

UNCLASSIFIED

PE NUMBER: 0604233F
 PE TITLE: Specialized Undergraduate Pilot Training

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training
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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.033	13.426	6.227	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4102 Joint Primary Aircraft Training System (JPATS)	4.665	8.265	2.281	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4376 T-38 Avionics Upgrade Program (AUP)	9.368	5.161	3.946	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification
 Supports Air Education and Training Command's (AETC) implementation of Specialized Undergraduate Pilot Training (SUPT) and the Department of Defense initiative for joint pilot training. The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34 respectively) and associated Ground Based Training Systems (GBTS). The Air Force is the Executive Service. The T-38 AUP is an integrated modernization of the T-38A and AT-38B cockpits to support mission ready fighter and bomber training.

JPATS T-6 FY2008 - FY2010 includes annual funding for the development and test of upgrades and enhancements to both the aircraft and the Ground Based Training System (GBTS) hardware and software components.

T-38 FY2008 - FY2010 funding is for software block updates driven by FAA-mandated changes, National Aerospace System (NAS) requirements, and enhancements identified during test and evaluation. FY2008-FY2010 includes development funding for improved T-38 brakes.

This program element is in Budget Activity 5, System Development and Demonstration (SDD), because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	14.927	7.462	3.977
(U) Current PBR/President's Budget	14.033	13.426	6.227
(U) Total Adjustments	-0.894	5.964	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.036	
Congressional Increases		6.000	
Reprogrammings	-0.550		
SBIR/STTR Transfer	-0.344		

(U) Significant Program Changes:
 FY2008 includes a transfer to Small Business Innovation Research (SBIR) and reprogrammings to support higher Air Force priorities.

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FY2009 includes a Congressional increase for an AT-6B capabilities demonstration for the Air National Guard, as well as Congressional rescissions.

FY2010 includes a funding increase to correctly phase the development of the T-38 Improved Brake Systems Program (IBSP).

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training			PROJECT NUMBER AND TITLE 4102 Joint Primary Aircraft Training System (JPATS)		
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
4102 Joint Primary Aircraft Training System (JPATS)	4.665	8.265	2.281	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34, respectively) and associated Ground Based Training Systems (GBTS). The aircraft and GBTS will be used to train entry-level student aviators in the fundamentals of flying so they can transition into advanced training tracks leading to qualification as military pilots, navigators, and naval flight officers. The program includes the purchase of aircraft, simulators, and other associated ground-based training devices, Training Integration Management System (TIMS), instructional courseware, and logistics support.

FY2008 and FY2009 include Congressional increases to develop/demonstrate potential Air National Guard (ANG) operational mission capabilities for the AT-6B.

FY2008-FY2010 JPATS funding requests are used to develop and test upgrades and enhancements to program hardware and software components.

Budget Activity Justification: This program element is in Budget Activity 5, System Development and Demonstration (SDD), because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) JPATS studies & development efforts.	2.335	2.287	2.281
(U) AT6B	2.330	5.978	0.000
(U) Total Cost	4.665	8.265	2.281

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

	<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>FY 2014</u>	<u>FY 2015</u>	<u>Cost to Complete</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>								
(U) Other APPN										
(U) Aircraft Procurement, Air Force, BA-3										
(U) JPATS	231.427	27.579	15.711							2,456.848
(U) JPATS, BA-6	0.000	15.954	2.515							TBD
(U) JPATS Mod Funding	16.974	20.697	33.074							TBD
(U) JPATS Post Production	0.000	0.000	0.000							TBD
(U) Military Construction, Air										

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training	PROJECT NUMBER AND TITLE 4102 Joint Primary Aircraft Training System (JPATS)
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(U) C. Other Program Funding Summary (\$ in Millions)

Force					
(U) PE 0804741F, JPATS	0.000	0.000	0.000		20.200
(U) RDT&E, Navy, BA-7					
(U) PE 0603208N, Training System Aircraft, H1150, JPATS	0.000	0.000	0.000		11.300
(U) Aircraft Procurement, Navy, BA-3	293.231	289.253	285.183		TBD
(U) JPATS					
(U) APN 5 Mod Funding	8.205	8.892	6.976		TBD
(U) APN 6 Spares	16.641	8.637	8.686		TBD
(U) Military Construction, Navy	23.850	0.000	0.000		120.763

