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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 0207138F: F-22 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	493.506	571.320	371.667	-	371.667	328.542	249.810	344.647	428.663	Continuing	Continuing
674785: F-22	493.506	571.320	371.667	-	371.667	328.542	249.810	344.647	428.663	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Totals include funding for PRCP Program Number, 265, F-22

The Cost to Complete and Total Cost for MDAP projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for MDAP projects since the R2 does not account for prior years funding.

A. Mission Description and Budget Item Justification

The F-22 Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, and homeland and cruise missile defense for the next 20+ years. The F-22 is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. The Engineering and Manufacturing Development (EMD) phase of F-22 acquisition is complete. The program is now continuing the pre-planned modernization effort through incremental development phases that enhance the F-22 Global Strike capability. The development program enhances the air vehicle, engine, and training system to improve/enhance F-22 weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

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.

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B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	576.330	718.432	689.201	-	689.201
Current President's Budget	493.506	571.320	371.667	-	371.667
Total Adjustments	-82.824	-147.112	-317.534	-	-317.534
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-147.000			
• Congressional Rescissions	-2.608	-0.112			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-15.216	-			
• Other Adjustments	-65.000	-	-317.534	-	-317.534
Change Summary Explanation					
FY 2011: \$82.8M reduction due to -\$2.6M Congressional Rescission, -\$15.2M SBIR, and -\$65.0M Congressional Reductions					
FY 2012: \$147.1M reduction due to -\$147.0M Congressional Reduction and -0.1M FFRDC					
FY 2013: \$317.5M reduction due to \$187.9M Increment 3.2B full funding realignments/adjustments, -\$140.1M realignment of Increment 3.2B to new PE 0605213F, \$9.8M Congressional Add for Line-in-the-Sky (LIS) Auto Ground Collision Avoidance System (AGCAS), and \$0.7M for inflation adjustments					
C. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013		
Title: Software Support	49.037	68.683	59.843		
Description: Operational Flight Plan (OFP) testing in the Raptor Integration Lab (RAIL) and the Avionics Integration Lab (AIL), Developmental and Operational flight test, Pilot Training Systems (PTS) software upgrades, Synthetic Aperature Radar (SAR) mapping capability development for the PTS, Trainer/Integrated Maintenance Information System (IMIS) Software Enhancements					
FY 2011 Accomplishments: In FY 2011: Flight test on the Update 3 software support OFPs are completed and fielded. FOT&E will be conducted on Update 3. Update 4 coding will be accomplished, and testing in the system integration laboratories will begin for two of the three Update 4 software configurations. Developmental flight testing will begin on the first of three software configurations. Pilot Training Systems (PTS) software upgrades, IMIS to continue Ada to C++ conversion focusing on Integrated Maintenance Data Systems (IMDS) interface error correction and Maintenance Data Collection.					
FY 2012 Plans:					

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
In FY 2012: Update 4 software support OFPs are completed. Flight testing of all the Update 4 software products will be completed and fielded. Pilot Training Systems (PTS) Software upgrades. Synthetic Aperature Radar (SAR) mapping capability development for the PTS. IMIS to continue focus on ADA to C++ conversion focusing on three additional major areas. FY 2013 Plans: In FY 2013: Update 4 software support OFPs are completed. Flight testing of all the Update 4 software products will be completed and fielded. Pilot Training Systems (PTS) Software upgrades. Synthetic Aperature Radar (SAR) mapping capability development for the PTS. IMIS to continue focus on ADA to C++ conversion focusing on three additional major areas.				
Title: System Engineering/Program Management Support Description: Provide for F-22 program-wide planning and execution. FY 2011 Accomplishments: In FY 2011: Provides for F-22 program wide planning and execution comprised of, but not limited to the following: Requirements Identification, Schedule Analysis & Integration, Cost Estimating Data, and Systems Engineering Process Management. FY 2012 Plans: In FY 2012: Same as prior year. FY 2013 Plans: In FY 2013: Same as prior year.		15.000	15.600	14.500
Title: Mission Support Description: Continue mission support of the Program Office; travel, computer costs, misc contracts, etc. FY 2011 Accomplishments: In FY 2011: Funds provide management and oversight activities in direct support of F-22 Increment Development, RAMMP, Aircraft Structural Integrity Program (ASIP), Flight Test Support, 3.2A Should Cost analysis, and 3.2B Milestone B documentation. FY 2012 Plans: In FY 2012: Funds provide management and oversight activities in direct support of F-22 Increment Development, RAMMP, Aircraft Structural Integrity Program (ASIP), Flight Test Support, 3.2B Should Cost analysis, and 3.2B Milestone B documentation. FY 2013 Plans: In FY 2013: Same as prior year. Increment 3.2B activities under separate PE 65213F.		17.261	21.795	10.787
Title: Reliability and Maintainability Maturation Program (RAMMP)		10.000	14.000	10.754

