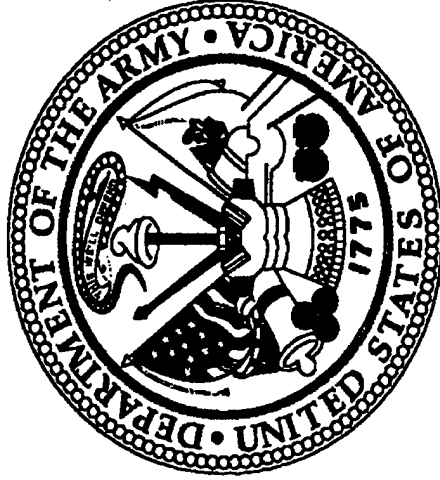


DEPARTMENT OF THE ARMY

Procurement Programs



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MISSILE PROCUREMENT, ARMY

APPROPRIATION

February 1997

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MISSILE PROCUREMENT, ARMY

APPROPRIATION LANGUAGE

For construction, procurement, production, modification, and modernization of missiles, equipment, including ordnance, ground handling equipment, spare parts, and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including the land necessary therefor, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes; \$1,178,151,000 in fiscal year 1998 to remain available for obligation until September 30, 2000.

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1997 BUDGET REQUEST
WITH THE FY 1997 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/99 BUDGET REQUEST
(In Millions of Dollars)

Appropriation Missile Procurement, Army	FY 1997		FY 1997		Increase or (Decrease)
	Requirements per FY1997 Budget	704	Requirements per FY1998/1999 Budget	944	
Activity 2 - Other Missiles					240
Activity 3 - Modification of Missiles		38		70	32
Activity 4 - Spares and Repair Parts		12		12	0
Activity 5 - Support Equipment and Facilities		12		12	0
Reimbursable Program		30		30	0
		796		1,068	272

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase resulted from congressional adjustments to Javelin (+34), Avenger (+59), MLRS Rocket (+17), MLRS Launcher (+67), ATACMS (+69), distribution of reductions for P.L. 104-208, SEC 8037 (-3), P.L. 104-208, SEC 8138 (-1).

Activity 3 - Modification of Missiles - The net increase resulted from congressional adjustment to Patriot Mod (+12), Stinger Mod (+20), distribution of reductions for P.L. 104-208, Sections 8138 and 8037 (-0.075).

Activity 4 - Spares and Repair Parts - A proportionate reduction was made for Sections 8138 and 8037 of P.L. 104-208 (-0.011).

Activity 5 - Support Equipment and Facilities - A proportionate reduction was made for Sections 8138 and 8037 of P.L. 104-208 (-0.011).

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1998/99 BUDGET REQUEST
WITH THE FY 1998 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/1999 BUDGET REQUEST
(In Millions of Dollars)

Appropriation	FY 1997 Requirements FY 1998/99 Budget	FY 1998	
		Requirements FY 1998/1999 Budget	Increase or (Decrease)
Activity 2 - Other Missiles	944	1,062	118
Activity 3 - Modification of Missiles	70	98	28
Activity 4 - Spares and Repair Parts	12	11	(1)
Activity 5 - Support Equipment and Facilities	12	7	(5)
Reimbursable Program	30	180	150
	1,068	1,358	290

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase results from: BMDO funding transfer for PAC 3 (+349) and increased ATACMS

Block IA buy (+23); completion of quantity buys for Avenger (-78), Hellfire II (-93), and MLRS

Rocket (-39) along with funding decrease to Javelin (-18), TOW (-12) and other program adjustments (-14).

Activity 3 - Modification of Missiles - The net increase results from: start of ITAS buy (+63), funding decrease in Stinger (-24),

Patriot (-3), MLRS (-4) Mods, and no funding for Dragon Mod (-3).

Activity 4 - Spares and Repair Parts - The net decrease results from minor funding adjustments to Initial Spares and Repair Parts (-1).

Activity 5 - Support Equipment and Facilities - The net decrease results from decrease to Air Defense Targets (-5).

Reimbursable Program - The net increase results from projected increase in Federal (+78) and FMS (+54) sales.

COMPARISON OF FY 1998 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1998/99 BUDGET REQUEST
WITH THE FY 1999 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/1999 BUDGET REQUEST
(In Millions of Dollars)

Appropriation	FY 1998 Requirements FY 1998/99 Budget	FY 1999 Requirements FY 1998/1999 Budget	Increase or (Decrease)
Missile Procurement, Army			
Activity 2 - Other Missiles	1,062	1,417	355
Activity 3 - Modification of Missiles	98	96	(2)
Activity 4 - Spares and Repair Parts	11	21	10
Activity 5 - Support Equipment and Facilities	7	7	0
Reimbursable Program	180	164	(16)
	1,358	1,705	347

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase results from: increased quantity buys for Patriot (+21), Longbow Hellfire (+64), Javelin (+184), and BAT (+15); start quantity buy for ER-MLRS (+16), ATACMS Block II (+61), and other adjustments (-6).

Activity 3 - Modification of Missiles - The net decrease results from adjustments to modification programs (-2).

Activity 4 - Spares and Repair Parts - The net increase results from an increase in Spares and Repair Parts for Javelin (+4), and MLRS Launcher (+6).

Reimbursable Program - The net decrease results from: increase in sale of Javelin to USMC (+42), no anticipated sale of MLRS Rocket/Launcher (-54) and minor adjustments associated with the sale of several other items (-4).

Index for MISSILE PROCUREMENT, ARMY

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4	HELLFIRE SYS SUMMARY	C70000	21338139.98P	17
5	JAVELIN (AAWS-M) SYSTEM SUMMARY	CC0007	20648139.98P	31
6	JAVELIN (AAWS-M) ADV PROC	CC0007	20649139.98P	39
7	TOW 2 SYSTEM SUMMARY	C59300	22104139.98P	41
8	MLRS ROCKET	C65400	25900139.98P	46
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14	PATRIOT MODS	C50700	20962121.98P	85
15	STINGER MODS	C20000	22684139.98P	112
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17	MLRS MODS	C67500	26552139.98P	136
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20	ITEMS LESS THAN \$2.0M (MISSILES)	CL2000	23902147.98P	172
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DEPARTMENT OF THE ARMY
FY 98/99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1997

Appropriation: **MISSILES**

Activity: 2. **OTHER MISSILES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS)						FY 99		
				FY 96		FY 97		FY 98		FY 99		
				QTY	COST	QTY	COST	QTY	COST	QTY	COST	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
SURFACE-TO-AIR MISSILE SYSTEM												
1	PATRIOT SYSTEM SUMMARY (MYP) (C49100)	A	6,713,634		4,924			52	349,109	68	369,885	
2	AVENGER SYSTEM SUMMARY (C14900)				30,532		71,913					
	SUB-ACTIVITY TOTAL				35,456		71,913		349,109		369,885	
AIR-TO-SURFACE MISSILE SYSTEM												
3	HELLFIRE SYS SUMMARY (C70000)	A	190,912	1,102	235,954	2,805	357,254	1,465	279,687	2,000	345,433	
	SUB-ACTIVITY TOTAL				235,954		357,254		279,687		345,433	
ANTI-TANK/ASSAULT MISSILE SYSTEM												
4	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)		132,511	1,010	200,858	1,020	161,281	1,080	143,112	3,316	326,623	
5	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007) ADVANCE PROCUREMENT (CY)	A					34,000					
6	TOW 2 SYSTEM SUMMARY (C59300)				9,686		13,571		1,326			
7	MLRS ROCKET (C65400)			1,326	44,607	1,674	41,404		2,863	534	18,955	
8	MLRS LAUNCHER SYSTEMS (C66400)		3,539,620		81,093		103,703	29	102,649	32	92,457	
9	ARMY TACTICAL MSL SYS (ATACMS) -SYS SUM (C98510) LESS: ADVANCE PROCUREMENT (PY)	A	748,326	120	121,303	97	91,815	153	114,494	160	120,400	
									-16,680		-17,440	
									97,814		102,960	

DEPARTMENT OF THE ARMY
FY 98/99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1997

Appropriation: **MISSILES**

Activity: 2. **OTHER MISSILES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS)					
				FY 96		FY 97		FY 98	
				QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
10	ARMY TACTICAL MSL SYS (ATACMS) -SYS SUM (C98510) ADVANCE PROCUREMENT (CY)						69,000		
11	ATACMS/BAT (CA6101)	A							
12	BAT (CA6100)	A	279,370					305	85,208
	SUB-ACTIVITY TOTAL				457,547		514,774		432,972
	ACTIVITY TOTAL				728,957		943,941		1,061,768
								50	60,781
								547	100,137
									701,913
									1,417,231

EXHIBIT P-1
February 1997

Activity: 3. **MODIFICATIONS**

P-1 Page 3 of 5

Appropriation: **MISSILES**

Activity: 4. **SPARES AND REPAIR PARTS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS)									
				FY 96		FY 97		FY 98		FY 99			
				QTY (5)	COST (6)	QTY (7)	COST (8)	QTY (9)	COST (10)	QTY (11)	COST (12)		
(1)	(2)	(3)	(4)										
	SPARES AND REPAIR PARTS												
18	SPARES AND REPAIR PARTS (CA0250)				11,500		12,078		11,381		21,385		21,385
					-----		-----		-----		-----		-----
	SUB-ACTIVITY TOTAL				11,500		12,078		11,381		21,385		21,385
	ACTIVITY TOTAL				11,500		12,078		11,381		21,385		21,385

DEPARTMENT OF THE ARMY
FY 98/99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1997

Appropriation: **MISSILES**

Activity: 5. SUPPORT EQUIPMENT AND FACILITIES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS)											
				FY 96			FY 97			FY 98			FY 99		
				QTY	COST	(5)	QTY	COST	(6)	QTY	COST	(7)	QTY	COST	(8)
(1)	(2)	(3)	(4)	(5)	(6)	(5)	(7)	(8)	(6)	(9)	(10)	(9)	(11)	(12)	(10)
SUPPORT EQUIPMENT AND FACILITIES															
19	AIR DEFENSE TARGETS (C93000)				6,595			6,195			998			996	
20	ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)				971			991			954			941	
21	MISSILE DEMILITARIZATION (HL2000)				1,643			1,532			1,507			1,496	
22	PRODUCTION BASE SUPPORT (CA0100)				2,848			3,466			3,364			3,325	
	SUB-ACTIVITY TOTAL				12,057			12,184			6,823			6,758	
	ACTIVITY TOTAL				12,057			12,184			6,823			6,758	
	APPROPRIATION TOTAL				839,455			1,038,109			1,178,151			1,541,375	

PROCUREMENT PROGRAM-INSTALLATION SUMMARY

(TOA, Dollars in Millions)

<u>System/Modification</u>	<u>Prior Yrs</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>Total</u>
PATRIOT MODS	10.4	1.2	1.6	1.4	1.8	2.2	1.8	1.4	21.8
TOW MODS	16.9	0.0	0.1	2.1	0.2	0.3	0.3	1.4	21.3
MLRS MODS	204.2	6.4	2.2	2.2	2.3	2.6	2.6	2.5	225
TOTAL FOR MISSILE MOD	231.5	7.6	3.9	5.7	4.3	5.1	4.7	5.3	268.1

BUDGET ITEM JUSTIFICATION SHEET												DATE
P-1 ITEM NOMENCLATURE												PATRIOT SYSTEM SUMMARY (MYP) (C-49100)
APPROPRIATION / BUDGET ACTIVITY												
MISSILE PROCUREMENT / Other Missiles												
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY	6475			52	68	180	212	220	240	228	7675	
COST (in millions)	9829.1	4.9	0.0	349.1	369.9	459.2	445.4	433.1	396.8		12087.5	
Initial Spares (in millions)	344.3										344.3	
Total (in millions)	9873.4	4.9		349.1	369.9	459.2	445.4	433.1	396.8		12431.8	
Unit Cost (in millions)	1.5			6.7	5.4	2.6	2.1	2.0	1.7		1.6	
DESCRIPTION: PATRIOT is an advanced Surface-to-Air guided missile system with a high single shot kill probability capable of operation in the presence of Electronic Countermeasures (ECM) and able to conduct multiple simultaneous engagements against high performance air breathing targets and ballistic missiles likely to be encountered by US Forces during the 90's and beyond. The system utilizes a multifunction Phased Array Radar, a digital computer controlling system functions, a guidance system combining command and homing (track-via-missile) features, and provides the operator the ability to control operations. PATRIOT totally replaced Nike Hercules and partially replaced HAWK. It has the advantage of reducing manpower and logistics costs associated with the replaced systems while providing improved high and medium altitude air defense. Deployment is to the field Army and the system is integrated with the U.S. Air Force in the overall air defense of the theater of operations The PATRIOT Advanced Capability (PAC)-3 program is a result of a series of integrated, phased system improvements in combination with the PAC-3 missile which utilizes hit-to-kill technology. Modification to the system, which includes radar enhancements, communication upgrades and increased command, control, and computer capability, will increase PATRIOT's effectivity, survivability, flexibility of defense design, footprint and detection of smaller low radar cross section targets. JUSTIFICATION: FY98-FY03 includes costs for PAC-3 missile and modifications to support equipment. Cooperative Agreements: U.S. Owned/FRG Manned - The Memorandum of Understanding for enhancing air defense for Central Europe dated 6 Dec 84, providing U.S. support to US owned/FRG Manned PATRIOT Fire Units. NATO Maintenance and Supply Agency (NAMSA) - DOD directed requirement to support the European and NATO deployed units (International agreement Germany, the Netherlands and the U.S. for common logistics support of PATRIOT).												

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON PATRIOT			C. MANUFACTURER NAME Raytheon, Andover, MA			D. DATE February 1997		
ID	CD	Missiles Cost Elements	FY 96			FY 97			FY 98			FY 99		
			TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
		Missile Hardware- Recurring												
		SubTotal Missile Hardware							114604	52	2204	132385	68	1947
		Non-Recurring Costs												
		Total Flyaway							114604			132385		
		Ground Support Equipment												
		Radar Phase III												
		CDI Phase III												
		RLCEU							38000			37000		
		Command and Launch System							14800			13800		
		Modification Spares							21900			22700		
		Total Ground Support Equipment							21200			39800		
									39300			32200		
									135200			145500		
		SubTotal C&L Hardware							249804			277885		
		Support Cost												
		Contractor Engineering							29300			27200		
		Government Engineering							21905			20500		
		SEPM	2200						20655			19300		
		Integrated Logistics Support							11950			11200		
		NAMA							5317			4300		
		DMPE							5000			4600		
		Fielding	2724						5178			4900		
		SubTotal Support Cost	4924						99305			92000		
		Gross P-1 End Cost	4924						349109			369885		
		Less: Prior Year Adv Proc												
		Net P-1 Full Funding Cost	4924						349109			369885		
		PLUS P-1 CY Adv. Proc.												
		Other Non P-1 Costs												
		Initial Spares												
		MODS	6767						20825			15575		
		MOD Initial Spares	3385						2732			3622		
		TOTAL	15076						372666			389082		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT / 2 / Other Missiles										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
P-1 ITEM NOMENCLATURE										PATRIOT
PRODUCTION CONTRACT		(2)								
PATRIOT MSL										
MULTIYEAR										
FY87	Raytheon Co Andover, MA	SS/FPM-5(1)*	MICOM	Mar-87	Jan-89	700	502000			
FY88	Raytheon Co Andover, MA	SS/FPM-5(2)*	MICOM	Nov-87	Jan-90	715	474000			
FY89	Raytheon Co Andover, MA	SS/FPM-5(3)*	MICOM	Nov-88	Sep-90	815	475000	YES	NO	
FY90	Raytheon Co Andover, MA	SS/FPM-5(4)*	MICOM	Nov-89	Aug-91	815	497000	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	Nov-90	Jul-92	1100	522000	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	May-92	Oct-94	83	717000	YES	NO	
FY92	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	May-92	Oct-94	97	714000	YES	NO	
PATRIOT GSE										
MULTIYEAR										
FY87	Raytheon Co Andover, MA	SS/FPM-3(1)*	MICOM	Mar-87	Jan-89	12	N/A			
FY88	Raytheon Co Andover, MA	SS/FPM-3(2)*	MICOM	Nov-87	Jan-90	12	N/A			
FY89	Raytheon Co Andover, MA	SS/FPM-3(3)*	MICOM	Nov-88	Jan-91	10	N/A	YES	NO	
FY90	Raytheon Co Andover, MA	SS/FPM-4(4)*	MICOM	Mar-90	Feb-92	10	N/A	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	Nov-90	Jan-93	10	N/A	YES	NO	
PAC-3 MISSILE										
FY 98	LMVS Dallas, TX	SS/CPIF	MICOM	Nov-97	Apr-99	52	2204000	N/A		
FY 99	LMVS Dallas, TX	SS/CPIF	MICOM	Nov-98	Apr-00	68	1947000	N/A		
REMARKS:										
(1) Raytheon Company contract includes Martin Marietta (Orlando, FL) as subcontractor for missiles.										
(2) Sole Source Procurement is necessary because only the development contractors possess the technical expertise necessary to perform the effort without duplication of time, funds and effort already expended.										
(3) Fire Unit cost contains one Radar, one Engagement Control Station, and eight Launchers. Missile unit cost does not contain warhead cost.										
* Contract contains economic price adjustment clause. No cost has been recouped to date.										

BUDGET ITEM JUSTIFICATION SHEET										DATE
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE								
MISSILE PROCUREMENT / Other Missiles		AVENGER SYSTEM SUMMARY (C14900)								
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0	0	
COST (in millions)	30.5	71.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Description:
The AVENGER System is a lightweight, highly mobile/transportable surface-to-air missile/gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). It is operated by a two man crew for defense against helicopters and fixed wing aircraft at low altitude, day or night, and in clear or adverse weather. The system incorporates an operator's position with controls, displays, fire control electronics, and the Standard Vehicle Mounted Launcher (SVML). The SVML includes seeker coolant bottles and related hardware and it supports and launches multiple STINGER missiles. The SVML provides output signals that can be used to display to the gunner exactly where the STINGER is pointed. The driven sight reticule capability aids the gunner in severe background clutter and Electromagnetic Counter Measure (ECM) environments. The system operates with standard unmodified Basic STINGER, STINGER-POST or STINGER-RMP missile rounds. AVENGER fills the Line-of-Sight Rear (LOS-R) role in Forward Area Air Defense Systems (FAADS).

A five year multiyear procurement (MYP) contract for AVENGER began in FY91. In 1994, Congress agreed to a provision in the FY95 budget that would grant a one year extension, at no additional cost, for extending the delivery schedule of AVENGER multiyear procurement authority so the Marine Corps and other services could take advantage of the Army's contract and favorable pricing terms. FY 97 procures the remainder of the multi-year procurement (93 fire units) for the Army National Guard.

Justification:
AVENGER constitutes the Line-Of-Sight Rear (LOS-R) component of the Forward Area Air Defense System (FAADS), and it is the first FAADS element fielded.

