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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 / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0101113F / <i>B-52 SQUADRONS</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	-	41.072	74.520	78.267	0.000	78.267	140.285	149.417	148.934	174.635	Continuing	Continuing
675039: <i>B-52 System Improvements</i>	-	0.000	0.050	0.051	0.000	0.051	0.050	0.051	0.050	0.051	Continuing	Continuing
675041: <i>Bomber Tactical Data Link</i>	-	0.000	0.000	7.525	0.000	7.525	5.843	2.179	0.000	0.000	Continuing	Continuing
675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>	-	39.994	60.265	34.634	0.000	34.634	15.128	0.000	0.000	0.000	0.000	150.021
675050: <i>CONNECT</i>	-	1.078	11.225	13.672	0.000	13.672	18.723	10.517	0.815	0.000	Continuing	Continuing
675055: <i>GPS-IU</i>	-	0.000	2.980	6.916	0.000	6.916	17.713	11.785	0.000	0.000	Continuing	Continuing
675056: <i>B-52 Radar Modernization Program (RMP)</i>	-	0.000	0.000	4.653	0.000	4.653	55.067	114.297	145.393	171.909	Continuing	Continuing
675057: <i>B-52 Low Cost Improvement (LCI)*</i>	-	0.000	0.000	0.000	0.000	0.000	2.674	2.674	2.676	2.675	Continuing	Continuing
675058: <i>B-52 Weapon Sys Trainer Air Ref Training Upgrade</i>	-	0.000	0.000	4.875	0.000	4.875	13.202	7.914	0.000	0.000	Continuing	Continuing
675160: <i>B-52 Crypto Modernization</i>	-	0.000	0.000	5.941	0.000	5.941	11.885	0.000	0.000	0.000	Continuing	Continuing

\*This project's R-2a exhibit has been suppressed due to funding not beginning until after FY 2017

**Note**  
 This program, BA 07 PE 0101113F, project 675041, Bomber Tactical Data Link, is a new start.  
 This program, BA 07 PE 0101113F, project 675056, Radar Modernization Program, is a new start.  
 This program, BA 07 PE 0101113F, project 675058, B-52 Weapons Systems Trainer Air Refueling Training Upgrade, is a new start.  
 This program, BA 07 PE 0101113F, project 675160, B-52 Crypto Modernization, is a new start.

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<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 0101113F / B-52 SQUADRONS	
<b>A. Mission Description and Budget Item Justification</b>		
B-52 SYSTEM IMPROVEMENTS (BPAC 675039) A comprehensive project to ensure B-52 viability to perform current and future wartime missions. B-52 System Improvements will facilitate future capabilities, scope of work may involve development of Analysis of Alternatives (AoA), Studies and Analysis, Capability Development Documents (CDD) or any other analysis or documentation necessary to establish a program of record. Additionally, this project may include airborne integration experiments or demonstrations of emerging technologies.		
Trainers and Upgrades for Systems Improvements. In order to maintain currency with the latest aircraft configuration, the Systems Improvements project will update existing trainers or use computer-based training to add any new systems improvements functionality to meet user-training requirements, and update/maintain the SIL for the WSTs		
BOMBER TACTICAL DATA LINK (B-52 LINK 16) (BPAC 675041) The B-52 Tactical Data Link (TDL) provides low latency, jam-resistant situation awareness and command and control communications needed to support in-theater operations and missions. This project will consist of integrating an existing off-the-shelf Link 16 terminal into the B-52. Integration includes Group A wiring, rack and antenna, and the Group B terminal Line Replaceable Unit (LRU). The TDL terminal will be fully integrated with CONECT. This Line-Of-Sight (LOS) Link 16 capability allows the warfighter to maintain situational awareness, avoid threats and employ an array of weapons.		
Trainers and Upgrades for Bomber Tactical Data Link (TDL) In order to maintain currency with the latest aircraft configuration, the TDL project will update existing trainers or use computer-based training to add TDL functionality to meet user-training requirements, and update/maintain the SIL for the WSTs		
B-52 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU) (BPAC 675048) The 1760 IWBU integrates MIL-STD 1760 weapons capability into the bomb bay on 78 B-52H aircraft, which includes two Ground Instructional Training Aircraft (GITA), utilizing 44 Common Strategic Rotary Launcher (CSRLs) converted into Conventional Rotary Launchers (CRLs), where three of the CRLs will be modified under Engineering Manufacturing and Development (EMD) for test purposes. This requirement's Capability Development Document (CDD) was validated by the AFROCC in June 2013. The 1760 IWBU project provides internal and external carriage for eight MIL STD 1760 weapons and consists of two sub increments: 1.1 and 1.2.		
Trainers and Upgrades for 1760 IWBU In order to maintain currency with the latest aircraft configuration, the 1760 IWBU project will update existing trainers or use computer-based training to add 1760 IWBU functionality to meet user-training requirements, and update/maintain the SIL for the WSTs		
B-52 COMBAT NETWORK COMMUNICATIONS TECHNOLOGY (CONECT) (BPAC 675050) The B-52 CONECT acquisition project supports nuclear and conventional operations by upgrading the B-52 fleet with tactical datalink and voice communications capabilities along with improved threat and situational awareness to support participation in network centric operations. The CONECT upgrade includes new Multi-Functional Color Displays (MFCDs) and a digital interphone system, which will survive and function through the nuclear environment to enhance crew interaction and		

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<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 0101113F / B-52 SQUADRONS	
<p>situational awareness. To enable net centric operations, the CONECT upgrade integrates: on-board client/server architecture supporting distributed processing with independent control functions; UHF Beyond Line-Of-Sight (BLOS) Joint Range Extension (JRE) capability via ARC-210 Warrior radio to exchange J-Series messaging within theater; Intelligence Broadcast Receiver (IBR); limited Internet Protocol (IP) based UHF BLOS link supporting voice, e-mail and file transfers; and Improved Data Modem (IDM)-based digital Variable Message Format (VMF) datalink to significantly enhance close air support (CAS) missions. This integrated suite will provide the B-52 fleet with a machine-to-machine data transfer capability supporting aircraft re-tasking and retargeting of Conventional Air Launched Cruise Missile (CALCM) and J-series weapons across the range of B-52 military operations and missions. This requirement's Capability Production Document (CPD) was validated by the Air Force Requirement's Oversight Council (AFROC) on 16 September 2008.</p> <p><b>Trainers and Upgrades for CONECT</b> In order to maintain currency with the latest aircraft configuration, the CONECT project will update existing trainers or use computer-based training to add CONECT functionality to meet user-training requirements, and update/maintain the SIL for the WSTs.</p> <p><b>GPS-INTERFACE UNIT (GPS-IU) REPLACEMENT (BPAC 675055)</b> Global Positioning System (GPS) Interface Unit (IU) Upgrade will replace three circuit card assemblies (CCAs) in the GPS-IU, as well as the backplane (to integrate the new and old CCAs): the Central Processing Unit/1553, the power supply CCA, and the video graphics card.</p> <p><b>Trainers and Upgrades for GPS-Interface Unit</b> In order to maintain currency with the latest aircraft configuration, the GPS-IU project will update existing trainers or use computer-based training to add GPS-IU functionality to meet user-training requirements, and update/maintain the SIL for the WSTs</p> <p><b>RADAR MODERNIZATION PROGRAM (BPAC 675056)</b> Support nuclear and conventional operations by replacing the current APQ-166 radar on the B-52H aircraft. The APQ-166 is increasingly difficult to support due to diminished manufacturing sources and obsolescent technologies; the average reliability rate places long-duration missions at risk. This replacement program will encompass the radar antenna array and up to 14 individual LRUs that comprise the entire radar system. Development and production of new systems to replace the legacy equipment; to be installed on all 76 B-52H aircraft. Radar Modernization Program (RMP) will take advantage of advances in technology and on-going development efforts to acquire, to the maximum extent possible, off-the-shelf components and integrate them into the B-52. The use of new technology will increase reliability of the radar system and allows the operational command to fully utilize the capabilities of the B-52H aircraft to employ an array of weapons and to perform mission-essential navigation and weather avoidance functions.</p> <p><b>Trainers and Upgrades for Radar Modernization Program</b> In order to maintain currency with the latest aircraft configuration, the Radar Modernization project will update existing trainers or use computer-based training to add Radar Modernization functionality to meet user-training requirements, and update/maintain the SIL for the WSTs</p> <p><b>LOW COST IMPROVEMENTS (BPAC 675057)</b></p>		