(U) D. Acquisition Strategy

JPATS was competitively awarded with the intent of maximizing the use of commercially available equipment and best commercial practices. Initially, the JPATS Program competitively awarded two contracts: a Firm Fixed Price Contractor Logistics Support (CLS) - Operations and Maintenance funds - contract and a Fixed Price Incentive Firm Target (FPIF) manufacturing development (MD)/production contract with seven options. The FY2002 (Lots 9-13) production contract for both the air vehicle and GBTS is Firm Fixed Price, FAR Part 12 (commercial). The FY2007 production follow-on contract for both the air vehicle and GBTS was awarded as a FAR Part 15 action.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE						PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)				0604233F Specialized Undergraduate Pilot Training						4102 Joint Primary Aircraft Training System (JPATS)		
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2008 Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u>												
JPATS	C/FPI	HBC, Wichita KS	2.316	2.335	May-08	2.287	Dec-08	2.281	Dec-09	Continuing	TBD	TBD
AT-6B	TO	Georgia Technical Research Institute (GTRI), Atlanta GA	2.330	2.330	Mar-09	5.978	Mar-09			0.000	10.638	TBD
Subtotal Product Development			4.646	4.665		8.265		2.281		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			4.646	4.665		8.265		2.281		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0604233F Specialized Undergraduate
Pilot Training

PROJECT NUMBER AND TITLE
4102 Joint Primary Aircraft Training
System (JPATS)

JPATS Schedule

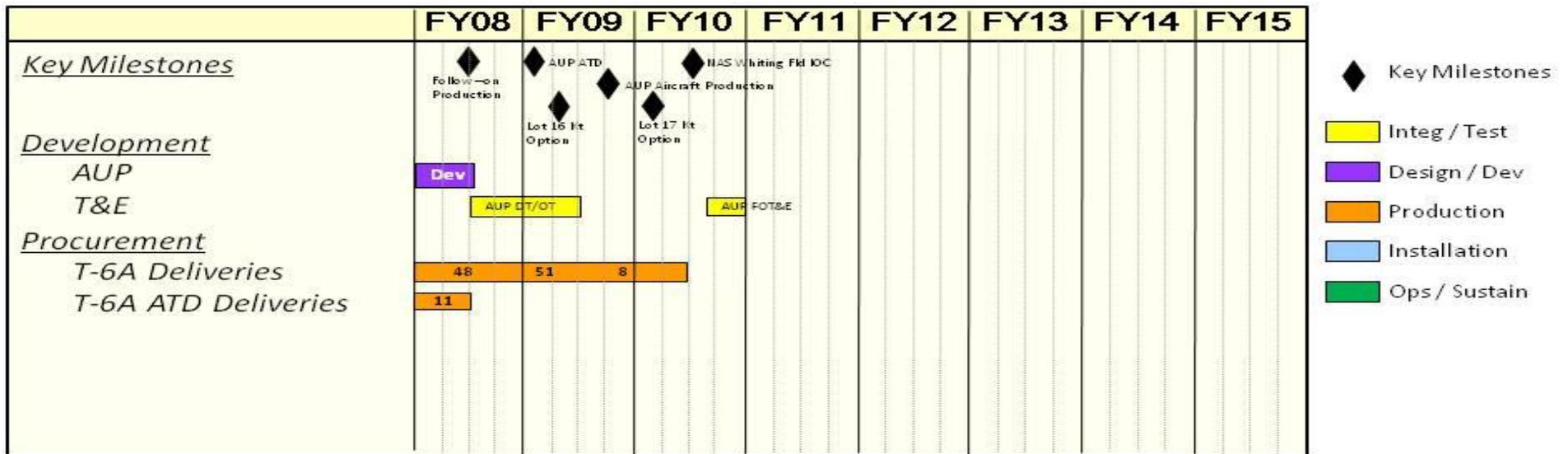


Exhibit R-4a, RDT&E Schedule Detail	DATE May 2009
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training	PROJECT NUMBER AND TITLE 4102 Joint Primary Aircraft Training System (JPATS)
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(U) <u>Schedule Profile</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) JPATS Landing Gear Handle Redesign	1Q	2Q	
(U) JPATS Universal Water-Activated Release System (UWARS)	4Q	4Q	
(U) JPATS Parachute Surveillance System Development	1Q	1Q	4Q
(U) JPATS Integrated Data Acquisition Recording System (IDARS) Memory Upgrade / Military Flight Operations Quality Assurance (MFOQA)	4Q	4Q	
(U) JPATS Aircrew Training Device (ATD) Visual System Development		1-4Q	
(U) JPATS Engine Studies	3Q		
(U) JPATS Instrument Hood Development		3Q	4Q
(U) JPATS Power Control Lever Protection	4Q	4Q	