Missiles Cost Analysis		A. APN / BUDGET ACTIVITY TITLE/NO		B. WEAPON		C. MANUFACTURER NAME		D. DATE	
		MISSILE PROCUREMENT / 2 / Other Missiles		AVENGER SYSTEM SUMMARY (C14900)		Various		February 1997	
Missiles		FY 96		FY 97		FY 98		FY 99	
Cost Elements		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each
HARDWARE									
Drive Hardware									
Turrent Assembly Army									
Unapplied EOQ									
EOQ Diverted to USMC									
SubTotal Missile Hardware									
PROCUREMENT SUPPORT									
Contractor Engineering		2726							
Government Engineering		2020							
Project Management Administration		420							
TOTAL PROCUREMENT		5166							
Command & Launch Hardware									
Std Veh Mid Launcher (SMVL) Army									
Other GFE- Army only									
Other (HMMWV)									
SubTotal C&L Hardware									
Support Cost									
Peculiar Support Equipment		2115							
Institutional Conduct of Fire Trainers(ICOFT)		8190							
Force On Force Trainers (FOFT)		6785							
DMPE									
Fielding		6261							
Interim Contractor Spt (Machinegun)		2015							
Other (FDT)									
SubTotal Support Cost		25366							
Gross P-1 End Cost									
Less: Prior Year Adv Proc		30532							
Net P-1 Full Funding Cost		30532							
PLUS P-1 CY Adv. Proc.									
Other Non P-1 Costs									
Initial Spares									
MODS									
MOD Spares		987							
TOTAL		31519							

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT / 2 / Other Missiles										
C. P-1 ITEM NOMENCLATURE										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV RECD	IF YES W/A
FY 97	Boeing Aerospace Huntsville, AL	SSM-7/FP	MICOM	Dec-96	Mar-97	*93	379	yes	no	
REMARKS: * No quantity shown in FYDP, however, Army plans to procure 93 fire units.										

Simulator and Training Device Justification										Date	February 1997
Appropriation / P-1 Line Item		Weapon System (if applicable)				Equipment Nomenclature				PE	
MISSILE PROCUREMENT/AVENGER TRAINING DEVICES		AVENGER				TRAINING DEVICES				C15200	
Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total		
Quantity (Each)											
Proc (\$000)	27626	6503							34129		
RDT&E (\$000)											
O&S (\$000)											

TRAINING SYSTEM DESCRIPTION:

Description:

The training devices being procured and supported for the AVENGER Air Defense Weapon System are essential to establish adequate and cost effective initial entry and sustainment training programs for the AVENGER operators and maintainers. The current initial entry training programs are seriously deficient in terms of training tasks and the cost to operate/sustain. Both operator and maintainer courses (Ft. Bliss-Operator and Redstone Arsenal-Maintainers) depend on actual AVENGER fire units to conduct training. This method of training was in place because there were no development funds for training devices in the baseline Non-Developmental Item (NDI) program. The use of actual AVENGER fire units requires a higher instructor-to-student ratio, limits the depth of training, and causes higher operating and support costs. The operators and maintainers leave the initial entry training courses with less than adequate training. The further development of critical skills and building-up proficiency in the collective environment is hampered, because there are no sustainment training devices in the field specifically designed for the AVENGER operators and maintainers.

Justification:

This training device program will put in place Institutional Conduct of Fire Trainers (ICOFT) at Ft. Bliss, Texas for operator and leadership training. The Force-On-Force Trainers (FOFT) will support the operator in a field environment for collective training.

NOTE: Training device funding in FY 95 for \$8.933 million was not utilized to procure training equipment. These funds were used for production support and total package fielding costs associated with fire units procured in FY 94.

Simulator and Training Device Justification (Page 2)												Date	February 1997
Appropriation / P-1 Line Item		Weapon System (if applicable)			IOC Date		Equipment Nomenclature			PE			
MISSILE PROCUREMENT/AVENGER TRAINING DEVICES		AVENGER			3Q88		TRAINING DEVICES			C16200			
Training Device By Type	Site	Del. Date	Ready For Trng Date	Avg Student Thruput	Prior Years		FY 1997		FY 1998		FY 1999		
					Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
					Each	\$000	Each	\$000	Each	\$000	Each	\$000	
Captive Flight Trainers (CFT)	Unit Locations	End of FY94	NOW	1	749	12651							
ICOFT	Ft. Bliss, TX	FY97	FY97	299	3	8190	2	5500					
FOFT	NTC/RANGES	FY97	Jan-00		22	6785	8	1003					
Total						27626		6503					

Simulator and Training Device Justification (Page 3)										DATE		February 1997	
Training Device By Type				Weapon System (if applicable)									
Captive Flight Trainers (CFT)				AVENGER									
Description / Justification													
The Captive Flight Trainer is used to train the AVENGER operator to track and acquire targets. It is also used to train proficiency in the field and system check-out.													
Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost		
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
	Each	\$000	Each	\$000	Each	\$000	Each	\$000	Each	\$000	Each	\$000	
HARDWARE COSTS													
Device (hardware)	749	12651									749	12651	
ECOs													
Nonrecurring													
GFE													
Other (Specify)													
SubTotal Hardware Costs	749	12651									749	12651	
SUPPORT COSTS													
Special SE													
Integrated Logistics Support													
Other (Specify)													
SubTotal Support Costs													
Software/Courseware													
TOTAL COSTS		12651										12651	

Simulator and Training Device Justification (Page 3)										DATE		February 1997	
Training Device By Type		Weapon System (if applicable)											
ICOFT		AVENGER											
Description / Justification													
The ICOFT is a six student training station device needed to more efficiently train initial entry AVENGER operators at Ft. Bliss, TX.													
Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost		
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
	Each	\$000	Each	\$000	Each	\$000	Each	\$000	Each	\$000	Each	\$000	
HARDWARE COSTS													
Device (hardware)	3	8096	2	5412							5	13508	
ECOs													
Nonrecurring													
GFE		94		88								182	
Program Mgmt													
SubTotal Hardware Costs	3	8190	2	5500							5	13690	
SUPPORT COSTS													
Special SE													
Integrated Logistics Support													
Other (Specify)													
SubTotal Support Costs													
Software/Courseware													
TOTAL COSTS		8190		5500								13690	

Simulator and Training Device Justification (Page 3)												
Training Device By Type		DATE		February 1997								
FOFT		Weapon System (if applicable)		AVENGER								
Description / Justification The AVENGER FOFT will be provided to the National Training Center (NTC) and instrumented ranges to enable the operators and leaders to train in a simulated combat environment.												
Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost	
	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000
HARDWARE COSTS												
Device (hardware)	22	5891	8	909							30	6800
ECOs		800										800
Nonrecurring												
GFE												
Program Mgmt		94		94								188
SubTotal Hardware Costs	22	6785	8	1003							30	7788
SUPPORT COSTS												
Special SE												
Integrated Logistics Support												
Other (Specify)												
SubTotal Support Costs												
Software/Courseware												
TOTAL COSTS		6785		1003								7788

BUDGET ITEM JUSTIFICATION SHEET													
APPROPRIATION / BUDGET ACTIVITY				DATE February 1997									
MISSILE PROCUREMENT / Other Missiles				P-1 ITEM NOMENCLATURE									
HELLFIRE SYS SUMMARY (C70000)													
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program		
QUANTITY	46590	1102	2805	1465	2000	2030	2020	2020	2060		62092		
COST (in millions)	1959.5	236.0	357.3	279.7	345.4	287.3	298.6	249.9	210.7	49.0	4273.3		
Initial Spares (in millions)	7.5										7.5		
Total (in millions)	1967.0	236.0	357.3	279.7	345.4	287.3	298.6	249.9	210.7	49.0	4280.8		
Unit Cost (in millions)	0.04	0.21	0.13	0.19	0.17	0.14	0.15	0.12	0.10		0.07		

Description:

HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance; Longbow HELLFIRE uses a radio frequency guidance section and is a fire-and-forget missile. HELLFIRE is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations Helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of the HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight. HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, Laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops. Longbow HELLFIRE maximizes the ability of the AH-64D Longbow Apache Helicopter to operate in adverse weather, battlefield obscurants, and dramatically increases aircraft survivability. HELLFIRE II and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

Longbow HELLFIRE began production in FY 95 with Long Lead Items and Initial Production Facilitization.

Description:

HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance; Longbow HELLFIRE uses a radio frequency guidance section and is a fire-and-forget missile. HELLFIRE is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations Helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of the HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight. HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, Laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops. Longbow HELLFIRE maximizes the ability of the AH-64D Longbow Apache Helicopter to operate in adverse weather, battlefield obscuration, and dramatically increases aircraft survivability. HELLFIRE II and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

Longbow HELLFIRE began production in FY 95 with Long Lead Items and Initial Production Facilitation.

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON HELLFIRE SYS SUMMARY (C70000)			C. MANUFACTURER NAME HELLFIRE Sys Lim Liab Co/Londonbow Lim Liab Co			D. DATE February 1997		
Missiles Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Flyaway Costs														
		All-Up-Rounds	167327	1102	152	296604	2856	104	230024	1465	157	300505	2000	150
		Containers	4549	3454	1	2351	1800	1	2283	1465	2	3185	2000	2
		GFE Explosives	589			1766			1180			1646		
		Engineering Services	6176			8610			7316			7495		
		Engineering Change Orders	3339			4153			3651			5026		
		Fielding	128			937			1303			1384		
		Acceptance Testing	6287			4613			5442			5564		
		Total Hardware	188395			319034			251199			324805		
Engineering Support														
		Project Mgt Admin	6121			8828			8582			8711		
		Production Engineering Support	10184			11379			8948			8523		
		Total Engineering Support	16305			20207			17530			17234		
Non-Recurring														
		Disposal of Tooling/Test Equipment				1999						2277		
		IPF	12309											
		Cost Reduction Program	18945			4914			2459					
		Rate Tooling/Test Equipment				11100			7699					
		Total Non-Recurring	31254			18013			10158			2277		
Total Flyaway			235954			357254			278887			344316		
Peculiar Support Equipment														
		Environmental Protection Covers										1117		
		Total Peculiar Support Equipment										1117		
Gross P-1 End Item Cost			235954			357254			279687			345433		
		Less PY Adv Proc												
		Net P-1 Full Funding	235954			357254			279687			345433		
		Plus CY Adv Procurement												
		Other Non P-1 Costs												
		Initial Spares												
		Mods												
Total			235954			357254			279687			345433		

BUDGET ITEM JUSTIFICATION SHEET												
DATE												February 1997
P-1 ITEM NOMENCLATURE												
MISSILE PROCUREMENT / Other Missiles												
APPROPRIATION / BUDGET ACTIVITY	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY	46590	750	1800								49140	
COST (in millions)	1889.1	50.7	108.0	15.0	16.9	0.0	0.0	0.0	0.0		2079.7	
Initial Spares (in millions)	5.7										5.7	
Total (in millions)	1894.8	50.7	108.0	15.0	16.9						2085.4	
Unit Cost (in millions)	0.04	0.07	0.06								0.04	

Description:

HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance and is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations Helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight. HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops.

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)			C. MANUFACTURER NAME HELLFIRE Systems Limited Liability Company			D. DATE February 1997		
Missiles			FY 96			FY 97			FY 98			FY 99		
Cost Elements			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Flyaway Costs														
All-Up-Rounds			34133	750	46	83404	1800	46						
Containers			4549	3454	1	2351	1800	1						
GFE Explosives			441			1112								
Engineering Services			1929			3418			3000			3062		
Engineering Change Orders			782			1472								
Fielding			128			161			304			311		
Acceptance Testing			2311			3058			3584			3664		
Total Hardware			44273			94976			6888			7037		
Engineering Support														
Project Mgt Admin			2706			5069			2908			2956		
Production Engineering Support			3761			5924			5166			4658		
Total Engineering Support			6467			10993			8074			7614		
Non-Recurring														
Disposal of Tooling/Test Equipment						1999						2277		
IPF														
Cost Reduction Program														
Rate Tooling/Test Equipment														
Total Non-Recurring						1999						2277		
Total Flyaway			50740			107968			14962			16928		
Peculiar Support Equipment														
Environmental Protection Covers														
Total Peculiar Support Equipment														
Gross P-1 End Item Cost														
Less PY Adv Proc			50740			107968			14962			16928		
Net P-1 Full Funding														
Plus CY Adv Procurement			50740			107968			14962			16928		
Other Non P-1 Costs														
Initial Spares														
Mods														
Total			50740			107968			14962			16928		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT / 2 / Other Missiles										
C. P-1 ITEM NOMENCLATURE										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQD	IF YES W/A
FY 96	HELLFIRE Systems, Limited Liability Company (HSLLC) Orlando, FI	*FFP	MICOM	Jan-96	Jul-98	750	46	Yes	No	
FY 97	HELLFIRE Systems, Limited Liability Company (HSLLC) Orlando, FI	**FFP	MICOM	Jan-97	May-99	1800	46	Yes	No	
REMARKS:										
* A competition was conducted between the Martin Marietta Technologies, Inc. and Rockwell International Corp. for HELLFIRE II development with firm-fixed-price not to exceed production options for FY 93-96. The development contract (with FY 93-96 production options) was awarded to Martin Marietta Technologies, Inc. after Rockwell, Int. chose not to bid.										
** An additional option for FY 97 was added to the current production contract in Oct. 95.										

FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE										LASER HELLFIRE MSL (BASIC/HW/HFI) (C70100)										DATE										February 1997																																							
COST ELEMENTS										M F R										S E R V										FY										PROC QTY Each										ACCEP. PRIOR TO 1 OCT										BAL DUE AS OF 1 OCT										O N D E C T V C N J A N F E B M A P R M A P									

BUDGET ITEM JUSTIFICATION SHEET												DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE										LONGBOW HELLFIRE (C70300)	
MISSILE PROCUREMENT / Other Missiles		Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY			352	1005	1465	2000	2030	2020	2020	2060		12952	
COST (in millions)		41.2	185.2	249.3	264.7	328.5	287.3	298.6	249.9	210.7		2115.4	
Initial Spares (in millions)													
Total (in millions)		41.2	185.2	249.3	264.7	328.5	287.3	298.6	249.9	210.7		2115.4	
Unit Cost (in millions)			0.53	0.25	0.18	0.16	0.14	0.15	0.12	0.10		0.16	

Description:
Longbow HELLFIRE is the air-to-ground missile system component of the Longbow system. It is designed to defeat individual targets and substantially enhance survivability of the AH-64D Longbow Apache Helicopter. Longbow HELLFIRE uses a radio frequency guidance section. It will provide the capability to conduct battle both day and night in adverse weather and with battlefield obscurants present. With its radio frequency guidance section, the Longbow HELLFIRE complements the semi-active Laser HELLFIRE II with a true fire and forget capability, maximizing the ability of the Longbow Apache to operate in adverse weather and dramatically increases the aircraft's survivability. Further, the Longbow HELLFIRE missile provides a lock-on-before-launch (LOBL) or lock-on-after-launch (LOAL) capability depending on target range and movement parameters. Longbow does not change the AH-64 mission or role, but provides for increased mission effectiveness by enhancing lethality and survivability. The production buys support training, fielding and deployment of the AH-64D Longbow Helicopter. All three Longbow programs elements (Fire Control Radar, D Model Apache Helicopter and Longbow HELLFIRE Missile) were developed simultaneously and are scheduled to be fielded as a total system. Long Lead Items procurement in FY 95 provided for the procurement of materials for the first Low Rate Initial Production year (FY 96). This is required to meet system fielding requirements. Laser HELLFIRE and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON LONGBOW HELLFIRE (C70300)		C. MANUFACTURER NAME Longbow Limited Liability Company		D. DATE February 1997					
Missiles Cost Elements	ID	FY 96		FY 97		FY 98		FY 99		UnitCost	Qty	UnitCost	Qty	UnitCost	Qty
		TotalCost \$000	Each	UnitCost \$000	TotalCost \$000	Each	UnitCost \$000	TotalCost \$000	Each						
Flyaway Costs															
All-Up-Rounds Containers		133194	352	378	213200	1056	202	230024	1465	157	2000	300505	2000	150	
GFE Explosives		148			654			2283	1465	2	2000	3185	2000	150	
Engineering Services		4247			5192			1180				1646		2	
Engineering Change Orders		2557			2681			4316				4433			
Fielding					776			3651				5026			
Acceptance Testing		3976			1555			999				1073			
Total Hardware		144122			224058			244311				317768			
Engineering Support															
Project Mgt Admin		3415			3759			5674				5755			
Production Engineering Support		6423			5455			3782				3865			
Total Engineering Support		9838			9214			9456				9620			
Non-Recurring															
Disposal of Tooling/Test Equipment															
IPF		12309			4914			2459							
Cost Reduction Program		18945			11100			7699							
Rate Tooling/Test Equipment					16014			10158							
Total Non-Recurring		31254													
Total Flyaway		185214			249286			263925				327388			
Peculiar Support Equipment															
Environmental Protection Covers								800				1117			
Total Peculiar Support Equipment								800				1117			
Gross P-1 End Item Cost		185214			249286			264725				328505			
Less PY Adv Proc															
Net P-1 Full Funding		185214			249286			264725				328505			
Plus CY Adv Procurement															
Other Non P-1 Costs															
Initial Spares															
Mods															
Total		185214			249286			264725				328505			

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										
B. APPROPRIATION / BUDGET ACTIVITY					C. P-1 ITEM NOMENCLATURE					DATE
MISSILE PROCUREMENT / 2 / Other Missiles					LONGBOW HELLFIRE (C70300)					February 1997
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQD	IF YES W/A
FY 96	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	MICOM	Jan-96	Mar-97	352	378	Yes	Yes	*
FY 97	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	MICOM	Jan-97	Jun-98	****1056	202	Yes	Yes	**
FY 98	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	MICOM	Dec-97	Jun-99	1465	157	Yes	Yes	**
FY 99	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP***	MICOM	Dec-98	Jun-00	2000	150	Yes	Yes	**
REMARKS: *System and development specifications are under government control, but the technical data package is not. **In the Longbow HELLFIRE's transition to production, performance based specifications will be baselined and used in all production contracts. ***Planned five year multiyear contract. ****Reflects actual contract quantity which is higher than FYDP. Program savings reinvested to buy additional missiles in accordance with the Cost Reduction Plan (1056).										

BUDGET ITEM JUSTIFICATION SHEET										DATE	
APPROPRIATION / BUDGET ACTIVITY										February 1997	
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
JAVELIN (AAMS-M) SYSTEM SUMMARY (CC0007)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	1575	1010	1020	1080	3316	5458	5403	7037		701	26600
COST (in millions)	437.0	200.9	161.3	143.1	326.6	466.0	409.5	475.9	7.1	95.3	2722.6
Initial Spares (in millions)					4.2	4.8	6.9	8.6	9.5	9.4	43.4
Total (in millions)	437.0	200.9	161.3	143.1	330.8	470.8	416.4	484.5	16.6	104.7	2766.0
Unit Cost (in millions)	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1		0.1	0.1

DESCRIPTION: This project provides procurement funds for JAVELIN, the medium antitank system for infantry, scouts, and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The JAVELIN, a replacement for the DRAGON, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. The JAVELIN is hardened against countermeasures and does not require extensive training for effective employment.