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<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 0101113F / B-52 SQUADRONS	
<p>Project to facilitate future B-52 capabilities. Scope of work may involve, but is not limited to, Avionics, Navigation, Situational Awareness (SA), Weapons/Targeting Pod Integration, Communications, Flight Systems, Nuclear Systems, and Electronic Flight Bags</p> <p>Trainers and Upgrades for Low Cost Improvements In order to maintain currency with the latest aircraft configuration, the Low Cost Improvements project will update existing trainers or use computer-based training to add Low Cost Improvements functionality to meet user-training requirements, and update/maintain the SIL for the WSTs</p> <p>WEAPON SYSTEMS TRAINER AIR REFUELING TRAINER UPGRADE (BPAC 675058) The principal mission of the B-52 Training Systems program is to ensure high fidelity simulators and training systems are available for aircrew members to support credible training, maintain proficiencies, and increase skill levels. B-52 Aircrew Training Devices simulates the necessary visual, motion, and audible cues to provide ground training for aircrew members. The B-52 Weapon System Trainer (WST) Air Refueling Upgrade is a comprehensive project that will allow B-52 Aircrew to accomplish credible air refueling training in the simulator, which minimizes the requirement for on-aircraft air refueling training. To facilitate this capability, scope of work will involve development of Analysis of Alternatives (AoA), Studies and Analysis, Capability Development Documents (CDD) or any other Analysis or documentation necessary to establish a program of record.</p> <p>B-52 CRYPTO MODERNIZATION (BPAC 675160) Upgrades aircraft with Mobile User Objective System (MUOS) capable ARC-210 radio systems to prevent loss of BLOS voice and data communications capability. As MUOS legacy channels are turned on, existing satellites will be removed from service. B-52 CONECT is at risk of losing its File Transfer Protocol (FTP), email, Beyond Line of Site (BLOS) voice, and BLOS data link communications without this modernization effort.</p> <p>Trainers and Upgrades for Crypto Modernization In order to maintain currency with the latest aircraft configuration, the Crypto Modernization project will update existing trainers or use computer-based training to add CONECT functionality to meet user-training requirements, and update/maintain the SIL for the WSTs</p> <p>The FY2017 funding request was reduced by \$16.462 million to account for the availability of prior year execution balances.</p> <p>BA7- This project 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.</p>		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 Air Force	<b>Date:</b> February 2016
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<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 0101113F / B-52 SQUADRONS
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<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	49.457	74.520	48.849	0.000	48.849
Current President's Budget	41.072	74.520	78.267	0.000	78.267
Total Adjustments	-8.385	0.000	29.418	0.000	29.418
• 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	-6.700	0.000			
• SBIR/STTR Transfer	-1.685	0.000			
• Other Adjustments	0.000	0.000	29.418	0.000	29.418

**Change Summary Explanation**

FY15: reduction of -\$8.385M consists of: -1.685M SBIR; -\$6.7M reprogramming for higher AF priorities.

FY17: increase of +\$29.418M consists of: +\$7.525 (Tactical Data Link); +\$4.653 (Radar Modernization); +\$5.941 (Crypto Modernization); +\$4.875 (Weapon System Trainers Air Refueling); +\$0.867 (CONNECT); +\$8.564 (1760 IWBU) for JASSM-ER acceleration; -\$3.005 (GPS-IU) for higher Air Force priorities.

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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 0101113F / B-52 SQUADRONS				<b>Project (Number/Name)</b> 675039 / B-52 System Improvements			
<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>
675039: B-52 System Improvements	-	0.000	0.050	0.051	0.000	0.051	0.050	0.051	0.050	0.051	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

B-52 System Improvements - A comprehensive project to ensure B-52 viability to perform current and future wartime missions. To facilitate future capabilities, scope of work may involve development of Analysis of Alternatives (AoA), Studies and Analysis, Capability Development Documents (CDD) or any other analysis or paper work necessary to establish a program of record. Additionally, this project may lead to airborne integration experiments or demonstrations of emerging technologies.

BA7- This project 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 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> B-52 System Improvements	0.000	0.050	0.051	0.000	0.051
<b>Description:</b> Initiate Analysis of Alternatives, modeling & simulation, testing, and demonstration, including but not limited to: Studies of existing and planned avionics, communications/navigation, electrical, weapons, flight, and nuclear-related aircraft systems and subsystems to support the future viability of the B-52 fleet.					
<b>FY 2015 Accomplishments:</b> N/A					
<b>FY 2016 Plans:</b> Initiate Analysis of Alternatives, modeling & simulation, testing, and demonstration, including but not limited to: Studies of existing and planned avionics, communications/navigation, electrical, weapons, flight, and nuclear-related aircraft systems and subsystems to support the future viability of the B-52 fleet.					
<b>FY 2017 Base Plans:</b> Continue Analysis of Alternatives, modeling & simulation, testing, and demonstration, including but not limited to: Studies of existing and planned avionics, communications/navigation, electrical, weapons, flight, and nuclear-related aircraft systems and subsystems to support the future viability of the B-52 fleet.					
<b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.050	0.051	0.000	0.051

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675039 / B-52 System Improvements
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**C. Other Program Funding Summary (\$ in Millions)**

<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>
• APAF: BA05: Line item # B05200: <i>Arms Control Implementation</i>	0.933	0.099	0.196	0.000	0.196	0.000	0.000	0.000	0.000	-	-

**Remarks**

**D. Acquisition Strategy**

Analyses of Alternatives will be conducted by various AFLCMC organizations and AFGSC.

