PE NUMBER: 0207133F
PE TITLE: F-16 SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2005
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS

	Cost ($ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	88.104	105.658	155.666	165.288	126.939	113.856	108.336	106.732	Continuing	TBD
2671	F-16 Squadrons	88.104	105.658	155.666	165.288	126.939	113.856	108.336	106.732	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The F-16 Fighting Falcon is the world's premier multi-mission fighter. It is a fixed-wing, high performance, single-engine fighter aircraft. In its 25-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as close air support, combat air patrol, forward air control, battle air interdiction (day/night and all-weather) and suppression of enemy air defenses (SEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world. Foreign military sales production will continue into the 21st century. The F-16 System Program Office (SPO) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

Enhancements which are being or will be developed during the FYDP include:

a. Advanced Weapons Integration will include Joint Air-to-Surface Stand-off Missile (JASSM), Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB) and updates to existing weapons into the F-16. This task also includes performing risk reduction activities on advanced weapon integration and add development/integration of advanced racks, pylons and adapters. Also includes Nuclear surety, safety and compatibility tasks.

b. The USAF AN/APG-68(V)10 radar and will give the F-16 an all weather autonomous detection and targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions of time critical targeting and Destruction of Enemy Air Defenses (DEAD). The AN/APG-68(V10) will be integrated into Blocks 40 and 50 and capability will be incorporated into other blocks as required.

c. The Air-to-Air Interrogator (AAI) consists of a single unit interrogator/transponder, a beam forming network, fuselage-mounted array antenna elements, and a lower interrogator antenna. The system provides a higher reliability rate and increases performance over present systems. Modes 1, 2, 3/A, C, S, 4 and 5 are available. Mode S transponders will be required for operation within the European Union. The AAI has been integrated in the Block 50 and will be integrated onto other blocks as required.

d. Structural analysis from the on-going Structural Integrity Program (SIP) has indicated that the F-16 is experiencing structural fatigue that will impact the ability of the airframes to reach their 8,000 hrs service life. RDT&E funds are required to design the required structural modifications, as appropriate for each F-16 Block of aircraft. Falcon Structural Augmentation Roadmap (Falcon STAR) development costs will be shared with the Multi-National Fighter Program (MNFP) countries.

e. Integrate the Sniper and LITENING targeting pods and transition the HARM Targeting System (HTS) pod to the left inlet hard point. This will allow the F-16 to perform the Detsruction of Enemy Air Defenses (DEAD) mission.

f. The F-16 development effort are complimented by the comprehensive operational flight program (OFP) upgrades. Hardware and Group A development associated with OFP software candidates are included in the OFP line. Integration efforts include the Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. When integrated to the high angle off-bore sight AIM-9X missile, this provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Also, the Link 16 provides the F-16s with a secure, jam resistant, high-capacity data

communications link with other fighters, airborne control aircraft, and ground control centers. Embedded GPS/INS (EGI) systems will provide targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions.

g. F-16 EMD hardware development provides funding to test, qualify, and field aircraft subsystem Pre-Planned Product Improvements (P3I) and Diminishing Manufacturing Source (DMS) replacements with more modern, supportable and affordable F-16 subsystems solutions. It will include programs such as the digital video recorder and other hardware development activiities. Since the development activities in this PE support an operational aircraft, these development activities are funded in the Operational System Development budget activity 7.

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

		FY 2004	FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	96.135	99.606	98.486	102.968
(U)	Current PBR/President's Budget	88.104	105.658	155.666	165.288
(U)	Total Adjustments	-8.031	6.052		
(U)	Congressional Program Reductions		-0.948		
	Congressional Rescissions	-3.500			
	Congressional Increases		8.000		
	Reprogrammings	-1.626	-1.000		
	SBIR/STTR Transfer	-2.905			

(U) Significant Program Changes:

FY04: $3.5M Common Configurable Remote Interface Unit Congressional Plus Up currently being rescinded

FY04: $6.0M Blk 50 AN/APG-68(V)10 Congressional Plus Up.