The Command Launch Unit (CLU) is reusable and consists of a target acquisition device, Built-In-Test (BIT), a trigger mechanism, and appropriate interfaces.

The round includes a missile encased in a disposable launch tube assembly. Attached to the launch tube are CLU mating connector, front and rear shock attenuators, removable front end cap, as well as a replaceable battery coolant unit (BCU), and adjustable and replaceable shoulder strap, and a replaceable desiccant.

JUSTIFICATION: The operational concept envisioned for fighting the antiarmor battle requires an effective, extended range, manportable, fire-and-forget, weapon for dismounted combat forces. JAVELIN's fire-and-forget technology allows the gunner to fire and immediately take cover, move to another fighting position or to reload. The JAVELIN provides enhanced lethality over the DRAGON through the use of a tandem warhead which will defeat all known armor threats. It is effective against stationary and moving targets. The JAVELIN is capable of operating at twice the range (2000m) of the DRAGON with a day/night integrated sight, capable of target acquisition in adverse weather and through battlefield obscurant conditions. This system will have a secondary mission of destroying bunkers and will provide defensive capability against hovering helicopters. The CLU can be used in a stand-alone mode for battlefield surveillance and target selection.

There were 3605 rounds procured through FY1997. Another 1080 are scheduled for procurement in FY1998 under the second year award of a three-year multiyear contract. The remaining 21,915 are planned for purchase in subsequent years.

The Marine Corps is also procuring the Javelin.

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)			C. MANUFACTURER NAME Joint Venture T1/MM			D. DATE February 1997		
Missiles			FY 96			FY 97			FY 98			FY 99		
Cost Elements			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Missile Hardware- Recurring														
All Up Round			101918	1010	101	72236	1020	71	67538	1080	63	202313	3316	61
Engineering Services			14272			6848			4852			6729		
Engineering Change Orders			1325			795			786			2265		
Contractor Prod Engineering Support			20041			11968			10378			11858		
Acceptance Testing			840			1498			1205			186		
Fielding			568			505			722			1937		
Subtotal Missile Hardware			138964			93850			85481			225288		
Procurement Support														
Government Project Mgt Admin			6391			5056			4455			4220		
Government Production Engineering Admin			9513			8119			8422			11682		
Pub/Tech Data			577			417			279			329		
Subtotal Support Cost			16481			13592			13156			16231		
Non-Recurring Production			1458			1451			1035			19668		
Total Missile Flyaway			156903			108893			99672			261187		
Command & Launch Hardware														
Command Launch Unit			20172	108	187	24394	206	118	26326	270	98	39228	423	93
Engineering Services			2614			2072			1095			666		
Engineering Change Orders			228			269			306			439		
Contractor Prod Engineering Support			3967			4146			4396			2448		
Fielding			6315			2612			4627			3155		
Non-Recurring Production			266			2373			1979			3160		
Total CLU Flyaway			33562			35866			38729			49096		
Training Devices														
Field Tactical Trainer - Student Station			6310	54	117	13283	129	103	3293	39	84	12332	180	69
Field Tactical Trainer - Instructor Station			644	23	28	281	13	22	174	10	17	665	39	17
Basic Skills Trainer			3209	16	201	2545	15	170	1084	8	136	2708	24	113
Missile Simulation Round			230	111	2	413	174	2	160	80	2	635	333	2
SubTotal Support Cost			10393			16522			4711			16340		
Gross P-1 End Cost														
Less: Prior Year Adv Proc			200858			161281			143112			326623		
Net P-1 Full Funding Cost			200858			161281			143112			326623		
PLUS P-1 CY Adv. Proc.						34000								
Other Non P-1 Costs														
Initial Spares														
MODS														
TOTAL			200858			195281			143112			4209		
												330832		

Simulator and Training Device Justification										Date	February 1997
Appropriation / P-1 Line Item		Weapon System (if applicable)			Equipment Nomenclature					PE	
MISSILE PROCUREMENT/JAVELIN (AAWS-M) SYSTEM SUMMARY		Javelin (AAWS-M) Training Devices (H06300)			See Training System Description Paragraph						
Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total		
Quantity (Each)											
Proc (\$000)	26621	16522	4711	16340	29926	25678	27765		147563		
RDT&E (\$000)											
O&S (\$000)											

TRAINING SYSTEM DESCRIPTION:

1. Field Tactical Trainer (FTT) Student Station - This item will be used to teach force-on-force tactics and practice tasks to prepare for the U.S. Army Training Evaluation Program (ARTEP) and U.S. Marine Corps Readiness Evaluation System.
2. The FTT Instructor Station - This item will be used in a traditional outdoor range environment at the institution and unit level to refine the basic individual skills required to operate the JAVELIN and for qualification training. The device will be used by the active U.S. Army and the U.S. Marine Corps.
3. Basic Skills Trainer (BST) - This item is used for development and retention of tactical and technical gunnery skills. Training will be conducted in both the institution and unit level. The training device will be used by the active U.S. Army and the U.S. Marine Corps.
4. Missile Simulation Round (MSR) - This item is a three-dimensional full-size replica, nonoperational mock-up of the JAVELIN tactical round. It is capable of attachment to a tactical Command Launch Unit (CLU). It will be used to practice handling, and assembly/disassembly procedures with the CLU. Additionally, it will be used in field handling and mobilization tactical deployment exercises. The device will be used by the active U.S. Army and the U.S. Marine Corps.

Simulator and Training Device Justification (Page 2)											Date		February 1997	
Appropriation / P-1 Line Item		Weapon System (if applicable)			IOC Date		Equipment Nomenclature			PE				
MISSILE PROCUREMENT/JAVELIN (AAWS-M) SYSTEM SUMMARY		AVELIN (AAWS-M) Training Devices			See Training System Description Paragraph									
Training Device By Type		Site	Del. Date	Ready For Trng Date	Avg Student Thruput	Prior Years		FY 1997		FY 1998		FY 1999		
						Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
						Each	\$000	Each	\$000	Each	\$000	Each	\$000	
FTT Student Station		Ft Benning	Apr-96	May-96	12	126	18946	129	13283	39	3293	180	12332	
FTT Instructor Station		Ft Benning	Apr-96	May-96	12	36	1564	13	281	10	174	33	665	
Basic Skills Trainer		Ft Benning	Aug-96	Sep-96	12	23	5383	15	2545	8	1084	24	2708	
Missile Simulation Round		Ft Benning	Oct-95	Nov 95	12	228	728	174	413	80	160	333	635	

Simulator and Training Device Justification (Page 3)										DATE		February 1997	
Training Device By Type		Weapon System (if applicable)											
FTT Student Station		Javelin (AAWS-M) Weapon System											
Description / Justification													
This item will be used to teach force-on-force tactics and practice tasks to prepare for the U.S. Army Evaluation Programs and the U.S. Marine Corps Readiness Evaluation System.													
Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost		
	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	
	Each		Each		Each		Each		Each		Each		
HARDWARE COSTS													
Device (hardware)	126	13901	129	11353	39	2582	180	11195	1070	59925	1544	98956	
Engineering Change Order		153		125		28		126		60		492	
Nonrecurring		2022		326		264		295		1029		3936	
Production Eng Support		2870		1479		419		716		3050		8534	
SubTotal Hardware Costs	126	18946	129	13283	39	3293	180	12332	1070	64064	1544	111918	
SubTotal Support Costs													
TOTAL COSTS		18946		13283		3293		12332		64064		111918	

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Other Missiles		JAVELIN (AAWS-M) (ADV PROC) (CC0007)									
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003			
QUANTITY											
COST (in millions)	0.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DESCRIPTION: These advance procurement funds will provide economic order quantities for year two and year three of the Javelin three-year multiyear procurement. JAVELIN is a medium antitank system for infantry, scouts, and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The JAVELIN, a replacement for the DRAGON, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. The JAVELIN is hardened against countermeasures and does not require extensive training for effective employment.											

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a) (COMPARISON OF REQUEST TO EXECUTION) (TOA, Dollars in Thousands)							CURRENT YEAR FOR FISCAL YEAR PROGRAM 1997	
Weapon System Type (Model/Series No.) JAVELIN (AAWS-M) (ADV PROC) (CC0007)		FIRST SYSTEM AWARD DATE May 1997		FIRST SYSTEM COMPLETION DATE August 2000		INTERVAL BETWEEN SYSTEM COMPLETIONS (MONTHS) February 1997		
Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost		
(1)	(2)	(3)	(4)	(5)	(6)	(7)		
1. CFE								
2. GFE (Specify)								
3. SUBTOTAL								
4. EOQ (MYP)	4396	Dec-97	Dec-98	24	34000	34000		
5. (CFE)								
6. (GFE) (Specify)								
7. SUBTOTAL					34000	34000		
8. Design								
9. Other (Indicate Specific Items)								
10. TOTAL					34000	34000		
NARRATIVE DESCRIPTION These funds will procure economic order quantities for Javelin all up round (4396); command launch unit (693); field tactical trainer, student station (219); field tactical trainer, instructor station (49); and basic skills trainer (32). These funds will be awarded on year one of the Javelin three-year multiyear contract. The multiyear contract will be awarded May 97 with an option for year two to be awarded in Dec 97 and option two for year three in Dec 98.								

BUDGET ITEM JUSTIFICATION SHEET											DATE	February 1997	
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE										TOW 2 SYSTEM SUMMARY (C58300)	
MISSILE PROCUREMENT/Other Missiles		Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY		144783										144783	
COST (in millions)		2256.2	9.7	13.6	1.3	0.0	0.0	0.0	0.0	0.0		2280.8	
Initial Spares (in millions)		20.2										20.2	
Total (in millions)		2276.4	9.7	13.6	1.3							2301.0	
Unit Cost (in millions)		0.016										0.016	
DESCRIPTION: TOW (Tube-Launched, Optically-Tracked, Wire-Guided Missile System) is designed to fulfill, the Heavy Antitank Assault Weapon System requirement for Close Combat Maneuver Forces. TOW is used primarily to destroy formations of armored vehicles, but is also an effective assault weapon against vehicles, field fortifications, and emplacements. TOW was a part of a combined united nations interagency force in Somalia and may be used against other regional threats. TOW can be fired from a ground tripod or from specifically adapted vehicles, e.g., ITV, Bradley, HMMWV, and Cobra. TOW is designated as the point target weapon on selected helicopters. TOW 2 has two distinct improvements, increase performance/hardening and a 6" full caliber warhead. TOW 2A added a small shaped tip of the TOW 2 probe to counter reactive armor, TOW 2B is an improvement to TOW 2 lethality based on a new warhead, fuze, and software to obtain a fly-over-shoot-down missile. JUSTIFICATION: FY 98 funding is required to complete plant transition/closure.													

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO		B. WEAPON		C. MANUFACTURER NAME		D. DATE	
		MISSILE PROCUREMENT / 2 / Other Missiles		TOW 2 SYSTEM SUMMARY (059300)				February 1997	
		FY 96		FY 97		FY 98		FY 99	
Missiles		TotalCost	Qty	TotalCost	Qty	TotalCost	Qty	TotalCost	Qty
Cost Elements		\$000	Each	\$000	Each	\$000	Each	\$000	Each
Missile Hardware- Recurring									
Missile Contract									
GFE									
Engineering Change Orders									
(Value Engineering)									
SUBTOTAL MISSILE HARDWARE									
Non-Recurring Costs									
Capstan Block		5000		4600					
Plant Transition/Closure		1650		5868		1029			
SUBTOTAL NONRECURRING COST		6650		10468		1029			
PROCUREMENT SUPPORT-RECURRING									
Contractor Engineering		1775		1767		150			
Production Engineering		1113		1261		147			
Government Test		108		75					
Project Management Admin									
Fielding		2996		3103		297			
SUBTOTAL		9646		13571		1326			
Total Flyaway									
Support Cost									
Peculiar Support Equipment									
Launcher (N/S)									
Training Device (B/S)									
DMPE		40							
Engineering Change Orders		40							
Other (Specify) FDT									
SUBTOTAL SUPPORT COST									
Gross P-1 End Cost		9686		13571		1326			
Less: Prior Year Adv Proc									
Net P-1 Full Funding Cost		9686		13571		1326			
PLUS P-1 CY Adv. Proc.									
Other Non P-1 Costs									
Initial Spares		40728		2311		5717		5821	
MODS				16		62755		63774	
TOTAL		50414		15898		69798		69595	

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY		C. P-1 ITEM NOMENCLATURE								February 1997
MISSILE PROCUREMENT / 2 / Other Missiles		TOW 2 SYSTEM SUMMARY (C59300)								
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
FY 1996										
	Hughes Aircraft Tucson, AZ	SS/FFP	MICOM	Aug-96	N/A	N/A	N/A	N/A	N/A	
FY 1997										
Support & Plant Transition/Closure	Hughes Aircraft Tucson, AZ	TBD	MICOM	Jun-97	N/A	N/A	N/A	N/A	N/A	
FY 1998										
Complete Plant Transition/Closure	Hughes Aircraft Tucson, AZ	TBD	MICOM	TBD	N/A	N/A	N/A	N/A	N/A	
REMARKS:										

BUDGET ITEM JUSTIFICATION SHEET												DATE
APPROPRIATION / BUDGET ACTIVITY												February 1997
MISSILE PROCUREMENT ARMY/Activity 2												
P-1 ITEM NOMENCLATURE												
MLRS ROCKET (C65400)												
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY	478398	1326	1674	0	534	576	240	978	1290		485016	
COST (in millions)	3569.7	44.6	41.4	2.9	19.0	19.9	19.8	54.0	62.6		3833.9	
Initial Spares (in millions)												
Total (in millions)	3569.7	44.6	41.4	2.9	19.0	19.9	19.8	54.0	62.6		3833.9	
Unit Cost (in millions)	0.01	0.03	0.02		0.04	0.03	0.08	0.06	0.05		0.01	
DESCRIPTION: The Extended Range (ER) Multiple Launch Rocket System (MLRS) includes the rocket assembly which is a tube-launched, spin stabilized, free flight rocket. Major assemblies of the rocket are a fused warhead, a rocket motor, four fins, a fin opening/restraint device, and four sabots. The rocket is packaged in a six rocket pod and can be fired one at a time or in ripples of two to six. The ER-MLRS rocket will enhance the capability of the existing MLRS by providing improvements in range, accuracy and effectiveness, and maneuver force safety (improved submunitions with self destruct fuzes). JUSTIFICATION: The objective of the system provides counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The increased range gives positioning flexibility and improves lateral ranging of targets on tomorrow's wider battlefronts. Operation Desert Storm identified the need for increased range to defeat long range targets. ER-MLRS will accomplish this mission.												

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO			B. WEAPON			C. MANUFACTURER NAME			D. DATE		
			MISSILE PROCUREMENT ARMY/Activity 2			MLRS EXTENDED RANGE ROCKET (C65402)						February 1997		
Missiles Cost Elements	ID	CD	FY 96		FY 97		FY 98		FY 99		TotalCost \$Million	UnitCost \$	Qty Each	UnitCost \$
			TotalCost \$Million	Qty Each	TotalCost \$Million	Qty Each	TotalCost \$Million	Qty Each	TotalCost \$Million	Qty Each				
FLY-AWAY COSTS														
HARDWARE														
Tactical Round (Less GFE)														
M85 Submunition			25.669	1326	28.865	1500	0.000	0	11.628	534			21775	
Engineering Services			8.209	88868	7.540	630924	0.000	0	2.863	278612			10	
Engineering Change Orders			8.777		2.426		0.918		2.508					
Fielding			0.740		1.225		0.000		0.190					
					0.000		0.063		0.062					
SUBTOTAL			43.395		40.056		0.981		17.251					
PROCUREMENT SUPPORT														
Project Management Admin														
Test & Evaluation			0.618		1.240		1.277		1.315					
Service Support Contract			0.489		0.000		0.495		0.276					
			0.105		0.108		0.110		0.113					
SUBTOTAL			1.212		1.348		1.882		1.704					
TOTAL			44.607		41.404		2.863		18.955					
GROSS P-1 END COST														
LESS: PRIOR YR ADV. PROC.														
NET P-1 FULL FUNDING COST														
PLUS CURRENT YEAR ADV. PROC.			44.607		41.404		2.863		18.955					
OTHER NON P-1 WEAPON SYSTEM COSTS														
INITIAL SPARES														
MODS														
TOTAL			44.607		41.404		2.863		18.955					

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT ARMY/Activity 2										
C. P-1 ITEM NOMENCLATURE										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
Tactical Round (Less GFE)/ER-MLRS										
FY 94 & Prior	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	Jan-98	1326	19358	Yes	No	
FY 96	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Feb-97	May-98	1500	19243	No	No	
FY 97*	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Dec-98	May-00	534	21775	No	No	
FY 99	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM							
REMARKS: NO TACTICAL ROCKETS PROCURED IN FY 95. * Quantity differs from FYDP to reflect best current estimate.										

BUDGET ITEM JUSTIFICATION SHEET												DATE
APPROPRIATION / BUDGET ACTIVITY												February 1997
MISSILE PROCUREMENT ARMY/Activity 2												
P-1 ITEM NOMENCLATURE												
MLRS LAUNCHER (C65900)												
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY	754			29	32	59	79	85	88		1126	
COST (in millions)	1898.3	81.1	103.7	102.6	92.5	158.3	208.7	216.9	230.7		3092.8	
Initial Spares (in millions)	153.9	5.1		1.0	7.1	8.6	16.5	23.2	27.3		242.6	
Total (in millions)	2052.2	86.2	103.7	103.6	99.6	166.9	225.2	240.0	258.0		3335.4	
Unit Cost (in millions)	2.7			3.6	3.1	2.8	2.9	2.8	2.9		3.0	

DESCRIPTION: The Multiple Launch Rocket System (MLRS) provides a high volume of fire power in a very short timeframe. Operationally, the concept is designed for the mobility, flexibility, and range requirements of the modern battlefield. Mounted on a derivative of the Bradley Fighting Vehicle (BFV), the 12-round launcher/loader requires a crew of three personnel to conduct launching missions. The design range in excess of 30 kilometers will allow coverage of 90 percent of the targets available at that range. Starting in FY 98 an Improved Fire Control System (IFCS) and an Improved Launcher Mechanical System (ILMS) will be procured and become part of the M270A1 upgrade. The IFCS is a modification to the current Fire Control System which provides the interface with the Fire Direction Center, the Munitions Controls and the MLRS Launcher. The IFCS will upgrade the system's electronics providing increased processing capability, an embedded global positioning system for future munitions and improved fault isolation for ease of launcher maintenance. The ILMS will allow faster target engagement on time sensitive, short dwell time targets and greatly reduces time on the firing point and reload operations in order to improve the survivability of the crew and the launcher. MLRS was jointly developed under a Memorandum of Understanding, signed July 1979, with France, Germany and the United Kingdom; Italy was added in July 1982. FY 96 and FY 97 program support funds are required for previously fielded launchers and to field launchers procured in FY 93, FY 94 and FY 95. FY 96 and FY 97 funds provide for remanufactured launchers for the South Carolina, Arkansas and South Dakota NG. Initial Spares to support launcher remanufacture in FY 96 and FY 97 are included in the total procurement cost. FY 98 and out quantities are for M270A1 upgrades. FY 98-03 funding also includes five batteries of rebuilt launchers for deployment to MLRS Heavy Divisions.