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Description: Continue development of RAMMP to improve MTBM and aircraft availability. FY 2011 Accomplishments: (U) In FY 2011: Provides for development of multiple efforts to improve Mean Time Between Maintenance (MTBM), Maintainability, and reduce F-22 Weapon System Life Cycle Costs. FY 2012 Plans: (U) In FY 2012: Same as prior year. FY 2013 Plans: (U) In FY 2013: Same as prior year.				
Title: Increment 3.1 Description: The F-22 Increment 3.1 Modernization Program consists of the software and hardware modifications necessary to provide Enhanced Global Strike (GS) capabilities on the Lot 4B and beyond F-22 aircraft and training systems. Increment 3.1 is currently implementing the design products to deliver the enhanced capabilities to support retrofit on operational F-22 aircraft and their support elements. FY 2011 Accomplishments: In FY 2011: Complete Increment 3.1 developmental flight test. Increment 3.1 operational flight test through completion. FY 2012 Plans: In FY 2012: No planned activities in 2012 FY 2013 Plans: In FY 2013: No planned activities in 2013		10.067	-	-
Title: Increment 3.2A Description: The F-22 Increment 3.2A Modernization Program consists of the software development necessary to provide Increment 3.2A capabilities including improvements to Electronic Protection, Combat Identification and Link-16 Receive. FY 2011 Accomplishments: In FY 2011: Requirements Development will be completed and will culminate in a System Design Review. Detailed design of the capabilities will begin and a Preliminary Design Review will be conducted. Preliminary work to prepare lab and test facilities for Development, Integration, and Test will also begin. FY 2012 Plans:		92.594	85.075	80.360

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
In FY 2012: The detailed design phase will continue and will culminate in a Critical Design Review. Preliminary work will continue to prepare lab and test facilities for Development, Integration, and Test. All software coding, integration and testing will begin. FY 2013 Plans: In FY 2013: Work will continue to prepare lab and test facilities for Development, Integration, and Test. All software coding, integration and testing will continue. Developmental Test will be conducted.				
Title: Increment 3.2B Description: The F-22 Increment 3.2B Modernization Program consists of the software development necessary to provide Increment 3.2B capabilities including Intra-Flight Data Link Improvements, Electronic Protection, AIM-9X and AIM-120D integration with Common Weapon Engagement Zone, Geolocate 2.0 and Stores Management System Common Split Bus. The Enhanced Stores Management System (ESMS) program is a hardware development and risk reduction program required to integrate any new weapons on the F-22 beyond Increment 3.1. FY 2011 Accomplishments: In FY 2011: ESMS program will continue sub-system integration and complete it in the Avionics Integration Lab (AIL). Flight test of the ESMS sub-system will also be performed and scheduled to be completed as well. Requirements Development will be completed and will culminate in a System Design Review. Detailed design of the capabilities will begin. Preliminary work to prepare lab and test facilities for Development, Integration, and Test will also begin. Efforts leading up to MDD will be accomplished. A significant amount of hardware is being purchased to support Increment 3.2B candidate testing and development. FY 2012 Plans: In FY 2012: MDD will be accomplished. Work to prepare lab and test facilities for Development, Integration and Test continues. Increment 3.2B will continue Design efforts; this effort will require all detailed design phase work necessary to start product development and to plan for the remaining phase efforts required to incorporate Increment 3.2 capabilities into the F-22 weapon system as described in the Increment 3.2 Operational Capability Description Document. FY 2013 Plans: In FY 2013: Increment 3.2B FY13 activities under separate Project Element 0605213F.		112.919	113.900	-
Title: Combined Test Force (CTF) Description: The F-22 Combined Test Force (CTF), located at Edwards Air Force Base, conducts full-up weapons system testing to assess the synergistic effect of the F-22 combined characteristics of stealth, speed, maneuverability, and integrated avionics in mission accomplishment. The CTF uses operationally significant ground and flight test scenarios, when practical, to identify		68.808	80.000	65.729