FY05: $ 8.0M Plus-up for USAF AN/APG-68(V)10

FY06: $47.6M FY06 PB add for USAF AN/APG-68(V)10, $27.3M FY06 PB add for Mode S/5 IFF for CAF Aircraft

FY06: Flight test costs for FY06 and out reflect transfer of indirect costs from F-16 account into Major Range & Test Facilty account to comply with FY03 Congressional language.

FY07: $33.2M FY06 PB add for USAF AN/APG-68(V)10, $34.0M FY06 PB add for Mode S/5 IFF for CAF Aircraft

Exhibit R-2a, RDT&E Project Justification			DATE: February 2005
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons	

Cost ($ in Millions)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2671	F-16 Squadrons	88.104	105.658	155.666	165.288	126.939	113.856	108.336	106.732	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-16 Fighting Falcon is the world's premier multi-mission fighter. It is a fixed-wing, high performance, single-engine fighter aircraft. In its 25-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as close air support, combat air patrol, forward air control, battle air interdiction (day/night and all-weather) and suppression of enemy air defenses (SEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world. Foreign military sales production will continue into the 21st century. The F-16 System Program Office (SPO) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

Enhancements which are being or will be developed during the FYDP include:

a. Advanced Weapons Integration will include Joint Air-to-Surface Stand-off Missile (JASSM), Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB) and updates to existing weapons into the F-16. This task also includes performing risk reduction activities on advanced weapon integration and add development/integration of advanced racks, pylons and adapters. Also includes Nuclear surety, safety and compatibility tasks.

b. The USAF AN/APG-68(V)10 radar and will give the F-16 an all weather autonomous detection and targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions of time critical targeting and Destruction of Enemy Air Defenses (DEAD). The AN/APG-68(V10) will be integrated into Blocks 40 and 50 and capability will be incorporated into other blocks as required.

c. The Air-to-Air Interrogator (AAI) consists of a single unit interrogator/transponder, a beam forming network, fuselage-mounted array antenna elements, and a lower interrogator antenna. The system provides a higher reliability rate and increases performance over present systems. Modes 1, 2, 3/A, C, S, 4 and 5 are available. Mode S transponders will be required for operation within the European Union. The AAI has been integrated in the Block 50 and will be integrated onto other blocks as required.

d. Structural analysis from the on-going Structural Integrity Program (SIP) has indicated that the F-16 is experiencing structural fatigue that will impact the ability of the airframes to reach their 8,000 hrs service life. RDT&E funds are required to design the required structural modifications, as appropriate for each F-16 Block of aircraft. Falcon Structural Augmentation Roadmap (Falcon STAR) development costs will be shared with the Multi-National Fighter Program (MNFP) countries.

e. Integrate the Sniper and LITENING targeting pods and transition the HARM Targeting System (HTS) pod to the left inlet hard point. This will allow the F-16 to perform the Detsruction of Enemy Air Defenses (DEAD) mission.

f. The F-16 development effort are complimented by the comprehensive operational flight program (OFP) upgrades. Hardware and Group A development associated with OFP software candidates are included in the OFP line. Integration efforts include the Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. When integrated to the high angle off-bore sight AIM-9X missile, this provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Also, the Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other fighters, airborne control aircraft, and ground control centers. Embedded GPS/INS (EGI) systems will provide targeting capability to

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE 2671 F-16 Squadrons

take full advantage of GPS-aided precision weapons to conduct evolving missions.