JUSTIFICATION: The objectives of the system are counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The system is designed for adaptation to other warheads such as scatterable mines, terminally guided munitions, and other smart munitions. MLRS is the Army's rocket launch platform for the next decade. The IFCS provides faster response times for high priority targets, enhances survivability, supports attack operations, mitigates electronic hardware obsolescence and reduces O&S costs. The ILMS decreases stow to aim point timeline, enhances effectiveness in engaging and supporting the force, and increases MLRS platform survivability.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT ARMY/Activity 2				B. WEAPON MLRS LAUNCHER (C65900)		C. MANUFACTURER NAME		D. DATE February 1997																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Cost Elements	ID	FY 96		FY 97		FY 98		FY 99		UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty	UnitCost	Qty

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										
B. APPROPRIATION / BUDGET ACTIVITY					DATE			February 1997		
MISSILE PROCUREMENT ARMY/Activity 2										
C. P-1 ITEM NOMENCLATURE										
MLRS LAUNCHER (C65900)										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
Launcher M270 FY 95	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Mar-95	Nov-96	20	1826400	Yes	No	
Launcher Remanufacture FY 96	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	May-97	29	384286	Yes	No	
FY 97	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Nov-96	Nov-97	35	384286	Yes	No	
Launcher M270A1 FY 98*	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Oct-97	Apr-00	21	2014762	Yes	No	
FY 99	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Oct-98	Mar-01	32	1739750	Yes	No	
REMARKS: First deliveries of FY 96 remanufacture launchers by Red River Army Depot (RRAD) Oct 96; contract with Lockheed Martin Vought System delivers 20 launchers starting May 97.										
* Quantity differs from the FYDP to reflect the current best estimate.										

FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE										MLRS LAUNCHER (C65900)										DATE										February 1997																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Simulator and Training Device Justification									
Appropriation / P-1 Line Item		Weapon System (if applicable)				Equipment Nomenclature			
MISSILE PROCUREMENT/MLRS LAUNCHER		MLRS LAUNCHER				LAUNCHER MAINTENANCE TRAINER			
Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	C65900 Total
Quantity (Each)	0	0	2	2	0	2	0	0	6
Proc (\$Million)	0.000	0.000	2.000	2.000	0.000	2.000	0.000	0.000	6.000
RDT&E (\$Million)									0.000
O&S (\$Million)									0.000
TRAINING SYSTEM DESCRIPTION: The MLRS Launcher Maintenance Trainer is used by the Ordnance Missile and Munitions Center and School (OMMCS) to provide training in troubleshooting and maintenance procedures for the MOS 27M. The trainer consists of a classroom station to provide computer controlled troubleshooting simulations, a Launcher Loader Module (LLM) mockup to provide hands-on maintenance training (remove/replace) and an Electronics Repair Station to provide training in Automated Test Equipment (ATE) and off-launcher repair. Trainer density increases with M270A1 fielding requirements.									

BUDGET ITEM JUSTIFICATION SHEET												
DATE												February 1997
P-1 ITEM NOMENCLATURE												
ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)												
MISSILE PROCUREMENT/Other Missiles												
Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program		
QUANTITY	1597	120	153	160	160	160				2447		
COST (in millions)	1024.0	121.3	97.8	103.0	100.1	111.6	13.8	0.0		1663.4		
Initial Spares (in millions)	2.3		0.9							4.2		
Total (in millions)	1026.3	121.3	98.7	103.0	100.1	111.6	13.8			1667.6		
Unit Cost (in millions)	0.6	1.0	0.6	0.6	0.6	0.7				0.7		

DESCRIPTION: The Army TACMS is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel anti-materiel (APAM) warhead. The Army TACMS Block IA integrates global positioning system (GPS) components and increases the range of the Block I missile. The inherent GPS accuracies will be achievable independent of range. Army TACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270 launcher and are being deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. Army TACMS includes Guided Missile and Launching Assembly; Test Set, Guided Missile System; Training Set, Guided Missile System: M-165; Trainer, Test Device, Guided Missile: M70; Modified M270 Launcher; and the Army TACMS Missile Facilities.

JUSTIFICATION: The Army TACMS is air transportable and provides a deep fires missile system that operates in near all-weather conditions, day or night. It is used to attack tactical surface-to-surface missile sites, air defense missile sites, logistics elements and command/control/communications complexes. The Block IA missile will destroy high value targets at ranges approximately twice that of the current Block I. The Block IA will be especially suited for destroying enemy surface-to-surface missile system launchers.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON ARMY TACTICAL MSL SYS (ATACMS) - SYS		C. MANUFACTURER NAME Lockheed Martin Vought Systems		D. DATE February 1997	
Missiles		FY 96		FY 97		FY 98		FY 99			
Cost Elements		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	
Missile Hardware- Recurring											
Prime Contract		76978	120	641		97	673		153	574	160
GFE											
Flight Kits		378									
Engineering Services		16631									
Engineering Change Orders (ECOs)		1862									
Fielding		579									
Subtotal Missile Hardware		96428									
Procurement Support											
Project Management Admin		5599									
Production Engineering Support		7743									
Test and Evaluation		4546									
Subtotal Procurement Support		17888									
TOTAL MISSILE FLYAWAY		114316									
Command & Launch Integration											
Command & Launch Integration Spt		755									
Subtotal C&L Integration		755									
Support Cost											
Missile Test Device		2704									
ATMF Test and Support Equipment		3528									
Subtotal Support Cost		6232									
Gross P-1 End Cost		121303									
Less: Prior Year Adv Proc											
Net P-1 Full Funding Cost		121303									
PLUS P-1 CY Adv. Proc.											
Other Non P-1 Costs											
Initial Spares											
MODS											
TOTAL		121303									

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles		B. WEAPON ATACMS BLK I (C98500)		C. MANUFACTURER NAME Lockheed Martin Vought Systems		D. DATE February 1997	
Missiles Cost Elements	ID CD	FY 96		FY 97		FY 98		FY 99	
		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each
Missile Hardware- Recurring									
Prime Contract		33200	50	664					
GFE									
Flight Kits		5850							
Engineering Services		791							
Engineering Change Orders (ECOs)		135							
Fielding		39976							
Subtotal Missile Hardware									
Procurement Support									
Project Management Admin		3845							
Production Engineering Support		5216							
Test and Evaluation		2733							
Subtotal Procurement Support		11794							
TOTAL MISSILE FLYAWAY		51770							
Command & Launch Integration									
Command & Launch Integration Spt									
Subtotal C&L Integration									
Support Cost									
Missile Test Device									
ATMF Test and Support Equipment									
Subtotal Support Cost									
Gross P-1 End Cost		51770							
Less: Prior Year Adv Proc									
Net P-1 Full Funding Cost		51770							
PLUS P-1 CY Adv. Proc.									
Other Non P-1 Costs									
Initial Spares									
MODS									
TOTAL		51770							

Missiles Cost Analysis				A. APPN / BUDGET ACTIVITY TITLE/NO			B. WEAPON			ATACMS BLK IA (C98501)			C. MANUFACTURER NAME			D. DATE		
				MISSILE PROCUREMENT / 2 / Other Missiles						Lockheed Martin Vought Systems			February 1997					
				FY 96			FY 97			FY 98			FY 99					
Missiles				TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost			
Cost Elements				\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000			
Missile Hardware- Recurring																		
Prime Contract				43778	70	625	65290	97	673	87886	153	574	92080	160	576			
GFE																		
Flight Kits				378			1216			128			128					
Engineering Services				10781			14806			318			3100					
Engineering Change Orders (ECOs)				1071			1094			9977			8666					
Fielding				444			142			827			870					
Subtotal Missile Hardware				56452			82548			99656			105114					
Procurement Support																		
Project Management Admin				1754			3906			4138			4246					
Production Engineering Support				2527			4537			5992			6288					
Test and Evaluation				1813			824			3668			3002					
Subtotal Procurement Support				6094			9267			13798			13536					
TOTAL MISSILE FLYAWAY				62546			91815			113454			118650					
Command & Launch Integration																		
Command & Launch Integration Spt				755						1040			1750					
Subtotal C&L Integration				755						1040			1750					
Support Cost																		
Missile Test Device				2704														
ATMF Test and Support Equipment				3528														
Subtotal Support Cost				6232														
Gross P-1 End Cost				69533			91815			114494			120400					
Less: Prior Year Adv Proc										16680			17440					
Net P-1 Full Funding Cost				69533			91815			97814			102960					
PLUS P-1 CY Adv. Proc.							69000											
Other Non P-1 Costs							963											
Initial Spares																		
MODS																		
TOTAL				69533			161778			98757			102960					

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY		C. P-1 ITEM NOMENCLATURE								February 1997
MISSILE PROCUREMENT / 2 / Other Missiles		ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (098510)								
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQD	IF YES W/A
Army TACMS Block I Missile										
FY 96	LMVS, Dallas, TX	SS/FP	MICOM	Nov-95	Mar-97	50	664			
Army TACMS Block IA Missile										
FY 96	LMVS, Dallas, TX	SS/FP	MICOM	Jun-96	Aug-97	70	625			
FY 97	LMVS, Dallas, TX	SS/FP	MICOM	Apr-97	May-98	97	673	No	Yes	Oct-96
FY 98	LMVS, Dallas, TX	SS/FP	MICOM	Dec-97	May-99	153	574	No	Yes	Oct-96
FY 99	LMVS, Dallas, TX	SS/FP	MICOM	Oct-98	Mar-00	160	576			
REMARKS:										

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Other Missiles		ARMY TACTICAL MSL SYS (ATACMS) - (ADV PROC) (C98510)									
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003			
QUANTITY											
COST (in millions)	0.0	69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
DESCRIPTION: Funding for economic order quantity (EOQ) for the FY 98-01 Multiyear Procurement of Army TACMS. The Army TACMS is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel anti-materiel (APAM) warhead. The Army TACMS Block IA integrates global positioning system (GPS) components and increases the range of the Block I missile. Army TACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270 launcher and are being deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. JUSTIFICATION: The EOQ funding is required for the buy out of the total Improved Missile Guidance Sets required for the multiyear procurement of the Army TACMS.											

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a) (COMPARISON OF REQUEST TO EXECUTION) (TOA, Dollars in Thousands)						CURRENT YEAR FOR FISCAL YEAR PROGRAM 1997	
Weapon System Type (Model/Serial No.) ARMY TACTICAL MSL SYS (ATACMS) - (ADV PROC)		FIRST SYSTEM AWARD DATE Dec-97		FIRST SYSTEM COMPLETION DATE May-99		INTERVAL BETWEEN SYSTEM COMPLETIONS (MONTHS) February 1997	
Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1. CFE							
2. GFE (Specify)							
3. SUBTOTAL							
4. EOQ (MYP)	633	Jun-97	Sep-98	15	69000		
5. (CFE)							
6. (GFE) (Specify)							
7. SUBTOTAL					69000		
8. Design							
9. Other (Indicate Specific Items)							
10. TOTAL					69000		
NARRATIVE DESCRIPTION							
The bulk of the \$69M in FY 97 will be used to buy out the total 633 Improved Missile Guidance Sets (IMGS) units required for the FY 98-01 Multiyear Procurement.							

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
ATACMS/BAT (CA6101)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY					50	100	150	89	194	1223	1806
COST (in millions)					60.8	80.7	109.9	94.3	190.8	968.5	1505
Initial Spares (in millions)											
Total (in millions)					60.8	80.7	109.9	94.3	190.8	968.5	1505
Unit Cost (in millions)					1.2	0.8	0.7	1.1	1.0		
DESCRIPTION: The Army Tactical Missile System Block II (ATACMS BLK II), a version of the currently fielded and combat-proven Army TACMS Block I missile, will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 13 BATs or P3I BATs as its payload. It will be launched from the Multiple Launch Rocket System (MLRS) modified M270 launcher and will be deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. The Army TACMS Block IIA (ATACMS Block IIA) will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 6 BAT P3I submunitions as its payload. The ATACMS Block IIA will be launched from the M270 launcher in response to the same Command and Control (C2) nodes applicable to the Block I, Block IA, and Block II missiles. Since the Block IIA payload only houses 6 submunitions rather than 13, as in the Block II, it is capable of achieving extended ranges comparable to the Block IA. JUSTIFICATION: The primary mission of the ATACMS BLK II is to delay, disrupt, neutralize, or destroy armored combat vehicles/organization. ATACMS BLK II will carry and dispense BAT and BAT P3I submunitions deep in enemy territory where these submunitions will automatically track and destroy targets. Global Positioning System (GPS) technology will increase accuracy in flight. The mission of the ATACMS Block IIA will be to delay, disrupt, or destroy the Block II target sets plus cold stationary tanks and armored combat vehicles as well as moving and stationary surface-to-surface missile (SSM) transporter erector launchers (TELs) at extended ranges. The Block IIA missile will dispense 6 BAT P3I submunitions at ranges beyond the Block II system.											

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
ATACMS BLK II (CA6105)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY					50	100	150	89	144	673	1206
COST (in millions)					60.8	80.7	109.9	84.5	128.3	509.1	973
Initial Spares (in millions)											
Total (in millions)					60.8	80.7	109.9	84.5	128.3	509.1	973
Unit Cost (in millions)					1.2	0.8	0.7	0.8	0.8		

DESCRIPTION: The Army Tactical Missile System Block II (ATACMS BLK II), a version of the currently fielded and combat-proven Army TACMS Block I missile, will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 13 BATs or P3I BATs as its payload. It will be launched from the Multiple Launch Rocket System (MLRS) modified M270 launcher and will be deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries.

JUSTIFICATION: The primary mission of the ATACMS BLK II is to delay, disrupt, neutralize, or destroy armored combat vehicles/organizations. ATACMS BLK II will carry and dispense BAT and BAT P3I submunitions deep in enemy territory where these submunitions will automatically track and destroy targets. Global Positioning System (GPS) technology will increase accuracy in flight.

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
ATACMS BLK IIA (CA6110)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY									50	550	600
COST (in millions)								9.9	62.5	459.3	532
Initial Spares (in millions)											
Total (in millions)								9.9	62.5	459.3	532
Unit Cost (in millions)									1.3		
DESCRIPTION: The Army TACMS Block IIA (ATACMS Block IIA) will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 6 BAT P31 submunitions as its payload. The ATACMS Block IIA will be launched from the M270 launcher in response to the same Command and Control (C2) nodes applicable to the Block I, Block IA, and Block II missiles. Since the Block IIA payload only houses 6 submunitions rather than 13, as in the Block II, it is capable of achieving extended ranges comparable to the Block IA. JUSTIFICATION: The mission of the ATACMs Block IIA will be to delay, disrupt, or destroy the Block II target sets plus cold stationary tanks and armored combat vehicles as well as moving and stationary surface-to-surface missile (SSM) transporter erector launchers (TELs) at extended ranges. The Block IIA missile will dispense 6 BAT P31 submunitions at ranges beyond the Block II system.											

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON ATACMS BLK II (CA6105)		C. MANUFACTURER NAME Lockheed Martin Vought Sys		D. DATE February 1997	
Missiles		FY 96		FY 97		FY 98		FY 99			
ID	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	UnitCost
Missile Hardware- Recurring Prime Contract (Includes IPF) GFE Flight Kits Engineering Services Engineering Change Orders (ECOs) Fielding Subtotal Missile Hardware											39548 1659 569 1408 250 43434
Procurement Support Project Management Admin Production Engineering Support Test and Evaluation Subtotal Procurement Support											1940 2081 6251 10272 53706
TOTAL MISSILE FLYAWAY											50 791
Command & Launch Integration Command & Launch Integration Spt Subtotal C&L Integration											920 920
Support Cost Missile Test Device ATMF Test and Support Equipment Subtotal Support Cost											2560 3595 6155
Gross P-1 End Cost Less: Prior Year Adv Proc Net P-1 Full Funding Cost PLUS P-1 CY Adv. Proc. Other Non P-1 Costs Initial Spares MODS											60781 60781
TOTAL											60781

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE	February 1997
B. APPROPRIATION / BUDGET ACTIVITY		C. P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Other Missiles		ATACMS/BAT (CA6105)									
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV RECD	IF YES W/A	
ATACMS BLK II FY 99	LMVS, Dallas, TX	SS/FP	MICOM	Jan-99	Jul-00	50	791				
REMARKS:											

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
P-1 ITEM NOMENCLATURE											
MISSILE PROCUREMENT / Other Missiles											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY				305	547	1500	1900	2200	2900	10519	19871
COST (in millions)				85.2	100.1	170.3	200.8	200.1	238.9	762.5	1757.9
Initial Spares (in millions)											
Total (in millions)				85.2	100.1	170.3	200.8	200.1	238.9	762.5	1757.9
Unit Cost (in millions)				0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1
DESCRIPTION: The BAT submunition is an anti-armor, top attack submunition with acoustic and infrared (IR) seekers working in tandem for autonomous attack of operating armored vehicles. The BAT is a guided submunition that searches for, tracks, and destroys armored, mobile targets. The Pre-Planned Product Improvement (P3I) BAT uses millimeter wave, infrared, and acoustic seekers in tandem to attack additional target arrays which include cold stationary or dug-in targets and surface-to-surface missile transporter erector launchers. JUSTIFICATION: The BAT submunitions will be carried deep into enemy territory by the Army Tactical Missile System (ATACMS) Block II. It will be dispensed over numerous high-payoff targets to selectively attack and destroy individual targets. By utilizing acoustic technology, BAT has the advantage of a large footprint which allows it to compensate for target location errors.											

