Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	129.864	93.808	53.208	-	53.208	41.173	5.653	3.901	-	Continuing	Continuing
675039: *B-52 Modernization*	129.864	93.808	0.065	-	0.065	-	-	-	-	Continuing	Continuing
675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*	-	-	16.490	-	16.490	11.373	5.653	3.901	-	Continuing	Continuing
675049: *MODE S/5 IFF*	-	-	1.202	-	1.202	-	-	-	-	Continuing	Continuing
675050: *CONECT*	-	-	34.700	-	34.700	29.800	-	-	-	Continuing	Continuing
675051: *ANTI-SKID*	-	-	0.751	-	0.751	-	-	-	-	Continuing	Continuing

Note

FOR FY05-FY12 THE B-52 SQUADRONS PROGRAM ELEMENT CONTAINED A SINGLE BPAC, 675039, B-52 MODERNIZATION. BEGINNING IN FY 13 AND OUT, SEPARATE BPACs HAVE BEEN ESTABLISHED AS FOLLOWS:
675039 B-52 MODERNIZATION
675048 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)
675049 MODE S/5 IFF
675050 CONECT
675051 B-52 ANTI-SKID

The EHF and SR2 programs are terminated in FY13 for higher Air Force priorities.

A. Mission Description and Budget Item Justification

B-52 MODERNIZATION PROGRAMS
Prior to FY13, all B-52 modernization programs were funded in a single BPAC, 675039 B-52 Modernization. B-52 modernization is a comprehensive program to ensure B-52 viability to perform current and future wartime missions to include datalinks, navigation, sensors, weapons, and electronic warfare (EW) and training capabilities. B-52 modernization (initiated in FY 2005) integrates and adds both tactical and global datalink communications for real time command and control, targeting, and intelligence. It upgrades antiquated air traffic management (ATM) systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance (CNS). Modernization upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and improved weapons carriage and fully integrates advanced targeting pods with the offensive avionics system. B-52 modernization upgrades or replaces legacy defensive EW systems to include the radar warning receiver, jammers, chaff and flare dispensers and situational awareness displays as well as integration of offensive EW such as the Miniature Air-Launched Decoy (MALD) and MALD-Jammer (MALD-J). Lastly, B-52 Modernization replaces the current aging strategic radar capability with a state-of-the-art, non-developmental radar.

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CONECT

The B-52 Combat Network Communications Technology (CONECT) acquisition program 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 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 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 re-targeting of Conventional Air Launched Cruise Missile (CALCM), Joint Air-to-Surface Standoff Missile/JASSM-Extended Range (JASSM/JASSM-ER), and other J-series weapons across the range of B-52 military operations and missions.

In FY13, the CONECT program will be restructured and reduced to only replacing the current Multi-Function Displays (MFD's) located at each of the crew stations, making the temporary Evolutionary Data Link (EDL) modification permanent, and demoding the CONECT test aircraft as required. However, the current CONECT development effort in FY12 will be completed as planned and the technical design/baseline will be maintained in support of future budget decisions.

As the remaining requirement of the CONECT program restructure, the Multi-Function Display (MFD) Replacement will develop wire-harnesses and installation tray configurations for the MFDs in each of the 76 B-52 aircraft. The existing legacy displays at each crew station will be removed and replaced with stock listed MFDs. This effort will replace the current MFDs due to long standing obsolescence issues. This configuration WILL NOT provide additional capability beyond what is currently available, but will retain growth potential for future upgrades.

Evolutionary Data Link (EDL) was intended a bridge program to provide a secure voice/datalink capability between ground combat personnel and the B-52 weapon system, providing situational awareness of where friendly forces are in relation to enemy forces during targeting efforts while using precision guided weapons in combat. Originally fielded as a T1 Modification, the EDL 3.1 program will be finalized as a permanent modification, which entails procurement of sufficient Group B kits to modify the remainder of the fleet, along with procurement of spares and a long-term maintenance strategy with sufficient cover through the end of the aircraft's life cycle. Additional full-up kits will also be required to modify aircrew and ground maintenance trainers. Technical orders, operational procedure directives, and drawings will need to be generated from existing temporary documents. No additional certification testing (DT/OT) is anticipated, as at the end of EDL 3.1 fielding the program office will consider this a fielded, operational system.

B-52 EHF

The B-52 Extremely High Frequency (EHF) program integrates and installs the B-52 fleet with the equipment needed to provide secure, survivable two-way EHF SATCOM link for Emergency Action Messages (EAMs) and report-backs to meet Joint Chiefs of Staff (JCS) nuclear protected Information Exchange Requirements (IERs). The B-52 EHF will install/integrate the Family of Advanced Beyond-Line-of-Sight (BLOS) Terminal (FAB-T) Airborne Wideband Terminal system developed and procured by Space and Missile Center (SMC) through PE 0303601F or other equivalent terminals/solutions, as necessary to meet user requirements. The B-52 EHF will also integrate a high data rate BLOS communication link supporting IP-based Global Information Grid (GIG) interoperability into the B-52 architecture. The B-52

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EHF program is planned to be accomplished in two increments. Increment 1 preserves the existing B-52 capability to receive EAMs and report-backs via SATCOM to include an Environmental Control System (ECS) modification required to support the additional communication equipment. Increment 2 provides GIG and net-ready capability as well as full integration with other-B-52 systems.