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
system performance deficiencies early before they are more difficult and costly to resolve. Starting in FY13, CTF efforts directly associated with Increment 3.2B development are located in the 3.2B program documentation, Project Element 65213F.				
FY 2011 Accomplishments: In FY 2011: The significant programs undergoing flight test at AFFTC include: The closeout of Increment 3.1, Update 3, AIM-9X Risk reduction, SDB Risk Reduction, ESMS/TA-74, Cold stick tests, Arresting Gear, Main Oil Pump, Signature Management Plan, 6 gallon test, Bio-fuel Certification, and the Travel Pod. Smaller projects planned were IR Countermeasure Door, Auxiliary Power Unit Exhaust Door Temperature, Augmentor/Ignitor, Air Cycle machine Reliability Improvements; Loads Regression Testing; #5 carbon seal redesign; Structural Health Monitoring Device Durability; and Engine Software version #17.				
FY 2012 Plans: In FY 2012: The significant programs undergoing flight test at AFFTC include: Update 3.6 and update 4 software testing; AIM-9X Risk reduction and AIM-9X SEEK EAGLE testing, arresting gear, External Fuel Tank testing, 6 gallon testing, Bio-fuel Certification, and ECS OBOGS investigations. Small projects currently-planned also include: NUCIF, MOP, dragging brake issue, Weapon Bay Door Redesign, cracking/missile fin rub; Flight Control Problem, and 5th Generation Common Architecture.				
FY 2013 Plans: In FY 2013: The significant programs undergoing flight test at AFFTC include: major software improvements associated with Increment 3.2A; Update 5 testing. Other small program requirements are expected to require testing such as supersonic tanks; AIM-9 employment with tanks; and Auto Ground Collision Avoidance software.				
Title: Laboratory Test & Operations (LTO)		58.291	79.300	73.802
Description: Lab Test & Operations is a continuous activity that plans and conducts development, integration, test, & verification (IT&V) of F-22 OFPs with F-22 hardware. Starting in FY14 (there is no 3.2B LTO money in FY13), LT&O efforts directly associated with Increment 3.2B development are located in the 3.2B program documentation, Project Element 0605213F. LT&O provides "ready state" maintenance, staffing, and operation of 20 development labs including 5 unique major System Integration Laboratories (SILs): the Agile Integration Lab (AIL); the Raptor Integration Lab; the Air Combat Simulation (ACS) Lab; the Vehicle Management System (VMS) Vehicle Integration Facility (VIF); and the Vehicle System Simulator (VSS). Through the ACS, LT&O provides the combat air forces with advanced mission-level test and training capability through a fully representative simulation.				
FY 2011 Accomplishments:				

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
In FY 2011: Maintain lab "ready state" availability in support of F-22 programs. Update critical systems as required to support new aircraft configurations and capabilities. Accomplish OFP verification and risk reduction. Support pilot training in support of Air Combat Command exercises and war gaming; Air Force Operational Test & Evaluation Center test planning; and test event rehearsals. Support periodic Air Warfare Center operational mission data updates. FY 2012 Plans: In FY 2012: Maintain lab "ready state" availability in support of F-22 programs. Update critical systems as required to support new aircraft configurations and capabilities. Accomplish OFP verification and risk reduction. Support pilot training in support of Air Combat Command exercises and war gaming; Air Force Operational Test & Evaluation Center test planning; and test event rehearsals. Support periodic Air Warfare Center operational mission data updates. FY 2013 Plans: In FY 2013: Same as prior year.				
Title: VAX Migration Description: The F-22 VAX Migration program develops, integrates, tests, and deploys computer infrastructure and software tools to replace existing VAX-based resources used to develop, field, and sustain F-22 capabilities. The current VAX architecture is obsolete, resulting in increased program risk, and delays in development due to reliance upon increasingly unreliable and unsupportable infrastructure. FY 2011 Accomplishments: In FY 2011: The majority of the activities include labor required to translate existing VAX based software development tools and procedures to new platforms. Where required this includes rewriting existing code to provide equivalent results on target platforms. Each system requires complete certification testing validation. Consequently this activity also includes contractor testing and support for government certification and accreditation of migrated systems; and updating of required contractor software and hardware development process to reflect resulting architectures. FY 2012 Plans: In FY 2012: Continue development and delivery of the Network User Control Interface (NUCIF) card allowing for non-VAX computers to interface with F-22 test aircraft and development labs; continue site-by-site replacement of VAX systems through deployment of PC-based systems, compilers and software support tools including Dimensions, Cradle, Quicksilver, Deployment of instrumentation tools, simulation tools and user unique tools. FY 2013 Plans: In FY 2013: Same as prior year.		31.850	28.000	10.500
Title: F-22 Small Project Roll-up		10.924	17.374	8.925