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON BAT (CA6100)				C. MANUFACTURER NAME Northrop Grumman Corp				D. DATE February 1997	
Missiles Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99				
		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000		
Missile Hardware- Recurring Prime Contract (Includes IPF) GFE Flight Kits Engineering Services Engineering Change Orders (ECOs) Fielding Subtotal Missile Hardware								74188	305	243	82232	547	150		
Procurement Support Project Management Admin Production Engineering Support Test and Evaluation Subtotal Procurement Support								1496			4553 2646 7 89438				
TOTAL MISSILE FLYAWAY								2920 3819 2213 8952 84636			3440 5189 2000 10629 100067				
Command & Launch Integration Command & Launch Integration Spt Subtotal C&L Integration															
Support Cost Missile Test Device ATMF Test and Support Equipment Subtotal Support Cost								572 572			70 70				
Gross P-1 End Cost Less: Prior Year Adv Proc Net P-1 Full Funding Cost PLUS P-1 CY Adv. Proc. Other Non P-1 Costs Initial Spares MODS								85208 85208			100137 100137				
TOTAL								85208			100137				

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
C. P-1 ITEM NOMENCLATURE										
MISSILE PROCUREMENT / Other Missiles										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
BAT										
FY 98	Northrop Grumman Hawthorne, CA	SS/FPI	MICOM	Jan-98	Sep-99	305	243			
FY 99	Northrop Grumman Hawthorne, CA	SS/FPI	MICOM	Mar-99	Sep-00	547	150			
REMARKS:										

BUDGET ITEM JUSTIFICATION SHEET										DATE
P-1 ITEM NOMENCLATURE										February 1997
APPROPRIATION / BUDGET ACTIVITY		MISSILE PROCUREMENT / Modification of Missiles								
		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
QUANTITY		0	0	0	0	0	0	0	0	
COST (in millions)		6.8	23.4	20.8	15.6	19.6	24.3	19.9	16.5	
DESCRIPTION: The PATRIOT Weapon System Growth Program is in response to a Report of the Defense Science Board Task Force on PATRIOT Vulnerability (1978) (SECRET) and the Air Threat to Central Europe (1978-1988) ATCE-1988 (SECRET) dated 1 Aug 78, and was part of the Mid 1980 ASARC/DSARC process approving the initiation of PATRIOT production. JUSTIFICATION: The above funding is required to support the planned system Growth Program P3I, anticipated Materiel Changes which will add the following hardware enhancements/improvements to the PATRIOT Weapon System:										

MODIFICATION INSTALLATION SUMMARY									
									Date
									February 1997
(TOA, Dollars in Millions)									
System/Modification	PY FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
PATRIOT MODS									
C50700	3.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	3.8
BLOCK VII	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
WEAPON CONTROL COMPUTER (WCC) UPGRADE	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8
CDI PHASE I	0.0	0.0	0.9	0.8	1.1	1.3	1.4	1.1	6.6
COMMUNICATION ENHANCEMENTS	0.0	0.0	0.4	0.6	0.7	0.9	0.4	0.3	3.3
BLOCK VIII (RAM MODS)	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3
AIR CONDITIONER UPGRADE	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4
INTEGRATED DIAGNOSTIC SUPPORT SYSTEM	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5
GEM PLUS/MINUS									
Totals	10.4	1.2	1.6	1.4	1.8	2.2	1.8	1.4	21.8

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		BLOCK VII 1-88-03-1224	
MODELS OF SYSTEMS AFFECTED:		Radar Set, ECS, ICC, LS, BME, BMG, CRG	
DESCRIPTION / JUSTIFICATION:		This modification provides corrections to problems in the field which have been identified and incorporated into ECPs. Corrections included in this Materiel Change involve improvements to the Radar Set, Engagement Control Station, Information and Coordination Central, Launching Station, Battalion Maintenance Equipment/Group, Communications Relay Group and ISE/PFASC Shop Sets. The purpose of this MC is the acquisition and installation of retrofit modification kits to bring fielded PATRIOT hardware up to the production baseline configuration.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<u>PLANNED</u>	<u>ACCOMPLISHED</u>
Major Milestones not applicable.			

BLOCK VII 1-88-03-1224

MODIFICATION TITLE (Cont):

FINANCIAL PLAN: (\$ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E	None																			
PROCUREMENT																				
Kit Quantity																				
Installation Kits	253	6.6	60	3.9	19	0.3													332	10.8
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	253	3.6																	253	3.6
FY 1997 Eqpt -- Kits			60	0.1															60	0.1
FY 1998 Eqpt -- Kits					19	0.1													19	0.1
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	253	3.6	60	0.1	19	0.1													332	3.8
Total Procurement Cost		10.2		4.0		0.4														14.6

METHOD OF IMPLEMENTATION Contractor Field Teams ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

Contract Dates: FY 1997: Dec 96 FY 1998: Dec 97 FY 1999: Jun 98

Delivery Date: FY 1997: Jun 97 FY 1998: Jun 98 FY 1999: Jun 98

Installation Schedule: BLOCK VII 1-88-03-1224													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													Total
FY 1996 & Prior		197	28	28									253
FY 1997				15	15	15	15						60
FY 1998								19					19
FY 1999													
Outputs													
FY 1996 & Prior		169	28	28	28								253
FY 1997				15	15	15	15						60
FY 1998								19					19
FY 1999													
Inputs													
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
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FY 2164													
FY 2165													

INDIVIDUAL MODIFICATION		Date	February 1997																								
MODIFICATION TITLE:		WEAPON CONTROL COMPUTER (WCC) UPGRADE 1-88-03-1227																									
MODELS OF SYSTEMS AFFECTED:		ECS & ICC																									
DESCRIPTION / JUSTIFICATION:		This task's objective is to increase (by four times) the speed and memory size of the current Weapon Control Computer (WCC) through replacement with a Very High Speed Integrated Circuit (VHSIC) WCC. The current WCC in the Engagement Control Station (ECS) and Information and Coordination Central (ICC) will be replaced by the VHSIC WCC. Peripheral devices which will permit the full utilization of the expanded WCC will be implemented by the replacement of the current Recovery Storage Unit (RSU) and the Mass Storage Unit (MSU) with an optical disk. This MC requires WCC software enhancements to be blocked with others in a Post Deployment Build 4(PDB-4). The Materiel Change will increase central processing speed throughout and available memory. Current RAM hardware usage is at 95% eliminating future growth. VHSIC technology and expanded memory will accommodate future throughput and growth.																									
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="1"> <thead> <tr> <th></th> <th>PLANNED</th> <th>ACCOMPLISHED</th> </tr> </thead> <tbody> <tr> <td>Preliminary Design Review:</td> <td>4QFY90</td> <td>4QFY90</td> </tr> <tr> <td>Critical Design Review:</td> <td>2QFY91</td> <td>2QFY90</td> </tr> <tr> <td>Contractor Test and Evaluation:</td> <td>1QFY92</td> <td>1QFY92</td> </tr> <tr> <td>Development Test and Evaluation:</td> <td>2QFY92</td> <td>3QFY92</td> </tr> <tr> <td>Initial Operational Test and Evaluation:</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>IPR Production Decision</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>TDP Available:</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>		PLANNED	ACCOMPLISHED	Preliminary Design Review:	4QFY90	4QFY90	Critical Design Review:	2QFY91	2QFY90	Contractor Test and Evaluation:	1QFY92	1QFY92	Development Test and Evaluation:	2QFY92	3QFY92	Initial Operational Test and Evaluation:	N/A	N/A	IPR Production Decision	N/A	N/A	TDP Available:	N/A	N/A	
	PLANNED	ACCOMPLISHED																									
Preliminary Design Review:	4QFY90	4QFY90																									
Critical Design Review:	2QFY91	2QFY90																									
Contractor Test and Evaluation:	1QFY92	1QFY92																									
Development Test and Evaluation:	2QFY92	3QFY92																									
Initial Operational Test and Evaluation:	N/A	N/A																									
IPR Production Decision	N/A	N/A																									
TDP Available:	N/A	N/A																									

Installation Schedule: WEAPON CONTROL COMPUTER (WCC) UPGRADE 1-88-03-1227													
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	Date	FY 2001	February 1997					
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4
Inputs													Total
FY 1996 & Prior	100	4	3	3									110
FY 1997													
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior	97	3	4	3	3								110
FY 1997													
FY 1998													
FY 1999													
Inputs													
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Remarks:													

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		CDI PHASE I 1-92-03-1235	
MODELS OF SYSTEMS AFFECTED:		RADAR SET	
DESCRIPTION / JUSTIFICATION:		Provides improvements to the identification process and enhances air defense effectiveness by reducing the potential for fratricide and providing better battlefield management of missile expenditures.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		Development effort completed.	
Preliminary Design Review:		PLANNED 4QFY90	ACCOMPLISHED 1QFY91
Critical Design Review:		3QFY91	4QFY91
Contractor Test and Evaluation:		2QFY92	3QFY92
Development Test and Evaluation:		2QFY92	1QFY94
Initial Operational Test and Evaluation:		N/A	N/A
IPR Production Decision		N/A	N/A
TDP Available:		N/A	N/A

INDIVIDUAL MODIFICATION														Date		February 1997					
MODIFICATION TITLE (Cont):														CDI PHASE I 1-92-03-1235							
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		14.6																		14.6	
PROCUREMENT																					
Kit Quantity																					
Installation Kits	19	3.1	2	0.2															21	3.3	
Installation Kits Nonrecurring Equipment																					
Equipment Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits	19	0.7	2	0.1															19	0.7	
FY 1997 Eqpt -- Kits																			2	0.1	
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
(FY(TC) Eqpt (xx kits)																					
Total Installation Cost	19	0.7	2	0.1															21	0.8	
Total Procurement Cost		3.8		0.3																4.1	
METHOD OF IMPLEMENTATION Contractor Mod Team														ADMINISTRATIVE LEADTIME:		6 Months		PRODUCTION LEADTIME:		6 Months	
Contract Dates:														FY 1997: Nov 96		FY 1998:		FY 1999:		FY 1999:	
Delivery Date:														FY 1997: May 97		FY 1998:		FY 1999:		FY 1999:	

Installation Schedule: CDI PHASE I 1-92-03-1235													
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	Date	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005		
Inputs													
FY 1996 & Prior	14	2	3										19
FY 1997				2									2
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior	13	1	2	3									19
FY 1997				2									2
FY 1998													
FY 1999													
Inputs													
FY 2000	1	2	3	4	4	1	2	3	4	1	2	3	4
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Remarks:													

INDIVIDUAL MODIFICATION		Date	February 1997								
MODIFICATION TITLE:		COMMUNICATION ENHANCEMENTS 1-93-03-1237									
MODELS OF SYSTEMS AFFECTED:		Fire Unit									
DESCRIPTION / JUSTIFICATION:		Communications Enhancements focuses on intra-battalion communications and improved interoperability at the fire unit level for contingency operations. It provides additional interfaces for told-in intelligence source; CADCI to provide automated switching within the battalion and permits fire unit voice and data interface into the Army Common User System (ACUS); high speed filters to permit access into long haul data transmission means; and, a fiber optic port to provide a local area network (LAN) interface with the battery command post. international agreements requirements. This is a subset of the full Remote Launch/Communication Enhancement Upgrade Program.									
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		Communication Upgrade Development Program was initiated in FY95 and is ongoing <table border="1"> <thead> <tr> <th>PLANNED</th> <th>ACCOMPLISHED</th> </tr> </thead> <tbody> <tr> <td>4QFY95</td> <td>3QFY96</td> </tr> <tr> <td>1QFY96</td> <td>4QFY96</td> </tr> <tr> <td>N/A</td> <td></td> </tr> </tbody> </table> Preliminary Design Review: Critical Design Review: TDP Available:		PLANNED	ACCOMPLISHED	4QFY95	3QFY96	1QFY96	4QFY96	N/A	
PLANNED	ACCOMPLISHED										
4QFY95	3QFY96										
1QFY96	4QFY96										
N/A											

INDIVIDUAL MODIFICATION																	Date	February 1997
MODIFICATION TITLE (Cont):																		
COMMUNICATION ENHANCEMENTS 1-93-03-1237																		
FINANCIAL PLAN: (\$ in Millions)																		
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E		9.4		6.1														15.5
PROCUREMENT																		
Kit Quantity																		
Installation Kits			14	8.8	14	8.2	6	11.3	7	13.6	8	13.8	4	11.4			53	67.1
Installation Kits Nonrecurring Equipment																		
Equipment Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits			14	0.9													14	0.9
FY 1999 Eqpt -- Kits					14	0.8	6	1.1									14	0.8
FY 2000 Eqpt -- kits																	6	1.1
FY 2001 Eqpt -- kits											7	1.3	8	1.4	4	1.1	7	1.3
FY 2002 Eqpt -- kits																	8	1.4
FY 2003 Eqpt -- kits																	4	1.1
(FY(TC) Eqpt (xx kits)																		
Total Installation Cost			14	0.9	14	0.8	6	1.1	7	1.3	8	1.4	4	1.1			53	6.6
Total Procurement Cost				9.7		9.0		12.4		14.9		15.2		12.5				73.7
METHOD OF IMPLEMENTATION Contractor Mod Team																		
Contract Dates: FY 1997: FY 1998: FY 1999: MAR 98 MAR 99 SEP 99																		
Delivery Date: FY 1997: FY 1998: FY 1999: SEP 00																		
PRODUCTION LEADTIME: 18 Months																		

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: BLOCK VIII (RAM MODS) 1-89-03-1230			
MODELS OF SYSTEMS AFFECTED: Radar Set, ECS, ICC, LS, BME, BMG, CRG			
DESCRIPTION / JUSTIFICATION: This modification provides corrections to problems in the field which have been identified and incorporated into ECPs. Corrections included in this Materiel Change involve improvements to the Radar Set, Engagement Control Station, Information and Coordination Central, Launching Station, Battalion Maintenance Equipment/Group, Communications Relay Group and ISE/PFASC Shop Sets. The purpose of this MC is the acquisition and installation of retrofit modification kits to bring fielded PATRIOT hardware up to the production baseline configuration.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: None		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

INDIVIDUAL MODIFICATION														Date		February 1997									
BLOCK VIII (RAM MODS) 1-89-03-1230																									
MODIFICATION TITLE (Cont):																									
FINANCIAL PLAN: (\$ in Millions)																									
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL						
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$					
RD&E																									
PROCUREMENT																									
Kit Quantity																									
Installation Kits			127	4.2	211	6.0	369	6.5	411	8.5	225	4.3	200	3.7					1543	33.2					
Installation Kits Nonrecurring Equipment																									
Equipment Nonrecurring																									
Engineering Change Orders																									
Data																									
Training Equipment																									
Support Equipment																									
Other																									
Interim Contractor Support																									
Installation of Hardware																									
FY 1996 & Prior Eqpt -- Kits																									
FY 1997 Eqpt -- Kits			127	0.4	211	0.6	369	0.7	411	0.9	225	0.4	200	0.3					127	0.4					
FY 1998 Eqpt -- Kits																			211	0.6					
FY 1999 Eqpt -- Kits																			369	0.7					
FY 2000 Eqpt -- kits																			411	0.9					
FY 2001 Eqpt -- kits																			225	0.4					
FY 2002 Eqpt -- kits																			200	0.3					
FY 2003 Eqpt -- kits																									
(FY(TC) Eqpt (xx kits)																									
Total Installation Cost			127	0.4	211	0.6	369	0.7	411	0.9	225	0.4	200	0.3					1543	3.3					
Total Procurement Cost				4.6		6.6	7.2		9.4		4.7		4.0							36.5					
METHOD OF IMPLEMENTATION Contractor Field Teams																		6 Months		6 Months		PRODUCTION LEADTIME:			
Contract Dates:																		FY 1997:		DEC 97		FY 1998:		DEC 98	
Delivery Date:																		FY 1997:		JUN 98		FY 1998:		JUN 99	

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: Air Conditioner Upgrade 1-95-03-1243			
MODELS OF SYSTEMS AFFECTED: ICC, ECS, and CRG			
DESCRIPTION / JUSTIFICATION: The Air Conditioner Upgrade provides replacement of the cooling equipment in the Engagement Control Station, Information & Coordination Central, And Communications Relay Group. The current cooling equipment inside of these shelters has not been upgraded sufficiently since its original issue. The replacement of this equipment is required to keep pace with the increased power generation equipment being installed in the ECS, ICC, and CRG and to prevent equipment failure due to overheating. In addition, the current cooling equipment is freon based which is a hazard to both the troops and the environment.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: none		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

INDIVIDUAL MODIFICATION														Date		February 1997								
MODIFICATION TITLE (Cont):														Air Conditioner Upgrade 1-95-03-1243										
FINANCIAL PLAN: (\$ in Millions)																								
RDT&E	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL					
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$				
PROCUREMENT																								
Kit Quantity																								
Installation Kits			294	6.9															294	6.9				
Installation Kits Nonrecurring Equipment																								
Equipment Nonrecurring																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
Other																								
Interim Contractor Support																								
Installation of Hardware																								
FY 1996 & Prior Eqpt -- Kits																								
FY 1997 Eqpt -- Kits																								
FY 1998 Eqpt -- Kits																								
FY 1999 Eqpt -- Kits																								
FY 2000 Eqpt -- kits																								
FY 2001 Eqpt -- kits																								
FY 2002 Eqpt -- kits																								
FY 2003 Eqpt -- kits																								
(FY(TC) Eqpt (xx kits)																								
Total Installation Cost			294	0.3															294	0.3				
Total Procurement Cost				7.2																7.2				
METHOD OF IMPLEMENTATION Contractor Mod Team																					ADMINISTRATIVE LEADTIME: 6 Months		PRODUCTION LEADTIME: 6 Months	
Contract Dates: FY 1997: OCT 96																					FY 1998: APR 97		FY 1999: APR 97	
Delivery Date: FY 1997: APR 97																					FY 1998: APR 97		FY 1999: APR 97	

Installation Schedule: Air Conditioner Upgrade 1-95-03-1243												
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	Date	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	
	& Prior	1	2	3	4	4	1	2	3	4	1	Total
Inputs												
FY 1996 & Prior												
FY 1997		147	147									294
FY 1998												
FY 1999												
Outputs												
FY 1996 & Prior												
FY 1997							147	147				294
FY 1998												
FY 1999												
Inputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Outputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Remarks:												

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244	
MODELS OF SYSTEMS AFFECTED:			
DESCRIPTION / JUSTIFICATION: At the fire unit level, maintenance monitors defect faults and automatically access diagnostic/repair procedures in electronic TMs and expert systems. Digital communications enable secure tele-maintenance from weapons platform to factory for remote diagnostics and adjustments.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

MODIFICATION TITLE (Cont): INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244

FINANCIAL PLAN: (\$ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RD&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits	7	5.9	7	5.9															14	11.8
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits	7	0.2																	7	0.2
FY 1998 Eqpt -- Kits			7	0.2															7	0.2
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- Kits																				
FY 2003 Eqpt -- Kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	7	0.2	7	0.2															14	0.4
Total Procurement Cost				6.1																12.2

METHOD OF IMPLEMENTATION Contractor Mod Team

Contract Dates: FY 1997: Feb 97 FY 1998: Feb 98 FY 1999: Feb 98

Delivery Date: FY 1997: Oct 97 FY 1998: Oct 98 FY 1999: Oct 98

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 9 Months

Installation Schedule: INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244												
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	February 1997	
	& Prior	1	2	3	4	1	2	3	4	1	2	3
Inputs												
FY 1996 & Prior												
FY 1997												
FY 1998												
FY 1999												
Outputs												
FY 1996 & Prior												
FY 1997												
FY 1998												
FY 1999												
Inputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Outputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Remarks:												

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		GEM PLUS/MINUS 1-97-03-1245	
MODELS OF SYSTEMS AFFECTED:		PAC-2 Missile	
DESCRIPTION / JUSTIFICATION:		Modification of existing PAC-2 missiles. Provides Cruise Missile Defense performance improvements by retrofitting PAC-2 missiles during missile recertification cycle with a Surface Acoustic Wave (SAW) Oscillator and a GEM fuze.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