The B-52 EHF program will be terminated in FY13 for higher AF priorities.

TRAINERS AND UPGRADES FOR CONECT, EHF & SR2
In order to maintain currency with the latest aircraft configuration, the CONECT, EHF & SR2 programs will update existing trainers or use computer-based training to add CONECT, EHF & SR2 functionality to meet user-training requirements and establish a system integration laboratory (SIL) for updates of the Weapon System Trainers (WST).
The Trainer and upgrades for CONECT, EHF, and SR2 will be terminated in FY13 for higher AF priorities.

SR2
The B-52 Strategic Radar Replacement (SR2) program replaces the current AN/APQ-166 Strategic Radar fielded in the 1960s and then upgraded in the 1970s and 1980s. Although modified several times, it has never been totally replaced and several parts of the system remain from the original design, such as the antenna reflector, feed, and casting. The legacy APQ-166 radar is becoming unsupportable with increasing signs of performance degradation and multiple DMS and materiel shortage issues. The SR2 program is a radar replacement program that may take advantage of the advanced capabilities of modern non-developmental radars, maximizing commonality with other platforms. The B-52 SR2 Program will integrate, test, and field a modern radar system, which supports all weather targeting and navigation to support the requirements of keeping the B-52 combat capable for its extended service life. Additionally, the remaining two legacy MFCDs will be upgraded to take advantage of the replacement radar's full capability.

The B-52 SR2 program will be terminated in FY13 for higher AF priorities.

ENGINEERING STUDIES & ANALYSIS AND TEST & EVALUATION
B-52 modernization funds test activities at the Air Force Flight Test Center (AFFTC), engineering and planning studies for potential future weapon system enhancements (weapons, sensors, avionics and EW) and emerging requirement on current programs, upgrades to the B-52 SIL, AISF and WSTs, and weapon system operational/safety, supportability, reliability, and Total Ownership Cost (TOC) improvements.

ARMS CONTROL ACTIVITIES
Arms Control Activities under the New START Treaty drives the need to modify a number of B-52s to a conventional only role by removing the Code Enable Switch and associated equipment. This effort requires a complete design to remove the equipment from the aircraft and install metal plates prohibiting reinstallation of removed equipment to comply with treaty protocols.

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ADDITIONAL EFFORTS

B-52 modernization funds additional efforts that stem from the operation and maintenance of a 50-plus-year-old aircraft, such as parts obsolescence, DMS, and emerging requirements to add to or maintain the existing capabilities. Examples include, but are not limited to upgrades to outdated avionics computers, mission planning interfaces to JMPS, Air Force Mission Support System (AFMSS), and other mission planning systems (JMPS), upgrades to the EW suite, and studies and analysis. All B-52 development programs support planned requirements for unique identification in their production phases.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	146.096	133.261	78.369	-	78.369
Current President's Budget	129.864	93.808	53.208	-	53.208
Total Adjustments	-16.232	-39.453	-25.161	-	-25.161
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-39.265			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.500	-			
• SBIR/STTR Transfer	-8.623	-			
• Other Adjustments	-6.109	-0.188	-25.161	-	-25.161

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 675039: *B-52 Modernization*		
Congressional Add: *Advanced Targeting Pod Integration - Congressional Add*	6.500	-
Congressional Add Subtotals for Project: 675039	6.500	-
Congressional Add Totals for all Projects	6.500	-

Change Summary Explanation

FY11 adjustments include -$8.623 SBIR; Congressional Directed Reductions -$24.700; Congressional adds of +$13.000 for Internal Weapons Bay and +$6.500 for ATP Interation; Congressional General Reductions -$.909; -$1.500 reprogramming for MEECN

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FY12 adjustments -$11.265 Congressional Directed Reduction for SR2 identified excess, -$5.000 for S/5 IFF late contract award, -$10.000 for 1760 IWBU late contract award and -$13.000 for B-52 EHF late contract award; Congressional General Reductions of -$0.188 FFRDC

FY13 adjustments include +$32.709 required to demodify the CONECT test aircraft, -$48.273 termination of SR2 program, +$4.045 MIL-STD-1760 IWBU Increment 2, +$1.202 Mode S/5 adjustment to account for 1-year slip

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force			DATE: February 2012
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COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675039: *B-52 Modernization*	129.864	93.808	0.065	-	0.065	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The EHF and SR2 programs are terminated in FY13 for higher Air Force priorities.

A. Mission Description and Budget Item Justification

Prior to FY13, all B-52 modernization programs were funded in a single BPAC, 675039 B-52 Modernization.

B-52 MODERNIZATION PROGRAMS

B-52 modernization is a comprehensive program to ensure B-52 viability to perform current and future wartime missions to include datalinks, navigation, sensors, weapons, and electronic warfare (EW) and training capabilities. B-52 modernization (initiated in FY 2005) integrates and adds both tactical and global datalink communications for real time command and control, targeting, and intelligence. It upgrades antiquated air traffic management (ATM) systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance (CNS). Modernization upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and improved weapons carriage and fully integrates advanced targeting pods with the offensive avionics system. B-52 modernization upgrades or replaces legacy defensive EW systems to include the radar warning receiver, jammers, chaff and flare dispensers and situational awareness displays as well as integration of offensive EW such as the Miniature Air-Launched Decoy (MALD) and MALD-Jammer (MALD-J). Lastly, B-52 Modernization replaces the current aging strategic radar capability with a state-of-the-art, non-developmental radar.