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Description: Continue F-22 modernization development and support activities FY 2011 Accomplishments: Provides for F-22 modernization activities including, but not limited to: LO Signature Mgmt, EN/Threat Modeling Support, DT Weapons Assets, F-22 Secure Software Dev Networks, PT Dynamic SAR, Support Equipment Development, Urgent Response, and OGC/GFE. FY 2012 Plans: In FY 2012: Same as prior year. FY 2013 Plans: In FY 2013: Same as prior year.				
Title: Crypto Modernization Description: Crypto Modernization provides for development to support crypto-graphic updates. Two crypto-graphic projects are currently in work: the KOV-20 Field Upgrade (field upgrade only) and the KOV-20 Off-Ramp. FY 2011 Accomplishments: FY 2011: Crypto Modernization activities: KOV-20 Field Upgrade to retrofit the test jets with the upgraded KOV-20 units. KOV-20 Off-Ramp requirements definition and tech package development will be accomplished. FY 2012 Plans: FY 2012: Crypto Modernization activities: KOV-20 Field Upgrade to begin fleet retrofit with upgraded KOV-20 units. KOV-20 Off-Ramp will conduct requirements analysis and generation phase will be accomplished and the design phase will begin. FY 2013 Plans: In FY 2013: KOV-20 Field Upgrade to continue fleet retrofit with upgraded KOV-20 units. KOV-20 Off-Ramp will continue the design phase and transition into coding and testing.		1.105	0.813	15.905
Title: Advanced Technology Development Description: Technology Maturation and risk reduction of Classified F-22 related development efforts FY 2011 Accomplishments:		15.650	25.756	10.762

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
In FY 2011: Technology Maturation and risk reduction of Classified F-22 related development efforts. This effort includes studies and analyses of a variety of Special Projects for integration onto the F-22 and to perform proof of concept demonstration on select projects. FY 2012 Plans: In FY 2012: Technology Maturation and risk reduction of Classified F-22 related development efforts. Study and analysis of a variety of Special Projects for integration onto our platform continues. Perform proof of concept demonstration on select projects. Detailed integration efforts begin on successfully demonstrated projects. FY 2013 Plans: In FY 2013: Same as prior year.				
Title: Line In-The-Sky Auto Ground Collision Avoidance System (AGCAS) Description: (U) The LIS AGCAS will be designed and integrated on the F-22 to prevent the aircraft from unintentionally descending below ground level. FY 2011 Accomplishments: In FY 2011: No planned effort in FY 2011. FY 2012 Plans: FY 2012: Requirements development for AGCAS will be accomplished. In addition, design work will begin to develop design solutions for Block 20, 30, and 35. FY 2013 Plans: In FY 2013: Same as FY12		-	2.890	9.800
Title: Open System Architecture Description: Conduct studies and analysis to reduce the risk of integrating Open Architecture (OA) hardware and fusion architecture onboard the F-22. The goal of this effort is to ultimately reduce the F-22 costs and timeline (development, test, and fielding) with more cost-effective solutions. Impact if not funded: If not funded F-22 program will be delayed developing open architecture, resulting in higher modernization costs and increase time capability can be delivered to the war fighter. FY 2011 Accomplishments: In FY 2011: No planned activity in FY 2011 FY 2012 Plans:		-	10.000	-