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training				PROJECT NUMBER AND TITLE 4376 T-38 Avionics Upgrade Program (AUP)		
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
4376 T-38 Avionics Upgrade Program (AUP)	9.368	5.161	3.946	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification
 The T-38 Avionics Upgrade Program (AUP) is an integrated modernization of the T-38A and AT-38B cockpits to support mission-ready fighter training and converts all T-38A and AT-38B aircraft to T-38C configuration. The modernized digital cockpit will include Global Positioning System (GPS), Head-Up Display (HUD), Inertial Navigation System (INS), Multi-Function Displays (MFDs), Up-Front Control Panel (UFCP), Data Transfer System (DTS), No-Drop Bombing System (NDBS), and Hands-On Throttle and Stick (HOTAS) switchology. HUD symbology is the new USAF standard recently certified as a primary flight reference. Also included is the acquisition of three types of Aircrew Training Devices (ATDs) to replace the existing T-51 simulators. The program includes the design, integration, test, and installation of the cockpit prototype in aircraft, ATDs, and other training devices, as well as engineering services, studies, analysis and support to determine the feasibility of incorporating changes for purposes of making informed life-cycle cost business decisions.

FY 2008 - FY2010 funding is to develop and test aircraft and ATD hardware/software block updates, mission planning software, requirements driven by DoD, FAA and National Aerospace System (NAS) mandated changes (Crash Survivable Flight Data Recorder, Cockpit Voice Recorder, Emergency Locator Transmitter, etc.), enhancements identified during test and evaluation Global Air Traffic Management (GATM), Joint Precision Approach and Landing System (JPALS), GPS, GPS Embedded Module (GEM) issues such as Selective Availability Anti-Spoofing Module (SAASM), and precision and GPS approaches. Other upgrades will include enhancements identified during Development Testing, Operational Testing and Force Development Evaluation (FDE), and AETC operations, such as a scratch pad, improvements to UFCP, HUD, Built In Test (BIT), mechanization of menus/modes and mission planning/debriefing system, ATD HUD projectors, and Companion Aircraft Model (CAM) operations.

FY 2008 - FY 2010 include development funding for the T-38C Improved Brake System Program (IBSP). This effort will include development/missionization of Non Developmental Items (NDI)/Commercial Off The Shelf (COTS) brakes, wheels, and anti-skid systems as well as necessary flight testing, validation, and any additional studies and analysis.

Budget Activity Justification. This project is in Budget Activity 5, System Development and Demonstration (SDD), because it primarily involves the missionization of NDI or COTS equipment, and components.

(U) B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Develop and test Block 7 AUP aircraft and ATD hardware/software upgrades, mission planning software, requirements driven by DoD/ FAA/NAS mandates, and/or improvements identified during Test and Evaluation and AETC operations.	1.372		
(U) Develop and test Block 8 AUP aircraft and ATD hardware/software upgrades, mission planning software,		1.598	

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training	PROJECT NUMBER AND TITLE 4376 T-38 Avionics Upgrade Program (AUP)
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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
requirements driven by DoD/ FAA/NAS mandates, and/or improvements identified during Test and Evaluation and AETC operations.			
(U) Develop and test Block 9 AUP aircraft and ATD hardware/software upgrades, mission planning software, requirements driven by DoD/ FAA/NAS mandates, and/or improvements identified during Test and Evaluation and AETC operations. Block 9 is not scheduled to be complete until FY2012, due to 2 year block upgrade cycle vs. 1 year cycle.			1.581
(U) Improved Brake System Program, wheel and brake replacement, anti-skid capability modification and its associated integration issues, studies and analyses	7.996	3.563	2.365
(U) Total Cost	9.368	5.161	3.946