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B-52 EHF
The B-52 Extremely High Frequency (EHF) program integrates and installs the B-52 fleet with the equipment needed to provide secure, survivable two-way EHF SATCOM link for Emergency Action Messages (EAMs) and report-backs to meet Joint Chiefs of Staff (JCS) nuclear protected Information Exchange Requirements (IERs). The B-52 EHF will install/integrate the Family of Advanced Beyond-Line-of-Sight (BLOS) Terminal (FAB-T) Airborne Wideband Terminal system developed and procured by Space and Missile Center (SMC) through PE 0303601F or other equivalent terminals/solutions, as necessary to meet user requirements. The B-52 EHF will also integrate a high data rate BLOS communication link supporting IP-based Global Information Grid (GIG) interoperability into the B-52 architecture. The B-52 EHF program is planned to be accomplished in two increments. Increment 1 preserves the existing B-52 capability to receive EAMs and report-backs via SATCOM to include an Environmental Control System (ECS) modification required to support the additional communication equipment. Increment 2 provides GIG and net-ready capability as well as full integration with other-B-52 systems.

The B-52 EHF program will be terminated in FY13 for higher AF priorities.

TRAINERS AND UPGRADES FOR CONECT, EHF & SR2
In order to maintain currency with the latest aircraft configuration, the CONECT, EHF & SR2 programs will update existing trainers or use computer-based training to add CONECT, EHF & SR2 functionality to meet user-training requirements and establish a system integration laboratory (SIL) for updates of the Weapon System Trainers (WST).
The Trainer and upgrades for CONECT, EHF, and SR2 will be terminated in FY13 for higher AF priorities.

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SR2

The B-52 Strategic Radar Replacement (SR2) program replaces the current AN/APQ-166 Strategic Radar fielded in the 1960s and then upgraded in the 1970s and 1980s. Although modified several times, it has never been totally replaced and several parts of the system remain from the original design, such as the antenna reflector, feed, and casting. The legacy APQ-166 radar is becoming unsupportable with increasing signs of performance degradation and multiple DMS and materiel shortage issues. The SR2 program is a radar replacement program that may take advantage of the advanced capabilities of modern non-developmental radars, maximizing commonality with other platforms. The B-52 SR2 Program will integrate, test, and field a modern radar system, which supports all weather targeting and navigation to support the requirements of keeping the B-52 combat capable for its extended service life. Additionally, the remaining two legacy MFCDs will be upgraded to take advantage of the replacement radar's full capability.

The B-52 SR2 program will be terminated in FY13 for higher AF priorities.

ENGINEERING STUDIES & ANALYSIS AND TEST & EVALUATION

B-52 modernization funds test activities at the Air Force Flight Test Center (AFFTC), engineering and planning studies for potential future weapon system enhancements (weapons, sensors, avionics and EW) and emerging requirement on current programs, upgrades to the B-52 SIL, AISF and WSTs, and weapon system operational/safety, supportability, reliability, and Total Ownership Cost (TOC) improvements.

ARMS CONTROL ACTIVITIES

Arms Control Activities under the New START Treaty drives the need to modify a number of B-52s to a conventional only role by removing the Code Enable Switch and associated equipment. This effort requires a complete design to remove the equipment from the aircraft and install metal plates prohibiting reinstallation of removed equipment to comply with treaty protocols.