**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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675039 / B-52 System Improvements
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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			
System Improvements Studies and Analysis	TBD	TBD : TBD	-	0.000		0.050	Mar 2016	0.051	Jan 2017	0.000		0.051	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.050		0.051		0.000		0.051	-	-	-

<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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

<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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

			Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			-	0.000	0.050	0.051	0.000	0.051	-	-	-

**Remarks**

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675039 / B-52 System Improvements
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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

System Improvements Studies and Analysis, etc.	
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**Exhibit R-4A, RDT&E Schedule Details:** PB 2017 Air Force **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0101113F / <i>B-52 SQUADRONS</i>	<b>Project (Number/Name)</b> 675039 / <i>B-52 System Improvements</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Improvements Studies and Analysis, etc.	2	2016	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 0101113F / B-52 SQUADRONS				<b>Project (Number/Name)</b> 675041 / Bomber Tactical Data Link			
<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>
675041: Bomber Tactical Data Link	-	0.000	0.000	7.525	0.000	7.525	5.843	2.179	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**  
This program, BA 07 PE 0101113F, project 675041, Bomber Tactical Data Link, is a new start.

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

The B-52 Combat Network Communications Technology (CONNECT) Capability Development Document (CDD), dated 18 March 2004, captures the requirements for a Tactical Data Link (TDL) capability on the B-52. The B-52 TDL, provides low latency, jam-resistant situation awareness and command and control communications needed to support in-theater operations and missions. This project will consist of integrating an existing off-the-shelf Link 16 terminal into the B-52. Integration includes Group A wiring, rack and antenna, and the Group B terminal Line Replaceable Unit (LRU). The TDL terminal will be fully integrated with CONNECT. This Line-Of-Sight (LOS) Link 16 capability allows the warfighter to utilize this capability by maintaining situational awareness, avoiding threats and employing an array of weapons.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> Bomber Tactical Data Link	0.000	0.000	7.525	0.000	7.525
<b>Description:</b> The TDL will provide low latency, jam-resistant situation awareness and command/control needed to support in-theater operations/missions via a line-of-sight (LOS) Link 16 capability. The program will consist of integrating an existing off-the-shelf Link 16 terminal into the B-52. This will include Group A wiring, rack and antennae and the Group B terminal LRU. The terminals will be installed inside the fuselage of the aircraft and two external antennae will be mounted on the top and bottom of the fuselage. The TDL terminal and LOS capability will be integrated with the rest of the CONNECT subsystem.					
<b>FY 2015 Accomplishments:</b> N/A					
<b>FY 2016 Plans:</b> N/A					
<b>FY 2017 Base Plans:</b>					

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675041 / Bomber Tactical Data Link
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Establish/stand up program office; requirements development, refinement, and validation; conduct technology maturation and risk reduction efforts (prototyping and operational evaluations, studies of cooling, electromagnetic compatibility, and CONECT integration), and begin TMRR phase.  <i>FY 2017 OCO Plans:</i> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.000	7.525	0.000	7.525

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF: BA05: Line Item # B05200: B-52	0.000	0.000	0.000	0.000	0.000	0.000	8.630	17.268	17.772	0.000	44.000

**Remarks**

**D. Acquisition Strategy**

B-52 Link 16 MDD prime contract is anticipated to be sole source to Boeing Defense, Space & Security (DSS), Oklahoma City, OK. Boeing designs, develops, integrates, tests, and procures necessary equipment from their subcontractors; develops engineering drawings, logistics and technical data.

**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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675041 / Bomber Tactical Data Link
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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			
Link 16 TMRR - Wright Patt	SS/ Various	Boeing : Oklahoma City, OK	-	0.000		0.000		6.025	Aug 2017	0.000		6.025	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		6.025		0.000		6.025	-	-	-

<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			
Other Government Cost (OGC)	Various	Various : TBD	-	0.000		0.000		1.000	Mar 2017	0.000		1.000	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		1.000		0.000		1.000	-	-	-

<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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

<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			
A&AS, Travel, Centralized Support	Various	Various : TBD	-	0.000		0.000		0.500	Jan 2017	0.000		0.500	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		0.500		0.000		0.500	-	-	-

			Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			-	0.000	0.000	7.525	0.000	7.525	-	-	-

**Remarks**

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675041 / Bomber Tactical Data Link
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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
MDD									■																			
Milestone A											■																	
TMRR													■	■	■	■												
Milestone B															■													
EMD																	■	■	■	■								
Milestone C																											■	
LRIP																												■

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

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675041 / Bomber Tactical Data Link
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MDD	1	2017	1	2017
Milestone A	3	2017	3	2017
TMRR	4	2017	3	2018
Milestone B	3	2018	3	2018
EMD	4	2018	3	2020
Milestone C	3	2020	3	2020
LRIP	4	2020	2	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 0101113F / B-52 SQUADRONS				<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)			
<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>
675048: 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)	-	39.994	60.265	34.634	0.000	34.634	15.128	0.000	0.000	0.000	0.000	150.021
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

MIL-STD-1760 Internal Weapons Bay Upgrade (IWBU) requires the integration of the 1760 weapons capability into the bomb bay on 78 B-52H aircraft. It includes two Ground Instructional Training Aircraft (GITA),utilizing 44 Common Strategic Rotary Launchers (CSRLs) converted into Conventional Rotary Launchers (CRLs), where three of the CRLs will be modified under Engineering Manufacturing and Development (EMD) for test purposes. The 1760 IWBU project is segmented into increments. Increment 1.0 provides internal and external carriage and consists of two sub increments 1.1 and 1.2. This requirement's Capability Development Document (CDD) was validated by the Air Force Requirements Oversight Council (AFROC) in June 2013. The 1760 Capability Production Document was validated by the AFROC in February 2015.

Increment 1.1

Increment 1.1 develops the capability for internal carriage of eight Joint Direct Attack Munitions (JDAM) and variants, to include Laser JDAM (L/JDAM), on a rotary launcher. This increment also develops the capability for external carriage for 16 L/JDAM. The CRL Hardware modification consists of Group A (equipment racks and electrical wiring) and Group B (one Survivability/Vulnerability (SV) junction box and one Integrated Weapons Interface Unit (IWIU) per CRL). The IWIU Line Replaceable Unit (LRU) was previously developed under the Advanced Weapons Integration (AWI) project. No CSRL replacements will be required as a result of this project. Increment 1.1 completed Preliminary Design Review in February 2013 and awarded an EMD contract in September 2013. Critical Design Review (CDR) was conducted in October 2013. An Integrated Baseline Review (IBR) was conducted in February 2014, validating cost and schedule baselines. Milestone C was conducted in April 2015. Development/Operational Flight Test was completed November 2015 and a Full Rate Production Decision was held November 2015.

Aircraft Hardware Development: None

Software Development: Consists of modifying aircraft Operational Flight Program (OFF) software, JDAM Stores Management Overlays (SMO) and ground based Joint Mission Planning System (JMPS).

CRL Hardware Development: Consists of modifying USSTRATCOM provided CSRLs by replacing nuclear mission equipment with Group B hardware and wiring interfaces. Group A includes equipment racks and electrical wiring; Group B includes one Survivability/Vulnerability (SV) junction box and one IWIU per CRL. The IWIU LRU was previously developed under the AWI project and work was previously accomplished during a 2005 demonstration and developed using 2006 and 2007 Congressional Add funding. Three CSRLs modified using RDT&E funds.

