

UNCLASSIFIED

PE NUMBER: 0604618F
 PE TITLE: Joint Direct Attack Munition

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition
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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	17.021	35.159	0.000	0.000	0.000	0.000	0.000	0.000	409.589
3890 Joint Direct Attack Munitions	17.021	35.159	0.000	0.000	0.000	0.000	0.000	0.000	409.589

(U) A. Mission Description and Budget Item Justification

The Joint Direct Attack Munition (JDAM) is a joint Air Force/Navy program with the Air Force as the lead service. Designated ACAT 1C, this program upgrades the existing inventory of general purpose bombs (MK-84, BLU-109, MK-83/BLU-110 and MK-82/BLU-111) by integrating the bombs with a guidance kit consisting of a Global Positioning System aided Inertial Navigation System (GPS/INS). JDAM provides an accurate, adverse weather capability. JDAM is integrated with the B-52H, B-2A, B-1B, F-15E, F-16C/D, F-14B/D, and F/A-18C/D/E/F aircraft. Follow-on integration will be on the F/A-22, F-117A, A/OA-10, AV-8B, P-3, S-3, MQ-9 (Predator), F-35, and X-45C (J-UCAS). JDAM Low Rate Initial Production (LRIP) began in FY97 and Full Rate Production (MK-84 and BLU-109) began in FY01. The development effort to integrate the JDAM guidance kits on the MK-82 completed in Dec 03 with production beginning in FY03. The JDAM GPS Selective Availability Anti-Spoofing Module (SAASM) development program with an integrated Anti-Jam capability (SAASM/AJ) began in Feb 03. SAASM capability is scheduled to be delivered in FY06 with Lot 9 tailkits. A redesign effort for the Joint Programmable Fuze (JPF) began Mar 01 to improve high altitude bomber capability. This fuze is a multi-function unitary fuze developed for JDAM and other conventional inventory weapons. An alternate fuze risk reduction effort started in FY03 to meet JDAM Operational Requirements Document (ORD) fuze requirements, as a backup to the JPF development program.

This program is funded in Budget Activity 5, SDD, due to its focus on devising an affordable design and manufacturing process.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	16.244	34.061	
(U) Current PBR/President's Budget	17.021	35.159	
(U) Total Adjustments	0.777	1.098	
(U) Congressional Program Reductions	0.000		
Congressional Rescissions		-0.302	
Congressional Increases		1.400	
Reprogrammings	1.252		
SBIR/STTR Transfer	-0.475		

(U) Significant Program Changes:

Congressional add of \$1.4M in FY04 for the Tungsten Heavy Alloy Core Deep Penetration JDAM.

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition			PROJECT NUMBER AND TITLE 3890 Joint Direct Attack Munitions			
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	
3890 Joint Direct Attack Munitions	17.021	35.159	0.000	0.000	0.000	0.000	0.000	0.000	409.589	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

The Joint Direct Attack Munition (JDAM) is a joint Air Force/Navy program with the Air Force as the lead service. Designated ACAT 1C, this program upgrades the existing inventory of general purpose bombs (MK-84, BLU-109, MK-83/BLU-110 and MK-82/BLU-111) by integrating the bombs with a guidance kit consisting of a Global Positioning System aided Inertial Navigation System (GPS/INS). JDAM provides an accurate, adverse weather capability. JDAM is integrated with the B-52H, B-2A, B-1B, F-15E, F-16C/D, F-14B/D, and F/A-18C/D/E/F aircraft. Follow-on integration will be on the F/A-22, F-117A, A/OA-10, AV-8B, P-3, S-3, MQ-9 (Predator), F-35, and X-45C (J-UCAS). JDAM Low Rate Initial Production (LRIP) began in FY97 and Full Rate Production (MK-84 and BLU-109) began in FY01. The development effort to integrate the JDAM guidance kits on the MK-82 completed in Dec 03 with production beginning in FY03. The JDAM GPS Selective Availability Anti-Spoofing Module (SAASM) development program with an integrated Anti-Jam capability (SAASM/AJ) began in Feb 03. SAASM capability is scheduled to be delivered in FY06 with Lot 9 tailkits. A redesign effort for the Joint Programmable Fuze (JPF) began Mar 01 to improve high altitude bomber capability. This fuze is a multi-function unitary fuze developed for JDAM and other conventional inventory weapons. An alternate fuze risk reduction effort started in FY03 to meet JDAM Operational Requirements Document (ORD) fuze requirements, as a backup to the JPF development program.

