

UNCLASSIFIED

PE NUMBER: 0207141F
 PE TITLE: F-117A SQUADRON

Exhibit R-2, RDT&E Budget Item Justification								DATE February 2004	
BUDGET ACTIVITY 07 Operational System Development				PE NUMBER AND TITLE 0207141F F-117A SQUADRON					
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.710	14.627	29.661	56.914	46.925	31.560	1.633	Continuing	TBD
3956 F-117A Stealth Fighter	3.710	14.627	29.661	56.914	46.925	31.560	1.633	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

NOTE: In FY 2005, Weapon System Trainer (WST) Image Generation System, Mission Planning System (MPS) Hardware Upgrade and Modify Flight Test Assets to Conform with Current Modifications of Operational Aircraft are New Start efforts.

The F-117 is the world's first operational low-observable (LO) combat aircraft. Its combination of stealth and precision weapons delivery capability allows the United States Air Force to hold even the most highly defended targets at risk. The program completed production in Jul 1990 with the delivery of the final F-117 (number 59). The single operational F-117 unit is the 49th Fighter Wing stationed at Holloman AFB, NM. The program is now primarily engaged in modernization and sustainment activities for the F-117, which is projected to remain in service through at least 2018.

This project provides research and development funding for multiple modifications to the F-117 weapon system to enhance combat capability while improving safety, reliability and supportability. The MIL-STD-1760 Stores Management Processor (SMP) modification, which completed development in May 01, is an essential prerequisite for integration of advanced weapons on the F-117. Development efforts continue for smart weapons integration. The current program implements full three weapons capability to include EGBU-27, JDAM and WCMD. System Development & Demonstration (SDD) started in FY01.

The Combat Capability Sustainment Program (CCSP) replaces obsolete avionics systems, establishes new vendors and improves reliability and maintainability to keep the F-117 operational through its service life. CCSP began Concept & Technology Development (CTD) in FY00 with Congressional Add funding. Beginning in FY2004, System Development & Demonstration (SDD) starts for Expanded Data Transfer System (EDTS) and Brooklyn Bridge. EDTS is the system that allows data to be transferred from the mission planning environment to the aircraft for operations. The Brooklyn Bridge consists of the F-117 outboard elevon actuator support structure.

The F-117 WST requires a replacement for the imagery computer/image generation (IG) system. The vendor of the current system, SGI no longer manufactures replacement boards for the IG computer. Furthermore, the vendor no longer supports the current maintenance contract. Recently, the IG contributed 80% of the total WST downtime. The downtime impact will likely continue and even increase in severity.

The F-117 Mission Planning System (MPS) requires an operational system upgrade. The National Imaging and Mapping Agency (NIMA) is migrating to DVD format for all mapping database operations and the F-117 MPS operating system cannot be modified to function with this capability. Additionally, the current MPS Solaris operating system and Sybase database product are no longer supported by the Air Force Mission Support System (AFMSS) program office. These obsolescence issues drive the requirement for both hardware and software upgrades.

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2004

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207141F F-117A SQUADRON

Modify flight test assets to conform with current modifications of operational jets.

This program is in budget activity 7, Operational System Development, because all aircraft have been delivered and the program is in its deployment phase.

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	3.417	14.752	31.539
(U) Current PBR/President's Budget	3.710	14.627	29.661
(U) Total Adjustments	0.293	-0.125	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.125	
Congressional Increases			
Reprogrammings	0.394		
SBIR/STTR Transfer	-0.101		
(U) <u>Significant Program Changes:</u>			

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE			
07 Operational System Development				0207141F F-117A SQUADRON			3956 F-117A Stealth Fighter			
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total	
3956 F-117A Stealth Fighter	3.710	14.627	29.661	56.914	46.925	31.560	1.633	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

NOTE: In FY 2005, Weapon System Trainer (WST) Image Generation System, Mission Planning System (MPS) Hardware Upgrade and Modify Flight Test Assets to Conform with Current Modifications of Operational Aircraft are New Start efforts.

