

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2000	
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604226F B-1B				PROJECT 654596	
COST (\$ in Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
654596 Conventional Mission Upgrades	175,686	176,218	168,122	135,677	44,820	15,795	0	0	1,491,938
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0
<p>(U) <u>A. Mission Description</u></p> <p>(U) This Program Element provides RDT&E funding for the B-1B Conventional Mission Upgrade Program (CMUP). The purpose of this program is to improve the B-1's effectiveness and survivability. Funding in the FYDP includes integration of advanced conventional weapons such as the Joint Direct Attack Munition (JDAM), Wind Corrected Munitions Dispenser (WCMD), Joint Stand-Off Weapon (JSOW), and Joint Air to Surface Stand-Off Missile (JASSM). Funding for upgrades to the Electronic Counter Measures (ECM) suite is also in the FYDP. Additional efforts include an upgrade to the avionics computers to enable simultaneous carriage of multiple weapon types (one type per bay), provide growth capability, and reduce support costs; development of an interface to the Air Force Mission Support System (AFMSS) for more effective employment of the B-1 in a theater scenario; and upgrades to the air crew and maintenance training systems to keep them concurrent with the aircraft's configuration. Funding is also provided for preliminary engineering and planning studies for potential future weapon system enhancements (weapons, sensors, and avionics); and weapon system operational/safety, supportability, maintainability, reliability, and Total Ownership Cost (TOC) support improvements.</p> <p>(U) <u>FY 1999 (\$ in Thousands)</u></p> <p>(U) \$149,870 Continued Conventional Mission Upgrade Program (CMUP) contractual efforts</p> <p>(U) \$465 Government Furnished Equipment (GFE)</p> <p>(U) \$16,047 Government flight test, Live Fire Test & Evaluation and General Test Support</p> <p>(U) \$3,729 Advisory and Assistance Services (A&AS)</p> <p>(U) \$2,515 Modeling & Simulation / Studies & Analyses</p> <p>(U) \$3,060 Program Management & Administration (PMA)</p> <p>(U) \$175,686 Total</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$140,751 Continued Conventional Mission Upgrade Program (CMUP) contractual efforts</p> <p>(U) \$1,173 Government Furnished Equipment (GFE)</p> <p>(U) \$24,121 Government flight test, Live Fire Test & Evaluation and General Test Support</p> <p>(U) \$3,898 Advisory and Assistance Services (A&AS)</p> <p>(U) \$2,000 Modeling & Simulation / Studies & Analyses</p>									
Project 654596			Page 1 of 8 Pages				Exhibit R-2 (PE 0604226F)		

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2000			
BUDGET ACTIVITY		PE NUMBER AND TITLE		PROJECT	
05 - Engineering and Manufacturing Development		0604226F B-1B		654596	
(U) <u>A. Mission Description Continued</u>					
(U) <u>FY 2000 (\$ in Thousands) Continued</u>					
(U)	\$4,275	Program Mangement & Administration (PMA)			
(U)	\$176,218	Total			
(U) <u>FY 2001 (\$ in Thousands)</u>					
(U)	\$121,662	Continued Conventional Mission Upgrade Program (CMUP) contractual efforts			
(U)	\$632	Government Furnished Equipment (GFE)			
(U)	\$37,562	Government flight test, Live Fire Test & Evaluation and General Test Support			
(U)	\$3,484	Advisory and Assistance Services (A&AS)			
(U)	\$1,236	Modeling & Simulation / Studies & Analyses			
(U)	\$3,546	Program Management & Administration (PMA)			
(U)	\$168,122	Total			
(U) <u>B. Budget Activity Justification</u>					
(U) The B-1 CMUP program is included in Budget Activity 5, Engineering and Manufacturing Development. The CMUP program provides new capabilities to the B-1B weapon system, including GPS, Near-Precision Weapons, enhanced computers and upgraded ECM. These capabilities require significant software development and testing.					
(U) <u>C. Program Change Summary (\$ in Thousands)</u>					
		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U)	Previous President's Budget (FY 2000 PBR)	194,549	203,544	143,911	1,363,540
(U)	Appropriated Value	195,385	178,544		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	-284	-20		
	b. Small Business Innovative Research	-9,621			
	c. Omnibus or Other Above Threshold Reprogram		-1,194		
	d. Below Threshold Reprogram	-4,639			
	e. Rescissions	-5,155			
	f. Other				
(U)	Adjustments to Budget Years Since FY 2000 PBR			24,211	173,919
(U)	Current Budget Submit/FY 2001 PBR	175,686	176,218	168,122	1,491,938
Project 654596		Page 2 of 8 Pages	Exhibit R-2 (PE 0604226F)		