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
In FY 2012: Study and analysis of the Open System Architecture integration onto F22.				
FY 2013 Plans: In FY 2013: No planned effort in FY13				
Title: Laboratory Obsolescence Description: Provides for identification and replacement of critical laboratory assets that have reached the end of their useful life and require replacement. Several components in the F-22 labs have exceeded their useful life, or have become so difficult to support that they require replacement. Currently identified items that require replacement include the: Stand-Alone Multi-Engine Real Time Simulator (SMRTS); Operational Flight Program (OFP) Build System; Raptor Integration Lab (RaIL) Communications, Navigation and Identification (CNI) Stimulator; Air Vehicle Systems (AVS) Prime Mission Equipment (PME); Integrated Vehicle System Controller (IVSC) Engineering Test Stand (ETS); Honeywell Environmental Control System (ECS) Lab; BAE Electronic Warfare (EW) Alpha Computers; RaIL Silicon Graphics, Inc. (SGI) Computer Replacement; IL FTE; Crash Survivable Memory Unit (CSMU) Specialized Test Equipment (STE). Replacement of these systems will be spread between FY12 and FY14 based upon criticality and availability for replacement (opportunity to replace without undue delay to the program), and available funding. The obsolescence priority list is maintained current based upon historic and current failure rates, lead-time to replace, position on F-22 program critical paths, and identification of new candidates. FY 2011 Accomplishments: In FY 2011: No planned activity in FY11. FY 2012 Plans: In FY 2012: Replace a subset of the equipment listed. Replace at least the four highest priority systems (currently SMRTS, OFP Build System, RaIL CNI, AVS PME). Actual priority may change prior to implementation. While every effort is made to identify those systems most at risk, new entries may enter at the top of the list due to numerous external factors. Increased level of activity in all above areas, compared to FY11, to support added FY12 development efforts. In addition, lab consolidation of the RAIL at Hill AFB will be accomplished. FY 2013 Plans: In FY 2013: No planned effort in FY13.		-	8.134	-
Accomplishments/Planned Programs Subtotals		493.506	571.320	371.667

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D. 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 0207138F*: F-22A Squadrons, APAF	639.582	385.646	332.349	0.000	332.349	480.070	422.485	425.911	475.770	Continuing	Continuing
• PE 0207219F**: Advanced Tactical Fighter, APAF	159.033	105.335	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0207138F, F-22A Squadrons: Other Procurement, OPAF	1.444	1.699	0.669	0.000	0.669	1.440	1.090	0.959	1.000	Continuing	Continuing
• PE 0207138F: MILCON	13.586	16.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0207445F: Tactical Data Link, RDT&E	23.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0207163F, AMRAAM***: AIM-120D, RDT&E	5.900	10.810	18.990	0.000	18.990	23.830	23.940	5.820	0.000	0.000	15.110
E. Acquisition Strategy											
The Raptor Enhancement Development & Integration (REDI) contract is an Indefinite Delivery/Indefinite Quantity Ordering contract that maximizes flexibility to start, stop, accelerate and decelerate projects as required. The REDI contract was established to be more responsive to evolving war fighter requirements. The REDI contract allows the issuance of orders for the highest priority war fighter capabilities in operationally meaningful capability increments, requirements analysis, contractor cost estimates and studies, development and demonstration of capability enhancements, and unanticipated future war fighter requirements. Each increment is broken into phases to initiate requirements analysis, the design phase and the development, integration and verification phase of a specific incremental development effort.											
F. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force										DATE: February 2012			
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Support	SS/CPIF	Lockheed Martin:Fort Worth, TX	232.941	68.683	Dec 2011	59.843	Dec 2012	-		59.843	Continuing	Continuing	0.000
System Engineering / Program Management	SS/CPIF	Lockheed Martin:Fort Worth, TX	176.533	15.600	Dec 2011	14.500	Dec 2012	-		14.500	Continuing	Continuing	0.000
RAMMP	SS/CPFF	Lockheed Martin:Fort Worth, TX	110.071	14.000	Jan 2012	10.754	Jan 2013	-		10.754	Continuing	Continuing	0.000
Increment 3.1	SS/CPIF	Lockheed Martin:Fort Worth, TX	639.985	-		-		-		-	0.000	639.985	0.000
Increment 3.2A	SS/CPIF	Lockheed Martin:Fort Worth, TX	171.646	85.075	Dec 2011	80.360	Nov 2012	-		80.360	34.217	371.298	0.000
Increment 3.2B	SS/CPIF	Lockheed Martin:Fort Worth, TX	292.256	113.900	Dec 2011	-		-		-	0.000	406.156	0.000
VAX Migration	SS/CPIF	Lockheed Martin:Fort Worth, TX	144.368	28.000	Dec 2011	10.500	Dec 2012	-		10.500	29.623	212.491	0.000
F-22 Small Projects	SS/Various	Lockheed Martin:Fort Worth, TX	494.452	17.374	Dec 2011	8.925	Oct 2012	-		8.925	Continuing	Continuing	0.000
Crypto-Modernization	SS/CPIF	Lockheed Martin:Fort Worth, TX	3.355	0.813	Dec 2011	15.905	Nov 2012	-		15.905	30.532	50.605	0.000
Advanced Technology Development	Various	Various:Various,	18.950	25.756	Jan 2012	10.762	Sep 2013	-		10.762	Continuing	Continuing	0.000
Auto Ground Collision Avoidance System (AGCAS)	SS/CPIF	Lockheed Martin:Fort Worth, TX	-	2.890	Sep 2012	9.800	Oct 2012	-		9.800	5.240	17.930	0.000
Open System Architecture	SS/CPIF	Lockheed Martin:Fort Worth, TX	-	10.000	Dec 2011	-	Dec 2012	-		-	Continuing	Continuing	0.000
Subtotal			2,284.557	382.091		221.349		-		221.349			0.000
Remarks FY13-17 Increment 3.2B costs and estimated contract award dates are summarized in separate documentation PE/BPAC 0605213F/654785. All increment 3.2B efforts and funding prior to FY13 continues to be shown in PE/BPAC 0207138F/674785.													

