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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2002		
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition				PROJECT 3890		
COST (\$ in Thousands)		FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
3890	Joint Direct Attack Munitions	10,654	27,679	16,594	34,816	0	0	0	0	410,219
	Quantity of RDT&E Articles	0	88	0	0	0	0	0	0	605

*Quantity of RDT&E Articles reflect assets by delivery year and cannot be reconciled to the dollar amounts (incremental funding) shown in any one year.

(U) **A. Mission Description**
 Operation DESERT STORM confirmed the need for, and Operation ALLIED FORCE confirmed the utility of a more accurate weapon delivery capability in adverse weather conditions from medium/high altitudes. Failure to satisfy this requirement will allow the enemy to continue to take advantage of the sanctuary of weather and/or prevent US air power from prosecuting a conflict on its terms. The Joint Direct Attack Munition (JDAM) is a joint Air Force and Navy munitions program to correct these shortfalls, with the Air Force as the executive service. JDAM will upgrade the existing inventory of general purpose bombs (Mk-84, BLU-109, Mk-83/BLU-110 and Mk-82/BLU-111) by integrating them with a guidance kit consisting of a Global Position System aided Inertial Navigation System (INS/GPS). JDAM will provide an accurate (13 meters) adverse weather capability. JDAM threshold aircraft are B-52H, F-22, AV-8B and F/A-18C/D. JDAM objective aircraft are B-2, B-1B, F-16, F-15E, and other aircraft. JDAM development was a two-phased Engineering and Manufacturing Development (EMD) effort. EMD Phase I emphasized competitive design and manufacturing processes. This phase completed 10 Oct 95. EMD Phase II emphasized full scale hardware build and flight test to verify system performance and supported OT&E. EMD Phase II ended Dec 00. A development effort to integrate the JDAM guidance kits on the Mk-82 began in September 2000. JDAM Low Rate Initial Production (LRIP) began in FY97 and Full Rate Production (Mk-84 and BLU-109) began in FY01. JDAM GPS Selective Availability Anti-Spoofing Module (SAASM) integration and anti-jam integration efforts begin in FY03. 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. JDAM is an Air Force Acquisition Category (ACAT) 1D program.

(U) **FY 2001 (\$ in Thousands)**

(U) \$3,751 Continued development effort for Mk-82 JDAM. Completed consolidation and test of flight software. Supported Mk-83 F-22 integration analysis and testing.

(U) \$5,906 Provided flight test support for Mk-82 flight software consolidation. Supported Mk-83 F-22 integration testing.

(U) \$997 Provided support and management tasks to coordinate the program activities of the prime contractor and various test and aircraft organizations.