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2000		
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604226F B-1B				PROJECT 654596		
(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>										
(U) <u>Significant Program Changes:</u>										
(U) FY99: (-\$1,895) of Below Threshold Reprogramming for Cancelled bills and (-\$4,603) for Rescissions.										
(U) Adjustments to FY02 - FY04: ZBTs from production to the EMD program for the restructure of the Computer/WCMD/JSOW/JASSM and Defensive System Upgrade Programs (FY01 +\$24,211; FY02: +\$96,822; FY03: +\$40,148; FY04: +\$15,948).										
(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u>										
		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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)	Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP11, Mods	82,920	125,543	48,793	86,539	80,658	102,222	69,930	381,134	1,304,928
(U)	Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP16, Initial Spares	24,345	32,187	14,628	4,571	7,587	11,747	11,643	0	146,504
(U)	Appn 10, PE 0207442F, B-1B, EW Production (TDS/IDECM) BP11, Mods (CMUP-related only) Related RDT&E:	0	0	0	2,107	0	4,884	7,707	49,965	105,820
	(U) Program Element 0205164F, Global Positioning System (GPS)									
	(U) Program Element 0207325F, Joint Air to Surface Standoff Missile (JASSM)									
	(U) Program Element 0604618F/N, Joint Direct Attack Munition (JDAM)									
	(U) Program Element 0604727F/N, Joint Stand-Off Weapon (JSOW)									
	(U) Program Element 0604754F, Joint Tactical Information Distribution System (JTIDS)									
	(U) Program Element 0604600F, Wind Corrected Munitions Dispenser (WCMD)									
	(U) Program Element 0208006F, Air Force Mission Support System (AFMSS)									
	(U) Program Element 0604270F, Electronic Warfare (EW) Development									

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)										DATE February 2000		
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
05 - Engineering and Manufacturing Development					0604226F B-1B					654596		
(U) E. Acquisition Strategy												
(U) Key elements of the overall CMUP acquisition strategy include: use of a sole source contract with a prime/integrating contractor; assignment of Total System Installed Performance Responsibility (TSIPR) to the integrating contractor; use of cost plus award fee (CPAF) development contracts; and combining developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime and differences in fielded configurations.												
(U) F. Schedule Profile												
		<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>		
	1	2	3	4	1	2	3	4	1	2	3	4
(U)	Defensive System Upgrade Program											
(U)	T&E Milestones											
(U)	- Complete subsystem qual test											X
(U)	- Flight Test Start											X
(U)	Mission Planning System (MPS)											
(U)	Engineering Milestones											
(U)	- S/W Release 2.0 CDR (Computer/ WCMD)											*
(U)	T&E Milestones											
(U)	- S/W Release 1.1 (GPS/COM/JDAM) Test Readiness Review /											*
	FQT											
(U)	- S/W Release 1.2 (GPS/COM/JDAM OT&E Fixes) TRR/FQT											X
(U)	- S/W Release 2.0 Test Readiness Review/FQT											X
(U)	Contract Milestones											
(U)	- S/W Release 1.1 Delivery											*
(U)	- S/W Release 1.2 Delivery											X
(U)	- S/W Release 2.0 Delivery											X
(U)	- S/W Release 2.1 (JSOW/JASSM) Contract Award											*
(U)	Training Systems											
(U)	Acquisition Milestones											
(U)	- Start JDAM/GPS EMD											*
(U)	- Start Computer/WST Rehost/WCMD EMD											X
(U)	- Complete JDAM/GPS EMD											X
(U)	Weapons											
Project 654596					Page 4 of 8 Pages					Exhibit R-2 (PE 0604226F)		

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2000
--	------------------------------

BUDGET ACTIVITY 05 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604226F B-1B	PROJECT 654596
--	---	--------------------------

(U) **F. Schedule Profile Continued**

	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Acquisition Milestones												
(U) - JDAM/1760 MS III		*										
(U) - GPS/Comm/JDAM/1760 RAA	*											
(U) - JSOW/JASSM MS II		*										
(U) Engineering Milestones												
(U) - JSOW/JASSM CDR								X				
(U) T&E Milestones												
(U) - Start Computer/WCMD Flight Test								X				
(U) - Start JSOW/JASSM Ground Test											X	
(U) Contract Milestones												
(U) - JSOW/JASSM EMD		*										