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)
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Support Equipment: Consists of developing software and 38 rotary launcher cable adapter sets on existing Multi-Use System Tester Armament Next Generation (MUSTANG) testers to interface with the CRL.

Increment 1.2

Increment 1.2 develops the capability for internal carriage of eight Joint Air-to-Surface Standoff Missiles (JASSM) and its variants, to include JASSM Extended Range (JASSM-ER), and eight Miniature Air Launched Decoys (MALD) and its variants, to include MALD Jammer (MALD-J). This increment also develops the capability for external carriage for 12 JASSM-ER.

Upon completion of JASSM/ER software development, an interim capability providing for carriage and deployment of no less than 16 JASSM/ER (4 bay, 12 external) is planned. A limited DT/OT will validate this capability in advance of hardware design completion and validation.

Aircraft Hardware Development: Development of Group A wiring and circuit breakers to supply additional power to the CRL per JASSM-ER requirements, for all 76 operational B-52H aircraft, and two Ground Instructional Training Aircraft.

Software Development: Development of a modification to existing aircraft SMO and weapon (JASSM and MALD) OFP software to allow for internal and external carriage and modification to ground based JMPS.

CRL Hardware Development: Develops Group A associated interface hardware and two Group B LRUs (power supply and power distribution box). Three CRLs will be modified using RDT&E funds.

Support Equipment: Consists of developing software updates to the existing MUSTANG to interface with the CRL and the development of additional ground handling support equipment.

BA7- This project 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 Base	FY 2017 OCO	FY 2017 Total
<b>Title:</b> 1760 IWBU Inc 1.1	10.276	0.000	0.000	0.000	0.000
<b>Description:</b> Provides internal J-series weapons capability through modification of CSRLs with IWIUs and upgraded weapon management software.					
<b>FY 2015 Accomplishments:</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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<p>Concluded Increment 1.1 development: Concluded SEEK EAGLE safe separation analysis. Concluded ground and initiate flight testing of CRL prototype and JDAM SMO. Concluded B-52 JMPS and Trainer/Ground Maintenance Computer Program (GMCP) software. Finalized drawings for CRL, and test support equipment modification kits to support Milestone C activity. Concluded development of technical orders in preparation for kit-proof. Concluded modification of three prototype CRLs.</p> <p><b>FY 2016 Plans:</b> N/A</p> <p><b>FY 2017 Base Plans:</b> N/A</p> <p><b>FY 2017 OCO Plans:</b> N/A</p>					
<p><b>Title:</b> 1760 IWBU Inc 1.2</p> <p><b>Description:</b> Provides internal J-series weapons capability through modification of CSRLs with IWIUs, aircraft hardware modifications, and upgraded weapon management software. Upon completion of JASSM software coding yet prior to full 1760 hardware design completion, an interim JASSM/ER capability will be validated thru DT/OT in FY17.</p> <p><b>FY 2015 Accomplishments:</b> Implemented Increment 1.2 development: Entered Technology Maturation &amp; Risk Reduction phase (TMRR). Awarded Tech Maturation &amp; Risk Reduction and Weapon Operational Flight Program Software contracts, including test assets. Initiated SEEK Eagle safe separation analysis. Began designing and coding of software. Initiated test planning efforts.</p> <p><b>FY 2016 Plans:</b> Continue Increment 1.2 development: Completes TMRR phase in support of Milestone B decision and awards Engineering and Manufacturing Development Option. Continue weapon software modification and provision remaining test assets. Continue SEEK EAGLE safe separation analysis. Conduct ground testing of JASSM SMO. Finalize test planning and technical orders in preparation for Interim JASSM/ER Capability validation. Initiate modification of three prototype aircraft and three prototype CRLs.</p> <p><b>FY 2017 Base Plans:</b></p>	29.718	60.265	34.634	0.000	34.634

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)

<b>B. Accomplishments/Planned Programs (\$ 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>
Continue Increment 1.2 development: Continues Engineering and Manufacturing Development phase in support of Milestone C decision. Continue weapon software modification and Developmental/Operational Test efforts. Continue SEEK EAGLE safe separation analysis. Concludes modification of three prototype aircraft and three prototype CRLs. Finalize test planning and technical orders in preparation for full 1.2 Capability validation.  <b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	39.994	60.265	34.634	0.000	34.634

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF: BA05: Line Item # B05200: <i>B-52 Modifications</i>	7.486	14.472	3.691	0.000	3.691	29.586	21.675	0.000	0.669	-	-
• APAF: BA06: Line Item # 000999: <i>Initial Spares/Repair Parts</i>	0.449	1.051	0.944	0.000	0.944	0.813	0.171	0.020	0.849	-	-
• APAF: BA07: Line Item # B05200: <i>Depot Activation</i>	0.000	3.960	0.000	0.000	0.000	0.000	0.992	0.000	0.000	-	-

**Remarks**

**D. Acquisition Strategy**  
The 1760 Internal Weapons Bay Upgrade project will acquire software development and hardware design via a sole-source contract to Boeing Defense, Space & Security (DSS), Oklahoma City, OK. Deliverables include an updated J-series weapon SMOs (software), three prototype modified CSRLs, six Low Rate Initial Production (LRIP) assets, logistics support, ground and flight test support, and engineering drawings. The Increment 1.1 program procured the CRL modification kits via sole source to Boeing DSS, OKC for LRIP and Full Rate Production (FRP) and LRIP Installations, and FRP Installs of the kits will be completed via Contract Field Teams (CFTs). The Increment 1.2 program plans to competitively procure the CRL modification kits for full rate production, and installs of the kits are planned to be completed via CFT.

Increment 1.1 consists of internal carriage of eight JDAM and variants, to include LJDAM, on a rotary launcher. This increment also develops the capability for external carriage for 16 LJDAM. The CRL Hardware modification consists of Group A (equipment racks and electrical wiring) and Group B (one SV junction box and one IWIU per CRL).

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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 0101113F / <i>B-52 SQUADRONS</i>	<b>Project (Number/Name)</b> 675048 / <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>

Increment 1.2 develops the capability for internal carriage of eight JASSM and its variants, to include JASSM-ER, or eight MALD and its variants, to include MALD-J. This increment also develops the capability for external carriage for 12 JASSM-ER. Upon completion of JASSM/ER OFP and SMO software coding, an interim capability of no less than 16 JASSM/ER carriage will be validated thru DT/OT in FY17.