(U) <u>C. Other Program Funding Summary (\$ in Millions)</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>FY 2014</u>	<u>FY 2015</u>	<u>Cost to Complete</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>								
(U) Other APPN										
(U) PE 0804741F, T-38 Avionics Upgrade, BP 1100	0.776	0.000	0.000							510.596
(U) PE 0804741F, T-38 Improved Brakes, BP 1100	0.000	9.770	14.217							TBD

(U) D. Acquisition Strategy
 The T-38C AUP competitively awarded three contracts: a) a cost plus award fee EMD contract with six firm fixed price production options; b) a firm fixed price CLS contract for avionics including Contractor Owned and Maintained Base Supply (COMBS) (O&M funds); and c) a fixed price award fee maintenance contract for the current and new Aircrew Training Devices (ATDs). During FY2004 new firm fixed priced contracts were negotiated to complete the AUP modification and pricing was negotiated for the period FY2005-2008 for the CLS contract, subsequently pricing was solicited for FY09 T-38C CLS requirements. FY2005-2010 block updates are being executed under the new contract.

The T-38C IBSP competitive source selection includes 3 years of development and 6 years of production.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE			
05 System Development and Demonstration (SDD)				0604233F Specialized Undergraduate Pilot Training					4376 T-38 Avionics Upgrade Program (AUP)			
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> Avionics Upgrade Program (AUP)	C/CPAF	The Boeing Corporation St. Louis MO	5,703.264	1.372		1.598		1.581		Continuing	TBD	TBD
Improved Brake System Program (IBSP)	PO	TBD		7.996	Jul-09	3.563	Jul-09	2.365		0.000	13.924	TBD
Subtotal Product Development			5,703.264	9.368		5.161		3.946		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>											0.000	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	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	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			5,703.264	9.368		5.161		3.946		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE

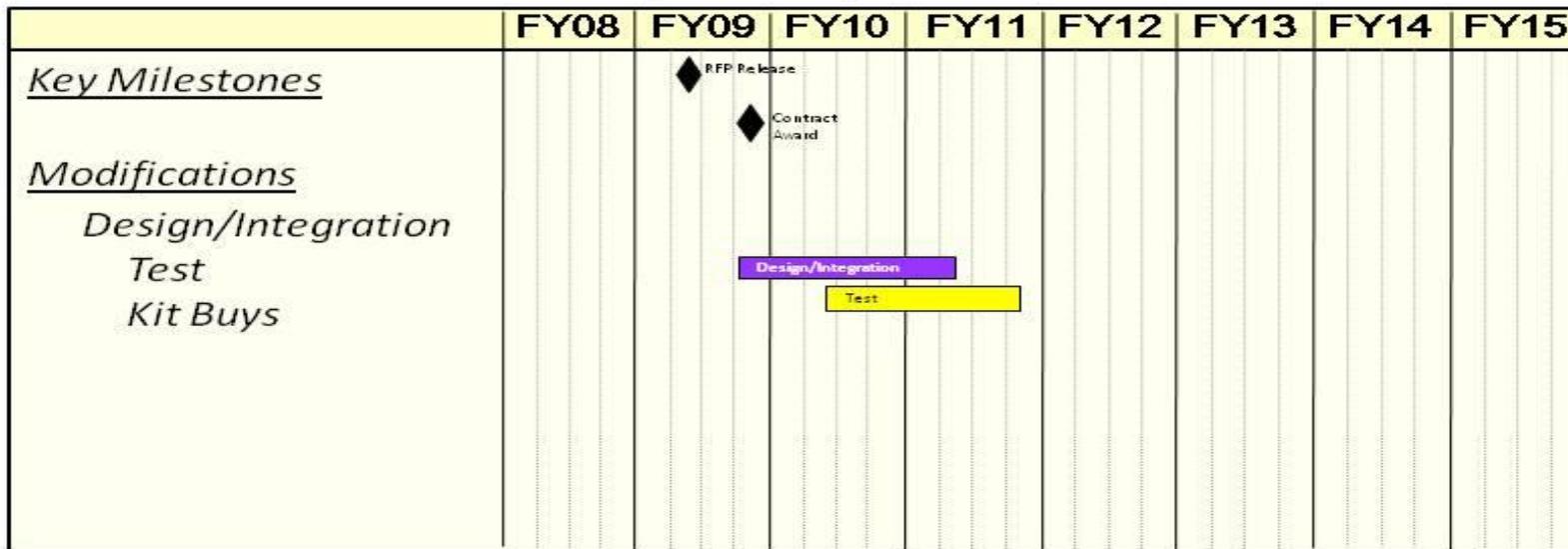
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BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0604233F Specialized Undergraduate
Pilot Training