This program is funded in Budget Activity 5, SDD, due to its focus on devising an affordable design and manufacturing process.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) JDAM software and hardware development to support SAASM integration effort and anti-jam development and integration.	15.812	0.000	
(U) Perform test effort on JDAM with integrated SAASM and anti-jam capabilities for the JDAM receiver.	0.705	6.637	
(U) Provide support and management tasks to coordinate the program activities of the prime contractor and various organizations.	0.504	1.811	
(U) JDAM software and hardware development to support SAASM integration effort and anti-jam development and integration. Also includes efforts for Tungsten Heavy Alloy Core Deep Penetration JDAM and future JDAM enhancements.	0.000	26.711	
(U) Total Cost	17.021	35.159	0.000

(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) Procurement of Ammunition, Air Force, JDAM,	476.800	424.446	521.782	421.799	317.712	110.891	105.402	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification	DATE February 2004
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition	PROJECT NUMBER AND TITLE 3890 Joint Direct Attack Munitions
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(U) **C. Other Program Funding Summary (\$ in Millions)**

Appn. 3011, PE 0207583F

(U) Procurement of

(U) Ammunition, Air Force, Seek Eagle, Appn. 3011, PE 0207590F	0.297	0.143	0.000	0.000	0.103	0.000	0.000	Continuing	TBD
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(U) **D. Acquisition Strategy**

The contract for the JDAM MK-82 effort is Cost Plus Award Fee (CPAF). The JPF effort is a fixed price incentive fee (FPIF) contract. The SAASM/Anti-Jam effort was awarded as a Cost Plus Award Fee (CPAF) contract. The Alternate Fuze risk reduction effort is a Cost Plus Fixed Fee (CPFF) contract.

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Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2004		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition				PROJECT NUMBER AND TITLE 3890 Joint Direct Attack Munitions			
<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 <u>Cost</u>	<u>FY</u> 2003 <u>Cost</u>	<u>FY</u> 2003 <u>Award</u> <u>Date</u>	<u>FY</u> 2004 <u>Cost</u>	<u>FY</u> 2004 <u>Award</u> <u>Date</u>	<u>FY</u> 2005 <u>Cost</u>	<u>FY</u> 2005 <u>Award</u> <u>Date</u>	<u>Cost to Complete</u>	<u>Total</u> <u>Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
<u>(U) Product Development</u>												
Prime Contractors Boeing and Lockheed Martin FY94/95 Only (Baseline JDAM, Mk-82, SAASM/Anti-Jam, Alternate Fuze Joint Programmable Fuze/Misc	C/CPAF/CPFF	Boeing (St Louis MO) and Lockheed Martin FY94/95 Only	210.204	15.812	Feb-03	26.711	Nov-03	0.000		0.000	252.727	252.727
	FPIF	Dayron/Kaman (Orlando, FL)	8.229								8.229	8.229
Conceptual Studies	Various		22.428							0.000	22.428	22.428
Subtotal Product Development			240.861	15.812		26.711		0.000		0.000	283.384	283.384
Remarks:												
<u>(U) Support</u>												
Engineering Support	CPAF	Eglin AFB, FL	14.579	0.478		0.881	Nov-03			0.000	15.938	15.938
TAMS Contractor	CPAF	Eglin AFB, FL	5.190							0.000	5.190	5.190
Program Office	Various	Eglin AFB, FL	18.389	0.026		0.930				0.000	19.345	19.345
Subtotal Support			38.158	0.504		1.811		0.000		0.000	40.473	40.473
Remarks: TAMS contractor provides management and financial support to the System Program Office (SPO).												
<u>(U) Test & Evaluation</u>												
Aircraft SPO Support	Various	Eglin AFB, FL	13.905							0.000	13.905	13.905
Flight Testing	Various	Eglin AFB, FL/Edwards AFB and China Lake, CA/Hill AFB, UT	41.847	0.705		6.637				0.000	49.189	49.189
Ground Testing	Various	Eglin AFB, FL/China Lake, CA	14.983							0.000	14.983	14.983
JPF Wind Tunnel Testing	TBD	Arnold Engineering Development Center, TN	3.320								3.320	3.320
Government Furnished Equipment (GFE)	Various	N/A	4.335								4.335	4.335
Subtotal Test & Evaluation			78.390	0.705		6.637		0.000		0.000	85.732	85.732
Remarks:												
<u>(U) Total Cost</u>			357.409	17.021		35.159		0.000		0.000	409.589	409.589