ADDITIONAL EFFORTS

B-52 modernization funds additional efforts that stem from the operation and maintenance of a 50-plus-year-old aircraft, such as parts obsolescence, DMS, and emerging requirements to add to or maintain the existing capabilities. Examples include, but are not limited to upgrades to outdated avionics computers, mission planning interfaces to JMPS, Air Force Mission Support System (AFMSS), and other mission planning systems (JMPS), upgrades to the EW suite, and studies and analysis. All B-52 development programs support planned requirements for unique identification in their production phases.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Title: Arms Control Activities ***Description:*** Arms Control Activation under the New START Treaty drives the need to modify approximately 28 B-52s to a conventional only role by removing the Code Enable Switch and associated equipment. This effort requires a complete design to remove the equipment from the aircraft and install metal plates prohibiting reinstallation of removed equipment to comply with treaty protocols. ***FY 2013 Plans:*** Studies/analysis to begin efforts to modify 28 aircraft to a conventional role. Design removal of equipment from aircraft and install equipment.	-	-	0.065
Title: CONECT ***Description:*** Integrates rapid re-tasking capability of J-series weapons and conventional cruise missiles; dedicated BLOS UHF comm/datalink; computer network infrastructure; digital interphone; Multi-Function Color Displays (MFCD); and an Intelligence Broadcast Receiver (IBR). ***FY 2011 Accomplishments:*** Resumed ground and flight testing of Drop C, Drop D and IBR. Began integration and lab testing of additional J-Series messages. Analyzed/Fixed ground/flight test issues as they were identified. Began redesign of DMS LRY boards identified during FY10. Designed, installed, and tested the redesign of the interphone system due to a deficiencey found during flight test. ***FY 2012 Plans:*** Milestone C flight testing completed Nov 11. Complete developmental requirements necessary to successfully pass Milestone C and enter into Low Rate Initial Production (LRIP), as required. Complete flight testing of the additional J-Series messages and IBR (Drop D). Analyze/fix ground/flight test issues as they are identified. Continue DMS redesign development and test effort. Enter IOT&E. Procure hardware required for integration into training systems. ***FY 2013 Plans:*** Effort moved to BPAC 675050	26.889	71.445	-
Title: Advanced Targeting Pod ***Description:*** Develops software updates to integrate Sniper and LITENING ATPs and to add advanced ATP capabilities. Upgrades software functions of the AME control stick and display enabling all wired aircraft to utilize either Sniper or LITENING ATPs. ***FY 2011 Accomplishments:***	6.263	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Completed software updates to integrate the LITENING Gen-4 ATP on the B-52.			
Title: EHF	9.689	1.648	-
Description: Integrates the FAB-T Airborne Wideband Terminal (AWT) or other equivalent terminals, as required, to preserve existing B-52 capability to receive EAMs and transmit report-backs; supports USSTRATCOM requirement for secure, survivable communications. Modifies B-52 ECS to support EHF and accommodate for B-52 aircraft system modifications. Future increment provides integration into GIG to provide wideband BLOS datalink. ***FY 2011 Accomplishments:*** Complete the additional risk reduction task efforts necessary to reach System Requirement Review (SRR). Initiate work efforts required to bring the EHF program through Preliminary Design Review (PDR), including ECS, upgrade the SIL, purchase additional government furnished property (GFP) for the SIL, and perform antenna field testing and analysis. ***FY 2012 Plans:*** Completion of efforts related to SRR of the EHF and ECS designs. Complete efforts associated with FAB-T analysis of B-52 unique requirements. ***FY 2013 Plans:*** Program terminated in FY13 for higher Air Force Priorities			
Title: Anti-skid	1.881	6.218	-
Description: Replaces legacy B-52 Anti-skid system with modernized system improving safety and cockpit display. Anti-Skid Detector has been identified a critical obsolescence item, which begins to be unsupportable in FY15. ***FY 2011 Accomplishments:*** Continue phased Systems Safety Analysis; conduct Hardware in the Loop (HITL) simulation and test reports; develop preliminary Tech Order (TO) source data and installation procedures; manufacture and procure flight test articles and hardware; continue flight test planning activities; identify and deliver overhaul special test equipment. ***FY 2012 Plans:*** Continue with HITL Simulations; Flight Test Activities, TO source data, Airworthiness Certification documents. ***FY 2013 Plans:*** Effort moved to BPAC 675051			
Title: SR2	8.260	0.531	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Description: Integrates modern non-developmental airborne radar replacing current, mission critical APQ-166 Strategic Radar, last upgraded in early-1980s. Legacy Strategic Radar is experiencing systemic sustainment and obsolescence issues. ***FY 2011 Accomplishments:*** The SR2 program will continue the risk reduction activities, and Material Solution Analysis phase. AFROC validated the AoA final report 3Q FY11. Drafting Capabilities Development Document (CDD) in preparation for RADAR competition. ***FY 2012 Plans:*** Complete SR2 studies and initiate program activities required for termination of effort in FY 13. ***FY 2013 Plans:*** Program terminated in FY13 for higher Air Force priorities			
Title: Mode S/5 IFF ***Description:*** Integrates modern IFF technology onto the B-52 by replacing the current system with APX-119; required by DoD, FAA and ICAO. ***FY 2011 Accomplishments:*** Define requirements and begin development of the Group A hardware and control panel; conduct system safety analysis of APX-119 FMECA as it relates to the aircraft integration. Address aircraft integration issues related to space, weight, electrical power, hydraulics, cooling impacts. Begin development of test strategy to define criteria to verify the system meets B-52 requirements. Develop source control drawings, develop/revise wiring diagrams, harness designs and installations drawings. Procure APX-119 test article and Common Control Panel prototype to begin lab testing of design. ***FY 2012 Plans:*** Upgrade SIL, EMI/EMC Test procedures, identify long-lead components, complete all fabrication drawings, develop Installation Drawing package, conduct SIL testing, support ground/flight testing and Air Traffic Control Radar System IFF Mark 12/Mark 12A Systems platform certification, and report certification results. ***FY 2013 Plans:*** Effort moved to BPAC 675049	8.583	1.166	-
Title: 1760 IWB ***Description:*** 1760 Internal Weapons Bay Upgrade - provides internal J-series weapons capability through modification of CSRLs with IWIU and upgraded weapon management software. ***FY 2011 Accomplishments:***	37.522	12.800	-

