1.1 Testing					█	█																						
UC2 Rel 1.1 Fielding Decision (FEB 2016)						█																						
UC2 Rel 1.1 Fielding						█	█																					
UC2 Rel 1.2 Development						█	█	█																				
UC2 Rel 1.2 Testing									█	█																		
UC2 Rel 1.2 Fielding Decision (FEB 2017)										█																		
UC2 Rel 1.2 Fielding										█	█																	
UC2 Rel 1.3 Development										█	█	█																
UC2 Rel 1.3 Testing													█	█														
UC2 Rel 1.3 Fielding Decision (FEB 2018)														█														
UC2 Rel 1.3 Fielding														█	█													
UC2 Rel 1.4 Development														█	█	█												
UC2 Rel 1.4 Testing																█	█											
UC2 Rel 1.4 Fielding Decision (FEB 2019)																	█											
UC2 Rel 1.4 Fielding																	█	█										
UC2 Follow-on Contract (SEP 2019)																	█											
UC2 2.1																	█	█	█									
UC2 2.2																				█	█	█						
UC2 2.3																										█	█	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675220 / Unit Level

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Inc 2 SP2 Test + Fielding	1	2015	2	2015
UC2 Rel 1.1 Development	1	2015	1	2016
Inc 2 SP3 Test + Fielding	4	2015	3	2016
UC2 Rel 1.1 Testing	1	2016	2	2016
UC2 Rel 1.1 Fielding Decision (FEB 2016)	2	2016	2	2016
UC2 Rel 1.1 Fielding	2	2016	4	2016
UC2 Rel 1.2 Development	2	2016	1	2017
UC2 Rel 1.2 Testing	1	2017	2	2017
UC2 Rel 1.2 Fielding Decision (FEB 2017)	2	2017	2	2017
UC2 Rel 1.2 Fielding	2	2017	4	2017
UC2 Rel 1.3 Development	2	2017	1	2018
UC2 Rel 1.3 Testing	1	2018	2	2018
UC2 Rel 1.3 Fielding Decision (FEB 2018)	2	2018	2	2018
UC2 Rel 1.3 Fielding	2	2018	4	2018
UC2 Rel 1.4 Development	2	2018	1	2019
UC2 Rel 1.4 Testing	1	2019	2	2019
UC2 Rel 1.4 Fielding Decision (FEB 2019)	2	2019	2	2019
UC2 Rel 1.4 Fielding	2	2019	4	2019
UC2 Follow-on Contract (SEP 2019)	1	2019	1	2019
UC2 2.1	2	2019	1	2020
UC2 2.2	2	2020	1	2021
UC2 2.3	2	2021	4	2021

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)				<b>Project (Number/Name)</b> 675221 / Personnel Recovery Command and Control (PRC2)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
675221: <i>Personnel Recovery Command and Control (PRC2)</i>	0.000	2.325	2.408	2.392	0.000	2.392	2.438	2.484	2.530	2.575	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project funds operational development necessary to acquire, modify, and sustain a segment of Air Force's C2 capabilities and services associated with Personnel Recovery. The Personnel Recovery Command and Control (PRC2) program develops and delivers tools and services for planning, collaborating and managing search and rescue efforts, as well as disseminating related information to all personnel recovery mission coordinators across PR network. PRC2 provides an adaptive and networked system, delivering timely situational awareness information supporting personnel accountability and recovery mission management worldwide. PRC2 delivers a globally accessible, collaborative, interoperable and integrated set of capabilities to prevent, prepare for and respond to joint/coalition military personnel recovery activities, and civilian rescue missions. The Joint Personnel Recovery (JPR) Initial Capability Document (ICD) (2012) articulates capabilities needed for PRC2.

The system collects, stores and delivers personnel/identity biometric data, emergency locator beacon registrations, isolated personnel reports, evasion plans of action, incident reports and other information management capabilities. The information is used for predictive, preventive and personnel vulnerability analysis and assessment in support of Personnel Recovery across Department of Defense and other national and international entities.

Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

In FY17, PRMS modifications are required to develop and field PRMS 5.0 to enable the transition from the existing Web Forms implementation to a Model View Controller (MVC) implementation. This release will also address known Deficiency Reports (DR), incorporate user inputs, facilitate reducing maintenance costs to operate PRMS, updating the User Interface (UI) to a modern design, and increase overall efficiency. Additionally, FY17 PRMM modifications will Import/validate Isolated Personnel (IP) events/alerts, Import/validate Isolated Personnel (IP) events/alerts and enable case files for Defense Prisoner of War/Missing Personnel Office (DPMO) and Joint Personnel Recovery Agency (JPRA).