INDIVIDUAL MODIFICATION															February 1997		
MODIFICATION TITLE (Cont):															Date		
GEM PLUS/MINUS 1-97-03-1245																	
FINANCIAL PLAN: (\$ in Millions)																	
RDT&E	FY 1996																
	and Prior																
PROCUREMENT	Qty	\$															
Kit Quantity																	
Installation Kits			75														75
Installation Kits Nonrecurring																	
Equipment																	
Equipment Nonrecurring																	
Engineering Change Orders																	
Data																	
Training Equipment																	
Support Equipment																	
Other																	
Interim Contractor Support																	
Installation of Hardware																	
FY 1996 & Prior Eqpt -- Kits																	
FY 1997 Eqpt -- Kits			75														75
FY 1998 Eqpt -- Kits																	
FY 1999 Eqpt -- Kits																	
FY 2000 Eqpt -- Kits																	
FY 2001 Eqpt -- Kits																	
FY 2002 Eqpt -- Kits																	
FY 2003 Eqpt -- Kits																	
(FY(TC) Eqpt (xx kits)																	
Total Installation Cost			75														75
Total Procurement Cost																	5.8
METHOD OF IMPLEMENTATION Contractor Mod Team																	
Contract Dates:																	
FY 1997: Jan 99																	
FY 1997: Jul 97																	
Delivery Date:																	
ADMINISTRATIVE LEADTIME:																	
FY 1998:																	
FY 1998:																	
PRODUCTION LEADTIME:																	
FY 1999:																	
FY 1999:																	
6 Months																	
18 Months																	

BUDGET ITEM JUSTIFICATION SHEET										DATE
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE								February 1997
MISSILE PROCUREMENT / Modification of Missiles		STINGER MODS (C20000)								
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0	0	
COST (in millions)	11.3	36.9	12.4	14.4	24.1	34.5	57.0	58.7		

DESCRIPTION
STINGER Block I Upgrades - Hardware and software modifications to the STINGER RMP Missile System improves performance against targets which are slow moving, employing advanced counter-measures, or operating at night. These STINGER Block I Upgrade modifications maintain compatibility with all current and planned command and launch platforms including Air-To-Air STINGER, AVENGER, and the gripstock used in shoulder fired applications. STINGER Block I Platform Mods - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For MANPADS gripstocks new EEPROMS must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each systems Interface Electronics Assembly. Bradley LINEBACKER (formerly Bradley STINGER Fighting Vehicle - Enhanced (BSFV-E)) - The Bradley LINEBACKER is an air defense system based upon minimal upgrades to the currently fielded Bradley STINGER Fighting Vehicle-MUA (BSFV-MUA). The Bradley LINEBACKER provides heavy maneuver forces with dedicated air defense against a variety of threat platforms. The Bradley LINEBACKER is a Non-Developmental Item rapid acquisition procurement to upgrade the existing BSFV-MUA with the addition of Bradley LINEBACKER modification kit. The kit includes an integrated, externally mounted Standard Vehicle Mounted Launcher with a modified fire control. It fires up to four Stinger missiles while the crew remains under armor protection. The Bradley LINEBACKER fielding maximizes the utility of the FAADS C2I Kit and a Bradley Fighting Vehicle-Operation Desert Storm Kit which are being fielded separately by CECOM and TACOM. JUSTIFICATION STINGER Block I Upgrades - The STINGER-RMP Missile is currently deficient in engagements against head/tail-on and slow moving targets, counter-measures, and night time engagements. There is also a safety deficiency whereby aviation platforms must super-elevate to fire the missile. The STINGER Block I Upgrade materiel change was developed to correct these deficiencies. This materiel change was recommended as the near term solution by the Air-to-Air Missile General Officer's Steering Committee. STINGER Block I Platform Mods - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance. Bradley LINEBACKER - The Warfighting Rapid Acquisition Panel approved the Bradley LINEBACKER as a rapid acquisition program on 26 January 95, which provided a Milestone IIIa (ASARC) decision to enter limited production to support the Army's Force XXI initiatives. An abbreviated Operational Requirements Document was approved and released by TRADOC. The Bradley LINEBACKER program leverages a portion of the fielded M2A2 Bradley Fighting Vehicle fleet, improves the employment of the approximately \$2 billion STINGER missile investment, and provides an armored Air Defense Artillery (ADA) fire unit with heavy forces employing Ground Based Sensor data as provided through FAADS C2I. This modestly costed program provides more firepower for the money than any other current Army program. This materiel solution corrects major ADA deficiencies in survivability, fire control, target acquisition and identification, with a reduction in crew size as a force savings.

MODIFICATION INSTALLATION SUMMARY										
(TOA, Dollars in Millions)										
System/Modification	Date									
	February 1997									
	PY	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
STINGER MODS										
C20000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STINGER Block I Upgrades		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STINGER Platform Mods		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bradley LINEBACKER										
Totals		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	STINGER Block I Upgrades	OSIP #	01-87-03-1510
MODELS OF SYSTEMS AFFECTED:	STINGER RMP Missile		
DESCRIPTION / JUSTIFICATION:	The STINGER Block I Upgrade materiel change incorporates hardware and software modifications to the STINGER-RMP missile system to increase overall missile performance in certain engagement scenarios and resolve a key aviation deficiency which requires aviation platforms to super-elevate. The engagement scenarios in which missile performance improves include head/tail-on and slow moving targets, counter-measures, and night time engagements. These changes include hardware changes to the missile and software changes to the command and launch platforms which include Air-to-Air STINGER, AVENGER, and gripstocks used in shoulder-fired applications. This materiel change was recommended by the Air-to-Air Missile General Officer's Steering Committee as the near term solution to the STINGER-RMP deficiencies.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
	PLANNED	ACCOMPLISHED	
Begin development	3rd Qtr FY92	3rd Qtr FY92	
Production Qualification	4th Qtr FY95	4th Qtr FY95	
Software Critical Design Review	4th Qtr FY96	2nd Qtr FY96	
Software Performance Assessment	2nd Qtr FY97	2nd Qtr FY97	

INDIVIDUAL MODIFICATION																		
Date February 1997																		
MODIFICATION TITLE (Cont): STINGER Block I Upgrades OSIP # 01-87-03-1510																		
FINANCIAL PLAN: (\$ in Millions)																		
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E		30.8		3.7														34.5
PROCUREMENT																		
Kit Quantity	1,850		1,300		471		906		1,665		1,658		1,664		1,228		11,218	
Installation Kits																		
Installation Kits Nonrecurring																		
Equipment		24.4		21.8		8.7		14.4		24.1		34.5		40.1		31.9		217.5
Equipment Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
Installation of Hardware costs are included in Equipment above.																		
Installation of Hardware																		
FY 1996 & Prior Eqpt - Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits																		
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits																		
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
(FY(TC) Eqpt (xx kits)																		
Total Installation Cost																		
Total Procurement Cost	1,850	24.4	1,300	21.8	471	8.7	906	14.4	1,665	24.1	1,658	34.5	1,664	40.1	1,228	31.9	476	17.6
																	11,218	217.5

METHOD OF IMPLEMENTATION:				contractor				ADMINISTRATIVE LEAD-TIME:				3 Months				PRODUCTION LEAD-TIME:				18 Months			
Contract Dates:				FY 1997: 2nd Q, FY97				FY 1998: 2nd Q, FY98				FY 1999: 2nd Q, FY99				FY 1999: 4th Q, FY00							
Delivery Date:				FY 1997: 4th Q, FY98				FY 1998: 4th Q, FY99				FY 1999: 4th Q, FY00											

METHOD OF IMPLEMENTATION:

Contract Dates: contractor

Delivery Date: FY 1997: 2nd Q, FY97

FY 1997: 4th Q, FY98

ADMINISTRATIVE LEAD-TIME: 3 Months

FY 1998: 2nd Q, FY98

FY 1998: 4th Q, FY99

PRODUCTION LEAD-TIME: 18 Months

FY 1999: 2nd Q, FY99

FY 1999: 4th Q, FY00

INDIVIDUAL MODIFICATION			Date	February 1997
MODIFICATION TITLE:	STINGER Platform Mods	OSIP #	TBD	
MODELS OF SYSTEMS AFFECTED:	Manpads, Avenger, Bradley Linebacker, OH-58D			
DESCRIPTION / JUSTIFICATION: In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For MANPADS gripstocks, new electronically erasable programmable read only memory (EEPROM) must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each system's Interface Electronics Assembly. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance.				
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <u>PLANNED</u> <u>ACCOMPLISHED</u> Development has been completed.				

INDIVIDUAL MODIFICATION																								
MODIFICATION TITLE (Cont):										STINGER Platform Mods					OSIP # TBD									
FINANCIAL PLAN: (\$ in Millions)																								
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL						
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$					
RDT&E																								
PROCUREMENT																								
0		2,425																2,425						
Kit Quantity																								
Installation Kits																								
Installation Kits Nonrecurring																								
	0.0		7.9																0.0	7.9				
Equipment																								
Equipment Nonrecurring																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
Other																								
Interim Contractor Support																								
Installation of Hardware																								
FY 1996 & Prior Eqpt -- Kits																								
FY 1997 Eqpt -- Kits																								
FY 1998 Eqpt -- Kits																								
FY 1999 Eqpt -- Kits																								
FY 2000 Eqpt -- Kits																								
FY 2001 Eqpt -- Kits																								
FY 2002 Eqpt -- Kits																								
FY 2003 Eqpt -- Kits																								
(FY(TC) Eqpt (xx kits)																								
Total Installation Cost																								
0	0.0	2,425	7.9															0	0.0	2,425	7.9			
Total Procurement Cost																								
METHOD OF IMPLEMENTATION of																								
Contract Dates:										ADMINISTRATIVE LEADTIME:					PRODUCTION LEADTIME:									
FY 1997:										2nd Qtr, FY97					3 Months					18 Months				
FY 1997:										4th Qtr, FY98					not applicable					not applicable				
Delivery Date:										FY 1998:					not applicable					not applicable				

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		Bradley LINEBACKER	OSIP # TBD
MODELS OF SYSTEMS AFFECTED: Bradley Stinger Fighting Vehicle - Manpads Under Armor (BSFV-MUA)			
DESCRIPTION / JUSTIFICATION:			
The Bradley LINEBACKER, formerly the Bradley Stinger Fighting Vehicle-Enhanced (BSFV-E), is an air defense system based upon minimal upgrades to the currently fielded BSFV-MUA. The Bradley LINEBACKER provides heavy maneuver forces with dedicated air defense against a variety of threat platforms. The Bradley LINEBACKER is a Non-Development Item rapid acquisition procurement to upgrade the existing BSFV-MUA with the addition of Bradley LINEBACKER modification kit. The kit includes an integrated, externally mounted Standard Vehicle Mounted Launcher with a modified fire control. It fires up to four Stinger missiles while the crew remains under armor protection. The Bradley LINEBACKER fielding maximizes the utility of the FAADS C2I Kit and the Bradley Fighting Vehicle-Operational Desert Storm Kit, which are being fielded separately by CECOM and TACOM. This materiel solution corrects major Air Defense Artillery deficiencies in survivability, fire control, target acquisition and identification with a reduction in crew size as a force savings.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
		PLANNED	ACCOMPLISHED
Contractor technical test and evaluation	Feb-96		Mar-96
Government technical test and evaluation	Apr-96		Jul-96
Operational test and evaluation	Sep-96		Sep-96
Production decision	Nov-96		Nov-96

INDIVIDUAL MODIFICATION															February 1997		
MODIFICATION TITLE (Cont): Bradley LINEBACKER OSIP # TBD															Date		
FINANCIAL PLAN: (\$ in Millions)																	
	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL							
	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty			
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			
RDT&E	8.8								18.0					26.8			
PROCUREMENT																	
Kit Quantity	8	99	0	0			33	40	194				374				
Installation Kits																	
Installation Kits Nonrecurring																	
Equipment	6.3	7.1	3.7	0.0			16.9	26.9	149.0					209.9			
Equipment Nonrecurring																	
Engineering Change Orders																	
Data																	
Training Equipment																	
Support Equipment																	
Other																	
Interim Contractor Support																	
Proponency for Bradley LINEBACKER was transferred from Stinger PMO to Bradley PMO in FY97. The Army will request the \$7.1M in FY97 be moved to Bradley PMO through Omnibus Reprogramming. FY98 and outyear funding will be used for additional Stinger Block I Upgrades (C21300) thereby reducing modification unit cost.																	
Installation of Hardware																	
FY 1996 & Prior Eqpt - Kits																	
FY 1997 Eqpt -- Kits																	
FY 1998 Eqpt -- Kits																	
FY 1999 Eqpt -- Kits																	
FY 2000 Eqpt -- kits																	
FY 2001 Eqpt -- kits																	
FY 2002 Eqpt -- kits																	
FY 2003 Eqpt -- kits																	
(FY(TC) Eqpt (xx kits)																	
Total Installation Cost																	
Total Procurement Cost	8	6.3	99	7.1	0	3.7	0	0.0		33	16.9	40	26.9	194	149.0	374	209.9
METHOD OF IMPLEMENTATION:																	
contractor																	
FY 1997: 2nd Qtr, FY97															ADMINISTRATIVE LEAD-TIME: 3 Months		
FY 1997: 2nd Qtr, FY98															PRODUCTION LEAD-TIME: FY 1999: not applicable		
FY 1997: 2nd Qtr, FY98															FY 1999: not applicable		
Contract Dates:																	
Delivery Date:																	

BUDGET ITEM JUSTIFICATION SHEET							DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE						
MISSILE PROCUREMENT /Modification of Missiles		ITAS/TOW MODS (C61700)						
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	40.7	0.0	62.8	63.8	64.4	63.8	67.7	59.9
DESCRIPTION: TOW Improved Target Acquisition System (ITAS) program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control Subsystems. The TOW ITAS will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the TOW system. Technology insertion developed for ITAS horizontally applies to Bradley TOW upgrades. ITAS takes advantage of state of the art infrared Standard Advanced Dewar Assembly (SADA) II technology to detect and recognize enemy targets day or night at greater ranges and with greater resolution. This allows the gunner to utilize TOW's maximum effective range, increasing lethality and survivability against armor and other targets. The embedded training software serves to increase gunner proficiency over that of the previous TOW system. ITAS will support the U.S. Army mission of crisis response to regionally based threats and allows for TOW to continue to be integral to the strategic principle of CONUS based force projection. The missile modification (MOIC) Materiel Change (MC) provides/installs MOICs (safety requirement) on Basic/ITOW heat missiles used for training. The MOIC precludes flight motor ignition and S&A arming in the event of missile malfunction. The objective of missile conversion and modification is to maintain a continuous source for training by utilizing out-of-production missiles (Basic TOW extended Range ITOW, rather than procuring training missiles). Mod kit procurement will continue until these missiles are depleted. The missile conversion MC converts Basic/ITOW heat missiles to practice missiles by replacing the heat warhead with a practice warhead. It also provides for a Missile Ordnance Inhibit Circuit (MOIC-Safety Requirement) and an epoxy coated T250 maraging steel launch motor. JUSTIFICATION: Funding is required for the ITAS program, which upgrades the detection recognition and fire control capabilities of the current Ground/HMMWV-Mounted TOW 2 System. ITAS also provides for growth potential for next generation missile. Funding is also required to maintain the production of the above essential MCs. These MCs are necessary to meet training/safety standards and upgrades the current TOW acquisition and fire control subsystems. This enhances Army posture against regionally based threats, promotes effective crisis response and increases overall readiness.								

MODIFICATION INSTALLATION SUMMARY									
									Date
									February 1997
(TOA, Dollars in Millions)									
System/Modification	Prior FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
ITAS/TOW MODS									
C61700	12.6	0.0	0.0	1.6	0.0	0.0	0.0	0.9	15.1
MISSILE CONVERSION(HEAT TO PRACTICE)	4.3	0.0	0.0	0.4	0.0	0.0	0.0	0.0	4.7
MISSILE MODIFICATION(MOIC)	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.5	1.5
ITAS(IMPROVED TARGET ACQUISITION SYSTEM)									
Totals	16.9	0.0	0.1	2.1	0.2	0.3	0.3	1.4	21.3

INDIVIDUAL MODIFICATION		
MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020		
MODELS OF SYSTEMS AFFECTED: ITAS/TOW MISSILE SYSTEM (BGM 71A, C, D) BTM 71A (C59300)		
DESCRIPTION / JUSTIFICATION:		
To convert TOW Basic/TOW heat missiles to practice missiles and to install a Missile Ordnance Inhibit Circuit (MOIC) on missiles used for training to prevent flyback the MOIC opens the circuit between the missile battery and flight motor ignition, and the safe and arming unlatch mechanism in the event of delay in ignition of the flight motor. Epoxy coated T250 maraging steel was incorporated into a new design as a result of launch motor failures (probable cause was identified as case deterioration due to stress corrosion.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
Examples		
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	N/A	
Development Test and Evaluation:	N/A	
Initial Operational Test and Evaluation:	N/A	
IPR Production Decision	N/A	
TDP Available:	N/A	
	PLANNED	ACCOMPLISHED

INDIVIDUAL MODIFICATION														February 1997				
Date																		
MODIFICATION TITLE (Cont):																		
MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
								</										

Installation Schedule: MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020																	
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		February 1997	
& Prior		1		2		3		4		1		2		3		4	
Inputs		10950		3000		2000											
FY 1996 & Prior		10950															
FY 1997																	
FY 1998																	
FY 1999																	
Outputs																	
FY 1996 & Prior		21703		1664		1664											
FY 1997																	
FY 1998																	
FY 1999																	
Inputs		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005					
1		2		3		4		1		2		3		4		1	
2		3		4		1		2		3		4		1		2	
3		4		1		2		3		4		1		2		3	
4		1		2		3		4		1		2		3		4	
Total		15950															
Outputs																	
FY 2000*								836		836						1672	
FY 2001																	
FY 2002																	
FY 2003																	
Remarks:																	
* FY 96 HARDWARE																	

INDIVIDUAL MODIFICATION		
MISSILE MODIFICATION(MOIC) MC-1-82-03-3021		
MODELS OF SYSTEMS AFFECTED: ITAS/TOW MISSILE SYSTEM (BGM 71A,C,D)BTM71A)(C59300)		
DESCRIPTION / JUSTIFICATION:		
To install Missile Ordnance Inhibit Circuit (MOIC) on TOW Basic/ITOW heat missile used for training to prevent flyback. The MOIC opens the circuit between the missile battery and flight motor ignitor and the safe and arming unlatch mechanisms which precludes flight motor ignitions and S&A arming in the event of a missile malfunction.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	N/A	
Development Test and Evaluation:	N/A	
Initial Operational Test and Evaluation:	N/A	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION														February 1996	
MODIFICATION TITLE (Cont): MISSILE MODIFICATION(MOIC) MC-1-82-03-3021														Date	
FINANCIAL PLAN: (\$ in Millions)															
	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL					
	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	\$	
RDT&E															
PROCUREMENT															
Kit Quantity															
Installation Kits															
Installation Kits Nonrecurring															
Equipment	35667							1000					36667	9.6	
Equipment Nonrecurring															
Engineering Change Orders															
Data															
Training Equipment															
Support Equipment															
Other															
Interim Contractor Support															
Installation of Hardware															
FY 1996 & Prior Eqpt -- Kits	34667			1000									35667	4.7	
FY 1997 Eqpt -- Kits															
FY 1998 Eqpt -- Kits															
FY 1999 Eqpt -- Kits															
FY 2000 Eqpt -- kits															
FY 2001 Eqpt -- kits															
FY 2002 Eqpt -- kits															
FY 2003 Eqpt -- kits															
(FY(TC) Eqpt -- Kits											1000	0.5	1000	0.5	
Total Installation Cost	34667			1000									36667	5.2	
Total Procurement Cost														14.8	

METHOD OF IMPLEMENTATION: Depot Team	ADMINISTRATIVE LEADTIME:	24	Months	PRODUCTION LEADTIME:	12	Months
Contract Dates:	FY 1997:			FY 1998:		
Delivery Date:	FY 1997:			FY 1998:		
		3Q97		FY 1999:		

Installation Schedule: MISSILE MODIFICATION(MOIC) MC-1-82-03-3021													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior	1	2	3	4	1	2	3	4	1	2	3	4	Total
Inputs													
FY 1996 & Prior	2050												3050
FY 1997													
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior	2050				250	250	250	250					3050
FY 1997													
FY 1998													
FY 1999													
Inputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
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FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Inputs													
FY 2000													
FY 2001													
FY 2002													

INDIVIDUAL MODIFICATION		
ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028		
MODELS OF SYSTEMS AFFECTED: IOW Missile System Launcher (59300)		
DESCRIPTION / JUSTIFICATION:		
TOW ITAS Program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control subsystems. The TOW will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the the TOW system, it will support the U.S. Army mission of crisis response to regionally based threats and allows for TOW to continue to be integral to the strategic principle of forward presence.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	PLANNED	ACCOMPLISHED
Examples		Oct-94
Preliminary Design Review:		
Critical Design Review:		Jul-94
Contractor Test and Evaluation:		Aug-95
Development Test and Evaluation:		Jan-96
Initial Operational Test and Evaluation:		Jul-96
IPR/LRIP Production Decision		Jul-96

Installation Schedule: ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028																															
FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				February 1997											
& Prior				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Total											
Inputs																															
FY 1996 & Prior				4	2	6	6	7												25											
FY 1997																															
FY 1998															15	15	15	16					61								
FY 1999															21	23	24	24					92								
Outputs																															
FY 1996 & Prior															4	6	6	9												25	
FY 1997																															
FY 1998															5	15	15	15	11												61
FY 1999															7	21	24	24	16												92

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Modification of Missiles		MLRS MODS (C87500)									
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003			
QUANTITY	0	0	0	0	0	0	0	0	0		
COST (in millions)	27.5	6.4	2.2	2.2	2.3	2.6	2.6	2.5			

DESCRIPTION: Modification kits are procured for previously manufactured MLRS launchers and the associated training and ground support equipment. The following page provides a list of approved modifications.