PROJECT NUMBER AND TITLE
4376 T-38 Avionics Upgrade Program
(AUP)

T-38 Improved Brake System Program (IBSP) Schedule



- ◆ Key Milestones
- Integ / Test
- Design / Dev
- Production
- Installation
- Ops / Sustain

Exhibit R-4, RDT&E Schedule Profile

DATE

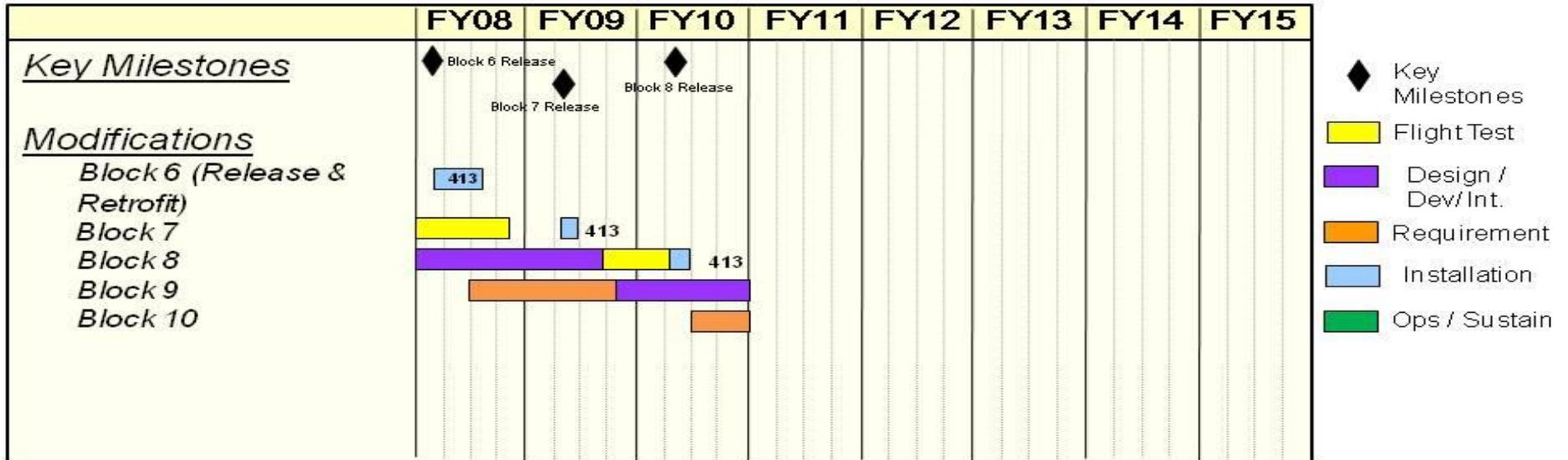
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BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0604233F Specialized Undergraduate
Pilot Training

PROJECT NUMBER AND TITLE
4376 T-38 Avionics Upgrade Program
(AUP)

T-38 Avionics Upgrade Program (AUP)



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Exhibit R-4a, RDT&E Schedule Detail	DATE May 2009
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training	PROJECT NUMBER AND TITLE 4376 T-38 Avionics Upgrade Program (AUP)
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	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Schedule Profile			
(U) AUP Block 6 Retrofit and Release	1-3Q		
(U) AUP Block 7 Implementation	3Q		
(U) AUP Block 7 Flight Test	3-4Q		
(U) AUP Block 7 Retrofit and Release		2Q	
(U) AUP Block 8 Implementation		3Q	
(U) AUP Block 8 Flight Test		3Q	2Q
(U) AUP Block 8 Retrofit and Release			2Q
(U) AUP Block 9 Implementation		4Q	2Q
(U) IBSP Requirements	3Q		
(U) IBSP Proposal Preparation/Source Selection	4Q	3Q	
(U) IBSP Contract Award		4Q	
(U) IBSP Design Intergration		4-Q	
(U) IBSP Test			1Q

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