(U) \$10,654 Total

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05 - Engineering and Manufacturing Development	0604618F Joint Direct Attack Munition	3890			
(U) <u>A. Mission Description Continued</u>					
(U) <u>FY 2002 (\$ in Thousands)</u>					
(U) \$9,316	Complete development effort for Mk-82 JDAM and JPF redesign.				
(U) \$12,449	Perform captive carry and DT flight testing on Mk-82 JDAM and perform JPF testing.				
(U) \$2,250	Provide support and management tasks to coordinate the program activities of the prime contractor and various test and aircraft organizations.				
(U) \$3,664	Continued development of fuzing hardware for high altitude bomber operations.				
(U) \$27,679	Total				
(U) <u>FY 2003 (\$ in Thousands)</u>					
(U) \$12,089	JDAM software and hardware development to support SAASM integration effort and anti-jam development and integration.				
(U) \$3,432	Perform test effort on JDAM with integrated SAASM and anti-jam capabilities for the JDAM receiver.				
(U) \$1,073	Provide support and management tasks to coordinate the program activities of the prime contractor and various organizations.				
(U) \$16,594	Total				
(U) <u>B. Budget Activity Justification</u>					
This program is funded in Budget Activity 5, EMD, due to its focus on devising an affordable design and manufacturing process.					
(U) <u>C. Program Change Summary (\$ in Thousands)</u>					
		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
(U) Previous President's Budget		11,055	27,956	0	355,515
(U) Appropriated Value		11,055	27,956		
(U) Adjustments to Appropriated Value					
a. Congressional/General Reductions			-277		-277
b. Small Business Innovative Research		-387			-387
c. Omnibus or Other Above Threshold Reprogram					
d. Below Threshold Reprogram		-14			-14
e. Rescissions					
(U) Adjustments to Budget Years Since FY 2002 PBR				16,594	55,382
(U) Current Budget Submit/FY 2003 PBR		10,654	27,679	16,594	410,219
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(U) C. Program Change Summary (\$ in Thousands) Continued										
(U) Significant Program Changes: FY03: \$2.6M transferred from Procurement account for JDAM software and hardware to support JDAM SAASM integration effort. \$13.994M added for anti-jam integration effort.										
(U) D. Other Program Funding Summary (\$ in Thousands)										
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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) (U) Procurement of Ammunition, Air Force, P-1 Line Item JDAM (PE 27583F)	203,470	185,825	378,563	235,488	292,803	288,040	166,546		2,081,704	
(U) (U) Seek Eagle (PE 27590F)	0	147	300	144	0	0	103	0	694	
In FY02, JDAM AF received \$250.5M as part of the Defense Emergency Response Fund (DERF). Funding was used to buy 5,006 JDAM kits in support of OPERATION ENDURING FREEDOM. This funding also accelerated the delivery of Lot 5. This funding is not reflected in the FY02 program total.										
(U) E. Acquisition Strategy The contract for the JDAM Mk-82 effort is Cost Plus Award Fee. The JPF effort is a fixed price incentive fee (FPI) contract. Procurement Lots 1-6 have been awarded and Lots 7-11 have a Production Price Commitment Curve agreement.										
(U) F. Schedule Profile										
				<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>		
			1	2	3	4	1	2	3	4
(U) Milestone III (2000 lb)				*						
(U) JPF Redesign Start				*						
(U) JPF Testing Start					*					
(U) MK-82 CDR						*				
(U) MK-82 DT Flight Test Start							X			
(U) MK-82 Design/Develop/Qual Finish								X		
(U) Milestone III (1000 lb)									X	
(U) SAASM Integration Start									X	
(U) Anti-Jam Integration Start									X	
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(U) <u>F. Schedule Profile Continued</u>												
		<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>		
	1	2	3	4	1	2	3	4	1	2	3	4
X - Planned Event												
* - Completed Event												
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2002		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
05 - Engineering and Manufacturing Development				0604618F Joint Direct Attack Munition				3890		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>		
(U)	Primary Hardware Development					3,751	12,980	12,089		
(U)	Test & Evaluation					5,906	12,449	3,432		
(U)	Engineering & Prog Mgt Support					997	2,250	1,073		
(U)	Total					10,654	27,679	16,594		
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
Prime Contractors Boeing (St	C/CPAF	Oct-95	231,720	231,720	191,275	3,751	7,315	12,089	17,262	231,692
Louis, MO) Lockheed Martin										
FY94/95 Only										
Dayron (JPF)	FPIF	Dec-01	4,194	4,194	2,191		2,003			4,194
Conceptual Studies	Various	Various	N/A	N/A	22,428	0			0	22,428
Fuze Development	TBD	TBD	3,644	3,644			3,664			3,664
<u>Support and Management Organizations</u>										
Engineering Spt.	CPAF	Oct 96	15,906	15,906	12,916	425	1,600	380	585	15,906
TAMS Contractor	CPAF	Oct 96	5,008	5,008	4,575	57	76	100	200	5,008
Program Office	Various	Various	N/A	N/A	17,356	515	572	593	868	19,904
<u>Test and Evaluation Organizations</u>										
Aircraft SPO/PMA Supt.	Various	Various	N/A	N/A	13,619	20	180		0	13,819
Flight Testing	Various	Various	N/A	N/A	36,910	3,140	10,949	406	13,201	64,606
Ground Testing	Various	Various	N/A	N/A	12,235	2,046	1,320	3,026	2,700	21,327
JPF Wind Tunnel Testing	TBD	TBD	N/A	N/A	2,636	700	0			3,336
Project 3890										