The F-117 is the world's first operational low-observable (LO) combat aircraft. Its combination of stealth and precision weapons delivery capability allows the United States Air Force to hold even the most highly defended targets at risk. The program completed production in Jul 1990 with the delivery of the final F-117 (number 59). The single operational F-117 unit is the 49th Fighter Wing stationed at Holloman AFB, NM. The program is now primarily engaged in modernization and sustainment activities for the F-117, which is projected to remain in service through at least 2018.

This project provides research and development funding for multiple modifications to the F-117 weapon system to enhance combat capability while improving safety, reliability and supportability. The MIL-STD-1760 Stores Management Processor (SMP) modification, which completed development in May 01, is an essential prerequisite for integration of advanced weapons on the F-117. Development efforts continue for smart weapons integration. The current program implements full three weapons capability to include EGBU-27, JDAM and WCMD. System Development & Demonstration (SDD) started in FY01.

The Combat Capability Sustainment Program (CCSP) replaces obsolete avionics systems, establishes new vendors and improves reliability and maintainability to keep the F-117 operational through its service life. CCSP began Concept & Technology Development (CTD) in FY00 with Congressional Add funding. Beginning in FY2004, System Development & Demonstration (SDD) starts for Expanded Data Transfer System (EDTS) and Brooklyn Bridge. EDTS is the system that allows data to be transferred from the mission planning environment to the aircraft for operations. The Brooklyn Bridge consists of the F-117 outboard elevon actuator support structure.

The F-117 WST requires a replacement for the imagery computer/image generation (IG) system. The vendor of the current system, SGI no longer manufactures replacement boards for the IG computer. Furthermore, the vendor no longer supports the current maintenance contract. Recently, the IG contributed 80% of the total WST downtime. The downtime impact will likely continue and even increase in severity.

The F-117 Mission Planning System (MPS) requires an operational system upgrade. The National Imaging and Mapping Agency (NIMA) is migrating to DVD format for all mapping database operations and the F-117 MPS operating system cannot be modified to function with this capability. Additionally, the current MPS Solaris operating system and Sybase database product are no longer supported by the Air Force Mission Support System (AFMSS) program office. These obsolescence issues drive the requirement for both hardware and software upgrades.

Modify flight test assets to conform with current modifications of operational jets.

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207141F F-117A SQUADRON

PROJECT NUMBER AND TITLE

3956 F-117A Stealth Fighter

This program is in budget activity 7, Operational System Development, because all aircraft have been delivered and the program is in its deployment phase.

(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program	0.000	0.000	0.000
(U) Continue SDD for Smart Weapons Integration	3.710	9.773	13.066
(U) Initiate SDD for CCSP Expanded Data Transfer System (EDTS)		4.634	
(U) Initiate SDD for Brooklyn Bridge		0.220	
(U) Continue SDD for CCSP Expanded Data Transfer System (EDTS)			6.519
(U) Continue Concept Technology and Development (CTD) for CCSP			2.745
(U) Initiate SDD for Weapon System Trainer (WST) Image Generation System			2.917
(U) Initiate Mission Planning System (MPS) HW Upgrade			3.414
(U) Modify flight test assets to conform with current modifications of operational jets			1.000
(U) Total Cost	3.710	14.627	29.661

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other APPN									
(U) Aircraft Procurement (BA-5), Appn 3010/BP1100, AF F117A Squadrons, PE 27141F	21.853	16.665	13.323	18.223	21.334	83.952	78.190	Continuing	TBD
(U) Aircraft Procurement (BA-5), Appn 3010/BP1200, AF F117A Squadrons, PE 27141F		3.821						Continuing	TBD
(U) Aircraft Procurement (BA-5), Appn 3010/BP1600, AF F117A Squadrons, PE 27141F	0.000	0.000	1.045	0.000	0.000	2.692	2.744	Continuing	TBD