MODIFICATION INSTALLATION SUMMARY									
(TOA, Dollars in Millions)									
System/Modification	PV FY 1996	Date							
		FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
MLRS MODS									
C67500									
Improved Electronic Unit (IEU)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Launcher Loader Module Improvements (LLM)	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3
Improved Launcher (Deep Attack) Modifications	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Carrier Improvements Phase IV	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Transmission Electronic Controller (TEC)	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
Fire Suppression Change	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3
Interim IPDS Launcher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interim MS Launcher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hoist Carriage Assembly	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Obsolescence Mitigation/ECP Reliability Integration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	26.9	1.1	0.1	0.1	0.0	0.0	0.0	0.0	28.2

INDIVIDUAL MODIFICATION		Date	February 1987				
MODIFICATION TITLE:		Improved Electronic Unit (IEU) 1-84-03-0502					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		This improvement increases the operational capability of the existing Version 4.0 software to provide the necessary growth capability for new missile and rocket programs. The IEU expands the operational memory capability of the MLRS Fire Control System (FCS) from 96K ROM and 32K RAM to 612 DRAM. Six computer interface ports, an internal magnetic bubble memory, and three more efficient minicomputers are incorporated which enhance flexibility to accommodate planned and potential warhead growth programs. The IEU allows usage of Version 6.0x reprogrammable software and can be updated by the user with a portable Program Load Unit (PLU). The Line Replaceable Unit (LRU) Test Program Set (TPS) support equipment consists of software, hardware and documentation used in conjunction with Base Shop Test Stations (BSTS) and Integrated Family of Test Equipment (IFTE) to detect and isolate LRU failures.					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="0"> <tr> <td>PLANNED</td> <td>ACCOMPLISHED</td> </tr> <tr> <td></td> <td>Development complete - Incorporated into current production.</td> </tr> </table>		PLANNED	ACCOMPLISHED		Development complete - Incorporated into current production.
PLANNED	ACCOMPLISHED						
	Development complete - Incorporated into current production.						

INDIVIDUAL MODIFICATION																				
Improved Electronic Unit (IEU) 1-84-03-0502																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring Equipment	866	36.6																866	36.6	
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment*		34.2		0.7		0.5		0.5		0.6		0.6		0.7		0.7				38.5
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- 866	866	0.7																866	0.7	
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	866	0.7																866	0.7	
Total Procurement Cost		71.5		0.7		0.5		0.5		0.6		0.6		0.7		0.7			866	75.8
METHOD OF IMPLEMENTATION Depot Field Application																				
Contract Dates: FY 1997: FY 1998: FY 1999: PRODUCTION LEADTIME: Months																				
Delivery Date: FY 1997: FY 1998: FY 1999: PRODUCTION LEADTIME: Months																				

Installation Schedule: Improved Electronic Unit (IEU) 1-84-03-0502													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior	1	2	3	4	1	2	3	4	1	2	3	4	
Inputs													Total
FY 1996 & Prior		866											866
FY 1997													
FY 1998													
FY 1999													
Outputs													866
FY 1996 & Prior		866											
FY 1997													
FY 1998													
FY 1999													

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		Launcher Loader Module Improvements (LLM) 1-85-03-0508	
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)	
DESCRIPTION / JUSTIFICATION:		This modification retrofits fielded vehicles for the following: Adds new metal blast panels to prevent damage to front launcher cage structure and blast doors; installs new environmentally sealed limit switches; welds in stiffening plate to motor pump assembly; provides moisture tight cover to the azimuth resolver; and adds support lugs and welds to the upper elevation actuator attach fitting to improve aft corner post. These improvements are required to correct operational deficiencies identified during OT-III testing and subsequent fielding. This modification accomplishes retrofit of the fielded vehicles as part of the Block Mod Effort in conjunction with MC 1-85-03-0507.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED _____	ACCOMPLISHED _____ Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION															Date		February 1997			
MODIFICATION TITLE (Cont):															Launcher Loader Module Improvements (LLM) 1-85-03-0508					
FINANCIAL PLAN: (\$ in Millions)																				
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring Equipment		433		22.2														433		
Equipment Nonrecurring Engineering Change Orders																		22.2		
Data																				
Training Equipment																				
Support Equipment																		0.2		
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits		433		11.3														433		
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost		433		11.3														433		
Total Procurement Cost																		11.3		
				33.5														33.7		
				0.2																
METHOD OF IMPLEMENTATION Depot Field Application															ADMINISTRATIVE LEADTIME:		PRODUCTION LEADTIME:		Months	
Contract Dates:															FY 1997:		FY 1998:		FY 1999:	
Delivery Date:															FY 1997:		FY 1998:		FY 1999:	

Installation Schedule: Launcher Loader Module Improvements (LLM) 1-85-03-0508													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1
Inputs													
FY 1996 & Prior		433											
FY 1997													
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior		433											
FY 1997													
FY 1998													
FY 1999													
Inputs													
FY 2000				FY 2001		FY 2002		FY 2003		FY 2004		FY 2005	
1	2	3	4	1	2	3	4	1	2	3	4	1	2
4													
Total													
433													
Remarks:													
Support equipment for Aft Corner Post modification.													

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Improved Launcher (Deep Attack) Modifications 1-85-03-0509		
MODELS OF SYSTEMS AFFECTED:	MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)		
DESCRIPTION / JUSTIFICATION:	The Improved Launcher (Deep Attack) modification kit consists of the Payload Interface Module (PIM), with associated cables and hardware, which controls command and power distribution to the warhead and a modification to the Fire Control System (FCS) Electronic Box (EB). This modification provides for upgrade to the existing MLRS capabilities, including training devices, and is required to support the addition of Army TACMS and other growth capabilities. The Improved Launcher modification provides the necessary interfaces between the warheads, the launcher, the EB, and the Improved Electronic Unit (IEU). The modification provides the capability of supplying power to, and communication with, payload onboard processors for transmitting prelaunch programming information and for the management of payload-peculiar time-sequencing interface parameters. The PIM, as part of the Improved Launcher Mod Kit, becomes the standard payload interface module for all MLRS launchers. The incorporation of the Improved Launcher modification causes no changes to the MLRS force structure.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
		PLANNED	<u>ACCOMPLISHED</u> Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION															February 1997						
MODIFICATION TITLE (Cont): Improved Launcher (Deep Attack) Modifications 1-85-03-0509																					
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Kit Quantity																					
Installation Kits																					
Installation Kits Nonrecurring Equipment	363	32.2																	363	32.2	
Equipment Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- 363	363	4.8																			
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
(FY(TC) Eqpt (xx kits)																					
Total Installation Cost	363	4.8																	363	4.8	
Total Procurement Cost		37.5																			37.5

METHOD OF IMPLEMENTATION Depot Field Application				ADMINISTRATIVE LEADTIME:		PRODUCTION LEADTIME:	
				FY 1998:		FY 1999:	
Contract Dates:				FY 1998:		FY 1999:	
Delivery Date:				FY 1998:		FY 1999:	

Installation Schedule: Improved Launcher (Deep Attack) Modifications 1-85-03-0509															
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4	1	2
Inputs															
FY 1996 & Prior		363													
FY 1997															
FY 1998															
FY 1999															
Total															
363															
Outputs															
FY 1996 & Prior		363													
FY 1997															
FY 1998															
FY 1999															

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Carrier Improvements Phase IV 1-94-03-0520		
MODELS OF SYSTEMS AFFECTED:	MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)		
DESCRIPTION / JUSTIFICATION:	This modification is a consolidation of nine (9) Class I ECPs addressing reliability, availability, maintainability, and dependability (RAM-D). Improvements include the addition of a fuel system heater valve, improved cab ventilation duct system, speedometer relocater, and a gas particulate filter unit plug for the NBC heater. This modification also corrects four (4) safety hazards by improving the commander's work station, adding a map light for tactical conditions, adding mounting provisions for an additional hand held fire extinguisher, and provides measures to prevent the existing engine compartment fire extinguisher from being inadvertently discharged.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<u>PLANNED</u>	<u>ACCOMPLISHED</u> Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION														
Carrier Improvements Phase IV 1-94-03-0520														
MODIFICATION TITLE (Cont):														
FINANCIAL PLAN: (\$ in Millions)														
	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E														
PROCUREMENT														
Kit Quantity														
Installation Kits														
Installation Kits Nonrecurring														
Equipment	758	1.1									758	1.1		
Equipment Nonrecurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment														
Other														
Interim Contractor Support														
Installation of Hardware														
FY 1996 & Prior Eqpt -- 758	733	2.2	25	0.1							758	2.3		
FY 1997 Eqpt -- Kits														
FY 1998 Eqpt -- Kits														
FY 1999 Eqpt -- Kits														
FY 2000 Eqpt -- kits														
FY 2001 Eqpt -- kits														
FY 2002 Eqpt -- kits														
FY 2003 Eqpt -- kits														
(FY(TC) Eqpt (xx kits)														
Total Installation Cost	733	2.2	25	0.1							758	2.3		
Total Procurement Cost		3.3		0.1								3.4		
METHOD OF IMPLEMENTATION Depot Field Application														
Contract Dates: FY 1997: FY 1998: FY 1999: PRODUCTION LEADTIME: 6 Months														
Delivery Date: FY 1997: FY 1998: FY 1999:														

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		Transmission Electronic Controller (TEC) 1-94-03-0522	
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)	
DESCRIPTION / JUSTIFICATION:		The TEC, which is an automatic electronically controlled transmission, replaces the previous hydromechanical transmission. The benefits of the TEC modification are increased power availability, ability to tow in neutral, decreased maintenance, improvements in slope capability, shift synchronism, fuel consumption, cold temperature performance, and maneuverability in restricted areas. Through the modification of the MLRS fleet of vehicles, this will allow a commonality of transmissions between all vehicle subsystems for the M270 MLRS.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED ACCOMPLISHED Development complete - Incorporated into current production.	

INDIVIDUAL MODIFICATION														February 1997	
MODIFICATION TITLE (Cont): Transmission Electronic Controller (TEC) 1-94-03-0522															
FINANCIAL PLAN: (\$ in Millions)															
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL					
	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				
RD&E															
PROCUREMENT															
Kit Quantity															
Installation Kits															
Installation Kits Nonrecurring															
Equipment	696									696		18.9			
Equipment Nonrecurring															
Engineering Change Orders															
Data															
Training Equipment															
Support Equipment															
Other															
Interim Contractor Support															
Installation of Hardware															
FY 1996 & Prior Eqpt --	590									590		7.4			
FY 1997 Eqpt -- Kits															
FY 1998 Eqpt -- Kits															
FY 1999 Eqpt -- Kits															
FY 2000 Eqpt -- kits															
FY 2001 Eqpt -- kits															
FY 2002 Eqpt -- kits															
FY 2003 Eqpt -- kits															
(FY(TC) Eqpt (xx kits)															
Total Installation Cost	590											7.4			
Total Procurement Cost												26.3			
METHOD OF IMPLEMENTATION Contr Field Team Applica															
Contract Dates: FY 1997: FY 1998: FY 1999:															
Delivery Date: FY 1997: FY 1998: FY 1999:															
ADMINISTRATIVE LEADTIME: 6 Months															
PRODUCTION LEADTIME: 3 Months															

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: Fire Suppression Change 1-94-03-0525			
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)			
DESCRIPTION / JUSTIFICATION:			
The purpose of this modification is to comply with Department of Defense Directive (DoDD) 6050.9 for the elimination of Chlorofluorocarbons (CFC) and Halons. The objective of this modification is to identify and eliminate all Ozone Depleting Chemicals (ODC) and all Ozone Depleting Substances (ODS) by Fiscal Year 2000. The initial phase of this program directs modification of mounting brackets to allow CO2 bottles to be used in lieu of the current 2.75 pound Halon bottles. Swap-out for the hand-held bottles is being done by the U.S. Army Tank and Automotive Command (TACOM) and began 1Q95. The second phase will direct the modification and/or conversion of the 7 pound engine compartment Halon bottle to an alternative substance.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<u>PLANNED</u> Will be incorporated into production.	<u>ACCOMPLISHED</u>

INDIVIDUAL MODIFICATION																
MODIFICATION TITLE (Cont): Fire Suppression Change 1-94-03-0525																
FINANCIAL PLAN: (\$ in Millions)																
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																
PROCUREMENT																
Kit Quantity																
Installation Kits																
Installation Kits Nonrecurring																
Equipment			857	0.7											857	0.7
Equipment Nonrecurring																
Engineering Change Orders																
Data																
Training Equipment																
Support Equipment																
Other																
Interim Contractor Support																
Installation of Hardware																
FY 1996 & Prior Eqpt -- Kits																
FY 1997 Eqpt -- 857			158	0.1			269	0.1							857	0.3
FY 1998 Eqpt -- 430																
FY 1999 Eqpt -- 427																
FY 2000 Eqpt -- kits																
FY 2001 Eqpt -- kits																
FY 2002 Eqpt -- kits																
FY 2003 Eqpt -- kits																
(FY(TC) Eqpt (xx kits)																
Total Installation Cost			158	0.1	430	0.1	269	0.1							857	0.3
Total Procurement Cost				0.8		0.1		0.1								1.0
METHOD OF IMPLEMENTATION Depot Field Application																
Contract Dates:			FY 1997: 31 Jan 97			ADMINISTRATIVE LEADTIME:			4 Months			PRODUCTION LEADTIME:			12 Months	
Delivery Date:			FY 1997: 31 Jan 98			FY 1998:			31 Dec 97			FY 1999:			31 Dec 98	
						FY 1998:			31 Dec 98			FY 1999:			31 Dec 99	

Installation Schedule: Fire Suppression Change 1-94-03-0525													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4
Inputs		Date											
FY 1996 & Prior		February 1997											
FY 1997		100	300	457									
FY 1998													
FY 1999													
Total													
857													
Outputs													
FY 1996 & Prior													
FY 1997		27	200	200	150	150	130						
FY 1998													
FY 1999													
Total													
857													
Inputs													
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4
FY 2001													
FY 2002													
FY 2003													
Total													
FY 2005													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Remarks:													

INDIVIDUAL MODIFICATION		Date	February 1997				
MODIFICATION TITLE:		Interim IPDS Launcher 1-94-03-0528					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		A special interim launcher configuration is required to allow the current M270 platform to fire all of its existing fielded M270 Family of Munitions (MFOM) and incorporate a new requirement to fire the Block IA, Army TACMS Missile System. The Block IA missile will be fielded in 1QFY98 and will require global positioning system (GPS) interface at time of launch. This modification must be accelerated because the pre-planned product improvement for GPS was not planned until the fielding of the Position Navigational Unit [POSNAV Unit (PNU)] with the Improved Fire Control System (IFCS) in FY00. The modification will incorporate the IPDS Line Replaceable Unit (LRU), a GPS antenna, associated cabling with armor protection, hoist bumper pads, a modification to the existing M68 Missile/Launch Pod Assembly (M/LPA) trainer, and sufficient Random Access Memory (RAM), with the Non Volatile Memory Module (NVMM) to support the software loaded into the IEU.					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="0"> <tr> <td style="text-align: center;"><u>PLANNED</u></td> <td style="text-align: center;"><u>ACCOMPLISHED</u></td> </tr> <tr> <td style="vertical-align: top;"> Will be integrated into launchers as an interim program in support of ATACMS Block 1A. </td> <td></td> </tr> </table>		<u>PLANNED</u>	<u>ACCOMPLISHED</u>	Will be integrated into launchers as an interim program in support of ATACMS Block 1A.	
<u>PLANNED</u>	<u>ACCOMPLISHED</u>						
Will be integrated into launchers as an interim program in support of ATACMS Block 1A.							