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.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> Personnel Recovery Command and Control (PRC2)	2.175	2.208	2.058
<b>Description:</b> PRC2 is developing and delivering tools and services for planning and managing search and rescue efforts, and disseminating related information.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675221 / Personnel Recovery Command and Control (PRC2)		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p><b>FY 2015 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>- Completed development and test of Personal Recovery Mission Software (PRMS) Virtualization 4.0 Development (formerly PRC2 Inc 4 Build 4.0.0 Virtualization Development).</li> <li>- Continued development of Personal Recovery Mission Manager (PRMM) Version 2 (formerly PRC2 Inc 5 Build 5.0.0 Mission Manager Inc 2) to create an environment for the AOC Personnel Recovery Coordinator Cell to access situational awareness data to recover isolated personnel</li> </ul> <p><b>FY 2016 Plans:</b></p> <ul style="list-style-type: none"> <li>- Complete development and field PRMS 4.0 (formerly PRC2 Inc 4 Build 4.0.0 Virtualization) and PRMM Version 2 (formerly PRC2 Inc 5 Build 5.0.0 Mission Manager Inc 2) capability</li> <li>- FY16 follow on activities focus on concept and risk reduction activities to support the development of Mission Manager in the Joint environment</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Will start development of PRMS 5.0 (formerly PRC2 Inc 4 Build 4.0.1 Maintenance Release)</li> <li>- Complete and field PRMM Version 2.0.0 Release (formerly PRC2 Inc 5 Build 5.0.1 Maintenance Release)</li> <li>- Will start development of PRMM Version 3.0 (formerly PRC2 Inc 6 Build 6.0.0 Mission Manager Inc 3)</li> </ul>				
<p><b>Title:</b> Test and Evaluation</p> <p><b>Description:</b> Test and Evaluation</p> <p><b>FY 2015 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>- Test and Evaluation focused on test activities to field PRMS Virtualization 4.0 (formerly PRC2 Inc 4 Build 4.0.0 Virtualization)</li> <li>- Follow on activities focused on finalizing test documentation to support the development of PRMM Version 2.0(formerly PRC2 Inc 5 Build 5.0.1 Maintenance Release)</li> </ul> <p><b>FY 2016 Plans:</b></p> <ul style="list-style-type: none"> <li>- Test and Evaluation focuses on test activities to field PRMS Version 4.0 (formerly PRC2 Inc 4 Build 4.0.1 and 4.0.2 Maintenance Releases) and PRMM Version 2.0(formerly PRC2 Inc 5 Build 5.0.1 Maintenance Release) capability</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Will test and evaluate PRMS 5.0 (formerly PRC2 Inc 4 Build 4.0.1 Maintenance Release) and start test and evaluate PRMM Version 3.0 Maintenance Release (formerly PRC2 Inc 5 Build 5.0.1 Maintenance Release)</li> </ul>		0.150	0.200	0.334
<b>Accomplishments/Planned Programs Subtotals</b>		2.325	2.408	2.392

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675221 / Personnel Recovery Command and Control (PRC2)

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

Line Item	FY 2015	FY 2016	FY 2017	FY 2017	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Cost To	
			Base	OCO	Total					Complete	Total Cost
• OPAF: BA03: Line Item # 834520: Theater Battle Management C2 System	0.995	1.255	1.252	0.000	1.252	1.274	1.297	1.320	1.344	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

PRC2 product support is provided to the program office by the 517th Software Maintenance Squadron (517 SMXS), Hill AFB Utah, in accordance with a memorandum of agreement and on a fee for service basis. This strategy to utilize the 517 SMXS for agile product development and sustainment was reviewed and approved by the Air Force Program Executive Officer for Battle Management, and implemented in mid-FY2014. The work done by the 517 SMXS includes, but is not limited to, modernization development, sustainment support services, and software maintenance of the PRC2 system.