(U) **D. Acquisition Strategy**

RDT&E funds are executed to develop improved capability, reliability, maintenance and safety modifications. Operational Flight Program (OFP) software is continuously updated as needed to complement modification development efforts. The contracting approach varies by individual effort and involves Cost Plus Fixed Fee (CPFF) and Cost Plus Award Fee (CPAF) contract types.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2004

BUDGET ACTIVITY			PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE				
07 Operational System Development			0207141F F-117A SQUADRON					3956 F-117A Stealth Fighter				
<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u> Prior to FY 2003 Cost	<u>FY</u> 2003 Cost	<u>FY</u> 2003 Award Date	<u>FY</u> 2004 Cost	<u>FY</u> 2004 Award Date	<u>FY</u> 2005 Cost	<u>FY</u> 2005 Award Date	<u>Cost to Complete</u>	<u>Total</u> Cost	<u>Target</u> Value of Contract
<u>(U) Product Development</u>												
Smart Weapon Integration SDD	CPAF	Lockheed Martin, Palmdale CA	3.744	3.710	Apr-00	9.773		13.066		Continuing	TBD	
CCSP CTD	CPFF	Lockheed Martin, Palmdale CA	7.284	0.000		0.000		2.745	Jan-05	Continuing	TBD	
CCSP EDTS SDD	CPFF	Lockheed Martin, Palmdale CA	0.000	0.000		4.634	Jan-04	6.519		Continuing	TBD	
Brooklyn Bridge SDD	CPFF	Lockheed Martin, Palmdale CA	0.000	0.000		0.220	Dec-03	0.000		0.000	0.220	
SDD Weapon System Trianer Image Generation Sys Upgrd	CPFF	Lockheed Martin, Palmdale CA	0.000	0.000		0.000		2.917	Jan-05	Continuing	TBD	
SDD Mission Planning System, Operating System Upgrade	CPFF	Lockheed Martin, Palmdale CA	0.000	0.000		0.000		3.414	Jan-05	Continuing	TBD	
Modify flight test assets to conform with current modifications of operational jets	CPFF	Lockheed Martin, Palmdale CA	0.000	0.000		0.000		1.000	Jan-05		1.000	
Subtotal Product Development			11.028	3.710		14.627		29.661		Continuing	TBD	0.000
Remarks:												
<u>(U) Support</u>												0.000
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Test & Evaluation</u>												0.000
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Management</u>												0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Total Cost</u>			11.028	3.710		14.627		29.661		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2004

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207141F F-117A SQUADRON

PROJECT NUMBER AND TITLE

3956 F-117A Stealth Fighter

F-117A Stealth Fighter Investment Program	APPR	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Smart Weapons Integration	3600	Cont.	Cont.	Cont.	Cont.	Cont.		
CCSP Pre-SDD (CTD Phase 1 Jun 00-Dec 03)	3600	Cont.						
CCSP SDD (EDTS)	3600		2Q	Cont.				
Brooklyn Bridge SDD	3600		2Q					
CCSP Pre-SDD (CTD Phase II Continue)	3600			2Q	Cont.			
CCSP SDD	3600					2Q	Cont.	Cont.
SDD for WST	3600			2Q	Cont.	Cont.		
SDD for MPS OS/HW Upgrade	3600			2Q	Cont.			
Modify Right Test Assets	3600			2Q				

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2004

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter
---	--	--

(U) <u>Schedule Profile</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Smart Weapons Integ Critical Design Review (CDR) (May 03)	3Q		
(U) CCSP Pre-SDD (CTD Phase 1 Jun 00-Dec 03)		1Q	
(U) CCSP SDD (EDTS Jan 04 - Sep 05)		2Q	
(U) Brooklyn Bridge SDD (Dec 03 - Sep 04)		1Q	
(U) Continue CTD for CCSP			2Q
(U) Initiate SDD for WST			2Q
(U) InitiateSDD for MPS			2Q
(U) Modify flight test assets to conform with current modifications of operational jets			2Q