

**UNCLASSIFIED**

PE NUMBER: 0207134F  
 PE TITLE: F-15E SQUADRONS

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2007</b>
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<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0207134F F-15E SQUADRONS</b>
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	135.009	137.541	101.251	186.386	165.614	119.979	120.756	123.223	Continuing	TBD
0131 Initial Operational Test and Evaluation	135.009	137.541	101.251	186.386	165.614	119.979	120.756	123.223	Continuing	TBD

**(U) A. Mission Description and Budget Item Justification**

The F-15 is the most versatile fighter in the world today. The F-15A-D continues to provide air superiority with an undefeated and unmatched aerial combat record. The F-15E retains this air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night/under-the-weather, air-to-surface attack. Configured with conformal fuel tanks (CFTs), the F-15E deploys worldwide with minimal tanker support and arrives combat-ready. A mainstay in the War on Terror both domestically and abroad, upgrades to the F-15 (avionics, armament, airframe, and engines) are critical to maintaining combat viability (lethality, survivability, and supportability).

Projected to remain in service past 2030, avionics modernization is key to long-term weapon system viability. This modernization is built on a foundation of technical studies (both internal to the Air Force and through outside contractors), forestalling obsolescence, exploiting proven technological advances, and leveraging new technology. Major avionics upgrades center around radar modernization (both hardware and software upgrades) and the exploitation of enhanced capability via wideband radome precision timing, data delivery and processing technology, precision registration systems, cockpit Head Up Display (HUD) and instrumentation digitization and modernization, central computer processing power increases, and digital mission event recording systems.

The proliferation of fourth generation enemy aircraft and sophisticated "double-digit" anti-aircraft missile systems pose a significant threat to F-15 survivability. A fully integrated electronic warfare suite holds the promise of providing survivability as well as expanded electronic attack capability.

Nearly all improvements are linked to an aircraft operational flight program update schedule that works to integrate new capabilities with the airframe. These updates are a responsive way to increase the offensive and defensive capability and survivability of the F-15. Given the comprehensiveness of these changes, significant flight test which integrates these capabilities will be required. Incorporation of corresponding spiral and/or phased technology/equipment improvements that include support equipment, mission planning systems, and training device upgrades will improve performance, supportability, and LRU throughput.

The F-15E program, PE 0207134F, is assigned budget activity (BA) code 07 because this developmental work upgrades an existing weapons system.

## Exhibit R-2, RDT&amp;E Budget Item Justification

DATE

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207134F F-15E SQUADRONS

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	143.572	125.062	105.903	234.214
(U) Current PBR/President's Budget	135.009	137.541	101.251	186.386
(U) Total Adjustments	-8.563	12.479		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.521		
Congressional Increases		13.000		
Reprogrammings	-5.200			
SBIR/STTR Transfer	-3.363			

(U) **Significant Program Changes:**

Funding (FY07):

FY 07 Congressional Increase from FY 07 PB to FY 08 PB in support of AESA Demonstration (\$13.0M)

Funding (FY08):

FY 08 Air Force program increase from FY 07 PB to FY 08 PB in support of the F-15 TEWS Support System (\$3.0M)

Funding (FY09):

FY 09 Air Force program reduction from the FY 07 PB to FY 08 PB affecting the F-15E Radar Modernization Program (\$50.0M)

**Exhibit R-2a, RDT&E Project Justification**

DATE  
**February 2007**

BUDGET ACTIVITY <b>07 Operational System Development</b>				PE NUMBER AND TITLE <b>0207134F F-15E SQUADRONS</b>				PROJECT NUMBER AND TITLE <b>0131 Initial Operational Test and Evaluation</b>		
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0131 Initial Operational Test and Evaluation	135.009	137.541	101.251	186.386	165.614	119.979	120.756	123.223	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

**(U) A. Mission Description and Budget Item Justification**

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The proliferation of fourth generation enemy aircraft and sophisticated "double-digit" anti-aircraft missile systems pose a significant threat to F-15 survivability. A fully integrated electronic warfare suite holds the promise of providing survivability as well as expanded electronic attack capability.

Nearly all improvements are linked to an aircraft operational flight program update schedule that works to integrate new capabilities with the airframe. These updates are a responsive way to increase the offensive and defensive capability and survivability of the F-15. Given the comprehensiveness of these changes, significant flight test which integrates these capabilities will be required. Incorporation of corresponding spiral and/or phased technology/equipment improvements that include support equipment, mission planning systems, and training device upgrades will improve performance, supportability, and LRU throughput.