g. F-16 EMD hardware development provides funding to test, qualify, and field aircraft subsystem Pre-Planned Product Improvements (P3I) and Diminishing Manufacturing Source (DMS) replacements with more modern, supportable and affordable F-16 subsystems solutions. It will include programs such as the digital video recorder and other hardware development activiities. Since the development activities in this PE support an operational aircraft, these development activities are funded in the Operational System Development budget activity 7.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007
(U)					
(U)					
(U)	Common Config Remote Interface Unit (being rescinded by Congress)				
(U)	AN/APG-68(V)10	6.127	12.628	47.600	33.200
(U)	Continue OFP Updates	45.497	52.606	57.925	69.759
(U)	ALR-56M	0.497	0.496	0.495	0.494
(U)	Continue Flight Tests DT&E	28.519	38.740	21.351	26.841
(U)	Weapons Integration	3.857	1.188	0.495	0.494
(U)	Mode S/5 IFF for CAF Aircraft			27.300	34.000
(U)	EMD Hardware Development			0.500	0.500
(U)	Complete Falcon STAR (Structural analysis and design)	3.607			
(U)					
(U)	Total Cost	88.104	105.658	155.666	165.288

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

		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Aircraft Procurement (3010), Line Item 27, F-16 Mods	278.208	314.093	347.268	341.176	353.230	302.537	186.603	166.330		TBD
(U)	Aircraft Procurement (3010), Line Item 71, Post Production Support	15.749	11.355	17.833	12.044	22.589	25.371	21.415	22.686		TBD

(U) D. Acquisition Strategy

RDT&E funds will primarily be executed in developing improved capability, maintenance and safety mods. Operational Flight Program (OFP) software will be continuously updated to complement mod development efforts. EMD Hardware Development provide funding to test, qualify, and field aircraft subsystem Pre-Planned Product Improvements (P3I), and Diminishing Manufacturing Source (DMS) replacements, with more modern, supportable and affordable F-16 subsystem solutions. The approach to contracting varies by individual project. Lockheed Martin Aeronautics Company (LM Aero) is the prime contractor on all systems except the 110 Engines

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207133F F-16 SQUADRONS**	PROJECT NUMBER AND TITLE **2671 F-16 Squadrons**

(General Electric), and the 229 Engines (Pratt & Whitney). Northrop Grumman and LM Aero will work collectively on AN/APG-68(V)10 efforts. Contract types are T&M, CPIF, CPFF and FFP.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2005**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207133F F-16 SQUADRONS**

PROJECT NUMBER AND TITLE: **2671 F-16 Squadrons**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2004 Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
OFP Updates	CPIF/T&M	LM Aero		45.497	Jan-04	52.606	Jan-05	57.925	Jan-06	69.759	Jan-07	Continuing	TBD	
Falcon STAR	FFP	LM Aero		3.607	Jun-04								3.607	
ALR-56M	PO	WRALC/LN		0.497	Dec-03	0.496	Dec-04	0.495	Dec-05	0.494	Dec-06		1.982	
Weapons Integration	T&M/FFP	LM Aero		3.857	Jul-04	1.188	Jul-05	0.495	Jul-06	0.494	Jul-07		6.034	
AN/APG-68(V)10	T&M/CPFF	Northrup Grumman / LM Aero		6.127	Jul-04	12.628		47.600	Mar-06	33.200	Mar-07	33.000	132.555	
Mode S/5 IFF for CAF Aircraft								27.300	Mar-06	34.000	Mar-07		61.300	
EMD Hardware Development	FFP/CPIF	LM Aero						0.500		0.500		Continuing	TBD	
													0.000	
Subtotal Product Development			0.000	59.585		66.918		134.315		138.447		Continuing	TBD	0.000
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Flight Tests	T&M/CPFF	LM Aero/ Edwards AFB		28.519	Jan-04	38.740	Jan-05	21.351	Jan-06	26.841	Jan-07	Continuing	TBD	
Subtotal Test & Evaluation			0.000	28.519		38.740		21.351		26.841		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Rescission														
(U) Total Cost			0.000	88.104		105.658		155.666		165.288		Continuing	TBD	0.000
Remarks:														

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2005
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons