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APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Continue Increment 1.1. Perform systems engineering and development to complete JDAM SMO FQT. Design, develop, fabricate and install modification components and drawings to yield four CRL prototypes for laboratory and flight testing to support concurrent testing in multiple locations. Develop test procedures and complete SIL testing of CRL protoypes and JDAM SMO software. Begin contractor support of ground and flight test concept development, planning, and test mission development. Support test instrumentation and modification to test aircraft. Begin support of fielding documentation. Design, develop and test software and hardware modifications to armament test support equipment. Begin mission planning modifications (UNIX system) in support of JDAM. Begin 1760 Internal Weapons Bay Increment 1, Phase 2 (Increment 1.2): development of JASSM/JASSM-ER SMO and MALD/MALD-J SMO modifications for internal bay capability. Begin B-52-specific JMPS development for JASSM and MALD and their respective variants. Begin Seek Eagle safe-separation analysis and modeling for bomb bay releases of JDAM, JASSM, MALD, and their variants. ***FY 2012 Plans:*** Continue Increment 1.1: Continue Seek Eagle safe separation analysis; conduct ground and flight testing of CRL prototype and JDAM SMO; finalize drawings for aircraft, CRL, and test support equipment modification kits; and complete development of technical orders. Continue Increment 1.2: Modify JASSM and MALD SMOs (including respective -ER and -J variant capabilities); perform engineering and test support for SIL, ground and flight testing. Develop technical orders. Continue B-52 JMPS development, testing, and certification with JASSM and MALD, including respective variants. ***FY 2013 Plans:*** Effort moved to BPAC 675048			
Title: Other Air Force Priorities ***Description:*** Excess funds from the teminated EHF and SR2 programs. Applied to higher AF priorities. ***FY 2011 Accomplishments:*** Excess funds from the terminated EHF and SR2 programs. Applied to higher AF priorities.	24.277	-	-
Accomplishments/Planned Programs Subtotals	123.364	93.808	0.065

	FY 2011	FY 2012
Congressional Add: Advanced Targeting Pod Integration - Congressional Add ***FY 2011 Accomplishments:*** Congressional add used to develop software updates to integrate the LITENING Gen-4 ATP on the B-52.	6.500	-
Congressional Adds Subtotals	6.500	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PE 0305145F (RDT&E): *Arms Control Implementation, RDT&E AF*	0.000	0.000	4.000	0.000	4.000	0.000	0.000	0.000	0.000	0.000	4.000
• PE 0101113F (APAF BP11): *B-52 Squadrons, Aircraft Procurement, BP11, Mods, APAF*	18.778	92.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0809731F (APAF BP11): *Training Support to Units, Aircraft Procurement, BP11, Mods, APAF*	2.180	1.656	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0305145F (APAF BP11): *Implement New START Treaty, BP11, Mods APAF*	0.000	0.000	0.000	0.000	0.000	0.500	0.203	0.102	0.203	0.000	1.008
• PE 0101113F (APAF BP16): *B-52 Squadrons, Aircraft Procurement, BP16, Initial Spares, APAF*	7.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.006
• PE 0101113F (APAF BP12): *B-52 Squadrons, Aircraft Procurement, BP12, Support Equipment, APAF*	10.014	14.457	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.471

D. Acquisition Strategy

The B-52 CONECT EMD prime contract was a sole source to Boeing Defense, Space & Security (DSS), Wichita, KS. Boeing designed, developed, tested and procured the necessary equipment from their subcontractors; developed engineering drawings, logistic and technical data, and time compliance technical order (TCTO) for installation on the B-52. The EMD effort included installing and testing CONECT equipment on a B-52 aircraft. The B-52 EHF EMD prime contract was a sole source to Boeing DSS, Wichita, KS. Boeing preserved the B-52 capability to receive EAMS and report-backs, upgraded current SIL and the environmental control system. The Engineering Manufacturing Development (EMD) effort includes installing and testing the EHF equipment on a B-52 aircraft.

The B-52 ATP program software development contract is sole sourced to Boeing DSS, Wichita. The ATP trainer development contract will be awarded by OO-ALC via their trainer contract.

The 1760 Internal Weapons Bay program will acquire software development and hardware design via a sole-source contract to Boeing DSS, Wichita, KS. Deliverables include an updated J-series weapon SMOs (software), a prototype modified CSRL, logistics support, ground and flight test support, and engineering drawings.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

Production of IWIU, required for each modified CSRL, and will be sole source to Boeing. The program will competitively procure the CSRL modification kits (cables, connectors, and mounting brackets).

The B-52 Anti-Skid program is a joint effort between OC-ALC and OO-ALC. The modification will be implemented via Program Depot Maintenance (PDM) and Contract Field Team (CFT).

The B-52 Strategic Radar Replacement (SR2) Program was a sustainment upgrade to the B-52H fleet by leveraging existing technologies, designs, and radar components (e.g., line replaceable units (LRUs) already in production and fielded on other military platforms. It used existing, mature, proven technologies and focused resources on identifying and reducing the risk associated with integrating a modern radar onto the B-52H platform. The SR2 program was created to replace the AN/APQ-166 radar and several components in the Offensive Avionics System (OAS) associated with managing the video chain. Closeout activities will begin in FY12 due to program termination beginning in FY13.

The Mode S/5 IFF Program is in the initial stage of acquisition planning. A detailed acquisition plan will be developed based on the results of the engineering studies being completed by Boeing, Wichita, KS.

The Tactical Data Link (TDL) will be sole source to Boeing DSS, Wichita, KS for the integration of TDL based on the CONECT baseline.

The Reconstitution of B-52 Nuclear Capability Study will be sole source to Boeing DSS.