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Exhibit R-3, RDT&E Project Cost Analysis: 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 0207138F: F-22 SQUADRONS				PROJECT 674785: F-22					
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combined Test Force	Various	Various:Various,	615.513	80.000	Dec 2011	65.729	Nov 2012	-		65.729	Continuing	Continuing	0.000
Laboratory Test & Operations (LTO)	SS/Various	Lockheed Martin:Ft Worth, TX	466.612	79.300	Dec 2011	73.802	Nov 2012	-		73.802	Continuing	Continuing	0.000
Laboratory Obsolescence	SS/Various	Lockheed Martin:Ft Worth, TX	-	8.134	Jan 2012	-		-		-	Continuing	Continuing	0.000
Subtotal			1,082.125	167.434		139.531		-		139.531			0.000
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support	C/Various	Various:Various,	111.693	21.795	Oct 2011	10.787	Oct 2012	-		10.787	Continuing	Continuing	0.000
Subtotal			111.693	21.795		10.787		-		10.787			0.000
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			3,478.375	571.320		371.667		-		371.667			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207138F: <i>F-22 SQUADRONS</i>	PROJECT 674785: <i>F-22</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207138F: <i>F-22 SQUADRONS</i>	PROJECT 674785: <i>F-22</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207138F: <i>F-22 SQUADRONS</i>	PROJECT 674785: <i>F-22</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Increment 3.1 Development, Integration, & Test - Actual Start: 4Q 2007	1	2011	1	2012
ESMS Development, Integration, & Test – Actual Start: 4Q 2008	1	2011	3	2011
Increment 3.2B Material Development Decision (MDD)	1	2012	1	2012
Increment 3.2A System Design Review (SDR)	2	2011	2	2011
Increment 3.2B System Requirements Review (SRR)	4	2011	4	2011
Increment 3.2B System Design Review (SDR)	4	2011	4	2011
Increment 3.2A Preliminary Design Review (PDR)	4	2011	4	2011
Increment 3.2B Preliminary Design Review (PDR)	4	2012	4	2012
Increment 3.2A Critical Design Review (CDR)	2	2012	2	2012
Initiate 3.2A Development, Integration, & Test	1	2012	1	2012
Advanced Technology Development Studies & Analysis	1	2011	4	2017
Advanced Technology Development Demonstrations	1	2011	4	2017
Advanced Technology Development Design	4	2012	4	2017
Open Systems Architecture	2	2012	3	2013
AGCAS Requirements Analysis	4	2012	2	2013
AGCAS System Requirements Review (SRR)	1	2013	1	2013
AGCAS System Design Review (SDR)	2	2013	2	2013
Initiate AGCAS Design	2	2013	2	2013
AGCAS Preliminary Design Review (PDR)	3	2013	3	2013
AGCAS Critical Design Review (CDR)	1	2014	1	2014
AGCAS Development, Integration, & Test	1	2014	2	2015