The F-15E program, PE 0207134F, is assigned budget activity (BA) code 07 because this developmental work upgrades an existing weapons system.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Operational Flight Program (OFP) development efforts.	64.898	81.314	52.676	80.993
(U) Flight testing of improvements initiated in prior years.	14.278	15.781	12.950	19.968
(U) Development of ADCP (formerly OFP effort).	1.483			
(U) Development of Tactical Electronic Warfare System (TEWS) Intermediate Support System (TISS) Technology Insertion Program (TTIP)	7.320	1.543	3.000	2.390
(U) Mode 5 Development Efforts	7.973	12.123	11.669	4.268
(U) F-15 BOL PVI	9.500			

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**Exhibit R-2a, RDT&E Project Justification**

DATE  
**February 2007**

<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0207134F F-15E SQUADRONS</b>	<b>PROJECT NUMBER AND TITLE</b> <b>0131 Initial Operational Test and Evaluation</b>
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<b>(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) F-15C/D APG-63(V)3 Radar Block Upgrade	22.828	13.594		
(U) F-15E Radar Modernization Program (RMP)	5.200	6.350	9.000	76.467
(U) F-15 ACU development efforts		4.557	10.086	
(U) Mission Support, Other Government Cost	1.529	2.279	1.870	2.300
(U) Total Cost	135.009	137.541	101.251	186.386

<b>(U) <u>C. Other Program Funding Summary (\$ in Millions)</u></b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) Other APPN:										
(U) Aircraft Procurement (3010F), F-15E (PE0207134F) [BP 10]	0.036									0.036
(U) Total BP 10	0.036									
(U) Aircraft Procurement (3010F), F-15A-E (PEs 0207130F and 0207134F) [BP 11]	123.850	121.311	19.165	58.222	256.625	336.627	287.240	148.517	Continuing	TBD
(U) Aircraft Procurement (3010F) F-15E (PE0809731F) Training Support to Units [BP11]	2.072	1.301							Continuing	TBD
(U) Aircraft Procurement (3010F) F-15E (PE0207445F) Fighter Tactical Data Link [BP11]	66.869	41.688								108.557
(U) Total BP 11	192.791	164.300	19.165	58.222	256.625	336.627	287.240	148.517		
(U) Aircraft Replacement (3010F) F-15E (PE 27134F) Support Equipment [BP	16.978	7.214								
(U) Total BP 12	16.978	7.214								
(U) Aircraft Procurement (3010F), F-15A-E (PE0207134F) [BP 13]	12.993	10.702	5.615	13.372	16.186	22.431	2.701	2.754	Continuing	TBD
(U) Total BP 13	12.993	10.702	5.615	13.372	16.186	22.431	2.701	2.754		

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Exhibit R-2a (PE 0207134F)

## Exhibit R-2a, RDT&amp;E Project Justification

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207134F F-15E SQUADRONS

PROJECT NUMBER AND TITLE

0131 Initial Operational Test and  
Evaluation(U) **D. Acquisition Strategy**

Program is a continuation of effort which includes the development of all F-15 models. Funds are executed organically in support of equipment improvement, study, analysis, and test.

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**Exhibit R-3, RDT&E Project Cost Analysis**

DATE  
**February 2007**

BUDGET ACTIVITY				PE NUMBER AND TITLE						PROJECT NUMBER AND TITLE					
<b>07 Operational System Development</b>				<b>0207134F F-15E SQUADRONS</b>						<b>0131 Initial Operational Test and Evaluation</b>					
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u>															
OFP Suite 4/5/6/7/8 Development and Test	CPAF	Boeing, St Louis		64.898		81.314		52.676		80.993		Continuing	TBD		
ADCP(E)	CPAF	Boeing, St Louis		1.483	Mar-06							0.000	1.483		
TISS TTIP	CPFF	Boeing, St. Louis		7.320	Dec-05	1.543	Dec-06	3.000	Dec-07	2.390	Dec-08	0.000	14.253		
F-15C/D APG-63(V)3 Radar Block Upgrade	CPFF	Boeing, St Louis		22.828	Jun-06	13.594	Apr-07					0.000	36.422		
F-15E RMP	CPFF	Boeing, St Louis		5.200	Apr-06	6.350	Jan-07	9.000	Mar-08	76.467	Feb-09	121.090	218.107		
Mode 5	CPFF	Boeing, St. Louis		7.973	Feb-06	12.123	Dec-06	11.669	Dec-07	4.268	Dec-08	0.000	36.033		
F-15 BOL PVI	CPFF	Boeing, St. Louis		9.500	May-06							0.980	10.480		
F-15 ACU	CPFF	Boeing, St. Louis				4.557	Jun-07	10.086	Jan-08			0.000	14.643		
Subtotal Product Development			0.000	119.202		119.481		86.431		164.118		Continuing	TBD	0.000	
Remarks:															
(U) <u>Support</u>															
(Msn Spt) Misc.		WPAFB, OH		1.529		2.279		1.870		2.300		Continuing	TBD		
Subtotal Support			0.000	1.529		2.279		1.870		2.300		Continuing	TBD	0.000	
Remarks:															
(U) <u>Test &amp; Evaluation</u>															
Boeing (Contractor Test Team)	FFP	Boeing, St Louis		11.672	Apr-06	10.199	Oct-06	11.250	Oct-07	14.208	Oct-08	Continuing	TBD		
Edwards	PO	Edwards AFB, CA		0.306	Mar-06	0.030	Apr-07	0.000		0.030	Apr-09	Continuing	TBD		
Eglin (Flt Test)	PO	Eglin AFB, FL		2.300	Mar-06	5.552	Jun-07	1.700	Jun-08	5.730	Jun-09	Continuing	TBD		
Subtotal Test & Evaluation			0.000	14.278		15.781		12.950		19.968		Continuing	TBD	0.000	
Remarks:															
(U) <u>Management</u>															
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	
Remarks:															
(U) Total Cost			0.000	135.009		137.541		101.251		186.386		Continuing	TBD	0.000	