**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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)
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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			
1.1 1760 IWBU Production Development	Various	Boeing : OKC, OK	-	6.821	Nov 2014	0.000		0.000		0.000		0.000	Continuing	Continuing	-
1.2 1760 IWBU Production Development	Various	Boeing : OKC, OK	-	16.446	Feb 2015	32.482	Feb 2016	18.890	Feb 2017	0.000		18.890	Continuing	Continuing	-
1.1 1760 IWBU Mission Planning Development	WR	557 SMXS : Tinker AFB, OK	-	0.044	Jan 2015	0.000		0.000		0.000		0.000	Continuing	Continuing	-
1.2 1760 IWBU MALD OFP	SS/FFP	Raytheon : Tuson, AZ	-	4.358	Mar 2015	2.705	Feb 2016	0.033	Feb 2017	0.000		0.033	Continuing	Continuing	-
1.2 1760 IWBU JASSM OFP	SS/FFP	Lockheed : Orlando, FL	-	3.042	Mar 2015	2.900	Feb 2016	3.377	Feb 2017	0.000		3.377	Continuing	Continuing	-
<b>Subtotal</b>			-	30.711		38.087		22.300		0.000		22.300	-	-	-

<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			
1.1 1760 IWBU Government Test	PO	419 FLTS : Edwards AFB, CA	-	1.306	May 2015	0.000		0.000		0.000		0.000	Continuing	Continuing	-
1.2 1760 IWBU Government Test	PO	419 FLTS : Edwards AFB, CA	-	0.175	Feb 2015	0.988	May 2016	8.020	Jan 2017	0.000		8.020	Continuing	Continuing	-
1.1 1760 IWBU Trainer Software	Allot	AFLCMC : Wright Patterson AFB, OH	-	1.400	Jan 2016	0.000		0.000		0.000		0.000	Continuing	Continuing	-
1.2 1760 IWBU Trainer Software	Allot	AFLCMC : Wright Patterson AFB, OH	-	0.000		0.626	Mar 2016	1.590	Jan 2017	0.000		1.590	Continuing	Continuing	-

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)
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<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			
1.2 1760 IWBU JASSM Test Assets	SS/FFP	Lockheed : Orlando, FL	-	4.600	Mar 2015	17.830	Dec 2015	0.000		0.000		0.000	Continuing	Continuing	-
1.2 1760 IWBU MALD Test Assets	SS/FFP	Raytheon : Tuson, AZ	-	0.000		1.510	Jan 2016	0.000		0.000		0.000	Continuing	Continuing	-
<b>Subtotal</b>			-	7.481		20.954		9.610		0.000		9.610	-	-	-

<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			
1.1 1760 IWBU Program Management Administration A&AS, Travel	Various	AFCLCMC : Tinker AFB, OK	-	0.705	Oct 2015	0.000		0.000		0.000		0.000	Continuing	Continuing	-
1.2 1760 IWBU Program Management Administration, A&AS, Travel	Various	AFCLCMC : Tinker AFB, OK	-	1.097	Feb 2015	1.224	Nov 2015	2.724	Jan 2017	0.000		2.724	Continuing	Continuing	-
<b>Subtotal</b>			-	1.802		1.224		2.724		0.000		2.724	-	-	-

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract	
<b>Project Cost Totals</b>		-	39.994	60.265	34.634	0.000	34.634	-	-	-

**Remarks**

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)

	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
1760 IWBU Inc. 1.1 Milestone C (Apr 15)			■																									
1760 IWBU Inc. 1.1 RAA (Dec 15)							■																					
1760 IWBU Inc. 1.2 TMRR			■	■	■	■	■	■																				
1760 IWBU Inc. 1.2 Milestone B (Dec 15)							■																					
1760 IWBU Inc. 1.2 EMD							■	■	■	■	■	■	■	■	■	■												
1760 IWBU Inc. 1.2 Milestone C (Oct 17)															■													
1760 IWBU Inc. 1.2 RAA (Oct 18)																											■	

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675048 / 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
1760 IWBU Inc. 1.1 Milestone C (Apr 15)	3	2015	3	2015
1760 IWBU Inc. 1.1 RAA (Dec 15)	1	2016	1	2016
1760 IWBU Inc. 1.2 TMRR	3	2015	2	2016
1760 IWBU Inc. 1.2 Milestone B (Dec 15)	1	2016	1	2016
1760 IWBU Inc. 1.2 EMD	2	2016	3	2018
1760 IWBU Inc. 1.2 Milestone C (Oct 17)	1	2018	1	2018
1760 IWBU Inc. 1.2 RAA (Oct 18)	1	2019	1	2019

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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 0101113F / B-52 SQUADRONS				<b>Project (Number/Name)</b> 675050 / CONECT			
<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>
675050: CONECT	-	1.078	11.225	13.672	0.000	13.672	18.723	10.517	0.815	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The B-52 Combat Network Communications Technology (CONECT) acquisition project supports nuclear and conventional operations by upgrading the B-52 fleet with tactical datalink and voice communications capabilities, along with improved threat and situational awareness to support participation in network centric operations. The CONECT upgrade includes new Multi-Functional Color Displays (MFCDs); a digital interphone system, on-board client/server architecture supporting distributed processing with independent control functions; Ultra High Frequency (UHF) Beyond Line-Of-Sight (BLOS) Joint Range Extension (JRE) capability Intelligence Broadcast Receiver (IBR); limited Internet Protocol (IP)-based UHF BLOS link supporting voice, e-mail and file transfers; and Improved Data Modem (IDM)-based digital Variable Message Format (VMF) datalink. As the CONECT upgrade brings additional capability to the B-52, emerging communication and security requirements (upgrades to IBR, JRE messages, crypto modernization, etc.) and aircraft upgrades (1760 Internal Weapons Bay Upgrade, Mode S/Mode 5 Identification, Friend or Foe (IFF), etc.) may require study for potential impacts to CONECT.

In order to maintain currency with the latest aircraft configuration, the CONECT project will update existing trainers, using stimulate/simulate/computer-based training or a mix, to add CONECT functionality to meet user-training requirements, and update/maintain the system integration laboratory (SIL) for the Weapon System Trainers (WST). In order to assist PDM during after-install checkout and Barksdale and Minot units with maintenance checkout and operational training, a CONECT ground station is being developed.

This project 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 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> CONECT	1.078	11.225	13.672	0.000	13.672
<b>Description:</b> Diminishing Manufacturing Source (DMS) redesign development and test effort. Continued engineering design of CONECT capability into the B-52 training systems. Began incorporating changes required due to updates in Government Furnished Equipment (GFE) and crypto modernization requirements. Incorporated/integrated CONECT with recurring updates of the B-52 software baseline. As the CONECT upgrade brings additional capability to the B-52, emerging communication and security requirements (upgrades to the IBR, JRE messages, crypto modernization, etc.) and aircraft upgrades (1760 Internal Weapons Bay Upgrade, Mode S/Mode 5 IFF, etc.) may require study for potential impacts to CONECT. CONECT will update the existing trainers and/or use computer-based training to add CONECT functionality to meet user-training requirements, and update/maintain the System Integration Lab (SIL) and for the WST. A CONECT ground station, is required in order to assist PDM during after-install checkout, and provide Barksdale/Minot units with maintenance checkout and operational training capability.					

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675050 / CONECT
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
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***FY 2015 Accomplishments:***  
 Completed DMS redesign development and test effort. Prepared for and began source selection for the development of CONECT capability into the B-52 training systems. Incorporated changes required due to updates in GFE and crypto modernization requirements. The CONECT Desktop Training Tool (CDTT) will begin development to provide an interim training capability until the WST is available. Completed the integration of the Air Force Tactical Receiver System Version 2 (AFTRS R2) crypto modernization and began work on the integration of Version 3 of AFTRS.