INDIVIDUAL MODIFICATION															Date		February 1997					
MODIFICATION TITLE (Cont):															Interim IPDS Launcher 1-94-03-0528							
FINANCIAL PLAN: (\$ in Millions)																						
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL				
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
RDT&E																						
PROCUREMENT																						
Kit Quantity																						
Installation Kits																						
Installation Kits Nonrecurring Equipment		29		16.2														29 16.2				
Equipment Nonrecurring																						
Engineering Change Orders																						
Data																						
Training Equipment																						
Support Equipment																		1.7				
Other																		4.1				
Interim Contractor Support																						
Installation of Hardware																						
FY 1996 & Prior Eqpt -- Kits																						
FY 1997 Eqpt -- Kits																						
FY 1998 Eqpt -- Kits																						
FY 1999 Eqpt -- Kits																						
FY 2000 Eqpt -- kits																						
FY 2001 Eqpt -- kits																						
FY 2002 Eqpt -- kits																						
FY 2003 Eqpt -- kits																						
(FY (TC) Eqpt (xx kits)																						
Total Installation Cost																						
Total Procurement Cost		16.2		2.2		0.5		0.5		0.6		0.7		0.7		0.7		22.0				
METHOD OF IMPLEMENTATION Contract Field Integration															ADMINISTRATIVE LEADTIME:		6 Months		PRODUCTION LEADTIME:		12 Months	
Contract Dates:															FY 1997:		FY 1998:		FY 1999:		FY 1999:	
Delivery Date:															FY 1997:		FY 1998:		FY 1999:		FY 1999:	

INDIVIDUAL MODIFICATION		Date	February 1987				
MODIFICATION TITLE:		Interim MS Launcher 1-94-03-0529					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		A special interim launcher configuration is required to allow the current M270 platform to fire all of its existing fielded M270 Family of Munitions (MFOM) and incorporate a new requirement to fire the Extended Range (ER) - MLRS beginning in 1QFY99. This modification is required to measure low altitude winds at the time of launch and will thus improve accuracy with increased range. This modification must be accelerated because the pre-planned product improvement for GPS was not planned for until the fielding of the Meteorological Sensor (MS) with the Improved Fire Control System (IFCS) in FY00. The components for this modification are the two IFCS MS Line Replaceable Units (LRUs), i.e., MET Sensor-Electronics Unit (MS-EU) and MS-Tranceiving Unit (MS-TU), associated kit components and sufficient Random Access Memory (RAM) to support the software loaded into the IEU. The current IEU P/N 13210269 will be modified to IEU P/N 13210255, with the Non Volatile Memory Module (NVMM).					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="0"> <tr> <td>PLANNED</td> <td>ACCOMPLISHED</td> </tr> <tr> <td>Will be integrated into launchers as an interim program in support of ER-MLRS.</td> <td></td> </tr> </table>		PLANNED	ACCOMPLISHED	Will be integrated into launchers as an interim program in support of ER-MLRS.	
PLANNED	ACCOMPLISHED						
Will be integrated into launchers as an interim program in support of ER-MLRS.							

INDIVIDUAL MODIFICATION		Date	February 1997				
MODIFICATION TITLE:		Hoist Carriage Assembly 1-95-03-0530					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		This modification provides a more reliable and stronger hoist carriage assembly, which will prevent cracks to the assembly and unnecessary bending of the "spider" beam. The modification will incorporate two Class I ECPs into 376 US Army M270 launchers and will standardize the fleet with one hoist carriage assembly common to the -202/-203 configuration M270 launcher. This modification will reduce Direct Support maintenance manhours and improve overall operational readiness.					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="0"> <tr> <td>PLANNED</td> <td>ACCOMPLISHED</td> </tr> <tr> <td></td> <td>Development complete - Incorporated into current production.</td> </tr> </table>		PLANNED	ACCOMPLISHED		Development complete - Incorporated into current production.
PLANNED	ACCOMPLISHED						
	Development complete - Incorporated into current production.						

INDIVIDUAL MODIFICATION														Date		February 1997									
MODIFICATION TITLE (Cont):														Hoist Carriage Assembly 1-95-03-0530											
FINANCIAL PLAN: (\$ in Millions)																									
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL							
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$						
376	3.3																	376	3.3						
143	0.5	233	0.9															376	1.4						
143	0.5	233	0.9															376	1.4						
	3.8		0.9																4.7						
METHOD OF IMPLEMENTATION Depot Field Application														ADMINISTRATIVE LEADTIME:		2		Months		PRODUCTION LEADTIME:		4		Months	
Contract Dates:														FY 1998:				FY 1999:		FY 1999:					
Delivery Date:														FY 1998:				FY 1999:		FY 1999:					

Installation Schedule: Hoist Carriage Assembly 1-95-03-0530														
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	February 1997			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	Total
Inputs														
FY 1996 & Prior	65	75	105	93	38									376
FY 1997														
FY 1998														
FY 1999														
Outputs														
FY 1996 & Prior	12	53	99	125	87									376
FY 1997														
FY 1998														
FY 1999														
Inputs														
FY 2000														
FY 2001														
FY 2002														
FY 2003														
Outputs														
FY 2000														
FY 2001														
FY 2002														
FY 2003														
Remarks:														

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: Obsolescence Mitigation/ECP Reliability Integration 1-95-03-Obse			
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)			
DESCRIPTION / JUSTIFICATION: Technology obsolescence is dictating the replacement of many launcher components. A study performed showed by the year 2003 over 70% of the electronic components will be obsolete and will not be replaceable. Circuit Cards in the line replaceable units (LRUs) e.g., IEU and FCU, are already obsolete or rapidly approaching obsolescence. The funding on this program will procure modification kits which will incorporate improved components necessary to replace parts no longer available. Program Office support costs are included within this modification line. In addition, this modification will reestablish the MLRS baseline at the optimal configuration for integration of IFCS and ILMS (MC No. 0519 and 0526) by aiding in the calibration of the system, providing required accuracy levels for new and future munitions, increasing reliability of early configuration of the launcher which reduces O&S costs, and eliminating noise and multiple software requirements. Also, funding in FY 00 and FY 01 will be programmed for Army Technical Architecture Migration Phase I for communications software changes to meet the VCSA ATA Implementation			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
PLANNED Will incorporate ongoing obsolescence analysis and determination into production.		ACCOMPLISHED	

INDIVIDUAL MODIFICATION														
Date February 1997														
MODIFICATION TITLE (Cont): Obsolescence Mitigation/ECP Reliability Integration 1-95-03-Obse														
FINANCIAL PLAN: (\$ in Millions)														
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E														
PROCUREMENT														
Kit Quantity														
Installation Kits														
Installation Kits Nonrecurring														
Equipment	2.2	1.4	1.0	1.0	0.8	1.1	1.1	1.0						9.6
Equipment Nonrecurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment*					0.2	0.2								0.4
Other														
Interim Contractor Support														
Installation of Hardware														
FY 1996 & Prior Eqpt -- Kits														
FY 1997 Eqpt -- Kits														
FY 1998 Eqpt -- Kits														
FY 1999 Eqpt -- Kits														
FY 2000 Eqpt -- kits														
FY 2001 Eqpt -- kits														
FY 2002 Eqpt -- kits														
FY 2003 Eqpt -- kits														
(FY(TC) Eqpt (xx kits)														
Total Installation Cost														
Total Procurement Cost	2.2	1.4	1.0	1.0	1.0	1.3	1.1	1.0						10.0
* Support equipment funds show breakout of Phase I ATA requirement.														
METHOD OF IMPLEMENTATION														
Contract Dates:	FY 1997:	ADMINISTRATIVE LEADTIME:				PRODUCTION LEADTIME:				Months				
Delivery Date:	FY 1997:	FY 1998:				FY 1999:				FY 1999:				

BUDGET ITEM JUSTIFICATION SHEET									
APPROPRIATION / BUDGET ACTIVITY		DATE							
MISSILE PROCUREMENT / Spares and Repair Parts		February 1997							
		P-1 ITEM NOMENCLATURE							
		SPARES AND REPAIR PARTS (CA0250)							
		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY		0	0	0	0	0	0	0	0
COST (in millions)		11.5	12.1	11.3	21.4	22.0	31.6	38.8	43.6
Description: Provides for procurement of spares to support initial fielding of new or modified end items.									
Justification: The funds in this account procure depot level repairable (DLRs) secondary items from the Supply Management, Army business area of the Defense Business Operations Fund. To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:									
System		FY 1996	FY 1997	FY 1998	FY 1999	FY 1999			
Javelin						4.2			
MLRS		5.1		1.0		7.1			
ATACMS			1.0	1.0					
Patriot Mods		3.4	7.0	2.7		3.6			
Avenger Mods		1.0							
ITAS/TOW			2.3	5.7		5.8			
MLRS Mods		2.0	1.8	1.0		.6			
Totals		11.5	12.1	11.4		21.3			

BUDGET ITEM JUSTIFICATION SHEET							DATE	
APPROPRIATION / BUDGET ACTIVITY							February 1997	
P-1 ITEM NOMENCLATURE								
MISSILE PROCUREMENT /Support Equipment and Facilities								
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	6.6	6.2	1.0	1.0	1.0	1.0	1.0	1.0
DESCRIPTION: The Air Defense Targets Program provides fixed wing, rotary wing, ballistic and towed targets; target control systems; and ancillary equipment for worldwide active Army and Reserve Component air defense training, including quality assurance, lot acceptance, production qualification, and first article tests. During the budget years, targets to be procured include many different varieties, ranging from 1/9-scale training targets to realistic, full scale threats, as well as the Ballistic Aerial Target System (BATS). Towed targets to be procured include the Infrared (IR) Training Target. Target ancillary hardware includes items such as the target group set, scoring hardware and installation kits, scoring ground support equipment, IR augmenters, radar altimeters, and low altitude kit. JUSTIFICATION: In support of soldier training, targets are provided to support fielded AVENGER, MANPADS, AIR-TO-AIR STINGER, PATRIOT, Bradley STINGER Fighting Vehicle (BSFV) and LINEBACKER. Major items of target hardware which support or will support soldier training include MQM-107, Radio Controlled Miniature Aerial Target (RCMAT), Ballistic Aerial Target System (BATS), 1/5 Scale Remotely Piloted Vehicle Targets (RPVTS), towed training targets, target control systems and ancillary equipment. Training requirements are generated by DA major field commands and provided to TMO at an annual DA-sponsored targets conference. These field requirements have been scrubbed against HQDA fielding and force restructuring plans, and are consistent with approved training doctrine. In support of weapon systems testing, targets are provided on a reimbursable basis to STINGER, PATRIOT, U.S. Navy, U.S. Air Force, and other Army programs. Major items of target hardware which support or will support these tests include ancillary items, MQM-107, 1/5 Scale RPVTS, target control systems, drone control kits and BATS. To provide for sustained operations of target systems, it is necessary to establish operational pools which vary in size depending on quantity and frequency of flights which must be supported.								

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities				B. WEAPON AIR DEFENSE TARGETS (C93000)			C. MANUFACTURER NAME		D. DATE February 1997		
Missiles Cost Elements			FY96		FY97		FY98		FY99					
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
MQM-107														
		-Airframe/Engine	1853			1912			665			664		
		-Technical Publications	780			727			333			332		
		-Engineering Costs												
		-Other Costs	2633			2639			998			996		
		SUBTOTAL												
		RCMAT												
		-Hardware	52			50								
		-Operating Costs	22			19								
		-Other Costs	74			69								
		SUBTOTAL												
		1/5 SCALE												
		-Hardware	176	112	2	618	150	4						
		-Operating Costs	60			120								
		-Other Costs	99			280								
		SUBTOTAL	335			1018								
		BATS												
		-Airframes	874	157	VAR	425	7000	VAR						
		-Rocket Motors												
		-Other Hardware												
		-Operating Costs	109			55								
		-Other Costs	414			183								
		SUBTOTAL	1397			663								
		TOWED TARGETS												
		-Operating Costs	77			54								
		-Other Costs	32			21								
		SUBTOTAL	109			75								
		ANCILLARY/AUGMENTATION												
		-Hardware												
		- Piece Parts CIK-170 Scoring Kits												
		- GSQ-102 Scoring Ground Stations												
		- RCMAT CIK-206 Scoring Kits												
		- Universal Fins w/CDOPS												
		- CIK-228 Scoring Kits												
		- RCMAT CIK-206 Scoring Kits	909	500	2	881	470	2						
		-Operating Costs	532			375								
		-Other Costs	606			475								
		SUBTOTAL	2047			1731			998			996		
		GRAND TOTAL	6595			6195								

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										
B. APPROPRIATION / BUDGET ACTIVITY		C. P-1 ITEM NOMENCLATURE								
MISSILE PROCUREMENT / 5 / Support Equipment and Facilities		AIR DEFENSE TARGETS (C93000)								
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
1/5 SCALE										
FY96	Continental RPV, Barstow, CA	FP	MICOM	Oct-95	Jun-96	112	4	Yes		
FY97	Continental RPV, Barstow, CA	FP	MICOM	Oct-96	Feb-97	150	4	Yes		
BATS										
FY96	Lockley Mfg., New Castle, PA	FP	MICOM	Jan-96	Jan-97	157	VAR	Yes		
- Airframes										
- Other Hardware										
FY97	Lockley Mfg., New Castle, PA.	FP	MICOM	Oct-96	Jan-97	7000	VAR	Yes		
- Rocket Motors										
ANCILLARY/AUGMENTATION										
FY96	Cartwright Eng., Fullerton, CA	FP	MICOM	Oct-95	May-96	500	2	Yes		
- RCMAT CIK-206 Scoring Kits										
FY97	Cartwright Eng., Fullerton, CA	FP	MICOM	Oct-96	May-97	470	2	Yes		
- RCMAT CIK-206 Scoring Kits										
REMARKS:										

BUDGET ITEM JUSTIFICATION SHEET										DATE
P-1 ITEM NOMENCLATURE										February 1997
MISSILE PROCUREMENT /Support Equipment and Facilities										ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0		0
COST (in millions)	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.1		1.1

DESCRIPTION: Provides for procurement of various tools and shop sets to support the Army's missile systems worldwide.

JUSTIFICATION: Funding is required for procurement of tool and shop sets to support the following systems:

MLRS
TOW
AVENGER

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities			B. WEAPON ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)			C. MANUFACTURER NAME ANNISTON DEPOT WAREHOUSE 30			D. DATE February 1997	
Missiles Cost Elements		FY 96			FY 97			FY 98			FY 99	
ID	CD	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each
ALL ARE MISSILE TOOL KITS. NO MODS												
1. MLRS COMPONENTS ASSEMBLY	A	402 215			487 260			467 250			469 251	
2. TOW COMPONENTS ASSEMBLY	A	65 35			16 8			16 8			14 6	
3. AVENGER COMPONENTS ASSEMBLY	A	165 89			142 78			140 73			132 69	
TOTAL		971			991			954			941	
NOTE: EACH SYSTEM HAS MORE THAN ONE KIT WITH VARYING QUANTITIES AND UNIT COSTS FOR EACH KIT.												

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Support Equipment and Facilities		MISSILE DEMILITARIZATION (HL2000)									
		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY		0	0	0	0	0	0	0	0		
COST (in millions)		1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5		

Description: The Missile Demilitarization Program provides for the demilitarization of U.S. Army missiles and missile components that are obsolete or excess to the Army requirements following the guidelines of the Resource Conservation and Recovery Act.

Justification: The backlog of missiles requiring demilitarization is a growing concern of the Department of the Army. Changes during the past few years in the worldwide political environment have resulted in drastic changes in military strategies. Reduced requirements of prepositioned military forces, retrograde of weapon system assets from Europe and major changes in war reserve planning have placed a tremendous strain on the CONUS wholesale storage base. There are some 52,000 missiles and 100,000 missile components utilizing 99 premium storage igloos that require demilitarization. FY98 will continue the process of demilitarization priority one (obsolete, excess, environmental concern and using valuable storage space) missiles, i.e., Shillelagh.

Missiles Cost Analysis														A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities				B. WEAPON MISSILE DEMILITARIZATION (HL2000)				C. MANUFACTURER NAME N/A		D. DATE February 1997	
Missiles Cost Elements		ID	FY 96				FY 97				FY 98				FY 99										
		CD	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000								
SHILLELAGH																									
DEMILITARIZATION			1116			1149			1183			1219													
OTHER			255			252			249			194													
REDEYE																									
DEMILITARIZATION			125																						
OTHER			20																						
SS-11(M22)																									
DEMILITARIZATION			102			107						60			69										
OTHER			25			24						15			14										
NIKE HERCULES																									
DEMILITARIZATION																									
OTHER																									
TOTAL			1643			1532			1507			1496													

BUDGET ITEM JUSTIFICATION SHEET										DATE
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE								February 1997
MISSILE PROCUREMENT / Support Equipment and Facilities		PRODUCTION BASE SUPPORT (CA0100)								
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0	0	
COST (in millions)	2.8	3.5	3.4	3.3	3.6	3.6	3.9	3.9	3.9	
DESCRIPTION: This program provides for Production Support and Equipment Replacement (PSR) of Government owned equipment used in production and production testing of missile systems or missile components. Funds are used to establish, modernize, expand or replace Army-owned industrial facilities. JUSTIFICATION: The FY98/FY99 request includes the above routine maintenance on real property, replacement/rehabilitation of existing equipment or instrumentation and modernization of test facilities at the Redstone Arsenal Technical Test Center and White Sands Missile Range. This project is also essential in sustaining the Army's missile warhead production capability, eliminating safety hazards, etc., at the Iowa Army AMMO Plant. A detailed summary project listing is attached.										

Production Support and Facilities Projects			DATE		February 1997	
APPROPRIATION / BUDGET ACTIVITY			P-1 ITEM NOMENCLATURE			
MISSILE PROCUREMENT /Support Equipment and Facilities			PRODUCTION BASE SUPPORT (CA0100)			
PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
39X2169	PSR	Redstone Arsenal Rocket Engine (RARE) Facility				
Thiokol Corp, producers of Solid Rocket Motors, closed its Redstone facility in September 1996. Due to the Thiokol's mission, an Environmental Baseline Study (EBS) has been performed to assess and establish liability for contamination. Funds will be used to complete environmental studies, demolition/asbestos abatement or other documentation related to closure of RARE that is required by environmental laws or that which is in the best interest of the government.			1.316	1.947	1.814	1.775
93X5069	PSR	White Sands Missile Range				
Funds replacement and initial purchase of equipment and instrumentation used in production testing of missile systems and components. Supported systems include ATACMS, MLRS, PATRIOT, SADARM. This project will procure computer system upgrades, replace test equipment and provide communications security equipment.			0.800	1.095	1.000	1.000
93X5071	PSR	Redstone Arsenal Technical Test Center (RTTC)				
This equipment is required for modernization of test facilities and equipment in the Dynamic, Static, and Electronic Component Test Branches of the Redstone Technical Test Center.			0.200	0.224	0.250	0.250

Production Support and Facilities Projects				DATE	
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE		February 1997	
MISSILE PROCUREMENT /Support Equipment and Facilities		PRODUCTION BASE SUPPORT (CA0100)			
PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998
3902335	MISSILE AUTOMATIC TEST EQUIPMENT (MATE)				FY 1992
Annual project to maintain and upgrade Missile Automatic Test Equipment used in depot level maintenance of various missile systems.		0.383			
6935333	PSR, IOWA ARMY AMMO PLANT		0.149	0.200	0.300
This project is essential to sustain the Army's missile warhead production capability, eliminate safety hazards by replacing worn equipment and rehabilitation of facilities. Further, this project will improve the Heating Ventilation and Air Conditioning (HVAC) in the TOW production area, provide fire protection in Bldg I-40 assembly area and upgrade process controllers in various areas.					