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.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675039: *B-52 Modernization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CONECT Ground/Flight Test Drop D	3	2011	3	2012
CONECT LRIP Milestone C	3	2012	3	2012
CONECT OA	2	2012	2	2012
B-52 EHF EMD Increment 1	1	2011	4	2012
Anti-Skid EMD	2	2011	4	2012
Anti-Skid LRIP	3	2013	3	2013
SR2 ASP	2	2012	2	2012
SR2 SRR-PDR	4	2012	4	2012
ATP Flight Test	1	2011	1	2011
Mode S/5 IFF EMD	2	2012	3	2014
Mode S/5 IFF LRIP	3	2014	3	2014
1760 IWB EMD	1	2012	3	2013
1760 IWB Milestone C	3	2013	3	2013

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*	-	-	16.490	-	16.490	11.373	5.653	3.901	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

NOTE: THIS IS NOT A NEW START. PRIOR YEAR COSTS FOR 1760 IWBU FY10-FY12 ARE CONTAINED IN BPAC 675039 ARMS CONTROL ACTIVITIES. THIS DOCUMENT REFLECTS NEW BPAC 675048 STRATING IN FY13.

A. Mission Description and Budget Item Justification

Beginning in FY13 Project Number 675048, 1760 Internal Weapons Bay Upgrade program transferred from Project Number 675039, B-52 Modernization.

MIL-STD 1760 Internal Weapons Bay Upgrade (IWBU) modifies aircraft software and the Common Strategic Rotary Launcher (CSRL) to carry MIL-STD-1760 based munitions in the B-52 internal weapons bay. This effort leverages the Integrated Weapons Interface Unit (IWIU) hardware developed under the Advanced Weapons Integration (AWI) program and previous work accomplished for a 2005 demonstration or developed using 2006 and 2007 Congressional Add funding. Production requirements include modification of 76 B-52 aircraft (Group A) and 44 CSRLs (Group B). No new CSRLs will be procured with this effort. This program will install MIL-STD 1760 interface cables and connectors on all B-52 aircraft, and will remove current munitions interface components, cables, connectors and mounting brackets from 44 CSRLs and replace removed items with MIL-STD 1760 capable components. Modified CSRLs will become "Conventional Rotary Launchers (CRLs)" and will lose their nuclear capability until integration of the MIL-STD 1760 Series II nuclear munitions and development and integration of a nuclear hardened IWIU. The sole line Replaceable Unit (LRU) for this modification is the IWIU, which is the same unit used for control of MIL-STD 1760-based munitions carried externally on the pylon. Phase I of the program, which supports eight-carriage capability on the CRL, will procure and install 44 IWIU pairs (one pair per CRL). Phase 2 will provide carriage expansion on the CRL through a software modification, and will increase the number of weapon stations from 8 to 16. Phase II will occur after Phase I procurement and installation is complete, using RDT&E funding.

B-52 Advanced Weapons Integration (AWI) initiatives previously managed under MN-4260 are now managed under three separate modifications for clarity in effort, funding and schedule. The initiatives are now described in MN-4260 Advanced Weapons Integration, MN-4693 Avionics Midlife Improvements, and MN-6884 MIL-STD-1760.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Title: 1760 IWBU	-	-	16.490
Description: 1760 Internal Weapons Bay Upgrade - provides internal J-series weapons capability through modification of CSRLs with IWIUs and upgraded weapon management software.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Effort accomplished in BPAC 675039 ***FY 2012 Plans:*** Effort accomplished in BPAC 675039 ***FY 2013 Plans:*** Continue Increment 1.1: Continue SEEK EAGLE safe separation analysis; conduct ground and flight testing of CRL prototype and JDAM SMO; finalize drawings for aircraft, CRL, and test support equipment modification kits; and complete development of tecnical orders. Continue Increment 1.2: Modify JASSM and MALD SMOs (including respective JASSM-ER and MALD-J variant capabilities); perform engineering and test support for SIL, ground and flight testing. Develop technical orders. Continue B-52 Joint Mission Planning System (JMPS) development, testing, and certification with JASSM and MALD including respective variants.			
Accomplishments/Planned Programs Subtotals	-	-	16.490

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 1: *PE 0101113F, B52 Squadrons, Aircraft Procurement BP11, Mods APAF*	11.541	0.000	3.238	0.000	3.238	30.983	6.690	0.000	0.000	Continuing	Continuing
• 2: *PE 0101113F, B52 Squadrons, Aircraft Procurement BP16, Initial Spares APAF*	0.000	0.000	0.000	0.000	0.000	0.550	0.557	0.000	0.000	Continuing	Continuing
• 3: *PE 0101113F, B-52 Squadrons, RDT&E, BPAC 675039*	37.522	12.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The 1760 Internal Weapons Bay Upgrade program will acquire software development and hardware design via a sole-source contract to Boeing DSS, Wichita, KS. Deliverables include an updated J-series weapon SMOs (software), a prototype modified CSRL, logistics support, gorund and flight test support, and engineering drawings. Production IWIUs, required for each modified CSRL, and will be sole source to Boeing. The program will competitively procure the CSRL modification kits (cables, connectors, and mounting brackets).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*

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.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
1760 Tech Development/Trade Studies	1	2011	2	2011
1760 IWBU EMD	2	2011	3	2013
1760 IWBU Milestone C	3	2013	3	2013

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675049: *MODE S/5 IFF*	-	-	1.202	-	1.202	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

NOTE: THIS NOT AN FY13 NEW START. PRIOR YEAR COSTS FOR MODE S/5 IFF FY11-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675049 STRATING IN FY13.