***FY 2016 Plans:***  
 Completed ground and flight test of the AFTRS R3. Complete source selection for the CONECT WST. Begin engineering design of CONECT capability into the B-52 training systems and SIL development through simulation/computer based training or a mix. SIL will be moved to the prime contract upon selection of the prime. Incorporate changes required due to updates in GFE and crypto modernization requirements. Incorporate/integrate CONECT with recurring updates of the B-52 software baseline. As the CONECT upgrade brings additional capability to the B-52, emerging communication and security requirements (upgrades to the IBR, JRE messages, crypto modernization, etc) and aircraft upgrades (1760 Internal Weapons Bay Upgrade, Mode S/Mode 5 IFF, etc) may require study for potential impacts to CONECT. The CONECT Desktop Training Tool (CDTT) will complete development and begin deployment to the user as an interim training capability until the WST is available. Began planning, development of an acquisition strategy,, and possibly the engineering design of the CONECT ground station, required in order to assist PDM during after-install checkout, and provide Barksdale/Minot units with maintenance checkout and operational training capability.

***FY 2017 Base Plans:***  
 Continuing engineering design of CONECT capability into the B-52 training systems. Incorporate changes required due to updates in GFE and crypto modernization requirements. Incorporate/integrate CONECT with recurring updates of the B-52 software baseline. As the CONECT upgrade brings additional capability to the B-52, emerging communication and security requirements (upgrades to the IBR, JRE messages, crypto modernization, etc) and aircraft upgrades (1760 Internal Weapons Bay Upgrade, Mode S/Mode 5 IFF, etc) may require study for potential impacts to CONECT. CONECT will continue the development/update of the existing trainers, by stimulation/simulation/computer-based training or a mix, to add CONECT functionality to meet user-training requirements, and update/maintain the SIL for the Weapon System Trainer (WST). Began/continue the engineering design of the CONECT ground station, required in order to assist PDM during after-install checkout, and provide Barksdale/Minot units with maintenance checkout and operational training capability.

***FY 2017 OCO Plans:***

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675050 / CONECT

<b>B. Accomplishments/Planned Programs (\$ 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>
N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	1.078	11.225	13.672	0.000	13.672

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

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF: BA05: Line Item # B05200: B-52	121.987	124.144	99.068	0.000	99.068	95.536	54.077	27.427	27.931	-	-
• APAF: BA06: Line Item # B05200: Initial Spares/Repair Parts	12.517	5.265	4.561	0.000	4.561	4.602	0.000	0.000	0.000	-	-
• APAF: BA07: Line Item # B05200: Post Production Support	1.328	5.911	28.125	0.000	28.125	0.199	12.924	4.678	5.597	-	-
• APAF:BA07: Line Item # B05200: Depot Activation	0.198	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-

**Remarks**

**D. Acquisition Strategy**

The B-52 CONECT EMD prime contract is a sole source to Boeing Defense, Space & Security (DSS), Oklahoma City, OK. Boeing designs, develops, tests and procures necessary equipment from their subcontractors; developed engineering drawings, logistic and technical data. The Government is developing the time compliance technical order (TCTO) for installation on the B-52. Pro-Active Systems is the current contractor for the trainer update to integrate CONECT into the existing trainers (currently in source selection for FY16).

**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 0101113F / B-52 SQUADRONS				675050 / CONECT							
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
AFTRS R3 - Wright Patt	SS/ Various	Boeing : Oklahoma City, OK	-	0.163	Mar 2015	0.775	Feb 2016	1.250	Jan 2017	0.000		1.250	Continuing	Continuing	-
<b>Subtotal</b>			-	0.163		0.775		1.250		0.000		1.250	-	-	-
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
Weapon System Trainer Update	Various	AFLCMC/WNS : WPAFB, OH	-	0.568	Aug 2015	10.200	Feb 2016	12.172	Jan 2017	0.000		12.172	Continuing	Continuing	-
Other Government Costs (OGC)	Various	Various : TBD	-	0.131	Feb 2015	0.250	Feb 2016	0.250	Jan 2017	0.000		0.250	Continuing	Continuing	-
<b>Subtotal</b>			-	0.699		10.450		12.422		0.000		12.422	-	-	-
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
AFTRS R3	SS/ Various	Boeing : Oklahoma City, OK	-	0.216	Mar 2015	0.000		0.000		0.000		0.000	Continuing	Continuing	-
<b>Subtotal</b>			-	0.216		0.000		0.000		0.000		0.000	-	-	-
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
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-
<b>Project Cost Totals</b>			-	1.078		11.225		13.672		0.000		13.672	-	-	-

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675050 / CONECT
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	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
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**Remarks**



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

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675050 / CONECT
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CONECT Full Rate Production Decision (Jan 15)	2	2015	2	2015
Weapon System Trainer (WST) Contract Award (Mar 16)	2	2016	2	2016
WST System Integration Lab (SIL) Development	2	2016	1	2018
System Integration Lab Relocation	2	2016	4	2016
CONECT RAA (Jul 17)	4	2017	4	2017
Offensive Station Mission Trainer (OSMT) Development	2	2018	4	2019

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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 0101113F / B-52 SQUADRONS				<b>Project (Number/Name)</b> 675055 / GPS-IU			
<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>
675055: GPS-IU	-	0.000	2.980	6.916	0.000	6.916	17.713	11.785	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Global Positioning System (GPS) Interface Unit (IU) Upgrade will replace three Circuit Card Assemblies (CCA) in the GPS IU, as well as the backplane (to integrate the new and old CCAs): the Central Processing Unit/1553, the power supply CCA, and the video graphics card. The current inventory of GPS IUs (76 installed on B-52H, plus current supply level of 16), plus 1 in the System Integration Laboratory (SIL), and 2 on Ground Instructional Training Aircraft (GITA)) will be upgraded by Prime Contractor Boeing. The upgraded LRUs will be replaced using blue-suit installation, using remove-and-replace processes on the flight line (the current maintenance process).

The GPS IU integrates GPS Position, Navigation and Timing (PNT) data into navigation, communications, and weapons systems onboard the B-52. The GPS IU acts as a controller for a MIL-STD-1553 data bus communications path. The major areas of support include GPS interface control and monitoring, targeting pod functions, navigation displays for the Pilot and Copilot stations, and Identification Friend or Foe (IFF) control functions.

Originally developed with a 33MHz processor with 4MB of Static Random Access Memory (SRAM), the GPS IU has become overloaded as more software has been added to the B-52. Currently operating at 86% throughput capacity and at 90% memory capacity, it is projected to exceed the designated safety threshold of 95% memory load by 2018. The GPS IU is also facing parts obsolescence issues. Studies show that the current spares will be exhausted by 2018. The upgrade will improve system reliability and address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues on subcomponents of the IU. The modified GPS IU will retain the existing functions and interfaces of the legacy GPS IU, and provide additional interfaces to allow for future growth requirements.