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Exhibit R-3 (PE 0207134F)

Exhibit R-4, RDT&E Schedule Profile

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07 Operational System Development

PE NUMBER AND TITLE  
0207134F F-15E SQUADRONS

PROJECT NUMBER AND TITLE  
0131 Initial Operational Test and Evaluation



# F-15A-D Modifications



U.S. AIR FORCE

*Dominant Air Power: Design For Tomorrow... Deliver Today*

Program	Prior	FY2006	FY2007				FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	Quantity
JHMCS													
Quantity includes three attrited systems	102	34	8	8	9	9							181+24G
GPS													
	128	32	14	14	12	12	55						178+54T
APG-63(V)3													
							5	8	2	11	23		35+14G
IFF													
			3	26	28	31	32	147	91				178+54T+126G
NVIS													
	1						152	25					178
OFP													
		S5					S6			S7			NA
Avionics Replacement													
							14	120	98				178+54T
DVR													
										54	178		178+54T
Mode 5													
								80	80	72			178+54T
		Development		Production			Installation						

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY  
07 Operational System Development

PE NUMBER AND TITLE  
0207134F F-15E SQUADRONS

PROJECT NUMBER AND TITLE  
0131 Initial Operational Test and Evaluation



# F-15E Modifications



U.S. AIR FORCE

*Dominant Air Power: Design For Tomorrow... Deliver Today*

Program	Prior	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	Quantity
PACS	94	57	16 14 10 13	13						224
ADP	161	39	9 10 5 3							224
ADCP		23	12 15 22 14	80	57					224
OFF		S5			S6			S7		NA
DVR				12 24			84	104		224
IFF		23	14 14 19 18	81	55					224
RMP								3	10	224
NVIS				198	26					224
Mode 5						80	80	64		224
TISS			8 9 18							34
ATS				17	23					40
		Development		Production		Installation				

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<b>Exhibit R-4a, RDT&amp;E Schedule Detail</b>	DATE <b>February 2007</b>
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<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0207134F F-15E SQUADRONS</b>	<b>PROJECT NUMBER AND TITLE</b> <b>0131 Initial Operational Test and Evaluation</b>
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<b>(U) <u>Schedule Profile</u></b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) OFP Suite 5E Flight Test Complete	4Q			
(U) OFP Suite 5MSIP Flight Test Complete		1Q		
(U) OFP Suite 5E Fielding		1Q		
(U) OFP Suite 5MSIP Fielding		1Q		
(U) OFP Suite 6 Phase 1 Complete	2Q			
(U) OFP Suite 6 Phase II Start	2Q			
(U) OFP Suite 6 Phase II Complete				4Q
(U) OFP Suite 6 Phase II Flight Test Start		1Q		
(U) OFP Suite 6 Phase II Flight Test Complete				2Q
(U) ADCP F3I complete	2Q			
(U) Mode 5 - Start	2Q			
(U) Mode 5 - Complete				4Q
(U) ACU - Start		3Q		
(U) ACU - Complete				4Q
(U) F-15 E SDD (EMD radar orders) Start				1Q
(U) F-15 RMP SDD Start			4Q	
(U) F-15 C/D (V)3 Radar Block Upgrade Flight Test - Start	4Q			
(U) F-15 C/D (V)3 Radar Block Upgrade Flight Test - Complete		1Q		
(U) TISS Hardware/Software Integration - Complete	4Q			
(U) TISS System Compatibility Test - Complete		1Q		
(U) RWR - Lab Test Start	2Q			
(U) RWR - Lab Test Complete		3Q		