A. Mission Description and Budget Item Justification

Beginning in FY13 Project Number 675049, Mode S/5 IFF, transferred from Project Number 675039, B-52 Modernization. Beginning in FY13, Project Number 675039 will be used for B-52 Modernization RDT&E funding only.

Mode S/5 IFF
Mode S/5 Identification Friend or Foe (IFF) is part of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) effort and will develop and integrate modern technology into the B-52 to enable it to operate in the evolving air traffic environment. This effort is driven by International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA) mandates to comply with performance standards to allow the B-52 to operate safely in controlled airspaces. This program will also yield significant savings through more efficient flight routes and altitudes. The Mode S/5 portion includes upgrade of the current APX-64 with the APX-119 and will possess architecture to include in a future modification the simultaneous integration of Automatic Dependent Surveillance - Broadcast (ADS-B) capability required for operations in European airspace by 2015 and CONUS airspace by 2020. Data Guard is needed to prevent transmissions of classified data from the 1553 data bus.

CNS/ATM
Capabilities identified under CNS/ATM activities will include Frequency Management (FM) immunity, digital communications (voice and data), improved navigation accuracy such as Required Navigation Performance (RNP) or Global Positioning System (GPS) enhancements, Reduced Vertical Separation Minimum (RVSM), Traffic Alert and Collision Avoidance System (TCAS), enhanced situational awareness such as Mode S/Mode 5 IFF, Communications Management Unit, HF Data Link, 8.33MHz Very High Frequency (VHF), Auto Dependent Surveillance (both address and broadcast), and any follow-on activities to associated components/systems resulting from modifications to CNS/ATM systems.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Title: Mode S/5 IFF	-	-	1.202

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Description: Integrates modern IFF technology onto the B-52 by replacng the current system with APX-119 required by DoD, FAA and the International Civil Aviation Organization (ICAO). ***FY 2011 Accomplishments:*** Effort accomplished in BPAC 675039. ***FY 2012 Plans:*** Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** Upgrade Systems Integration Lab (SIL), EMI/EMC Test procedures, indentify long-lead components, complete all fabrication drawings, develop Installation Drawing Package, conduct SIL testing, support ground/flight testing and Air Traffic Control Radar System IFF Mark 12/Mark 12A Systems platform certification, and report certification results.			
Accomplishments/Planned Programs Subtotals	-	-	1.202

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 1: *PE 0101113F, B-52 Squadrons, Aircraft Procurement BP11, Mods APAF*	0.000	0.000	0.000	0.000	0.000	9.590	12.357	2.557	0.000	Continuing	Continuing
• 2: *PE 0101113F, B-52 Squadrons, Aircraft Procurement BP16, Initial Spares APAF*	0.000	0.000	0.000	0.000	0.000	0.779	0.803	0.000	0.000	Continuing	Continuing
• 3: *PE 0101113F, B-52 Squadrons, RDT&E, BPAC 675039*	8.583	1.166	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The Mode S/5 IFF Program is in the initial stage of acquisition planning. A detailed acquisition plan will be developed based on the results of the engineering studies being completed by Boeing, Wichita KS.

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.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675049: *MODE S/5 IFF*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Mode S/5 IFF EMD	2	2012	3	2014
Mode S/5 IFF Milestone C	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675050: *CONECT*	-	-	34.700	-	34.700	29.800	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

NOTE: THIS IS NOT AN FY13 NEW START. PRIOR YEAR COSTS FOR CONECT FY 05 - FY 12 ARE CONTAINED IN BPAC 675039 ARMS CONTROL ACTIVITIES. THIS DOCUMENT REFLECTS NEW BPAC 675050 STARTING IN FY 13.

A. Mission Description and Budget Item Justification

CONECT

Starting in FY13, the CONECT program will be restructured to replace the current Multi-Function Displays (MFD's) located at each of the crew stations, make the temporary Evolutionary Data Link (EDL) modification permanent, and demod of the CONECT test aircraft as required. The current CONECT development program will be completed as intended.

The B-52 Combat Network Communications Technology (CONECT) acquisition program 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 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 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 re-targeting of Conventional Air Launched Cruise Missile (CALCM), Joint Air-to-Surface Standoff Missile/JASSM-Extended Range (JASSM/JASSM-ER), and other J-series weapons across the range of B-52 military operations and missions.

As the remaining requirement of the CONECT program restructure, the Multi-Function Display (MFD) Replacement will develop wire-harnesses and installation tray configurations for the MFDs in each of the 76 B-52 aircraft. The existing legacy displays at each crew station will be removed and replaced with stock listed MFDs. This effort will replace the current MFDs due to long standing obsolescence issues. This configuration WILL NOT provide additional capability beyond what is currently available, but will retain growth potential for future upgrades.