GPS IU requires upgrading to incorporate any other GPS dependent capabilities on the B-52 platform. B-52 fleet will have the capability to carry additional GPS dependent weapons and targeting pods, and the increased capacity to incorporate future GPS-dependent capabilities beyond 2018.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> Global Positioning System (GPS) Interface Unit (IU)	0.000	2.980	6.916	0.000	6.916
<b>Description:</b> Global Positioning System (GPS) Interface Unit (IU) Upgrade will replace three circuit card assemblies in the GPS IU, as well as the backplane (to integrate the new and old CCAs): the Central Processing Unit/1553, the power supply CCA, and the video graphics card.					
<b>FY 2015 Accomplishments:</b> N/A					
<b>FY 2016 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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675055 / GPS-IU

<b>B. Accomplishments/Planned Programs (\$ 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>
Enter GPS IU Upgrade Technology Maturation and Risk Reduction (TMRR) phase. Award TMRR sole source contract to Boeing, OKC OK.  <b>FY 2017 Base Plans:</b> Continue GPS IU Upgrade development. Complete TMRR phase in support of Milestone B decision. <b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	2.980	6.916	0.000	6.916

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</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>
• APAF BA05: Line Item # B05200: GPS-IU Replacement	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.932	9.096	-	-

**Remarks**

**D. Acquisition Strategy**

The GPS IU Upgrade project will begin development in the Technology Maturation and Risk Reduction (TMRR) phase via a sole source contract to Boeing Defense, Space & Security (DSS), Oklahoma City, OK.

Development will continue in the Engineering and Manufacturing Development (EMD) phase via a sole source contract to Boeing DSS, OKC. Deliverables include software, five prototype upgraded GPS IUs, logistics support, ground and flight test support, and engineering drawings.

**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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675055 / GPS-IU
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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			
GPS-IU TMRR	SS/ Various	Boeing : Oklahoma City, OK	-	0.000		2.980	Aug 2016	6.616	Mar 2017	0.000		6.616	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		2.980		6.616		0.000		6.616	-	-	-

<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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

<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			
PMA, Travel	Various	Various : TBD	-	0.000		0.000		0.300	Jan 2017	0.000		0.300	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		0.300		0.000		0.300	-	-	-

			Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			-	0.000		2.980		6.916		0.000		6.916	-	-	-

**Remarks**

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675055 / GPS-IU
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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
MS A (Nov 16)																												
TMRR																												
MS B (Sep 17)																												
EMD																												
DT/OT																												
MS C																												

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

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675055 / GPS-IU
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MS A (Nov 16)	1	2017	1	2017
TMRR	2	2017	1	2018
MS B (Sep 17)	4	2017	4	2017
EMD	2	2018	1	2020
DT/OT	2	2019	4	2019
MS C	4	2019	4	2019

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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 0101113F / B-52 SQUADRONS				<b>Project (Number/Name)</b> 675056 / B-52 Radar Modernization Program (RMP)			
<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>
675056: B-52 Radar Modernization Program (RMP)	-	0.000	0.000	4.653	0.000	4.653	55.067	114.297	145.393	171.909	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**  
This program, BA 07 PE 0101113F, project 675056, Radar Modernization Program, is a new start.

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

The B-52 Radar Modernization Program (RMP) supports nuclear and conventional operations by upgrading or replacing, in whole or in part, the current APQ-166 radar Line Replaceable Units on the B-52H aircraft. The APQ-166 system will be increasingly difficult to sustain due to diminished manufacturing sources and obsolescent technologies; the current failure rate of the APQ-166 places long-duration missions at risk. This modernization program will encompass the radar antenna array and up to 14 individual LRUs that comprise the entire radar system. Development, production and installation of new components and systems to replace the legacy equipment; to be installed on all 76 B-52H aircraft. RMP will take advantage of advances in technology and on-going development efforts to acquire, to the maximum extent possible, off-the-shelf components and integrate them into the B-52. The use of new technology will increase both the overall reliability of the radar system and the capabilities for new missions. This Radar Modernization Program will allow the operational command (AF Global Strike Command) to fully utilize the capabilities of the B-52H aircraft to employ an array of weapons and to perform mission-essential navigation and weather avoidance functions.

In addition, all the applicable training devices which process radar data or represent the radar subsystem must also be modified and upgraded in conjunction with the aircraft modifications. This upgrade will affect all three Weapon System Trainers (WST), the WST Training Systems Integration Laboratory (SIL), both B-52 Offensive Station Maintenance Trainers (OSMT), and the Bombing-Navigation System Maintenance Trainers (BNSMT). Based on input from AFGSC, the program will retire the five existing BNMSTs and replace them with three new virtual training devices.

This project 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 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> Radar Modernization Program	0.000	0.000	4.653	0.000	4.653
<b>Description:</b> Support nuclear and conventional operations by replacing the current APQ-166 radar on the B-52H aircraft. Development and production of new systems to replace the legacy equipment and to be installed on all 76 B-52H aircraft. Radar Modernization Program (RMP) will take advantage of advances in technology and on-					

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675056 / B-52 Radar Modernization Program (RMP)

<b>B. Accomplishments/Planned Programs (\$ 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>
going development efforts to acquire, to the maximum extent possible, off-the-shelf components and integrate them into the B-52. The use of new technology will increase both the overall reliability of the radar system and provide capabilities for new missions					
<b>FY 2015 Accomplishments:</b> N/A					
<b>FY 2016 Plans:</b> N/A					
<b>FY 2017 Base Plans:</b> Establish/stand up program office; requirements development and refinement; conduct analysis of alternatives and other technology maturation and risk reduction efforts (competitive prototyping and operational evaluations, studies of cooling, electromagnetic compatibility, power and nuclear hardening impacts and requirements); initiate development activities supporting integration of off-the-shelf radar components; initiate test requirements and planning for DT&E					
<b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.000	4.653	0.000	4.653

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</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>
• None: None	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-

**Remarks**

**D. Acquisition Strategy**  
Various options are in review, i.e., sole source to the Original Equipment Manufacturer (Boeing), compete the radar, compete the integrator, etc. Sources Sought has been issued for potential integrators. Final decision will be made after all data has been gathered and reviewed.

**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 3600 / 7				R-1 Program Element (Number/Name) PE 0101113F / B-52 SQUADRONS				Project (Number/Name) 675056 / B-52 Radar Modernization Program (RMP)							
<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
Risk Reduction	TBD	Not specified. : TBD	-	0.000		0.000		3.500	Jan 2017	0.000		3.500	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		3.500		0.000		3.500	-	-	-
<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
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-
<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
Management Support, A&AS, PMA	Various	Not specified. : TBD	-	0.000		0.000		1.153	Jan 2017	0.000		1.153	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		1.153		0.000		1.153	-	-	-
<b>Project Cost Totals</b>			-	0.000		0.000		4.653		0.000		4.653	-	-	-
<b>Remarks</b>															

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675056 / B-52 Radar Modernization Program (RMP)

	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
Risk Reduction																												
MS A																												
TMRR																												
MS B																												
EMD																												

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675056 / B-52 Radar Modernization Program (RMP)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction	2	2017	2	2018
MS A	2	2018	2	2018
TMRR	2	2018	4	2019
MS B	4	2019	4	2019
EMD	1	2020	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 0101113F / B-52 SQUADRONS				<b>Project (Number/Name)</b> 675058 / B-52 Weapon Sys Trainer Air Ref Training Upgrade			
<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>
675058: B-52 Weapon Sys Trainer Air Ref Training Upgrade	-	0.000	0.000	4.875	0.000	4.875	13.202	7.914	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

This program, BA 07 PE 0101113F, project 675058, B-52 Weapons Systems Trainer Air Refueling Training Upgrade, is a new start.