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2004

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

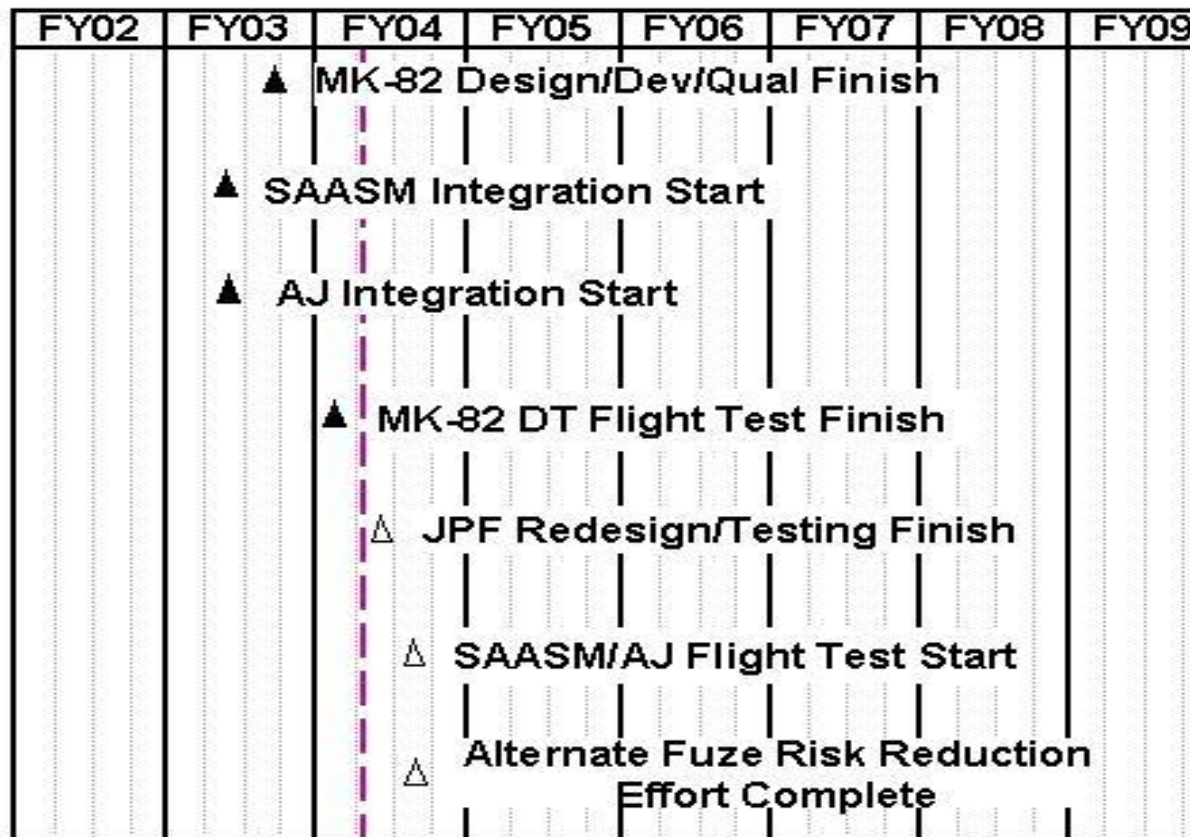
PE NUMBER AND TITLE

0604618F Joint Direct Attack Munition

PROJECT NUMBER AND TITLE

3890 Joint Direct Attack Munitions

JDAM Schedule



As of: 28 Jan 04

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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2004
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition	PROJECT NUMBER AND TITLE 3890 Joint Direct Attack Munitions
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	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) <u>Schedule Profile</u>			
(U) MK-82 Design/Develop/Qualification Finish	3Q		
(U) SAASM Integration Start	2Q		
(U) Anti-Jam Integration Start	2Q		
(U) MK-82 Developmental Test (DT) Flight Test Finish		1Q	
(U) JPF Redesign/Testing Finish		2Q	
(U) SAASM/Anti-Jam Flight Test Start		3Q	
(U) Alternate Fuze Risk Reduction Effort Complete		3Q	