Evolutionary Data Link (EDL) was intended a bridge program to provide a secure voice/datalink capability between ground fighting personnel and the B-52 weapon system, providing situational awareness of where friendly forces are in relation to enemy forces during targeting efforts while using precision guided weapons in combat. Originally fielded as a T1 Modification, the EDL 3.1 program will be finalized as a permanent modification, which entails procurement of sufficient Group B kits to modify the remainder of the fleet, along with procurement of spares and a long-term maintenance strategy with sufficient cover through the end of the aircraft's life

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

cycle. Additional full-up kits will also be required to modify aircrew and ground maintenance trainers. Technical orders, operational procedure directives, and drawings will need to be generated from existing temporary documents. No additional certification testing (DT/OT) is anticipated, as at the end of EDL 3.1 fielding the program office will consider this a fielded, operational system.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Title: CONECT	-	-	34.700
Description: Integrates rapid re-tasking capability of J-series weapons and conventional cruise missiles, dedicated BLOS UHF comm/datalink; computer network infrastructure, digital interphone. Multi-Function Color Displays (MFCD); and an Intelligence Broadcast Receiver (IBR). Beginning in FY 13, CONECT is being restructured to make the Evolutionary Data Link Temporary Mod permanent and replace the legacy displays, due to obselence issues. ***FY 2011 Accomplishments:*** Effort accomplished in BPAC 675039. ***FY 2012 Plans:*** Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** Initiate restructure of the B-52 CONECT program to include closeout of open contracts and demodification of the flight test aircraft. Continue replacement the current MFDs due to long standing obsolescence issues.			
Accomplishments/Planned Programs Subtotals	-	-	34.700

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 1: *B-52 Squadrons, Aircraft Procurement, BP11, Mods APAF*	0.000	0.000	0.000	0.000	0.000	0.000	17.519	25.604	23.298	4.800	71.221
• 2: *B-52 Squadrons, Aircraft Procurement, BP16, Initial Spares, APAF*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.795	1.428	0.000	2.223
• 3: *B-52 Squadrons, RDT&E, BPAC 675039*	23.543	65.460	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

D. Acquisition Strategy

The B-52 CONECT EMD prime contract was a sole source to Boeing Defense, Space & Security (DSS), Wichita, KS. Boeing designed, developed, tested and procured the necessary equipment from their subcontractors; developed engineering drawings, logistic and technical data, and time compliance technical order (TCTO) for installation on the B-52.

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.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

Schedule Details

	Start		End	
Events	Quarter	Year	Quarter	Year
CONECT/EDL EMD	1	2013	4	2014
CONECT/EDL Milestone C	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675051: *ANTI-SKID*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675051: *ANTI-SKID*	-	-	0.751	-	0.751	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

NOTE: THIS IS NOT AN FY13 NEW START. PRIOR YEAR COSTS FOR ANTI-SKID FY10-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675051 STARTING IN FY13

A. Mission Description and Budget Item Justification

Beginning in FY13 Project Number 675051, B-52 Anti Skid Replacement, transferred from Project Number 675039, B-52 Modernization.

The B-52 Anti-skid system is used to maintain control of aircraft during landings and taxi operations. The B-52 Anti-skid system prevents aircraft skidding by sensing the exact amount of brake pressure needed for safe braking under all runway conditions without tire damage. Previous B-52 Anti-skid supportability analysis, completed in 2006 by General Atomics, indicated a supportability end date of 2011, based on parts obsolescence, a lack of test equipment and a lack of repair personnel. Parts obsolescence continues to be a major supportability factor. However, since the previous analysis, test equipment and new depot maintenance procedures to refurbish previously failed Anti-skid detectors have been put in place in order to provide spares until 2014/2015 when the replacement will be available. The Anti-skid Replacement program develops and installs a new system. This effort includes an upgrade of the maintenance trainers.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Title: Anti-skid	-	-	0.751
Description: Replaces legacy B-52 Anti-skid system with modernized system improving safety and cockpit display. Anti-skid detector has been identified a critical obsolescence item, which begins to be unsupportable in FY15. ***FY 2011 Accomplishments:*** Effort accomplished in BPAC 675039. ***FY 2012 Plans:*** Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** Continue/complete Flight Test Activities, Flight Test Reports, update Techhnical Order (TO) data			
Accomplishments/Planned Programs Subtotals	-	-	0.751

Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675051: *ANTI-SKID*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 1: *PE 0101113F, B-52 Squadrons, Aircraft Procurement BP11, Mods APAF*	0.000	0.000	4.626	0.000	4.626	6.737	6.011	0.915	0.930	Continuing	Continuing
• 2: *PE 0101113F, B-52 Squadrons, Aircraft Procurement BP16 Initial Spares APAF*	0.000	0.000	0.000	0.000	0.000	0.505	0.523	0.000	0.000	Continuing	Continuing
• 3: *PE 0101113F, B-52 Squadrons, RDT&E, BPAC 675039*	5.996	6.218	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The B-52 Anti-skid program is a combined effort between OC-ALC and OO-ALC. The modification will be implemented via Program Depot Maintenance (PDM) and Contract Field Team (CFT).

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.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675051: *ANTI-SKID*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675051: *ANTI-SKID*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Anti-skid EMD Test & Evaluation	2	2012	3	2013
Anti-skid LRIP	3	2013	3	2013