**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 2017 Air Force												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 7				PE 0207410F / Air & Space Operations Center (AOC)				675221 / Personnel Recovery Command and Control (PRC2)							
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
PRC2 Follow on Development	PO	Ogden ALC : Hill AFB, UT	0.000	1.449	Dec 2014	1.118	Dec 2015	1.658	Dec 2016	0.000		1.658	Continuing	Continuing	TBD
<b>Subtotal</b>			0.000	1.449		1.118		1.658		0.000		1.658	-	-	-
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
			-	-		-		-		-		-	-	-	-
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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 and Evaluation.	PO	46th Test Squadron : Eglin AFB, FL	0.000	0.150	Oct 2014	0.200	Oct 2015	0.334	Oct 2016	0.000		0.334	Continuing	Continuing	TBD
<b>Subtotal</b>			0.000	0.150		0.200		0.334		0.000		0.334	-	-	-
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	0.318	Oct 2014	0.330	Oct 2015	0.000		0.000		0.000	0.000	0.648	-
Program Management Administration	C/Various	Various : Hill AFB, UT	0.000	0.408	Dec 2014	0.760	Dec 2015	0.400	Dec 2016	0.000		0.400	Continuing	Continuing	TBD
<b>Subtotal</b>			0.000	0.726		1.090		0.400		0.000		0.400	-	-	-



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675221 / Personnel Recovery Command and Control (PRC2)

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
PRMM Ver 2 Development (formerly PRC2 Inc 5 Build 5.0.0 MM Inc 2)	██████████																											
PRMM Ver 2 Testing (formerly PRC2 Inc 5 Build 5.0.0 MM Inc 2)																					████							
PRMM Ver 2 Fielding (formerly PRC2 Inc 5 Build 5.0.0 MM Inc 2)																												
PRMM Ver 3.0 Development (Formerly PRMM 3.0 Maintenance Release )													████████████████████															
PRMM Ver 3.0 Testing (Formerly PRMM 3.0 Maintenance Release Testing)																					████							
PRMM Ver 3.0 Fielding (Formerly PRMM 3.0 Maintenance Release Fielding)																					████							
PRMS 4.0 Development (formerly PRC2 Inc 4 Build 4.0.0)	██████████																											
PRMS 4.0 Testing (formerly PRC2 Inc 4 Build 4.0.0)																					████							
PRMS 4.0 Fielding (formerly PRC2 Inc 4 Build 4.0.0)																												
PRMS 5.0 Development													████████████████████															
PRMS 5.0 Testing																					████							
PRMS 5.0 Fielding																					████							
PRC 4.0 Enclave Development (Formerly embedded in PRMS 4.0)	██████████																											
PRC 4.0 Enclave Testing (Formerly embedded in PRMS 4.0)																					████							
PRC 4.0 Enclave Fielding (Formerly embedded in PRMS 4.0)																					████							

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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675221 / Personnel Recovery Command and Control (PRC2)
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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

PRC 5.0 Enclave Development																												
PRC 5.0 Enclave Testing																												
PRC 5.0 Enclave Fielding																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207410F / Air & Space Operations Center (AOC)	<b>Project (Number/Name)</b> 675221 / Personnel Recovery Command and Control (PRC2)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
PRMM Ver 2 Development (formerly PRC2 Inc 5 Build 5.0.0 MM Inc 2)	2	2015	3	2016
PRMM Ver 2 Testing (formerly PRC2 Inc 5 Build 5.0.0 MM Inc 2)	4	2016	4	2016
PRMM Ver 2 Fielding (formerly PRC2 Inc 5 Build 5.0.0 MM Inc 2)	4	2016	4	2016
PRMM Ver 3.0 Development (Formerly PRMM 3.0 Maintenance Release )	1	2017	4	2019
PRMM Ver 3.0 Testing (Formerly PRMM 3.0 Maintenance Release Testing)	1	2020	1	2020
PRMM Ver 3.0 Fielding (Formerly PRMM 3.0 Maintenance Release Fielding)	1	2020	1	2020
PRMS 4.0 Development (formerly PRC2 Inc 4 Build 4.0.0)	1	2015	2	2016
PRMS 4.0 Testing (formerly PRC2 Inc 4 Build 4.0.0)	3	2016	3	2016
PRMS 4.0 Fielding (formerly PRC2 Inc 4 Build 4.0.0)	3	2016	3	2016
PRMS 5.0 Development	4	2016	1	2021
PRMS 5.0 Testing	2	2021	2	2021
PRMS 5.0 Fielding	2	2021	2	2021
PRC 4.0 Enclave Development (Formerly embedded in PRMS 4.0)	2	2015	2	2016
PRC 4.0 Enclave Testing (Formerly embedded in PRMS 4.0)	3	2016	3	2016
PRC 4.0 Enclave Fielding (Formerly embedded in PRMS 4.0)	3	2016	3	2016
PRC 5.0 Enclave Development	4	2016	4	2019
PRC 5.0 Enclave Testing	1	2020	1	2020
PRC 5.0 Enclave Fielding	1	2020	1	2020