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

The principal mission of the B-52 Training Systems program is to ensure high fidelity simulators and training systems are available for aircrew members to support credible training, maintain proficiencies, and increase skill levels. B-52 Aircrew Training Devices simulates the necessary visual, motion, and audible cues to provide ground training of Air Force Global Strike Command aircrew members. The B-52 Weapon System Trainer (WST) Air Refueling Upgrade is a comprehensive project that will allow B-52 Aircrew to accomplish credible air refueling training in the simulator, which minimizes the requirement for on-aircraft air refueling training. To facilitate this capability, scope of work may involve development of Analysis of Alternatives(AoA),Studies and Analysis, Capability Development Documents (CDD) or any other Analysis or paperwork necessary to establish a program of record.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> B-52 Weapons Systems Trainer Air Refueling Training Upgrade	0.000	0.000	4.875	0.000	4.875
<b>Description:</b> Initiate Analysis of Alternatives, engineering studies, flight test planning, data collection, data analysis, and software development required to support B-52 Weapon System Trainer Air Refueling Training Upgrade.					
<b>FY 2015 Accomplishments:</b> N/A					
<b>FY 2016 Plans:</b> N/A					
<b>FY 2017 Base Plans:</b> Initiate Analysis of Alternatives,engineering studies, flight test planning,data collection, data analysis, and software development required to support B-52 Weapon System Trainer Air Refueling Training Upgrade.					
<b>FY 2017 OCO 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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675058 / B-52 Weapon Sys Trainer Air Ref Training Upgrade

<b>B. Accomplishments/Planned Programs (\$ 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>
N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.000	4.875	0.000	4.875

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

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF: BA 0-5: Line item # B05200: Weapons System Trainer Air Refueling Training Upgrade	0.000	0.000	0.000	0.000	0.000	1.806	0.000	11.085	0.000	-	-

**Remarks**

**D. Acquisition Strategy**

The B-52 Training Systems Contract will be utilized for Weapon System Trainer Air Refueling contracting actions.

**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 0101113F / B-52 SQUADRONS				675058 / B-52 Weapon Sys Trainer Air Ref Training Upgrade								
<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	
Weapon System Trainer Air Refueling Training Upgrade	TBD	TBD : TBD	-	0.000		0.000		4.875	Feb 2017	0.000		4.875	Continuing	Continuing	-	
<b>Subtotal</b>			-	0.000		0.000		4.875		0.000		4.875	-	-	-	
<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	
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-	
<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	
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-	
<b>Project Cost Totals</b>			-	0.000		0.000		4.875		0.000		4.875	-	-	-	
<b>Remarks</b>																



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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675058 / B-52 Weapon Sys Trainer Air Ref Training Upgrade

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
WST AR Trainer Engineering Studies/Analysis	2	2017	4	2017
WST AR Trainer Data Collection/Compilation	1	2018	3	2018
WST AR Trainer Software/Hardware Development/Integration/Test	4	2017	3	2020

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675160 / B-52 Crypto Modernization
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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
675160: B-52 Crypto Modernization	-	0.000	0.000	5.941	0.000	5.941	11.885	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

This program, BA 07 PE 0101113F, project 675160, B-52 Crypto Modernization, is a new start.

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

Upgrades aircraft with Mobile User Objective System (MUOS) capable ARC-210 radio systems to prevent loss of BLOS voice and data communications capability. As MUOS legacy channels are turned on, existing satellites will be removed from service. B-52 CONECT is at risk of losing its File Transfer Protocol (FTP), email, Beyond Line of Site (BLOS) voice, and BLOS data link communications without this modernization effort.

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<b>Title:</b> B-52 Crypto Modernization	0.000	0.000	5.941	0.000	5.941
<b>Description:</b> Upgrades aircraft with MUOS capable ARC-210 radio systems to prevent loss of BLOS voice and data communications capability. As Mobile User Objective System (MUOS) legacy channels are turned on, existing satellites will be removed from service. B-52 CONECT is at risk of losing its File Transfer Protocol (FTP), email, Beyond Line of Site (BLOS) voice, and BLOS data link communications without this modernization effort.					
<b>FY 2015 Accomplishments:</b> N/A					
<b>FY 2016 Plans:</b> N/A					
<b>FY 2017 Base Plans:</b> Establish/stand-up program office, develop and refine requirements, initiate development activities supporting integration of MUOS radio, and planning for DT&E.					
<b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.000	5.941	0.000	5.941

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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 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675160 / B-52 Crypto Modernization
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**C. Other Program Funding Summary (\$ in Millions)**

<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>
• APAF: BA 05: Line item # B05200: B-52 Crypto Modernization	0.000	0.000	0.000	0.000	0.000	0.000	14.880	17.863	21.842	-	-

**Remarks**

**D. Acquisition Strategy**

The B-52 Crypto Modernization Program EMD prime contract is expected to be sole sourced to Boeing Defense, Space & Security (DSS), Oklahoma City, OK. Boeing designs, develops, integrates, tests, and procures necessary equipment from their subcontractors, develops engineering drawings, logistics and technical data.

**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 0101113F / B-52 SQUADRONS				675160 / B-52 Crypto Modernization								
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	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Crypto Modernization development and integration activities	TBD	Not specified. : TBD	-	0.000		0.000		5.541	Jan 2017	0.000		5.541		Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		5.541		0.000		5.541		-	-	-
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	Award Date	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	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Initiate test requirements and DTE planning	TBD	TBD : TBD	-	0.000		0.000		0.300	Jan 2017	0.000		0.300		Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		0.300		0.000		0.300		-	-	-
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	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Costs for Program Management Administration and Travel	Various	TBD : TBD	-	0.000		0.000		0.100	Jan 2017	0.000		0.100		Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		0.100		0.000		0.100		-	-	-
			Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract					
<b>Project Cost Totals</b>			-	0.000	0.000	5.941	0.000	5.941	-	-	-					

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</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 0101113F / <i>B-52 SQUADRONS</i>	<b>Project (Number/Name)</b> 675160 / <i>B-52 Crypto Modernization</i>
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	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
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<u>Remarks</u>									
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**Exhibit R-4A, RDT&E Schedule Details:** PB 2017 Air Force **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0101113F / B-52 SQUADRONS	<b>Project (Number/Name)</b> 675160 / B-52 Crypto Modernization
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MDD	1	2017	1	2017
Milestone B	1	2017	1	2017
EMD contract award	4	2017	4	2017
EMD	4	2017	3	2018
Milestone C	4	2018	4	2018