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000				
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604226F B-1B			PROJECT 654596				
(U) A. Project Cost Breakdown (\$ in Thousands)											
						<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>	
(U)	CMUP contractual efforts					149,870		140,751		121,662	
(U)	Government flight test					16,047		24,121		37,562	
(U)	Government Furnished Equipment					465		1,173		632	
(U)	Advisory and Assistance Services (A&AS)					3,729		3,898		3,484	
(U)	Modeling & Simulation / Studies & Analyses					2,515		2,000		1,236	
(U)	Program Management & Administration (PMA)					3,060		4,275		3,546	
(U)	Total					175,686		176,218		168,122	
(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>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	
	<u>Total</u>									<u>Program</u>	
<u>Product Development Organizations</u>											
(U) DSUP											
(U)	BNA	SS/CPAF	May 93	30,228	30,228	30,228	0	0	0	0	30,228
(U)	BNA	SS/CPAF	June 97	337,666	337,666	83,743	60,002	62,945	50,026	80,950	337,666
(U) Mission Planning System											
(U)	Lockheed-Sanders	C/CPAF	Aug 94	1,311	1,311	489	252	188	190	192	1,311
(U)	Logicon	CPAF	Dec 95	49,807	49,807	29,560	9,460	8,562	2,033	192	49,807
(U) Training Systems											
(U)	Lockheed-Martin	C/CPAF	Jun 94	13,284	13,284	13,284	0	0	0	0	13,284
(U)	Intelx	C/CPAF	Jun 99	56,961	56,961	1,257	5,348	12,280	9,153	28,923	56,961
(U) Weapons											
(U)	BNA - CBU's	SS/CPFF	Mar 93	4,960	4,960	4,960	0	0	0	0	4,960
(U)	BNA - CBU's	SS/CPFF	Jan 94	16,314	16,314	16,314	0	0	0	0	16,314
(U)	BNA - FWEP	SS/T&M	Sep 98	3,275	3,275	2,501	774	0	0	0	3,275
(U)	BNA - EFX	SS/T&M	Feb 98	5,359	5,359	5,359	0	0	0	0	5,359

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE	
										February 2000	
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT	
05 - Engineering and Manufacturing Development					0604226F B-1B					654596	
(U) Performing Organizations Continued:											
<u>Product Development Organizations</u>											
(U)	BNA- JDAM/GPS	SS/CPFF	Aug 93	72,223	72,223	72,223	0	0	0	0	72,223
Pre-EMD											
(U)	BNA- JDAM/ GPS	SS/CPAF	Mar 95	270,717	270,717	270,083	634	0	0	0	270,717
EMD											
(U)	BNA-ACBM	SS/CPAF	Mar 98	1,900	1,900	1,900	0	0	0	0	1,900
(U)	BNA-Wing Sweep	SS/T&M	Jul 97	1,089	1,089	853	236	0	0	0	1,089
(U)	BNA- Computer	SS/CPAF	May96/Jan 97	219,095	219,095	93,003	48,875	35,067	29,787	12,363	219,095
(U)	BNA-WCMD	SS/CPAF	May96/Jan 97	57,975	57,975	19,550	13,842	11,134	9,558	3,891	57,975
(U)	Lockheed-Martin - WCMD	SS/CPAF	Jan 97	2,775	2,775	825	50	900	1,000	0	2,775
(U)	BNA- JSOW/ JASSM	SS/CPAF	Mar 99	60,190	60,190	2,090	6,485	7,306	16,562	27,747	60,190
(U)	Lockheed- Martin - JASSM	SS/T&M	Jan 99	12,461	12,461	3,360	3,462	1,299	2,093	2,247	12,461
(U)	Raytheon -JSOW	SS/T&M	Jan 99	4,250	4,250	900	450	970	1,160	770	4,250
(U)	TBD - Future CMUP	TBD	TBD	400	400	0	0	100	100	200	400
Related EMD											
<u>Support and Management Organizations</u>											
(U)	A&AS	Various	Annual	35,033	35,033	19,367	3,729	3,898	3,484	4,555	35,033
(U)	Studies & Analyses / Modeling & Sim	Various	Various	26,155	26,155	17,526	2,515	2,000	1,236	900	24,177
(U)	Program Mgmt & Admin	Various	Various	34,124	34,124	23,465	3,060	4,275	3,546	1,756	36,102
<u>Test and Evaluation Organizations</u>											
(U) DSUP											
(U)	AFFTC	P.O.	Various	61,488	61,488	4,082	6,003	8,430	23,224	19,749	61,488
(U) Weapons											
(U)	AFFTC	P.O.	Various	106,031	106,031	54,433	10,044	15,691	14,338	11,525	106,031

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000		
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604226F B-1B			PROJECT 654596		
(U) Government Furnished Property:									
	<u>Contract</u>	<u>Award or</u>							
<u>Item</u>	<u>Method/Type</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>or Funding</u>	<u>Date</u>	<u>Date</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
(U) DSUP									
(U) Various	Various	Various	Various	3,105	70	300	200	300	3,975
(U) Weapons									
(U) Various	Various	Various	Various	1,160	395	873	432	32	2,892
<u>Support and Management Property</u>									
<u>Test and Evaluation Property</u>									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				656,747	150,335	141,924	122,294	157,807	1,229,107
Subtotal Support and Management				60,358	9,304	10,173	8,266	7,211	95,312
Subtotal Test and Evaluation				58,515	16,047	24,121	37,562	31,274	167,519
Total Project				775,620	175,686	176,218	168,122	196,292	1,491,938