F-16 Program Schedule - USAF

U.S. AIR FORCE

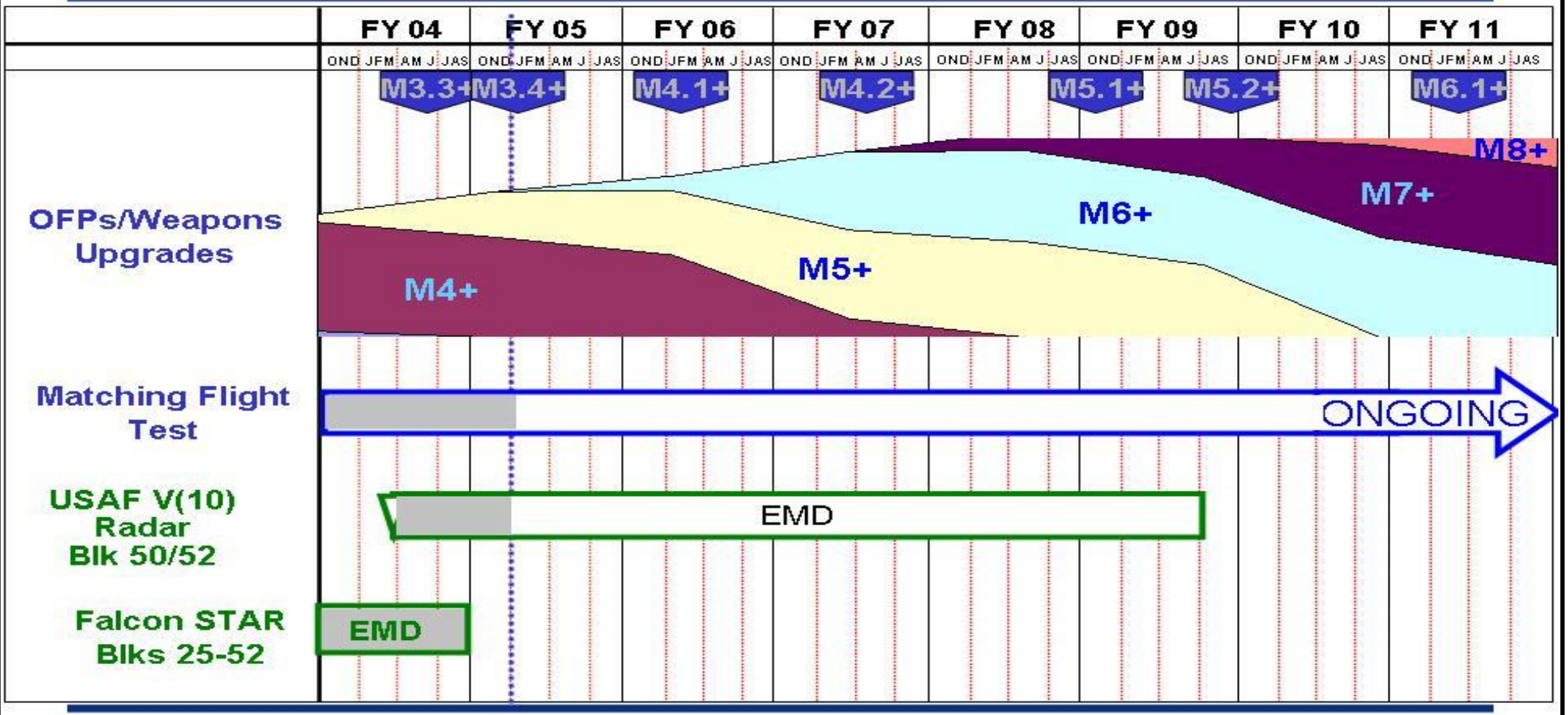

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Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207133F F-16 SQUADRONS	2671 F-16 Squadrons

(U) Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007
(U) Flight Test Continuous, no end date	1-4Q	1-4Q	1-4Q	1-4Q
(U) Falcon Star	4Q			
(U) OFP	1-4Q	1-4Q	1-4Q	1-4Q
(U) ALR-56M	1Q	1Q	1Q	1Q
(U) Weapons Integration	3Q	3Q	3Q	3Q
(U) AN/APG-68(V)10	2Q		2Q	2Q
(U) Mode S/5 IFF for CAF Aircraft			2Q	2Q
(U) EMD Hardware Development			1-4Q	1-4Q